



## FREEDOM OF INFORMATION COVERSHEET

The following information is provided pursuant to section 28 of the *Freedom of Information Act 2016*.

FOI reference: 23-139

Information to be published	Status
1. Access application	Published
2. Decision notice	Published
3. Schedule	Published
4. Documents	Published
5. Additional information identified	Not Applicable
6. Fees	Not Applicable
7. Processing time (in working days)	56 Days
8. Decision made by Ombudsman	Not applicable
9. Additional information identified by Ombudsman	Not Applicable
10. Decision made by ACAT	Not applicable

11. Additional information identified by ACAT	Not applicable
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# Freedom of Information - Access Application to Transport Canberra and City Services - Submission confirmation

Your submission has been successful. Please keep a copy of this receipt for your records.

Date and time

Reference code

20 Nov 2023 1:34:22 PM

Z69R9KC9

Transport Canberra and City Services (TCCS)

GPO Box 158  
Canberra ACT 2601

Phone: 02 6207 2987

Email: TCCS.FOI@act.gov.au

## Applicant details

Title

Given name

Family name

Preferred name

Preferred method of contact

Phone  Email  Post

Contact phone number

Contact email address

## Contact postal address

Address line 1

Address line 2

Suburb

State

Postcode

Preferred method to receive information \*

Email  Post

Same as contact email address

## Information request

Who are you making the request on behalf of?

What type of information are you requesting access to? \*

What information are you requesting access to under the Act? \*

On page 97 the Transport Canberra and City Services 2021-2022 Annual Report it was advised 'In 2021-2022, TCCS continued to pursue activities identified in the TCCS Emissions Reduction Plan 2019-2020 to 2024-2025 to contribute to the whole of government target..'

I am requesting access to the "TCCS Emissions Reduction Plan 2019-20 to 2024-25" and:

- any documents or correspondence relating to its development including any consultants reports, as well as
- documents and correspondence which were sent to the Environment, Planning and Sustainable Development Directorate, Minister for Transport and City Services or Director-General of Transport Canberra and City Services on the TCCS Emissions Reduction Plan 2019-2020 to 2024-2025.

Attach a description or additional details about the information you are requesting access to (optional)

Do you have a similar or identical request currently under review by another ACT Government Directorate?

Yes  No

Are you enquiring as

[Redacted]

Provide a statement about how the release of information is in the public interest (optional)

[Redacted]

Would you like to provide any additional information? (optional)

[Redacted]

Attach additional documents to support your application (optional)



Dear 

**Freedom of Information Request - Reference 23-139**

I refer to your application for access to government information received by Transport Canberra and City Services (TCCS) on 20 November 2023. It is my understanding that you are seeking access to the following government information:

- *“Any documents or correspondence relating to its development including any consultants’ reports, as well as*
- *documents and correspondence which were sent to the Environment, Planning and Sustainable Development Directorate, Minister for Transport and City Services or Director-General of Transport Canberra and City Services on the TCCS Emissions Reduction Plan 2019-2020 to 2024-2025.”*

I thank you for working with our office on interpreting the scope of your request by providing the following contextual background to your application:

- *records that show how the strategy was crafted, including consideration of relationships with other strategies across government and EPSDD; and*
- *questions about the strategy have been raised in the annual report hearings for 2021-22 and 2022-23, and [we] are interested in any records created in relation to those questions.*

**Timeframes**

A decision was due on your application by 4 January 2024. I thank you for agreeing to an extension until 12 February 2024.

**Decision on access**

A search of records held by TCCS has been completed and 63 relevant records have been identified as relevant you your application.

In reviewing these records, it was identified that some records relating to questions on notice are publicly available. In accordance with the FOI Act I have refused to deal with your application where it applies to these records and links to the online publications have been included in the schedule at Attachment A.

It has also been identified that some of these records are duplicates and copies have been excluded from the enclosed documents. References to these duplicates have been included in the schedule for completeness.

Upon reviewing the information within the relevant records and applying the public interest test under section 17 of the FOI Act, I have decided to provide you with partial access. Reasons for my decision are detailed in the statement of reasons.

The records identified as relevant to your application are listed in the schedule enclosed at Attachment A. A copy of the records with deletions applied to the information I have found to be contrary to the public interest is enclosed at Attachments B to D.

### **Statement of Reasons**

In making my decision on disclosing the relevant government information, I must identify all relevant factors in schedule 1 and 2 of the FOI Act and determine, on balance, where the public interest lies. I have taken the following into account:

- The FOI Act; and
- The *Human Rights Act 2016*.

### **Schedule 1:**

- 1.6 Cabinet information

### **Schedule 2:**

#### ***Factors favouring disclosure (Schedule 2.1)***

- Schedule 2.1(a)(i) - promote open discussion of public affairs and enhance the government's accountability; and
- Schedule 2.1(a)(iv) - ensure effective oversight of expenditure of public funds.

#### ***Factors favouring non-disclosure (Schedule 2.2)***

- Schedule 2.2(a)(ii) - prejudice the protection of an individual's right to privacy or any other right under the *Human Rights Act 2016*.
- Schedule 2.2(a)(xvi) - prejudice a deliberative process of government.

In reviewing the relevant records, I have identified information that has been submitted, or that a Minister proposes to submit, to Cabinet for its consideration, including extracts of that information. I have found that the information is not purely factual and schedule 1.6 applies to this information, in which the disclosure of cabinet information is deemed contrary to the public interest.

Third party personal information, including direct phone numbers, has also been identified. I have considered that this information is not readily available to the public and the disclosure of this information is likely to prejudice the protection of an individual's right to privacy under the *Human Rights Act 2004*. I have attributed significant weight to this factor and find the disclosure of personal information to be, on balance, contrary to the public interest.

I have also identified information that has been prepared for or relates to an ongoing government deliberative process such as future budget considerations. I have considered that the disclosure of this information at this time is likely to prejudice those processes, including future deliberations by Cabinet. I have placed significant weight on this factor and find this information is, on balance, contrary to the public interest to disclose.

TCCS.FOI@act.gov.au | phone: (02) 620 72987 | [www.act.gov.au](http://www.act.gov.au)

I have found that the factors favouring disclosure can be satisfied with the deletion of information which is contrary to the public interest. A copy of the relevant information is enclosed at [Attachments B to D](#).

### **Charges**

In accordance with section 107 of the FOI Act no fees are applicable to your application.

### **Online publishing – disclosure log**

Under section 28 of the FOI Act, TCCS maintains an online record of access applications called a disclosure log. Your access application and this notice of decision will be published on the disclosure log within 3 – 10 business days. Your personal information will be removed from these documents prior to publication.

### **Ombudsman review**

My decision on your access request is a reviewable decision as identified in Schedule 3 of the FOI Act. You have the right to seek Ombudsman review of this outcome under section 73 of the FOI Act within 20 working days from the day that my decision is published in TCCS' disclosure log, or a longer period allowed by the Ombudsman. If you wish to request a review of my decision you may write to the Ombudsman at:

The ACT Ombudsman  
GPO Box 442  
CANBERRA ACT 2601  
via email: [ombudsman@ombudsman.gov.au](mailto:ombudsman@ombudsman.gov.au)

### **ACT Civil and Administrative Tribunal (ACAT) review**

Under section 84 of the Act, if a decision is made under section 82(1) on an Ombudsman review, you may apply to the ACAT for review of the Ombudsman decision. Further information may be obtained from the ACAT at:

ACT Civil and Administrative Tribunal  
15 Constitution Avenue  
GPO Box 370  
CANBERRA CITY ACT 2601 Telephone:  
(02) 6207 1740  
[www.acat.act.gov.au](http://www.acat.act.gov.au)

If you have any queries concerning the directorate's processing of your request, or would like further information, please contact the TCCS FOI team on (02) 6207 2987 or email [tccs.foi@act.gov.au](mailto:tccs.foi@act.gov.au).

Yours sincerely



Kristine Scheul  
Information Officer

12 February 2024

## ATTACHMENT A - ACCESS APPLICATION SCHEDULE, FREEDOM OF INFORMATION

**Reference Number: 23-139**

Please be aware that under the *Freedom of Information Act 2016*, some of the information provided to you will be released to the public through the ACT Government's Open Access Scheme. The Open Access release status column of the table below indicates what documents are intended for release online through open access.

Personal information or business affairs information will not be made available under this policy. If you think the content of your request would contain such information, please inform the contact officer immediately.

Information about what is published on open access is available online at: [https://www.cityservices.act.gov.au/about-us/freedom\\_of\\_information/disclosure-log](https://www.cityservices.act.gov.au/about-us/freedom_of_information/disclosure-log)

### Factors favouring non-disclosure:

Schedule 1.6 – Cabinet information

Schedule 2.2(a)(ii) - prejudice the protection of an individual's right to privacy or any other right under the *Human Rights Act 2016*.

Schedule 2.2(a)(xvi) - prejudice a deliberative process of government.

Reference number	Page number	Description	Date	Status	Reason for non-release or deferral	Open Access release status
1	1	001 - TCCS Five Year Emissions Reduction Plan 2019-20 to 2024-25	July 2020	Partial access	Schedule 2.2(a)(xvi)	Decision to be published on the <a href="#">TCCS Disclosure Log</a> .
2	8	002 - GAMS - DG20204978 - DG Brief - Submission of Feedback on Five Year Emissions reduction target reporting template 2019-20 - 2024	July 2020	Full access	Not applicable	
3	11	002 - Attachment 1 - Draft Directorate five-year emissions	July 2020	Full access	Not applicable	



		reduction projection template 2019-20 to 2024-25				
<b>4</b>	<b>15</b>	002 - Attachment 2 - TCCS Feedback	July 2020	Partial access	Schedule 2.2(a)(xvi)	
<b>5</b>	<b>18</b>	003 Email to EPSDD - DG endorsed feedback on the five year emission reduction projection template	20 July 2020	Full access	Not applicable	
<b>6</b>	-	003 Email to EPSDD - Attachment 1 - Draft Directorate five year emissions reduction projection template 2019-20 to 2024-25	July 2020	-	Duplicate record, see record 3.	
<b>7</b>	-	003 Email to EPSDD - Attachment 2 - TCCS Feedback	July 2020	-	Duplicate record, see record 4.	
<b>8</b>	<b>19</b>	004. FW_ FOR DG CLEARANCE; Ministerial - Final Approval - DUE_ 16.11.20 - GAMS - DG2020_6073 - TCCS draft Five-year Emissions Reduction Plan 2019-20 to 2024-25 - DG Brief	1 December 2020	Full access	Not applicable	
<b>9</b>	<b>23</b>	004. 1. REQUEST DG2020_6073 - DG Brief - Five Year Emissions Reduction Plan 2019-20 to 2024-25	1 December 2020	Full access	Not applicable	
<b>10</b>	<b>27</b>	004. Attachment A_ Feedback on Draft Directorate Emissions Target template - August 2020	1 December 2020	Partial access	Schedule 2.2(a)(xvi)	
<b>11</b>	<b>34</b>	004. Attachment B - Directorate emissions reduction target template to 2024-25	1 December 2020	Partial access	Schedule 2.2(a)(xvi) Schedule 1.6	

<b>12</b>	<b>43</b>	005. 1. REQUEST DG2021_6855 - DG Brief - Five Year Emissions Reduction Plan 2019-20 to 2024-25 copy	1 December 2020	Full access	Not applicable
<b>13</b>	<b>45</b>	005. Attachment A - FW-DG CLEARANCE Ministerial - Final Approval	1 December 2020	Partial access	Schedule 2.2(a)(ii)
<b>14</b>	<b>50</b>	005. Attachment B - TCCS Five Year Emissions Reduction Plan 2019-20 to 2024-25	1 December 2020	Partial access	Schedule 2.2(a)(xvi)
<b>15</b>	<b>57</b>	006 - Email - Draft Annual Update 2022-23 - TCCS ERP	17 October 2023	Full access	Not applicable
<b>16</b>	<b>58</b>	006 - Attachment B - Annual Update 2022-23 - TCCS Five Year Emissions Reduction Plan	17 October 2023	Partial access	Schedule 2.2(a)(xvi)
<b>17</b>	<b>61</b>	007 - Email to EPSDD - TCCS Five Year ERP 2020-21 Results	3 November 2021	Full access	Not applicable
<b>18</b>	<b>62</b>	007 - Attachment A_ TCCS Five Year Emissions Reduction Plan 2020-21 results for Endorsement	3 November 2021	Partial access	Schedule 2.2(a)(xvi)
<b>19</b>	<b>71</b>	008 - Email EPSDD - Response Emissions reporting for 2020-21	8 December 2021	Full access	Not applicable
<b>20</b>	<b>73</b>	009 - Email EPSDD - Endorsed Emissions reporting for 2020-21	8 December 2021	Partial access	Schedule 2.2(a)(xvi)
<b>21</b>	<b>75</b>	009 - Attachment A_ TCCS Five Year Emissions Reduction Plan 2020-21 DG Approved	8 December 2021	Partial access	Schedule 2.2(a)(xvi)

<b>22</b>	<b>84</b>	010 - Email to EPSDD - DG Endorsed - TCCS Annual Update 2022-23 on 5-yr ERP	18 October 2023	Full access	Not applicable
<b>23</b>	<b>85</b>	010 - Attachment B - Annual Update 2022-23 - TCCS Five Year Emissions Reduction Plan	18 October 2023	Partial access	Schedule 2.2(a)(xvi)
<b>24</b>	-	011 - Attachment B - Annual Update 2022-23 - TCCS Five Year Emissions Reduction Plan	1 December 2020	-	Duplicate record, see record 10
<b>25</b>	<b>88</b>	012 - Advisory Note - MINS202101749	December 2021	Full access	Not applicable
<b>26</b>	<b>90</b>	012 - Attachment A - TCCS Five Year Emissions Reduction Plan 2019-20 to 2024-25	December 2021	Partial access	Schedule 2.2(a)(xvi)
<b>27</b>	<b>97</b>	012 - Attachment B - TCCS Five Year Emissions Reduction Plan 2020-21 results	December 2021	Full access	Not applicable
<b>28</b>	<b>100</b>	013 - Advisory Note - Steel (A16649938)	November 2021	Full access	Not applicable
<b>29</b>	<b>102</b>	013 - 1. REQUEST DG2021_01615 - DG Brief - TCCS Five Year Emission Reduction Plan - 2020-21 Report to EPSDD	November 2021	Full access	Not applicable
<b>30</b>	-	013 - Attachment A_ TCCS Five Year Emissions Reduction Plan 2020-21 DG Approved	3 November 2021	-	Duplicate record, see record 18
<b>31</b>	<b>105</b>	013 - DG approved email	15 November 2021	Full access	Not applicable
<b>32</b>	<b>110</b>	014 - REQUEST DG2023_02536 - TCCS DG Brief - TCCS 2022-23	18 October 2023	Full access	Not applicable

		Report - Five-Year Emission Reduction Target 2024-25				
<b>33</b>	<b>113</b>	014 - DG APPROVED EMAIL_RE_FOR DG CLEARANCE_FW_DG2023_02536 QA Response	18 October 2023	Partial access	Schedule 2.2(a)(ii)	
<b>34</b>	<b>116</b>	014 - Attachment A - TCCS Five-Year Emission Reduction Plan - DG Approved	18 October 2023	Partial access	Schedule 2.2(a)(xvi)	
<b>35</b>	-	014 - Attachment B - Annual Update 2022-23 - TCCS Five Year Emissions Reduction Plan	18 October 2023	-	Duplicate record, see record 23	
<b>36</b>	<b>123</b>	20220308 - FW_ Annual Reports 2020-2021 Inquiry – ECCB QON 11 - TCCS Emissions reduction commitments	8 March 2022	Partial access	Schedule 2.2(a)(ii)	
<b>37</b>	<b>124</b>	20220310 - FW_ URGENT - FOR TCCS RESPONSE - AR ECCB QON 11 - TCCS Emissions reduction commitments	10 March 2022	Partial access	Schedule 2.2(a)(ii)	
<b>38</b>	-	20220321 - Inquiry into Annual and Financial Reports 2020-2021 - ECCB QON 11	21 March 2022	-	Available <a href="#">here</a>	
<b>39</b>	<b>126</b>	20220411 - FW_ Annual Report QON's - Due to MSU 10am 8 November 2022	8 November 2022	Full access	Not applicable	
<b>40</b>	<b>128</b>	20221104 - FW_ Annual Report QON's - Due to MSU 10am 8 November 2022	4 November 2022	Partial access	Schedule 1.6	

<b>41</b>	<b>132</b>	20221104 - FW_ Annual Report QON's - Due to MSU 10am 8 November 2022	4 November 2022	Partial access	Schedule 1.6
<b>42</b>	-	20221109 - QON PTCS 01 - Response - Clay - TCCS Emissions Reduction Reporting - Signed	9 November 2022	-	Available <a href="#">here</a>
<b>43</b>	-	20221109- QON PTCS 04 - Response - Clay - TCCS Emissions Reduction Working Group - Signed	9 November 2022	-	Available <a href="#">here</a>
<b>44</b>	<b>136</b>	044 - EPSDD - Directorate Emissions Reduct Target Template for completion	26 August 2020	Full access	Not applicable
<b>45</b>	-	044a – Attachment - Directorate emissions reduction target template to 2024-25.docx	July 2020	-	Duplicate, see record 3
<b>46</b>	-	044b – Attachment - Feedback on Draft Directorate Emissions Target template - August 2020.docx	1 December 2020	-	Duplicate, see record 11
<b>47</b>	<b>138</b>	045 - Development of TCCS 2024-25 ERP - Consultation - Email response from Capital Linen Services	29 September 2020	Full access	Not applicable
<b>48</b>	-	045a– Attachment - Feedback on Draft Directorate Emissions Target template - August 2020.docx	1 December 2020	-	Duplicate, see record 11
<b>49</b>	<b>139</b>	046 - Development of TCCS 2024-25 ERP - Consultation - Email	30 October 2020	Full access	Not applicable

		response from Capital Linen Services				
<b>50</b>	-	046a – Attachment - Directorate emissions reduction target template to 2024-25.docx	July 2020	-	Duplicate, see record 3	
<b>51</b>	-	046b – Attachment - Feedback on Draft Directorate Emissions Target template - August 2020.docx	1 December 2020	-	Duplicate, see record 11	
<b>52</b>	<b>141</b>	047 - Development of TCCS 2024-25 ERP - Consultation - Email to Transport Canberra	27 October 2020	Full access	Not applicable	
<b>53</b>	-	047a – Attachment - Directorate emissions reduction target template to 2024-25.docx	July 2020	-	Duplicate, see record 3	
<b>54</b>	-	047b – Attachment - Feedback on Draft Directorate Emissions Target template - August 2020.docx	1 December 2020	-	Duplicate, see record 11	
<b>55</b>	-	047c – Attachment – DG Brief – Five Year Emissions Reduction Plan 2019-20 to 2024-25	1 December 2020	-	Duplicate, see record 9	
<b>56</b>	<b>142</b>	048 - Development of TCCS 2024-25 ERP - Consultation - Email to TCCS Fleet Services	27 October 2020	Full access	Not applicable	
<b>57</b>	<b>143</b>	049 - Development of TCCS 2024-25 ERP - Consultation - Email response from TCCS Fleet Services	28 October 2020	Full access	Not applicable	

58	146	050 - Development of TCCS 2024-25 ERP - Consultation - Email response from TC	10 November 2020	Full access	Not applicable	
59	149	050a - DG Brief - Five Year Emissions Reduction Plan 2019-20 to 2024-25vb edits	November 2020	Full access	Not applicable	
60	Folio 2	050b - Copy of Data vb edits TC	November 2020	Partial access	Schedule 2.2(a)(xvi)	
61	152	050c - Attachment B - Directorate emissions reduction target template to 2024-25vb edits	November 2020	Partial access	Schedule 2.2(a)(xvi)	
62	Folio 3	050a - Development of TCCS 2024-25 ERP - Attachment - Data	November 2020	Partial access	Schedule 2.2(a)(xvi)	
63	159	052 - RE_ Modelling emission pathway for TC 2024-25	1 October 2020	Partial access	Schedule 2.2(a)(xvi) Schedule 2.2(a)(ii)	

Total number of documents: 63 (167 pages)

## Background

The ACT Government has committed to reducing its greenhouse-gas emissions in its operations to zero by 2040. It has also committed to reduce its emissions by more than 33% over the period 2019-20 to 2020-25.

Given the unusual business conditions caused by the COVID-19 pandemic, data from calendar year 2019 has been used as a proxy for the 2019-20 baseline. All targets are calculated as a percentage change on that base year.

TCCS produced 39,028 tCO<sub>2</sub>-e emissions in 2019, 93.1% of which were associated with transport fuels. Emissions from the public transport sector represented over half of all ACT Government emissions and efforts are underway to increase efficiency of the Transport Canberra bus network. The Zero-Emission Transition Plan for Transport Canberra was released in 2020 and outlines the pathway to achieve the ACT Government's ambition of zero-emission public transport system by 2040. The Plan will see the government replace up to 17% of ageing diesel and CNG buses with battery electric buses powered with the ACT's 100% renewable electricity in line with the existing fleet retirement profile.<sup>1</sup> This will be timed with plans for new bus depots with electric charging infrastructure to support the growing fleet of zero-emission buses. Following an initial short-term lease of 34 replacement diesel buses, Transport Canberra will progress to procurement of 90 zero-emission buses and supporting infrastructure.

Given limited opportunity to transition fleet to zero emission vehicles in the short-term, TCCS have identified a potential of 15.1% reductions in emissions by 2024-25.

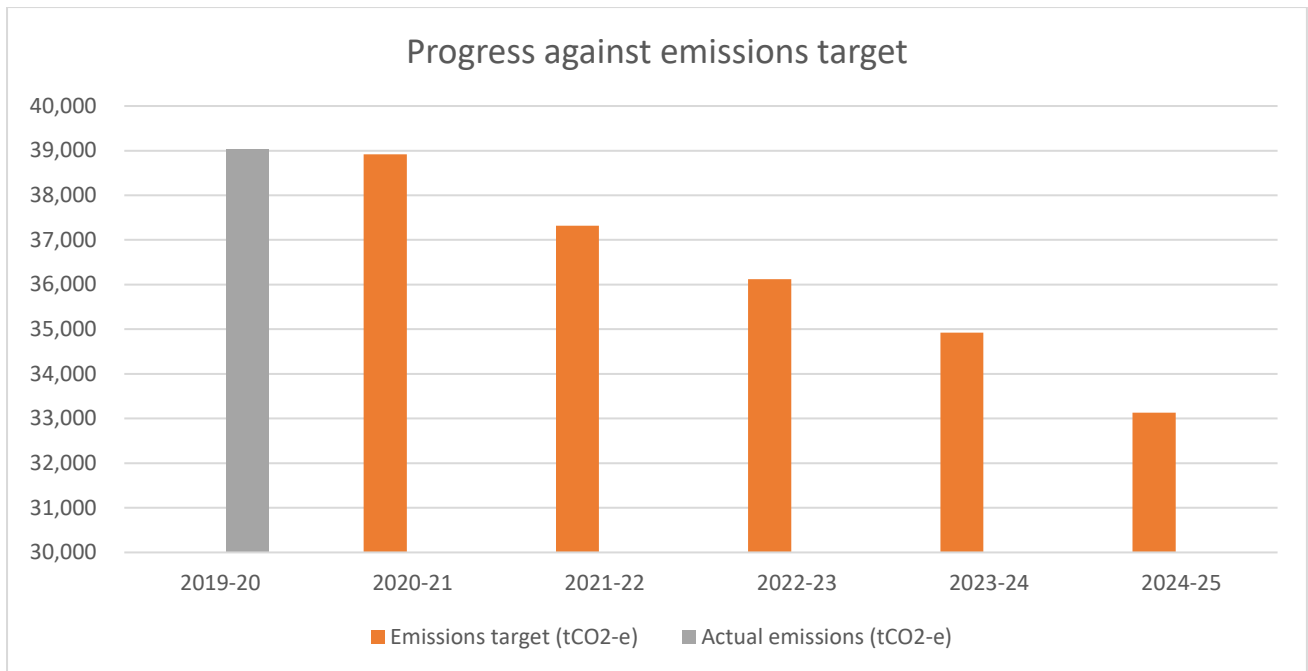
**Table 1: Transport Canberra and City Services emissions target and results**

	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Emissions target (tCO <sub>2</sub> -e)						33,130
Actual emissions (tCO <sub>2</sub> -e)	39,029 <sup>2</sup>					
Change in emissions from 2019-20 (%)						

<sup>1</sup> [REDACTED]

<sup>2</sup> Calendar year 2019 used as a proxy for 2019-20





## Emissions reduction plan to 2024-25

Table 2: Key emissions sources

Emissions source	tonnes CO <sub>2</sub> -e <sup>3</sup>	% of total emissions
Transport fuels	36,348	93.1%
<i>Bus network (Diesel)</i>	29,078	74.5%
<i>Bus network (CNG)</i>	4,183	10.7%
<i>TCCS Fleet (passenger vehicles)</i>	73	0.2%
<i>TCCS Fleet (non-passenger vehicles)</i>	3,014	7.7%
Natural gas	2,620	6.7%
Refrigerants	60	0.2%

## Emissions reduction activities

### Transport Canberra bus network

- The [Zero-Emission Transition Plan for Transport Canberra](#) outlines the pathway to achieve the ACT Government's ambition of zero-emission public transport system by 2040.
- Estimated emissions savings of activity:
  - See table below.
- How emissions savings were estimated:
  - Future fleet replacement profile, [REDACTED] was used to apply an average network tCO<sub>2</sub>-e/pa using existing diesel and CNG data for 2019.
  - Driver training to deliver more efficient driving of buses.

<sup>3</sup> Calendar year 2019 used as a proxy for 2019-20

- Fleet allocation so lower emission vehicles deliver a higher proportion of service kms.
- Timeframes:
  - Procurement of electric vehicles to commence 2021-22 with emissions savings ongoing for the usable life of the vehicle.
- Verification plan:
  - Tracking to be undertaken using actual fuel and emission data for the network.
- Responsibility for activity:
  - Project: DDG, Transport Canberra
  - Reporting: TCCS Sustainability Program.

#### Tuggeranong Bus Depot – Heating, Ventilation and Air Conditioning (HVAC) upgrade and solar PV

- The project proposes conversion of existing heating boilers from gas to electric heat pumps (with a small gas condensing boiler) and a 200kWh solar PV array.
- Estimated emissions savings of activity:
  - See table below.
- How emissions savings were estimated:
  - Robust savings calculations were included in application to the zero-emission Government loan fund and reviewed by an expert panel.
- Timeframes:
  - Project completion anticipated in early 2021.
- Verification plan:
  - To ensure that high quality before and after data for this project is captured, TCCS will apply a formal measurement and verification program to this project, informed by the International Performance Measurement and Verification Protocol.
- Responsibility for activity:
  - Project: TCCS Facilities/DDG, Transport Canberra
  - Reporting: TCCS Sustainability Program.

#### TCCS passenger fleet vehicles

- The ACT's Transition to Zero Emissions Vehicles Action Plan 2018-21 commits all newly leased ACT Government fleet passenger vehicles being zero-emissions (ZEV), where fit for purpose, by 2020-21.
- Estimated emissions savings of activity:
  - See table below.
- How emissions savings were estimated:
  - Future fleet replacement profile was used to estimate emissions savings from transitioning vehicles to zero-emissions, based on 2019 actual data.
- Timeframes:
  - Subject to operational requirements, leasing cycles and industry availability, 39% of passenger vehicles are scheduled to be transitioned to ZEV in 2020-21; a further 25% in 2021-22; and 14% in 2023-24.
- Verification plan:
  - Emissions savings will be measured using average tCO<sub>2</sub>-e/km data for similar diesel fleet compared with km travelled by ZEV.
- Responsibility for activity:
  - Project: TCCS Fleet Services
  - Reporting: TCCS Sustainability Program.

#### TCCS non-passenger fleet vehicles

- 12-month trial of a fully electric litter/leaf collection truck. The trial will provide a comprehensive understanding of features and benefits of EV for heavy commercial vehicles.

- Estimated emissions savings of activity:
  - See table below.
- How emissions savings were estimated:
  - Robust emission savings calculations were included in application to the zero-emission Government loan fund and reviewed by an expert panel.
- Timeframes:
  - Late 2020/early 2021.
- Verification plan:
  - Emissions savings will be measured using average tCO<sub>2</sub>-e/km data for similar diesel fleet compared with km travelled by ZEV.
  - Fit for purpose elements will be established to determine operational suitability, safety and driver usability is assessed.
- Responsibility for activity:
  - Project: TCCS Fleet Services/Executive Branch Manager, City Presentation
  - Reporting: TCCS Sustainability Program.

TCCS move to 480 Northbourne Avenue (NBA)

- Under the ACT Climate Change Strategy, the ACT Government is leading by example in the transition to a net zero emissions future with 480 NBA being a zero-emissions building with climate-wise design and energy efficient appliances.
- Estimated emissions savings of activity:
  - See Table below.
- How emissions savings were estimated:
  - Gas savings from previous accommodation in 496 Northbourne Avenue base building was used to quantify emissions savings.
- Timeframes:
  - TCCS relocated to 480NBA in June 2020.
- Verification plan:
  - n/a.
- Responsibility for activity:
  - Reporting: TCCS Sustainability Program.

**Table 3: Summary of projected emissions savings**

Activity name	tCO <sub>2</sub> -e				
	2020-21	2021-22	2022-23	2023-24	2024-25
Transport Canberra Bus Network <sup>4</sup>		1,454	1,195	1,195	1,793
Tuggeranong Bus Depot – HVAC upgrade	41	123			
TCCS passenger fleet – transition to EV	21	21	8		
Electric leaf litter truck 12-month EV trial	1.8	2.6			
Move to 480NBA	44				
<b>TOTAL</b>	<b>108</b>	<b>2,069</b>	<b>1,203</b>	<b>1,195</b>	<b>1,793</b>

<sup>4</sup> [REDACTED]

### Changes to previous estimates

- Placeholder to explain any variation in the emissions reductions identified in previous years.

Table 4: Cost of emission reduction activities

Activity name	Total cost (projected or actual) (\$)	Funding bid successful [Yes/partial/pending/no]
Transport Canberra Bus Network – transition to ZEV		
Tuggeranong Bus Depot HVAC/solar upgrade	\$1.3M	Yes
TCCS Fleet Services Electric tipper truck trial	\$0.1M <sup>5</sup>	Yes
TCCS Fleet Services Passenger vehicle transition to ZEV		
<b>TOTAL</b>		

### Transition to zero emissions vehicles (ZEV)<sup>7</sup>

The ACT Government has made the following commitments under The ACT’s Transition to Zero Emissions Vehicles Action Plan:

- From 2019-20 at least 50% of all newly leased Government fleet passenger vehicles will be zero emissions vehicles (where fit for purpose); and
- From 2020-21 all newly leased ACT Government passenger fleet vehicles will be zero emissions vehicles (where fit for purpose).

Table 5: TCCS Passenger vehicle transition to ZEV

5 [REDACTED]  
6 [REDACTED]

<sup>7</sup> The ACT Government is working from the following definitions of ‘fit for purpose’, ‘passenger vehicle’ and ‘fleet vehicle’:

<b>Fit for purpose</b>	A fleet vehicle is deemed ‘fit for purpose’ for replacement with an electric vehicle where there is an available electric vehicle model which can deliver equivalent function and utility for the purpose that the vehicle is used. This will take into consideration any modifications that have been made to the vehicle being replaced and any specific requirements such as equipment loads, or distances travelled. From 2020-21 the responsible area will be required to demonstrate due cause for leasing a passenger vehicle which is not a zero emissions vehicle
<b>Passenger vehicle</b>	A motor vehicle used for the primary purpose of transporting up to nine passengers including the driver. This includes sedans, hatchbacks and station wagons as well as small and medium sports utility vehicles (SUVs). Small vans considered suitable for replacement with electric vehicles are included. Other light commercial vehicles, such as utility vehicles, are not included at this stage. Replacement of light commercial vehicles with electric vehicles will be considered as models become more widely available.
<b>Fleet vehicle</b>	All Government-leased vehicles including pool and non-pool vehicles. This excludes Executive vehicles where these vehicles are not leased by Government.

	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Total passenger vehicle leases held on 30 June	36	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>
Total ZEV passenger vehicles leases held on 30 June	9	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>
Total <i>new</i> leases of passenger vehicles	5	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>
Total <i>new</i> leases of ZEV passenger vehicles	3	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>
% of <i>newly</i> leased passenger vehicles that are ZEV	60%	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>

### Summary of non-ZEV vehicle leases

TCCS entered into two new non-ZEV vehicle leases during 2019-20. Both vehicles have 8 seat capacity, an operational requirement, for which there is currently no fit for purpose ZEV vehicles available.

In addition to TCCS passenger vehicles, TCCS operates a fleet of light commercial vehicles, agricultural equipment, trucks, buses, plant and equipment. TCCS are demonstrating leadership with an electric truck trial commencing in 2020-21, as well as keeping abreast of opportunities across all vehicle types as the ZEV industry matures. The emissions associated with this non-passenger fleet equates to 98% of annual emissions for TCCS (excluding the bus fleet).

### Further detail

#### Other Key Performance Indicators

Growth in the Territory will result in TCCS increasing service delivery and operations resulting in a commensurate increase in energy use. Energy intensity measures track efficiencies where changes in operations or environment occur. This includes the Transport Canberra bus network with energy use per passenger kilometre and Capital Linen Services with energy use against volume of linen sold.

**Table 6: Energy intensity measures**

	2019-20 <sup>8</sup>	2020-21	2021-22	2022-23	2023-24	2024-25
Transport Canberra bus network - (GJ/100 passenger km)	0.30	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>
Capital Linen Services – Energy/kg linen sold <sup>9</sup>	0.86	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>

<sup>8</sup> Calendar year 2019 used as a proxy for 2019-20

<sup>9</sup> Normalised number. Consumption data provided by CLS and based on a 70% proportional split with Sterilisation Services.

## Preparing for emissions reductions beyond 2025

The Yarralumla Nursery is one of a number of facilities under review for replacement of gas-based heating systems with low emissions alternatives. The gas replacement study, conducted by the Environment, Planning and Sustainable Development Directorate (EPSDD) for TCCS and other Directorates, will recommend options that can be implemented before the interim target end date of 2025.

The Capital Linen Services facility is also being reviewed under the EPSDD gas replacement study. Owing to the nature of operations at CLS and the limited options for alternative steam-raising plant, lower emissions alternatives may not be feasible within the 2025 interim target period.

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**To:** Director-General, Transport Canberra and City Services

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**Through:** Chief Operating Officer  
Deputy Director-General, City Services  
Deputy Director-General, Transport Canberra and Business Services  
Executive Group Manager, Transport Operations  
Executive Group Manager, Territory and Business Services

---

**From:** Executive Branch Manager, Governance and Ministerial Services

---

**Subject:** Zero Emissions Government (ZEG) submission of feedback on the EPSDD five-year emissions reduction reporting template

---

**Critical Date:** 17 July 2020

---

**Critical Reason:** To meet the timeframe set for submission of the finalised reporting template and half year emissions reduction brief to Head of Service by EPSDD.

---

**Purpose**

To note TCCS comments to EPSDD on the Zero Emissions Government framework reporting template.

**Recommendations**

That you:

1. **Note** the TCCS comments to be provided to EPSDD at Attachment B on the reporting template – Emissions Reduction Projection 2019-20 to 2024-25.

**Noted / Please Discuss**

2. **Note** the issues contained in this brief.

**Noted / Please Discuss**

Alison Playford, Director-General..... /..... /.....

Director-General's Office Feedback

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## Background

1. The ACT Climate Change Strategy 2019-25 (the Strategy) was released in September 2019 and outlines the next steps for Canberra to reduce emissions by 50–60% (below 1990 levels) by 2025 and establish a pathway for achieving net zero emissions by 2045.
2. In order to demonstrate leadership in emission reductions, the Strategy includes a Zero Emissions Government (ZEG) Framework which replaces the previous Carbon Neutral Government (CNG) Framework.
3. The ZEG Framework includes targets to reduce emissions from government operations by over 33% by 2025 (from 2020 levels) and achieve zero emissions from Government operations by 2040.
4. EPSDD have drafted a reporting template – Emissions Reduction Projection 2019-20 to 2024-25 at [Attachment A](#) and requested comments from each Directorate, prior to formalising the template and requesting targets to be set.
5. TCCS comments are provided at [Attachment B](#) for your endorsement.

## Issues

6. The draft Emission Reduction template calls for a baseline year of CY2019 when setting emission targets for 2025.
7. In CY2019 TCCS contributed the majority of emissions (60%) to the ACT Government emission profile in relation to natural gas (4%) and transport fuels (56%), with Transport Canberra (including the bus network and depots) making up over half of ACT Government emissions (52%).
8. Progress toward the ZEG targets will be publicly reported each year in the Minister's Annual Report under the *Climate Change and Greenhouse Gas Reduction Act 2010*.
9. To achieve a 33% reduction target by 2025, based on 2019 figures<sup>1</sup>, TCCS would need to reduce annual emissions by 12 kt CO<sub>2</sub>-e (26 kT CO<sub>2</sub>-e in 2025 compared with 38 kT CO<sub>2</sub>-e in 2019) which equates to 60% of the total Government reduction (22 kt CO<sub>2</sub>-e).
10. While the ZEG Framework requires Directors-General to report emission reductions and activities undertaken, the accountability of individual directorates for their emissions through Director-General key performance indicators should be carefully considered with TCCS owning such a high proportion of the ZEG target.
11. Transport Canberra is presently developing a Zero-Emission Transition Plan (TC Plan) to transition its public transport bus fleet to zero-emission by 2040, as well as assisting the ACT Government in reducing its emissions by 33% overall by 2025 and improving customer outcomes, increasing patronage and growing the public transport service in a financially sustainable manner.
12. Finalisation of the TC Plan, anticipated in August 2020, will guide the development of the TCCS 2025 emissions target which is expected to be compiled for the whole of Government and provided to Head of Service in September 2020.

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<sup>1</sup> The ZEG target is based on emission reductions by 2025 from 2019 emission levels.



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### Media Implications

13. ACT Government agency emission reduction targets are published on the ACT Government website. This may result in a greater level of activity around Ministerial responses for TCCS emission profile.

Lisa Johnson  
EBM, Governance and Ministerial Services  
July 2020

Phone: 6205 5187

Action Officer: Trish Campbell  
Director, Sustainability, Facilities and Fleet Unit

Phone: 6205 1574

Attachment	
Attachment A	Draft Directorate Reporting template
Attachment B	TCCS comments on Reporting template

# ABCD Directorate

## Emissions Reduction Projection 2019-20 to 2024-25

### DRAFT TEMPLATE – FOR DIRECTORATE CONSULTATION

#### Background

The ACT Government has committed to reducing its greenhouse-gas emissions in its operations to zero by 2040. It has also committed to reduce its emissions by more than 33% over the period 2019-20 to 2020-25. The ABCD Directorate has set a target of x% by 2025. It produced xxxx tCO<sub>2</sub>-e emissions in 2019. This means a, xxxx tCO<sub>2</sub>-e emissions reduction by 2025 and additional xxxx tCO<sub>2</sub>-e emissions over the following 15 years.

Given the unusual business conditions caused by the COVID-19 pandemic, the base year is set as the 2019 calendar year. All targets are calculated as a percentage change on that base year.

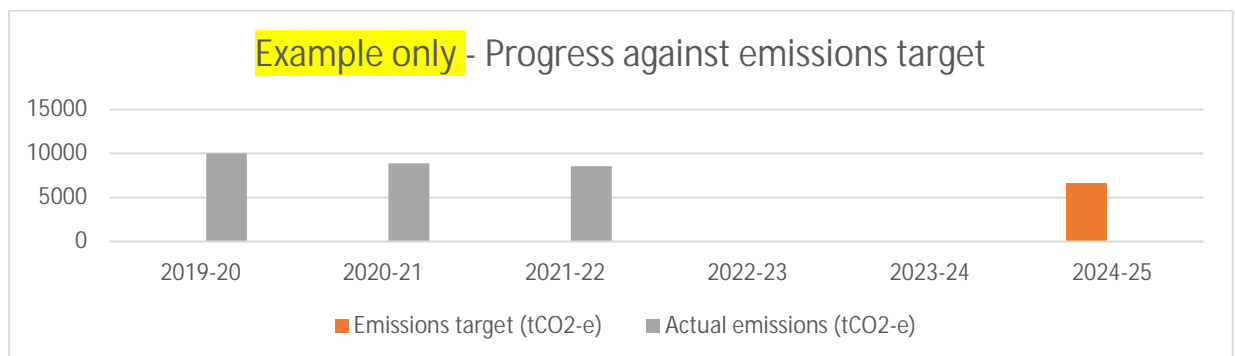
*Background instructions appear in italics throughout this template. This reporting template can be used each year from 2019-20 to 2024-25. Projections for all years are to be filled out in 2020-21, as well as actual data for that year. Actual data for subsequent years is to be added each year.*

#### ABCD emissions target and results

*The following table tracks progress to your Directorate's 2024-25 emissions target. It is intended that this table will be updated each year to update progress to the target. There will also be an opportunity to update data. For example, in cases where the property portfolio of a Directorate changes significantly targets may be updated, along with historical results to reflect that portfolio change.*

- The first row is the target itself.*
- The second row will be updated each year with actual emissions results. Please note once again that calendar year 2019 will be used as a proxy for 2019-20.*

	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Emissions target (tCO <sub>2</sub> -e)						26,080
Actual emissions (tCO <sub>2</sub> -e)	38,925					
Actual reduction from 2019-20 (%)						



## Emissions reduction plan to 2024-25

*This section will outline the measures your Directorate will take to meet its 2025 emissions reduction target. This information will be updated by Directorates each year to help track progress against targets.*

### Background: key emissions sources

*Summarise the key sources of emissions for your Directorate. The table below updated each year with most recent full financial year's data. Directorates are free to provide additional information if desired. For example, in a Directorate with emissions mostly from transport fuel it may be useful to break these emissions down by vehicle or fuel type.*

*Does your Directorate have any emissions sources that cannot be addressed before 2024-25? Please indicate why here. Examples might include recently installed gas heating system(s) that won't be upgraded before 2024-25 or a fleet of vehicles that are not suitable for replacement with zero emissions alternatives before 2024-25.*

Emissions source	tonnes CO <sub>2</sub> -e	% of total emissions
Transport fuels		
<i>(Passenger vehicles)</i>		
<i>(Non-passenger vehicles)</i>		
Natural gas		
Refrigerants		
<i>(add other sources as required)</i>		

### Emissions reduction activities

*In this section of the template, Directorates will outline the emissions reduction activities forecast to 2024-25. Please feel free to group similar types of activities together. For example, an activity that impacts the whole fleet can be listed as a single activity here, rather than writing a summary for each individual vehicle. Likewise, a series of insulation activities in buildings can be grouped together.*

*For each measure please include the following information:*

- Brief description of the emissions reduction activity
- Estimated emissions savings of activity
  - *See table below*
- How emissions savings were estimated
  - This might include:
    - § *an emissions audit (e.g. an assessment done as part of a ZEG Fund application);*
    - § *estimates based on the outcomes of similar activities;*
    - § *Data for an emission source that is being removed. (e.g. where several petrol vehicles are being replaced with electric vehicles, it would be suitable to measure the annual emissions from the petrol vehicles towards an emissions reduction).*
- Secondary emissions impacts
  - *Will the implementation of this activity have flow-on effects for emissions elsewhere?*
    - § *For example, if an emissions reduction is being attributed to the end of a building lease, you must consider the emissions from the building replacing it. It is worth considering whether leasing additional electric vehicles will reduce the total number of petrol vehicles in your fleet?*

- *If there are secondary emissions impacts, confirm that these effects are accounted for in the estimated emissions savings.*
- Timeframes
  - *When will the activity commence and be completed?*
  - *How long will annual emissions reductions last? Will this activity permanently cut emissions or will savings degrade over time?*
- Verification plan
  - *What method will be used to verify the emissions savings resulting from this activity?*
- Responsibility for activity
  - *Sustainability Managers may not be directly responsible for the management of the asset. Who is responsible for making procurement or Capital Works decisions about this activity? What role will this person/team have in implementing the activity? Have they been consulted?*
    - § *What procedures will support them to implement the emissions reductions project as planned?*
    - § *Do they have the information they need? Do they understand the basis for the requirement?*
    - § *Are they required to report on emissions reductions to their managers?*
    - § *How are they held accountable for implementing emission reductions?*

### Summary of projected emissions savings

*For the activities identified above please summarise the expected annual emissions savings: i.e. the net reduction in emissions relative to calendar year 2019 emissions, once primary and secondary emissions impacts have been considered. In subsequent years, Directorates will be asked to input verified savings from activities into this table. (For example, a Directorate reporting in 2021-22 would report actual savings in the table below for 2020-21.)*

Activity name	2020-21	2021-22	2022-23	2023-24	2024-25
Activity 1 (tCO <sub>2</sub> -e)	xx				
Activity 2 (tCO <sub>2</sub> -e)	xx				
<b>TOTAL</b>	<b>xx</b>				

### Changes to previous estimates

- For activities identified above, please explain any variation in the emissions reductions identified in previous years.

### Transition to zero emissions vehicles (ZEV)<sup>1</sup>

The ACT Government has made the following commitments under The ACT's Transition to Zero Emissions Vehicles Action Plan:

<sup>1</sup> The ACT Government is working from the following definitions of 'fit for purpose', 'passenger vehicle' and 'fleet vehicle':

<b>Fit for purpose</b>	A fleet vehicle is deemed 'fit for purpose' for replacement with an electric vehicle where there is an available electric vehicle model which can deliver equivalent function and utility for the purpose that the vehicle is used. This will take into consideration any modifications that have been made to the vehicle being replaced and any specific requirements such as equipment loads, or distances travelled. From 2020-21 the responsible area will be required to demonstrate due cause for leasing a passenger vehicle which is not a zero emissions vehicle
<b>Passenger vehicle</b>	A motor vehicle used for the primary purpose of transporting up to nine passengers including the driver. This includes sedans, hatchbacks and station wagons as well as small and medium sports utility vehicles (SUVs). Small vans considered suitable for replacement with electric vehicles are included. Other light commercial

- From 2019-20 at least 50% of all newly leased Government fleet passenger vehicles will be zero emissions vehicles (where fit for purpose); and
- From 2020-21 all newly leased ACT Government passenger fleet vehicles will be zero emissions vehicles (where fit for purpose).

	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Total passenger vehicle leases held on 30 June						
Total ZEV passenger vehicles leases held on 30 June						
Total <i>new</i> leases of passenger vehicles						
Total <i>new</i> leases of ZEV passenger vehicles						
% of <i>newly</i> leased passenger vehicles that are ZEV						

### Summary of non-ZEV vehicle leases

Where the percentage of newly leased passenger vehicles that are ZEV falls below 100% in 2020-21 or in any subsequent year, please explain the shortfall in terms of why non-ZEV vehicles have been deemed not fit for purpose.

### Further detail

#### Energy productivity and other KPIs

[the above section is optional based on Directorate specific KPIs. For example, emissions per student or per hospital bed day.]

#### KPI name

	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Target						
Actual						

	vehicles, such as utility vehicles, are not included at this stage. Replacement of light commercial vehicles with electric vehicles will be considered as models become more widely available.
Fleet vehicle	All Government-leased vehicles including pool and non-pool vehicles. This excludes Executive vehicles where these vehicles are not leased by Government.

## TCCS Feedback on Zero Emissions Government (ZEG) five-year emissions reduction reporting template

TCCS has reviewed the ZEG five-year emissions reduction reporting template (the template) and provides the following high-level comments:

- The template is somewhat rigid in how it is to be completed, particularly for projected emission savings, milestones and KPI's. TCCS has concerns that the template may not fully address all of the issues or allow for rationale or explanation around targets, particularly if emissions are not achievable and why this is the case.
- It is suggested that there is a field not just for year-by-year for future planned actions and targets but an option for breakdown by milestones instead that provides some flexibility in meeting targets and allows for a qualitative assessment of reasons to explain this and also why other outcomes may be preferable (for example, for the Transport Canberra fleet as discussed below).
- There may be impacts from COVID-19 in meeting targets, and an increased reliance on Government capital injections and budget decisions. This needs to be considered in the context of the template.

TCCS also provides the following, more specific comments.

### Emissions reduction activities

Under emissions reduction activities, it is unclear whether these categories are only suggestions or requirements. If they are requirements the following issues need to be considered and resolved:

- Secondary emissions impacts. Will the EPSDD ZEG team assist in emission calculations?
- Timeframes, and the requirement to articulate activity commencement and completion dates. This can be difficult to set and achieve. There would be risk associated with making this information publicly available, particularly as things can change year on year. There may be sensitivities associated with projects not going ahead (e.g. a site is to be put up for sale and so energy conservation measures are no longer financially viable, but this information is non-disclosable?). Providing flexibility in milestones and completing the template may assist with this.
- Timeframes, and requirement to look at whole of life emissions savings. Will the EPSDD ZEG team assist in emission calculations and provide agencies with guidance. How are we going to ensure a consistent approach across Government?
- Verification plan. It is unclear whether we require a measurement and verification plan of IPMVP standard for all capital works projects that have an emission reduction attached (even if not undertaken through ZEG funding?). There is a cost associated with this activity that will need to be included in procurement requirements and budget funding bids.
- Responsibility for activity. This level of detail may not be suitable for a high level, publicly available document. There is also a risk of under-commitment in case an

identified responsible party is not able to deliver on an energy conservation measure, although is identified and held accountable via this document.



### Transport Canberra emissions

TCCS is currently considering how best to transition its Transport Canberra fleet to zero emissions by 2040, including the 2025 target. This includes identification of the point at which all operational, service, environmental and financial objectives can be optimised (both economic and emissions).

It is suggested that consideration is given to broadening the interpretation/application of the target to other measures which demonstrate a similar intent or progress, for instance the net present value of emissions over a transition lifecycle may present opportunity to drive approaches aligned to the intent of the 2025 target but, for a variety of reasons, they are likely to deliver a better outcome overall.

### Alternate fuels

Due to the nature of some TCCS work, particularly in terms of depots, there is a reliance on small to medium trucks, utes and tractors all of which use petroleum type fuel. There are currently no alternatives that TCCS is aware of. Hand equipment will be progressively replaced with battery operated equipment, such as blowers and whipper-snippers.

### Waste emissions

While emissions relating to waste are not captured under the ACT Government emission boundary, emissions from waste forms part of the ACT Climate Change Strategy.

Regarding emissions from waste the following comments are provided:

- The waste management and resource recovery functions of the ACT government are unique in that the emissions associated with landfill gas can have a 30+ year lifespan which suggests a long-term horizon for policy outcomes. A five-year monitoring period may not reflect actions being taken to reduce these emissions. Some current and proposed actions intended to reduce landfill gas emissions include:
  - The addition of a FOGO collection and processing facility to reduce organic material heading to landfill. This will comprehensively reduce the emissions associated with the decay of organic and putrescible material in landfill however there will be a measurable lag between FOGO implementation and any flow-on emission reductions.
  - Regular monitoring of landfill gas emissions is undertaken for fugitive and captured gases, and the inclusion of carbon equivalent calculations may be included in waste audit reports to support policy responses, if required. This

may mean that emissions reporting for waste management would shift from the modelling approach currently used by EPSDD to an identified and measurable empirical approach led by TCCS, which could potentially commence as early as 2021.

- The ACT Waste Management Strategy 2011-2025 had set a target to achieve a carbon neutral waste sector by 2020. It would be good to align targets across strategies, or at least be able to support consistent whole-of-government reporting where there are variations.

### Capital Linen Service

Capital Linen Service (CLS) production requires the use of steam for the ironers/washing machines and gas for the dryers and heating in winter. Steam is generated through two gas fired boilers situated at CLS which also provide steam to other ACT Government properties on site.

Replacement of the current gas boilers with either electrical or bio- fuel option has been investigated. Reviews have also been undertaken that indicate that currently neither option allows for the functionality required by CLS. In respect of the bio-fuel option issues include the inability to shut down boilers when not in use and considerable R&M costs resulting in the project not being cost-effective.

The continued ability to invest in emission reductions has and may continue to be impacted by COVID-19 and the subsequent reduction in cash reserves, which could result in a reliance on increased capital injections from government.



**From:** [Campbell, Trish](#)  
**To:** [Rodén, Helen](#); [Caird, Angela](#)  
**Cc:** [Devine, Emma](#)  
**Subject:** Multiple Documents - "Attachment 1 - Draft Directorate five year emissions reduction projection template 2019-20 to 2024-25" (A25944436), "Attachment 2 - TCCS Feedback" (A25944438)  
**Date:** Monday, 20 July 2020 4:37:00 PM  
**Attachments:** [Attachment 1 - Draft Directorate five year emissions reduction projection template 2019-20 to 2024-25.docx](#)  
[Attachment 2 - TCCS Feedback.docx](#)

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Good afternoon ZEG team,

Please see attached DG endorsed feedback on the five year emission reduction projection template. Apologise for the delay and many thanks to Emma Devine for coordinating this piece of work for TCCS.

Kind regards,

Trish

Trish Campbell | Senior Director, Sustainability, Facilities and Fleet Unit  
Phone: 02 6205 1574 | Email: [trish.campbell@act.gov.au](mailto:trish.campbell@act.gov.au)  
Governance and Ministerial | Chief Operating Officer | Transport Canberra and City Services Directorate | ACT Government  
496 Northbourne Avenue, Dickson ACT 2602 | GPO Box 158 Canberra ACT 2601 | [www.act.gov.au](http://www.act.gov.au)

Connected services for the people of Canberra

Trish Campbell has sent you copies of the following 2 documents from Objective:  
"Attachment 1 - Draft Directorate five year emissions reduction projection template 2019-20 to 2024-25" (A25944436) v4.0  
"Attachment 2 - TCCS Feedback" (A25944438) v6.0

**From:** [Playford, Alison](#)  
**To:** [Selmes, Jenny](#)  
**Subject:** FW: FOR DG CLEARANCE; Ministerial - Final Approval - DUE: 16.11.20 - GAMS - DG2020/6073 - TCCS draft Five-year Emissions Reduction Plan 2019-20 to 2024-25 - DG Brief  
**Date:** Tuesday, 1 December 2020 11:40:41 AM  
**Attachments:** [image001.png](#)  
[image002.png](#)  
[image003.png](#)  
[image004.png](#)

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OFFICIAL

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**From:** Playford, Alison  
**Sent:** Friday, 27 November 2020 1:21 PM  
**To:** Selmes, Jenny <[Jenny.Selmes@act.gov.au](mailto:Jenny.Selmes@act.gov.au)>  
**Cc:** Willson, Helen <[Helen.Willson@act.gov.au](mailto:Helen.Willson@act.gov.au)>  
**Subject:** RE: FOR DG CLEARANCE; Ministerial - Final Approval - DUE: 16.11.20 - GAMS - DG2020/6073 - TCCS draft Five-year Emissions Reduction Plan 2019-20 to 2024-25 - DG Brief

OFFICIAL

approved

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**From:** Selmes, Jenny <[Jenny.Selmes@act.gov.au](mailto:Jenny.Selmes@act.gov.au)>  
**Sent:** Friday, 27 November 2020 11:34 AM  
**To:** Playford, Alison <[Alison.Playford@act.gov.au](mailto:Alison.Playford@act.gov.au)>  
**Cc:** Willson, Helen <[Helen.Willson@act.gov.au](mailto:Helen.Willson@act.gov.au)>  
**Subject:** FOR DG CLEARANCE; Ministerial - Final Approval - DUE: 16.11.20 - GAMS - DG2020/6073 - TCCS draft Five-year Emissions Reduction Plan 2019-20 to 2024-25 - DG Brief

OFFICIAL

**Alison**

**Attached is DG Brief for your clearance.**

**Action history listing approvals and comments from officers.**

**Jenny Selmes** completed task **QA Response** action taken **Send to Final Approver**

Actioned on: 2020-11-27 11:24:59.0

Comment: *"With DG for clearance"*

**Ben McHugh** completed task **Approve Response** action taken **Approve**

Actioned on: 2020-11-26 13:50:14.0

Comment: ""

**Ben McHugh** completed task **Approve Response** action taken **Approve**

Actioned on: 2020-11-26 13:44:31.0

Comment: ""

**Jim Corrigan** completed task **Approve Response** action taken **Approve**

Actioned on: 2020-11-25 16:26:36.0

Comment: ""

**Jessica Sizer** completed task **Error Set Next Approver** action taken **Retry Automation**

Actioned on: 2020-11-24 14:31:27.0

Comment: ""

**Greg Haraldson** completed task **Approve Response** action taken **Approve**

Actioned on: 2020-11-24 11:20:45.0

Comment: *"Nil changes - note electric leaf collection tipper truck mentioned in Attachment B"*

**Shonah Stratton** completed task **Approve Response** action taken **Approve**

Actioned on: 2020-11-24 08:15:23.0

Comment: "Endorsed by TC EGM"

**Craig Jordan** completed task **Approve Response** action taken **Approve**

Actioned on: 2020-11-19 17:48:03.0

Comment: "endorsed"

**Ken Marshall** completed task **Approve Response** action taken **Approve**

Actioned on: 2020-11-17 14:14:12.0

Comment: ""

**Stephen Alegria** completed task **Approve Response** action taken **Approve**

Actioned on: 2020-11-16 13:28:42.0

Comment: ""

**Cherie Hughes** completed task **Approve Response** action taken **Approve**

Actioned on: 2020-11-15 11:31:34.0

Comment: "Approved"

**Lisa Johnson** completed task **Approve Response** action taken **Approve**

Actioned on: 2020-11-12 14:26:34.0

Comment: ""

**Ebony Bakavgas** completed task **Respond** action taken **Send for Approval**

Actioned on: 2020-11-12 13:35:11.0

Comment: ""

**From:** [Objective@act.gov.au](mailto:Objective@act.gov.au) <[Objective@act.gov.au](mailto:Objective@act.gov.au)>

**Sent:** Friday, 27 November 2020 11:25 AM

**To:** Selmes, Jenny <[Jenny.Selmes@act.gov.au](mailto:Jenny.Selmes@act.gov.au)>

**Subject:** Ministerial - Final Approval - DUE: 16.11.20 - GAMS - DG2020/6073 - TCCS draft Five-year Emissions Reduction Plan 2019-20 to 2024-25 - DG Brief

**CAUTION:** This email originated from outside of the ACT Government. Do not click links or open attachments unless you recognise the sender and know the content is safe.

## Final Approval

Hello Jenny Selmes,

Please review the finalised response documents for this request.

If actioning via Email, click on the relevant action button in the body of the Email. Depending on the action button chosen, either a reply email window will open for you to send or the Final Approval task will open in a new browser tab.

When your review is complete, click on the applicable action button and the relevant fields will be displayed.

- Reassign Final Approver: select the user or group to reassign the final electronic approval to.

- Approve: select to approve the response and send it to be collated and dispatched.

Customer logo



OM DATE DUE TO  
DIRECTOR  
GENERAL

16

NOV 2020

PRIORITY

- Return to QA Response: select to return to the QA Response task if re-work or changes are required. Please add comments as to why you have chosen this action.

**BRIEF -  
URGENT**

### Item for Action

[Open Task: GAMS - DG2020/6073 - TCCS draft Five-year Emissions Reduction Plan 2019-20 to 2024-25 - DG Brief](#)

[Open Document Folder: GAMS - DG2020/6073 - TCCS draft Five-year Emissions Reduction Plan 2019-20 to 2024-25 - DG Brief](#)

**OM Action Required String:** DG Brief  
**OM Reference:** DG2020/6073  
**OM Owner String:** Director General  
**OM Topic:** DG Brief  
**OM Division:** Division - COO - Chief Operating Officer  
**OM Branch:** Branch - COO - Governance and Ministerial Services (GAMS)  
**OM Section:**  
**Summary:**

[Open Task List](#)

### Checklist

- Select the appropriate action.
- Complete any mandatory fields (marked with a red asterisk).
- Click the tick to apply your changes.
- Click Continue.
- In the Task Completion pop-up box, enter comments as appropriate.
- Click Submit.

### Available Actions

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### History

**Jenny Selmes** completed task **QA Response** action taken **Send to Final Approver**

Actioned on: 2020-11-27 11:24:59.0

Comment: "With DG for clearance"

**Ben McHugh** completed task **Approve Response** action taken **Approve**

Actioned on: 2020-11-26 13:50:14.0

Comment: ""

**Ben McHugh** completed task **Approve Response** action taken **Approve**

Actioned on: 2020-11-26 13:44:31.0

Comment: ""

**Jim Corrigan** completed task **Approve Response** action taken **Approve**

Actioned on: 2020-11-25 16:26:36.0

Comment: ""

**Jessica Sizer** completed task **Error Set Next Approver** action taken **Retry Automation**

Actioned on: 2020-11-24 14:31:27.0

Comment: ""

**Greg Haraldson** completed task **Approve Response** action taken **Approve**

Actioned on: 2020-11-24 11:20:45.0

Comment: "*Nil changes - note electric leaf collection tipper truck mentioned in Attachment B*"

**Shonah Stratton** completed task **Approve Response** action taken **Approve**

Actioned on: 2020-11-24 08:15:23.0

Comment: "*Endorsed by TC EGM*"

**Craig Jordan** completed task **Approve Response** action taken **Approve**

Actioned on: 2020-11-19 17:48:03.0

Comment: "*endorsed*"

**Ken Marshall** completed task **Approve Response** action taken **Approve**

Actioned on: 2020-11-17 14:14:12.0

Comment: ""

**Stephen Alegria** completed task **Approve Response** action taken **Approve**

Actioned on: 2020-11-16 13:28:42.0

Comment: ""

**Cherie Hughes** completed task **Approve Response** action taken **Approve**

Actioned on: 2020-11-15 11:31:34.0

Comment: "*Approved*"

**Lisa Johnson** completed task **Approve Response** action taken **Approve**

Actioned on: 2020-11-12 14:26:34.0

Comment: ""

**Ebony Bakavgas** completed task **Respond** action taken **Send for Approval**

Actioned on: 2020-11-12 13:35:11.0

Comment: ""

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**To:** Director-General, Transport Canberra and City Services

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**Through:** Deputy Director-General, City Services  
Deputy Director-General, Transport Canberra and Business Services  
Chief Operating Officer, Transport Canberra and City Services  
Executive Group Manager, Transport Canberra  
Executive Group Manager, Territory and Business Services  
Executive Group Manager, City Operations  
Executive Branch Manager, City Presentation

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**From:** Executive Branch Manager, Governance and Ministerial Services

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**Subject:** TCCS draft Five-year Emissions Reduction Plan 2019-20 to 2024-25

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**Critical Date:** 16 November 2020

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**Critical Reason:** The Environment, Planning and Sustainable Development Directorate (EPSDD) require directorate's five-year emissions reduction plans to compile a whole of government plan for Head of Service.

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**Purpose**

To provide (EPSDD) with a draft Five-year Emissions Reduction Plan (ERP) 2019-20 to 2024-25.

**Recommendations**

That you approve the draft TCCS Five-year ERP to be provided to EPSDD's Zero Emissions Government team.

**Agreed / Not Agreed / Please Discuss**

Alison Playford, Director-General..... /...../.....

Director-General's Office Feedback
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## Background

1. The ACT Climate Change Strategy 2019-25 (the Strategy) was released in September 2019 and outlines the next steps for Canberra to reduce emissions by 50–60% (below 1990 levels) by 2025 and establish a pathway for achieving net zero emissions by 2045.
2. In order to demonstrate leadership in emission reduction, the Strategy includes a Zero Emissions Government (ZEG) Framework which replaces the previous Carbon Neutral Government (CNG) Framework.
3. The ZEG Framework includes targets to reduce emissions from government operations by over 33% by 2025 (from 2020 levels) and achieve zero emissions from Government operations by 2040. The baseline has been adjusted to the 2019 calendar year to accommodate for the impacts of COVID-19.
4. EPSDD are seeking draft Emission Reduction Plans from agencies to allow assessment of ACT Governments overall pathway towards the 33% whole of government target.
5. To ensure a consistent approach to setting emission targets and reporting across government, EPSDD drafted a Five-year Emission Reduction Plan 2019-20 to 2024-25 (Five-year ERP) template for consultation in June 2020 and have made some changes following feedback from agencies (refer to [Attachment A](#) for list of Directorate feedback and responses).
6. EPSDD will organise a meeting with agencies following collection and assessment of all directorates draft Five-year ERP's with Director-General approved versions due by the end of November 2020.

## Issues

7. The TCCS Five-year ERP draft is at [Attachment B](#) for your approval to be provided to EPSDD.
8. Budgeting for the emission savings projects can prove challenging and what can be delivered will be impacted on the availability of budget in the future. EPSDD have advised that 'the projects included in agency Five-year ERP's and the projected costs associated with them are indicative only ... and it is expected that the information in the templates will change over time'.
9. To achieve a 33% reduction target by 2025 based on 2019 figures, TCCS would need to reduce annual emissions by 12.9 kt CO<sub>2</sub>-e (26 kT CO<sub>2</sub>-e in 2025 compared with 38 kT CO<sub>2</sub>-e in 2019) which equates to 60% of the total Government reduction (22 kt CO<sub>2</sub>-e).
10. Given that transport fuel counts for 93.1% of the TCCS emissions profile, there is limited opportunity to transition the fleet to zero emission vehicles in the short-term. The draft TCCS ER Plan provides a pathway to achieving 15% emission reductions by 2024-25 through:
  - 5,637 tCO<sub>2</sub>-e savings for the Transport Canberra bus network, providing a 17% reduction in emissions for the bus network and 95.6% contribution to TCCS overall emissions target.
  - 54 tCO<sub>2</sub>-e savings for TCCS Fleet Services including 67% reduction in emissions for passenger fleet, 0.1% reduction in emissions for non-passenger fleet and 0.9% contribution to TCCS overall emissions target.

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- 208 tCO<sub>2</sub> savings from natural gas, contributed to by the move to 480 Northbourne Avenue as well as efficiency upgrades at Tuggeranong Bus Depot, providing a reduction in overall natural gas emissions for TCCS of 7.9% and contribution of 3.5% to TCCS overall emissions.
11. While the target falls short of 33%, it is worthwhile to note that TCCS as the largest contributor to emissions (51.7% of ACT Government emission profile) is demonstrating a strong response to the whole of government target, whilst being constrained by areas with limited opportunities to reduce emissions at this point in time such as the bus network (85.2% of TCCS emission profile), non-passenger vehicles (7.7% of TCCS emission profile) and natural gas (6.7% of TCCS emission profile).
  12. Further emission saving opportunities will continue to be explored, including funding of projects through the Zero Emission Government Loan Fund where relevant. One such example is the gas replacement study, conducted by EPSDD, which may provide options that can be implemented before the interim target end date of 2025 with Capital Linen Services and/or Yarralumla Nursery.
  13. While the ZEG Framework requires Directors-General to report emission reductions and activities undertaken, the accountability of individual directorates for their emissions through Director-General key performance indicators should be carefully considered with TCCS owning such a high proportion of the ZEG target, particularly due to the availability of budget to support the five-year ERP.

### Consultation

14. Key stakeholders across the Directorate were consulted in preparing this brief, including Public Transport Policy and Planning, TCCS Fleet Services and Capital Linen Services.

### Media Implications

15. Progress toward the ZEG targets will be publicly reported each year in the Minister's Annual Report under the *Climate Change and Greenhouse Gas Reduction Act 2010*.
16. ACT Government agency emission reduction targets are published on the ACT Government website. This may result in a greater level of activity around Ministerial responses for TCCS emission profile.

Lisa Johnson  
Executive Branch manager, GAMS  
12 November 2020

Phone: 6205 5187

Action Officer: Trish Campbell  
Director, Sustainability, Facilities and Fleet Unit

Phone: 6205 1574



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Attachment	
Attachment A	WhoG Summary of feedback on Five-year ER template and EPSDD response
Attachment B	TCCS Draft Five-year Emissions Reduction Plan 2019-20 to 2024-25

# Transport Canberra and City Services Directorate

## Emissions Reduction Plan 2019-20 to 2024-25

### Background

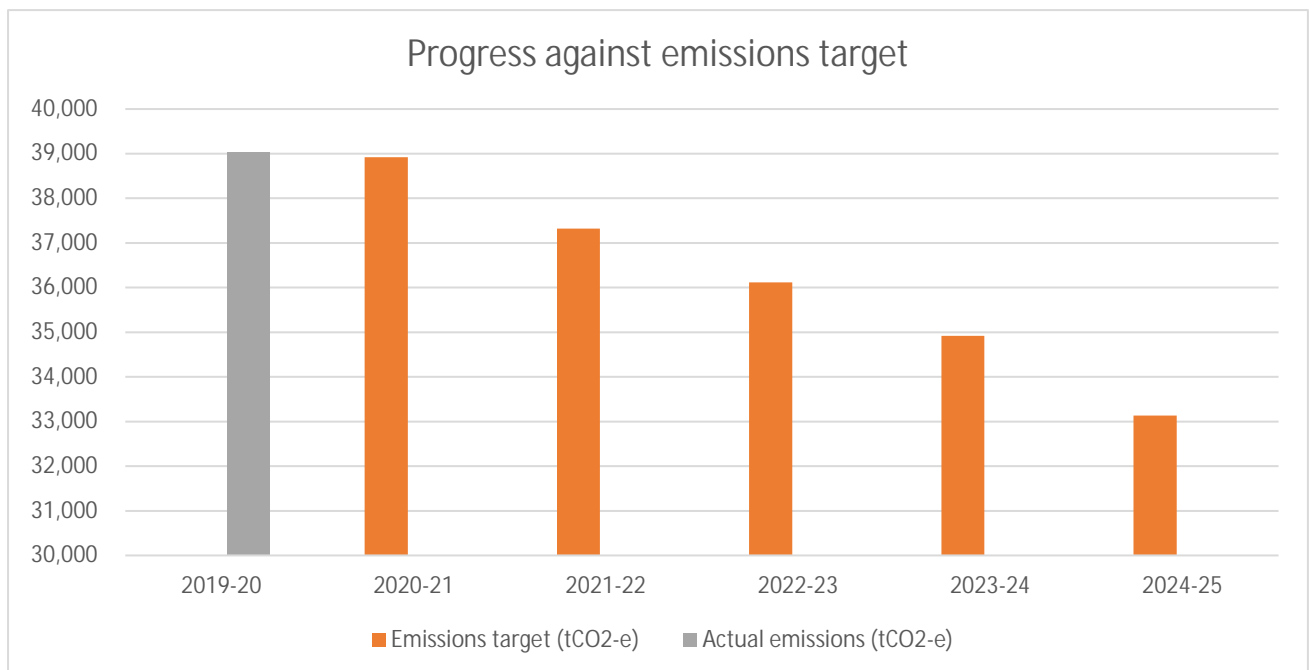
The ACT Government has committed to reducing its greenhouse-gas emissions in its operations to zero by 2040. It has also committed to reduce its emissions by more than 33% over the period 2019-20 to 2020-25.

Given the unusual business conditions caused by the COVID-19 pandemic, data from calendar year 2019 has been used as a proxy for the 2019-20 baseline. All targets are calculated as a percentage change on that base year.

TCCS produced 39,028 tCO<sub>2</sub>-e emissions in 2019, 93.1% of which were associated with transport fuels. Given limited opportunity to transition fleet to zero emission vehicles in the short-term, TCCS have identified a potential of 15.1% reductions in emissions by 2024-25.

### Transport Canberra and City Services emissions target and results

	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Emissions target (tCO <sub>2</sub> -e)						33,130
Actual emissions (tCO <sub>2</sub> -e)	39,029 <sup>1</sup>					
Change in emissions from 2019-20 (%)						



<sup>1</sup> Calendar year 2019 used as a proxy for 2019-20

## Emissions reduction plan to 2024-25

### Background: key emissions sources

Emissions source	tonnes CO <sub>2</sub> -e <sup>2</sup>	% of total emissions
Transport fuels	36,348	93.1%
<i>Bus network (Diesel)</i>	29,078	74.5%
<i>Bus network (CNG)</i>	4,183	10.7%
<i>TCCS Fleet (passenger vehicles)</i>	73	0.2%
<i>TCCS Fleet (non-passenger vehicles)</i>	3,014	7.7%
Natural gas	2,620	6.7%
Refrigerants	60	0.2%

### Emissions reduction activities

#### Transport Canberra bus network

- The Zero-Emission Transition Plan for Transport Canberra outlines the pathway to achieve the ACT Government's ambition of zero-emission public transport system by 2040. The Plan will see the government replace up to 17% of ageing diesel and CNG buses with battery electric buses powered with the ACT's 100% renewable electricity.<sup>3</sup> This will be timed with plans for new bus depots with electric charging infrastructure to support the growing fleet of zero-emission buses. Following an initial short-term lease of 34 replacement diesel buses, Transport Canberra will progress to procurement of 90 zero-emission buses and supporting infrastructure.
- Estimated emissions savings of activity:
  - See table below.
- How emissions savings were estimated:
  - Future fleet replacement profile, [REDACTED] was used to apply an average network tCO<sub>2</sub>-e/pa using existing diesel and CNG data for 2019.
  - Driver training to deliver more efficient driving of buses.
  - Fleet allocation so lower emission vehicles deliver a higher proportion of service kms.
- Timeframes:
  - Procurement of electric vehicles to commence 2021-22 with emissions savings ongoing for the usable life of the vehicle.
- Verification plan:
  - Tracking to be undertaken using actual fuel and emission data for the network.
- Responsibility for activity:
  - Project: DDG, Transport Canberra
  - Reporting: TCCS Sustainability Program.

#### Tuggeranong Bus Depot – Heating, Ventilation and Air Conditioning (HVAC) upgrade and solar PV

- The project proposes conversion of existing heating boilers from gas to electric heat pumps (with a small gas condensing boiler) and a 200kWh solar PV array.

<sup>2</sup> Calendar year 2019 used as a proxy for 2019-20

<sup>3</sup> [REDACTED]

- Estimated emissions savings of activity:
  - See table below.
- How emissions savings were estimated:
  - Robust savings calculations were included in application to the zero-emission Government loan fund and reviewed by an expert panel.
- Timeframes:
  - Project completion anticipated in early 2021.
- Verification plan:
  - To ensure that high quality before and after data for this project is captured, TCCS will apply a formal measurement and verification program to this project, informed by the International Performance Measurement and Verification Protocol.
- Responsibility for activity:
  - Project: TCCS Facilities/DDG, Transport Canberra
  - Reporting: TCCS Sustainability Program.

#### TCCS passenger fleet vehicles

- The ACT's Transition to Zero Emissions Vehicles Action Plan 2018-21 commits all newly leased ACT Government fleet passenger vehicles being zero-emissions (ZEV), where fit for purpose, by 2020-21.
- Estimated emissions savings of activity:
  - See table below.
- How emissions savings were estimated:
  - Future fleet replacement profile was used to estimate emissions savings from transitioning vehicles to zero-emissions, based on 2019 actual data.
- Timeframes:
  - Subject to operational requirements, leasing cycles and industry availability, 39% of passenger vehicles are scheduled to be transitioned to ZEV in 2020-21; a further 25% in 2021-22; and 14% in 2023-24.
- Verification plan:
  - Emissions savings will be measured using average tCO<sub>2</sub>-e/km data for similar diesel fleet compared with km travelled by ZEV.
- Responsibility for activity:
  - Project: TCCS Fleet Services
  - Reporting: TCCS Sustainability Program.

#### TCCS non-passenger fleet vehicles

- 12-month trial of a fully electric litter/leaf collection truck. The trial will provide a comprehensive understanding of features and benefits of EV for heavy commercial vehicles.
- Estimated emissions savings of activity:
  - See table below.
- How emissions savings were estimated:
  - Robust emission savings calculations were included in application to the zero-emission Government loan fund and reviewed by an expert panel.
- Timeframes:
  - Late 2020/early 2021.
- Verification plan:
  - Emissions savings will be measured using average tCO<sub>2</sub>-e/km data for similar diesel fleet compared with km travelled by ZEV.
  - Fit for purpose elements will be established to determine operational suitability, safety and driver usability is assessed.
- Responsibility for activity:
  - Project: TCCS Fleet Services/Executive Branch Manager, City Presentation

- Reporting: TCCS Sustainability Program.

#### TCCS move to 480 Northbourne Avenue (NBA)

- Under the ACT Climate Change Strategy, the ACT Government is leading by example in the transition to a net zero emissions future with 480 NBA being a zero-emissions building with climate-wise design and energy efficient appliances.
- Estimated emissions savings of activity:
  - See Table below.
- How emissions savings were estimated:
  - Gas savings from previous accommodation in 496 Northbourne Avenue base building was used to quantify emissions savings.
- Timeframes:
  - TCCS relocated to 480NBA in June 2020.
- Verification plan:
  - n/a.
- Responsibility for activity:
  - Reporting: TCCS Sustainability Program.

#### Summary of projected emissions savings

Activity name	tCO2-e				
	2020-21	2021-22	2022-23	2023-24	2024-25
Transport Canberra Bus Network <sup>4</sup>		1,454	1,195	1,195	1,793
Tuggeranong Bus Depot – HVAC upgrade	41	123			
TCCS passenger fleet – transition to EV	21	21	8		
Electric leaf litter truck 12-month EV trial	1.8	2.6			
Move to 480NBA	44				
<b>TOTAL</b>	<b>108</b>	<b>2,069</b>	<b>1,203</b>	<b>1,195</b>	<b>1,793</b>

#### Changes to previous estimates

- Placeholder to explain any variation in the emissions reductions identified in previous years.



### Cost of emission reduction activities

Activity name	Total cost (projected or actual) (\$)	Funding bid successful [Yes/partial/pending/no]
Transport Canberra Bus Network – transition to ZEV		
Tuggeranong Bus Depot HVAC/solar upgrade	\$1.3M	Yes
TCCS Fleet Services Electric tipper truck trial	\$0.1M <sup>5</sup>	Yes
TCCS Fleet Services Passenger vehicle transition to ZEV		
<b>TOTAL</b>		

### Transition to zero emissions vehicles (ZEV)<sup>7</sup>

The ACT Government has made the following commitments under The ACT’s Transition to Zero Emissions Vehicles Action Plan:

- From 2019-20 at least 50% of all newly leased Government fleet passenger vehicles will be zero emissions vehicles (where fit for purpose); and
- From 2020-21 all newly leased ACT Government passenger fleet vehicles will be zero emissions vehicles (where fit for purpose).

5 [REDACTED]  
6 [REDACTED]

<sup>7</sup> The ACT Government is working from the following definitions of ‘fit for purpose’, ‘passenger vehicle’ and ‘fleet vehicle’:

<b>Fit for purpose</b>	A fleet vehicle is deemed ‘fit for purpose’ for replacement with an electric vehicle where there is an available electric vehicle model which can deliver equivalent function and utility for the purpose that the vehicle is used. This will take into consideration any modifications that have been made to the vehicle being replaced and any specific requirements such as equipment loads, or distances travelled. From 2020-21 the responsible area will be required to demonstrate due cause for leasing a passenger vehicle which is not a zero emissions vehicle
<b>Passenger vehicle</b>	A motor vehicle used for the primary purpose of transporting up to nine passengers including the driver. This includes sedans, hatchbacks and station wagons as well as small and medium sports utility vehicles (SUVs). Small vans considered suitable for replacement with electric vehicles are included. Other light commercial vehicles, such as utility vehicles, are not included at this stage. Replacement of light commercial vehicles with electric vehicles will be considered as models become more widely available.
<b>Fleet vehicle</b>	All Government-leased vehicles including pool and non-pool vehicles. This excludes Executive vehicles where these vehicles are not leased by Government.

	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Total passenger vehicle leases held on 30 June	36	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>
Total ZEV passenger vehicles leases held on 30 June	9	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>
Total <i>new</i> leases of passenger vehicles	5	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>
Total <i>new</i> leases of ZEV passenger vehicles	3	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>
% of <i>newly</i> leased passenger vehicles that are ZEV	60%	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>

### Summary of non-ZEV vehicle leases

Of the TCCS passenger vehicle fleet, there were two new non-ZEV vehicle leases to replace existing vehicles entered into in 2019-20 due to operational purposes with the vehicles being 8 seaters. No fit for purpose ZEV vehicles were available at this time for 8 seaters.

In addition to TCCS passenger vehicles, TCCS operates a fleet of light commercial vehicles, agricultural equipment, trucks, buses, plant and equipment. The emissions associated with this non-passenger fleet equates to 98% of annual emissions for TCCS Fleet Services (excluding the bus fleet). TCCS are demonstrating leadership with an electric truck trial commencing in 2020-21, as well as keeping abreast of opportunities across all vehicle types as the ZEV industry matures.

### Further detail

#### Other Key Performance Indicators

Growth in the Territory will result in TCCS increasing service delivery and operations resulting in a commensurate increase in energy use. Energy intensity measures track efficiencies where changes in operations or environment occur. This includes the Transport Canberra bus network with energy use per passenger kilometre and Capital Linen Services with energy use against volume of linen sold.

#### Energy intensity measures

	2019-20 <sup>8</sup>	2020-21	2021-22	2022-23	2023-24	2024-25
Transport Canberra bus network - (GJ/100 passenger km)	0.30	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>
Capital Linen Services – Energy/kg linen sold <sup>9</sup>	0.86	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>

<sup>8</sup> Calendar year 2019 used as a proxy for 2019-20

<sup>9</sup> Normalised number. Consumption data provided by CLS and based on a 70% proportional split with Sterilisation Services.

## Preparing for emissions reductions beyond 2025

The Yarralumla Nursery is one of a number of facilities under review for replacement of gas-based heating systems with low emissions alternatives. The gas replacement study, conducted by the Environment, Planning and Sustainable Development Directorate (EPSDD) for TCCS and other Directorates, will recommend options that can be implemented before the interim target end date of 2025.

The Capital Linen Services facility is also being reviewed under the EPSDD gas replacement study. Owing to the nature of operations at CLS and the limited options for alternative steam-raising plant, lower emissions alternatives may not be feasible within the 2025 interim target period.



## Directorate feedback on the draft Emissions Reduction Plan template

Feedback	Directorate	Response	#
Incorporate flexibility of future emission targets into template as we don't know whether projects will get funded	CMTEDD	Noted. Directorates will have to opportunity to update their targets each year, however all changes will need to be justified in the report to the Head of Service and signed off by DGs. Changes to baseline emissions will also be possible in certain circumstances, such as structural changes to Directorates (e.g. split between Canberra Health Services and ACT Health Directorate) or if data from the baseline year needs to be corrected.	1
Could the bottom line on table be actual % change form 2019-20? That way if we reduce by 11% it would show -11%. (If it stays as is, as a result of the new pool we would have to a result with a minus sign.) (Table shows 'actual reduction from 2019-20')	CMTEDD	Agree. Changed in template.	2
<u>Work from home</u> - Should emissions produced while working from home be incorporated into the emissions boundary. Similar treatment to contractors but the omission of contractors astounds me to. If I were not working from home during the day to conduct government business my gas heating would not be producing emissions all day.	EPSDD	Disagree. The ZEG Framework is aimed at reducing emissions from assets over which the ACT Government has operational control. ACT Government does not have operational control of employees' or contractors' households or personal transport. The ZEG Fund for instance couldn't be used to fund upgrades of employees heating systems or personal vehicles. More information on the ACT Government's emissions boundary is available <a href="#">here</a> .	3
<u>DOB refrigerants</u> – DOB has no reliable data/history on refrigerants but is going to rely solely on electric HVAC. How do we produce an estimate of emissions from refrigerants for the baseline period?	EPSDD	Noted. Refrigerant data is now available in the ESP. Directorates should be able to use this for baseline data.	4
<u>Refrigerants in general</u> - adding these, when not reported before, could create an immediate uptick, which is artificial. How reconcile this against requirement to reduce emissions? We could add refrigerant emissions to baseline period, but do we have the data?	EPSDD	See response 4 above. Yes, the refrigerant data can be listed separately for clear comparison.	5

Would need to be careful as will not reconcile with previous reports unless clearly and separately annexed in emission summary.			
<u>1 year baseline</u> - If the point of a 5 year target is to smooth out year on year inconsistencies, why base the five year target on a 1 year baseline? What if a directorate undertook a major project in the baseline period? Should they have to meet and beat that every year thereafter? Would it be more practical to have a five year baseline?	EPSDD	Noted. The ZEG team is happy to consider amendments to the 2019 calendar year baseline in cases where data from this year is inconsistent with business as usual.	6
<u>Activities that do not produce direct emission reductions:</u> There is no space for activities that facilitate future reductions but don't produce immediate, direct reductions. It's getting harder to simply eliminate emissions so becoming important to celebrate successes where they contribute to long term zero emissions goal. E.g. pathway strategies, solar PV/batteries, substation upgrades, asset management plans, EV chargers all improve prospects of emissions reductions in future.	EPSDD	Noted. New section added to template to allow Directorates to refer to longer term emissions reduction measures.	8
<u>Fitness for purpose:</u> Request better recognition of emissions from sources where there is currently no 'fit for purpose'[option?]. Arguably these should be itemised in total emissions and potentially carved out from total emission targets until they can be actioned. E.g. most of EPSDD's Parks and Cons fleet of utes and light commercial vehicles will represent >90% of EPSDD's total emissions once we vacate DPMH (about 680 tonnes of a total 700). So even if we could eliminate all stationary emissions (we can't, they mostly come from COB), our available target reduction would be only 0.6%% per year over 5 years. Although we are making significant progress as a directorate, the document as drafted will headline an extraordinarily modest target. The DG could be penalised for failing to deliver the impossible.	EPSDD	Noted. The template allows for the itemisation of different emissions sources. Vehicles that cannot be replaced with a fit for purpose zero emissions vehicle could be added as a category under the existing template.  It should be noted that emissions reductions measures can still be applied to these vehicles. For example, a more fuel-efficient vehicle could still be introduced as an interim emissions reduction measure.	9
Document looks good. No proposed changes	Health	Noted.	10
Agree with 2019 calendar year baseline	JACS	Noted.	11
Once base year emissions are set there should be no 'allowance for growth' or zero emissions by 2040 would become even less	JACS	Noted.	12

achievable. Reporting needs to highlight funding required to achieve ZEG, not try to make emissions results look better.		A section on the cost of measures has been added to the template.	
Would be good to start charting (in a graph?) the course by Directorates to 2040 and updating each year too. That requires a zero emissions pathway consideration as being undertaken by CMTEDD and JACCS.	JACS	Agree. The ZEG team will be working with Directorates to integrate 2025 targets with progress to zero emissions from government operations by 2040. A section has been added to the template to allow Directorates to reflect how their actions will impact emissions beyond 2025.	13
AMC and heavy vehicle emergency services fleet will fit into the category of emissions sources that cannot be addressed by 2024-25.	JACS	Noted. See response 9 above.	14
ZEG team may need to provide technical advice on verification plan (method used to verify emissions savings resulting from activity).	JACS	Noted. The ZEG team will be available to Directorates to provide advice on the development of Directorate Emissions Reduction targets.	15
Responsibility for activity should accurately reflect both Directorate's role and MPC's accountability in delivering sustainability for all major projects across ACT Gov.	JACS	Noted. Directorates are asked to nominate responsibility for projects in the 'emissions reduction activities' section of the template.	16
'ZEG approved' private consultants and project managers should be reported as being used (or not used) for major projects, so the focus and skills required to deliver sustainability is front of mind throughout infrastructure design and delivery. Happy to clarify and discuss how this might be implemented.	JACS	Noted. The ZEG team can assist Directorates in the development consultancy work to ensure that an appropriately qualified organisation is selected.	17
Template does not show the cost required to achieve the emissions reduction. 'Funding and unfavourable physics' are the primary barriers to decarbonising. If funding bids are rejected, this needs to be clearly stated in the document to make it clear why targets were not reached.	CHS	Noted. The template has been updated to allow Directorates to reflect the cost of projects and whether funding has been secured through budget or other processes, such as ZEG Fund applications. The ZEG team is available to assist Directorates in the development budget business cases.	18
KPIs are not simple to develop or understand as they need to account for facility size, environmental factors and service delivery, and	CHS	Noted.	19

<p>therefore are a -4 parameter regression. Determining the validity of the parameters chosen requires techniques such as principle component analysis (PCA) and is why the NABERS team takes years to develop and change rating tools based on national datasets such that bad parameters can be weeded out by techniques such as PCA.</p>		<p>Reporting against KPIs is at the discretion of Directorates. The ZEG team is available to assist in the development of KPIs should Directorates wish to consider them.</p>	
<p>Baseline year should be FY 2012-2013, as this is the start of the CNG/ZEG process, includes all actions to date in support of CNG, and shows expenditure to date and effect on energy and emissions intensity to clearly demonstrate the technical and financial challenge.</p>	<p>CHS</p>	<p>See response 6.</p>	<p>20</p>
<p>If a more recent year is to be used it should in our opinion be a financial year. Emissions profiles don't change that quickly for any non trivial portfolio over 6 months and only capital works already underway will change the emissions of the subsequent FY so can be reasonably estimated. The currently completed FY is not a good baseline due to the radically different year COVID created, thereby failing the requirements for being a representative year.</p>	<p>CHS</p>	<p>Noted. Data from the 2019 calendar year is considered the closest proxy for business as usual 2019-20 emissions. See response 6 for further details.</p>	<p>21</p>
<p>Various tracked changes in the template:</p> <ol style="list-style-type: none"> <li>1. Change template heading to Emissions Reduction Plan</li> <li>2. Change baseline to 2018-9</li> <li>3. Insert sentence under ABCD emissions target and results <i>Provide an overview of the progress to achieving the interim targets and the need for any adjustments to interim targets required. Details any successes and provide commentary on under achievement.</i></li> <li>4. Provided an alternative table to 'Summary of projected emissions savings which:             <ol style="list-style-type: none"> <li>a. Shows emissions reduction and cost per tCO<sub>2</sub>-e, to better inform directorates of cheaper alternatives.</li> <li>b. Header row says 'description of emissions reduction activity', rather than activity name.</li> </ol> </li> <li>5. Additional rows in ZEV table show fit for purpose passenger vehicle leases and ZEV charging stations held by directorate.</li> </ol>	<p>CHS</p>	<ol style="list-style-type: none"> <li>1. Agree.</li> <li>2. See response 21.</li> <li>3. Agreed.</li> <li>4. A. Noted. Changes have been made to the template to reflect the cost of action. B. Agree. Updated in template.</li> <li>5. Noted. Directorates are free to provide information on charging infrastructure but this won't be mandatory to try and keep the reporting requirements manageable.</li> </ol>	<p>22</p>

<p>1. Under Emissions reduction activities, are these categories only suggestions or requirements? If they are requirements –</p> <p>1.1 Secondary emissions impacts. Will EPSDD ZEG team assist in emission calculations?</p> <p>1.2 Timeframes – requirement to articulate activity commencement and completion dates. This can be difficult to set and achieve. I would suggest that this not be made publicly available. What about if there are sensitivities with projects not going ahead (e.g. a site is to be put up for sale and so energy conservation measures are no longer financially viable, but this information is non disclosable?)</p> <p>1.3 Timeframes – requirement to look at whole of life emissions savings. Will EPSDD ZEG team assist in emission calculations and provide agencies with guidance. How are we going to ensure a consistent approach?</p> <p>1.4 Verification plan – do we require a measurement and verification plan – of IPMVP standard for all capital works projects that have an emission reduction attached (even if not undertaken through ZEG funding?). There is a cost associated with this activity that will need to be included in procurement requirements and budget funding bids.</p> <p>1.5 Responsibility for activity – see point 1.4 above.</p>	<p>TCCS</p>	<p>The categories listed under ‘Emissions reduction activities’ should be included in Directorate targets.</p> <p>1.1 ZEG team can assist with these calculations</p> <p>1.2 Noted. The Head of Service will be consulted on whether reporting will be made public. Previously all Directorate reporting was public so it is reasonable to assume this will continue. Directorates are asked to highlight any information that may be sensitive. In cases where data is sensitive it may be necessary to amend documents before publication.</p> <p>1.3 The whole of life emissions savings should be considered in the development of measures. The ZEG team will be available to assist on the projection of emissions savings.</p> <p>1.4 The level of monitoring and verification will be dictated by the complexity of the project. Directorates encouraged to discuss their proposed verification method with the ZEG team prior to submission of targets.</p> <p>1.5 The ‘responsibility’ category has been included to ensure that project managers and financial delegates are identified and engaged in the development of emissions reduction measures.</p>	<p>23</p>
<p>Timeframes – requirement to articulate activity commencement and completion dates. This can be difficult to set and achieve. I would suggest that this not be made publicly available. What about if there are sensitivities with projects not going ahead (e.g. a site is to be put up for sale and so energy conservation measures are no longer financially viable, but this information is non disclosable?)</p>	<p>TCCS</p>	<p>Noted. Previously all Directorate reporting was public. It is reasonable to assume this will continue. In cases where data may be sensitive, please consult with the ZEG team.</p>	<p>24</p>
<p>Reduction of emissions from waste not in ZEG boundary but could be reported on in the template.</p>	<p>TCCS (ACT No Waste)</p>	<p>Noted. Waste emissions can be optionally reported on in the template. It is requested that Directorates outline</p>	<p>25</p>

		what method is being used to measure emissions from waste.	
Due to the nature of our work we rely on small to medium trucks, utes and tractors all of which use petroleum type fuels there are currently no alternatives that I am aware off. Hand equipment as we replace will be replaced with battery operated equipment i.e. blowers and whipper-snippers. This does not apply to everything i.e. specialised turf	TCCS (City presentation)	Noted. See response 9.	26

**Additional comments**

The following comments were not specifically about the template but relate to the broader ZEG Framework..

Feedback	Directorate	Response
[Redacted content]		
<p><u>Bulk fuel</u> – There is no automatic means of uploading emissions data from bulk fuel into the ESP. This is a recipe for reporting error. Suggestions</p> <ol style="list-style-type: none"> <li>1) Have an itemised section in the 5 year template for bulk fuel as a trigger to include it (but JACS and EPSDD probably only ones to use); or</li> <li>2) Update the ESP to include an API for automatic upload of bulk fuel data.</li> </ol> <p>There is space in the template for fuel emissions but it’s not clear whether the ESP team will continue to provide the first cut of emissions data. Regardless, bulk fuel could be easily omitted in future as ESP team to not currently receive notification of bulk fuel invoices. Potential impact of omission of bulk fuel by EPSDD is considerable – bulk fuel is by far the largest emissions source.</p>	EPSDD	For further discussion with EPSDD.
<ol style="list-style-type: none"> <li>1. What is the backup plan should TCCS, EPSDD and HD not be able to achieve a reduction of 33% reduction by 2024-25? This holds a reputation risk for ACT Government.</li> </ol>	TCCS (COO)	<ol style="list-style-type: none"> <li>1. Directorates need to assess the options and costs in detail before we rule out meeting the target. If cost is the key factor, then this argument can be pursued through the budget process. Government</li> </ol>

<p>2. As upgrades are budget dependent – what support is provided by Treasury to enable DG’s to sign off on a 2024-25 emissions target (therefore committing to upgrades that may not be achievable if budget does not allow).</p>		<p>needs to be presented with all options before we rule out achieving this target.</p> <p>2. As above. We can’t commit Treasury to spending without well evidenced business cases.</p>
<p>TC understands the existing 2025 targets is to drive initiatives in the short term in order to meet the 2040 Zero Emission Government (ZEG) target.</p> <p>TC is currently considering how best to transition its fleet to zero emission by 2040 including the 2025 target.</p> <p>These include identification of the point at which all operational, service, environmental and financial objectives can be optimised (both economic and emissions).</p> <p>TC suggest that consideration of broadening the interpretation/application of the target to other measures which demonstrate the similar intent or progress, for instance, the net present value of emissions over a transition lifecycle, may present opportunity to drive approaches aligned to the intent of the 2025 target but, for a variety of reasons, they are likely to deliver a better outcome overall.</p>	<p>TCCS (TC)</p>	<p>For discussion.</p> <p>This approach might be worth pursuing with TCCS but trying to account for the impact of future actions (beyond 2025) will be difficult.</p>
<p>The waste management and resource recovery functions of the ACT government are unique in that the emissions associated with landfill gas can have a 30+ year lifespan which suggests a long time horizon for policy outcomes, a 5 year monitoring period may not reflect actions being taken to reduce these emissions. Some current and proposed actions intended to reduce landfill gas emissions included:</p> <ul style="list-style-type: none"> <li>• The addition of a FOGO collection and processing facility to reduce organic material heading to landfill. This will comprehensively reduce the emissions associated with the decay of organic and putrescible material in landfill however there will be a measurable lag between FOGO implementation and any flow-on emission reductions.</li> <li>• Regular monitoring of landfill gas emissions is undertaken for fugitive and captured gases, and the inclusion of carbon equivalent calculations</li> </ul>	<p>TCCS (ACT No waste)</p>	<p>For discussion.</p> <p>Emissions from waste are accounted against the whole community rather than being directly attributed to TCCS. Emissions from waste are outside of the ACT Government’s emissions boundary.</p> <p>EPSDD can work with TCCS to look at options for accounting for emissions from waste.</p>



<p>may be included in waste audit reports to support policy responses, if required. This may mean that emissions reporting for waste management would shift from the modelling approach currently used by EPSDD to an identified and measurable empirical approach led by TCCS, which could potentially commence as early as 2021.</p>		
<p>The ACT Waste Management Strategy 2011-2025 had set a target to achieve a carbon neutral waste sector by 2020. ACT NoWaste would seek to align targets across strategies, or at least be able to support consistent whole-of-government reporting where there are variations.</p>	<p>TCCS (ACT No Waste)</p>	<p>Noted.          For further discussion with ACT No Waste.</p>

Objective ref: A28153210

UNCLASSIFIED

**To:** Alison Playford, Director-General, Transport Canberra and City Services

---

**Through:** Cherie Hughes, Chief Operating Officer  
Judith Sturman, Executive Group Manager, Transport Operations

---

**From:** Lisa Johnson, Executive Branch Manager, Governance and Ministerial Services

---

**Subject:** TCCS Emissions Reduction Plan 2019-20 to 2024-25

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**Critical Date:** 26 February 2021

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**Critical Reason:** The Environment, Planning and Sustainable Development Directorate (EPSDD) require directorate's five-year emissions reduction plans to compile a whole of government plan for the Head of Service.

---

**Purpose**

To provide EPSDD with a TCCS five-year emissions reduction plan.

**Recommendations**

That you:

1. **Approve** the TCCS Emissions Reduction Plan 2019-20 to 2024-25 at Attachment B; and

**Agreed / Not Agreed / Please Discuss**

2. **Agree** to the plan being provided to the EPSDD Zero Emissions Government team.

**Agreed / Not Agreed / Please Discuss**

Alison Playford, Director-General...../...../.....

Director-General's Office Feedback

UNCLASSIFIED

## Background

1. In November 2020 you approved the TCCS draft Five-Year Emissions Reduction Plan (ERP) 2019-20 to 2024-25 ([Attachment A](#)).

## Issues

2. EPSDD is now seeking finalised plans from agencies to combine into a whole of government target.
3. Following feedback on the draft from EPSDD, a short explanation around the need to replace the CNG buses during the procurement of 90 zero emissions buses was added (see yellow highlight on page 1). Some other minor editorial changes have been made from the draft you endorsed in November 2020.
4. The five-year TCCS ERP is at [Attachment B](#) for your approval.

## Consultation

5. The Senior Director, Public Transport Policy and Planning was consulted in the additional comment made on the CNG buses.

## Media Implications

6. Progress toward the Zero Emission Government targets will be publicly reported each year in the Minister's Annual Report under the *Climate Change and Greenhouse Gas Reduction Act 2010*.
7. ACT Government agency emission reduction targets are published on the ACT Government website. This may result in a greater level of activity around Ministerial responses for TCCS emission profile.

Lisa Johnson  
EBM, Governance and Ministerial Services  
16 February 2021

Phone: 6205 8316

Action Officer: Trish Campbell  
Director, Sustainability, Facilities and Fleet Unit

Phone: 6205 1574

Attachment	
Attachment A	TCCS draft plan (Nov 2020)
Attachment B	TCCS Emissions Reduction Plan 2019-20 to 2024-25 (final)

**From:** [Bakavgas, Ebony](#)  
**To:** [Campbell, Trish](#); [Hart, Rick \(EPD\)](#)  
**Subject:** FW: DG CLEARANCE; Ministerial - Final Approval - DUE: 16.11.20 - GAMS - DG2020/6073 - TCCS draft Five-year Emissions Reduction Plan 2019-20 to 2024-25 - DG Brief  
**Date:** Tuesday, 1 December 2020 12:15:06 PM  
**Attachments:** [image001.png](#)  
[image002.png](#)  
[image003.png](#)  
[image004.png](#)  
[GAMS - DG2020\\_6073 - TCCS draft Five-year Emissions Reduction Plan 2019-20 to 2024-25 - DG Brief.obr](#)  
[image005.jpg](#)

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OFFICIAL

FYI

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**From:** Selmes, Jenny <Jenny.Selmes@act.gov.au>  
**Sent:** Tuesday, 1 December 2020 12:01 PM  
**To:** McHugh, Ben <Ben.McHugh@act.gov.au>; Corrigan, Jim <Jim.Corrigan@act.gov.au>; Sturman, Judith <Judith.Sturman@act.gov.au>; Jordan, Craig <Craig.Jordan@act.gov.au>; Marshall, Ken <Ken.Marshall@act.gov.au>; Hughes, Cherie <Cherie.Hughes@act.gov.au>; Johnson, Lisa <Lisa.Johnson@act.gov.au>  
**Cc:** Gambale, Imogen <Imogen.Gambale@act.gov.au>; Neal, Colleen <Colleen.Neal@act.gov.au>; Stratton, Shonah <Shonah.Stratton@act.gov.au>; Kelly, Shane <Shane.Kelly@act.gov.au>; Darmody, Billie <Billie.Darmody@act.gov.au>; Bakavgas, Ebony <Ebony.Bakavgas@act.gov.au>; Willson, Helen <Helen.Willson@act.gov.au>  
**Subject:** DG CLEARANCE; Ministerial - Final Approval - DUE: 16.11.20 - GAMS - DG2020/6073 - TCCS draft Five-year Emissions Reduction Plan 2019-20 to 2024-25 - DG Brief

OFFICIAL

Good afternoon

Confirming that the Director-General has approved this brief.

Please note that the brief has not been signed, but the below notification from objective should be kept as a record of her approval.

Regards

Jen

#### Jen Selmes

Executive Assistant to Alison Playford | Director-General  
Transport Canberra and City Services Directorate (TCCS) | ACT Government  
☎Tel: (02) 6207 8002 | Mob: [REDACTED] | ✉E-mail: [jenny.selmes@act.gov.au](mailto:jenny.selmes@act.gov.au)

---

A close up of a logo Description automatically generated



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**From:** Playford, Alison  
**Sent:** Friday, 27 November 2020 1:21 PM  
**To:** Selmes, Jenny <[Jenny.Selmes@act.gov.au](mailto:Jenny.Selmes@act.gov.au)>  
**Cc:** Willson, Helen <[Helen.Willson@act.gov.au](mailto:Helen.Willson@act.gov.au)>  
**Subject:** RE: FOR DG CLEARANCE; Ministerial - Final Approval - DUE: 16.11.20 - GAMS - DG2020/6073 - TCCS draft Five-year

Emissions Reduction Plan 2019-20 to 2024-25 - DG Brief

OFFICIAL

approved

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**From:** Selmes, Jenny <[Jenny.Selmes@act.gov.au](mailto:Jenny.Selmes@act.gov.au)>  
**Sent:** Friday, 27 November 2020 11:34 AM  
**To:** Playford, Alison <[Alison.Playford@act.gov.au](mailto:Alison.Playford@act.gov.au)>  
**Cc:** Willson, Helen <[Helen.Willson@act.gov.au](mailto:Helen.Willson@act.gov.au)>  
**Subject:** FOR DG CLEARANCE; Ministerial - Final Approval - DUE: 16.11.20 - GAMS - DG2020/6073 - TCCS draft Five-year Emissions Reduction Plan 2019-20 to 2024-25 - DG Brief

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**Alison**

**Attached is DG Brief for your clearance.**

**Action history listing approvals and comments from officers.**

**Jenny Selmes** completed task **QA Response** action taken **Send to Final Approver**

Actioned on: 2020-11-27 11:24:59.0

Comment: *"With DG for clearance"*

**Ben McHugh** completed task **Approve Response** action taken **Approve**

Actioned on: 2020-11-26 13:50:14.0

Comment: ""

**Ben McHugh** completed task **Approve Response** action taken **Approve**

Actioned on: 2020-11-26 13:44:31.0

Comment: ""

**Jim Corrigan** completed task **Approve Response** action taken **Approve**

Actioned on: 2020-11-25 16:26:36.0

Comment: ""

**Jessica Sizer** completed task **Error Set Next Approver** action taken **Retry Automation**

Actioned on: 2020-11-24 14:31:27.0

Comment: ""

**Greg Haraldson** completed task **Approve Response** action taken **Approve**

Actioned on: 2020-11-24 11:20:45.0

Comment: *"Nil changes - note electric leaf collection tipper truck mentioned in Attachment B"*

**Shonah Stratton** completed task **Approve Response** action taken **Approve**

Actioned on: 2020-11-24 08:15:23.0

Comment: *"Endorsed by TC EGM"*

**Craig Jordan** completed task **Approve Response** action taken **Approve**

Actioned on: 2020-11-19 17:48:03.0

Comment: *"endorsed"*

**Ken Marshall** completed task **Approve Response** action taken **Approve**

Actioned on: 2020-11-17 14:14:12.0

Comment: ""

**Stephen Alegria** completed task **Approve Response** action taken **Approve**

Actioned on: 2020-11-16 13:28:42.0

Comment: ""

**Cherie Hughes** completed task **Approve Response** action taken **Approve**

Actioned on: 2020-11-15 11:31:34.0

Comment: "Approved"

**Lisa Johnson** completed task **Approve Response** action taken **Approve**

Actioned on: 2020-11-12 14:26:34.0

Comment: ""

**Ebony Bakavgas** completed task **Respond** action taken **Send for Approval**

Actioned on: 2020-11-12 13:35:11.0

Comment: ""

**From:** [Objective@act.gov.au](mailto:Objective@act.gov.au) <[Objective@act.gov.au](mailto:Objective@act.gov.au)>

**Sent:** Friday, 27 November 2020 11:25 AM

**To:** Selmes, Jenny <[Jenny.Selmes@act.gov.au](mailto:Jenny.Selmes@act.gov.au)>

**Subject:** Ministerial - Final Approval - DUE: 16.11.20 - GAMS - DG2020/6073 - TCCS draft Five-year Emissions Reduction Plan 2019-20 to 2024-25 - DG Brief

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## Final Approval

Customer logo



### Hello Jenny Selmes,

Please review the finalised response documents for this request.

If actioning via Email, click on the relevant action button in the body of the Email. Depending on the action button chosen, either a reply email window will open for you to send or the Final Approval task will open in a new browser tab.

When your review is complete, click on the applicable action button and the relevant fields will be displayed.

- Reassign Final Approver: select the user or group to reassign the final electronic approval to.

- Approve: select to approve the response and send it to be collated and dispatched.

- Return to QA Response: select to return to the QA Response task if re-work or changes are required. Please add comments as to why you have chosen this action.



### Item for Action

[Open Task: GAMS - DG2020/6073 - TCCS draft Five-year Emissions Reduction Plan 2019-20 to 2024-25 - DG Brief](#)

[Open Document Folder: GAMS - DG2020/6073 - TCCS draft Five-year Emissions Reduction Plan 2019-20 to 2024-25 - DG Brief](#)

**OM Action Required String:** DG Brief  
**OM Reference:** DG2020/6073  
**OM Owner String:** Director General  
**OM Topic:** DG Brief  
**OM Division:** Division - COO - Chief Operating Officer  
**OM Branch:** Branch - COO - Governance and Ministerial Services (GAMS)  
**OM Section:**  
**Summary:**

OM DATE DUE TO  
DIRECTOR  
GENERAL

16

NOV 2020

PRIORITY

BRIEF -  
URGENT

[Open Task List](#)

### Checklist

- Select the appropriate action.
- Complete any mandatory fields (marked with a red asterisk).
- Click the tick to apply your changes.
- Click Continue.
- In the Task Completion pop-up box, enter comments as appropriate.
- Click Submit.

### Available Actions



### History

**Jenny Selmes** completed task **QA Response** action taken **Send to Final Approver**

Actioned on: 2020-11-27 11:24:59.0

Comment: *"With DG for clearance"*

**Ben McHugh** completed task **Approve Response** action taken **Approve**

Actioned on: 2020-11-26 13:50:14.0

Comment: ""

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Comment: ""

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Actioned on: 2020-11-25 16:26:36.0

Comment: ""

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Comment: ""

**Ebony Bakavgas** completed task **Respond** action taken **Send for Approval**

Actioned on: 2020-11-12 13:35:11.0

Comment: ""

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# Transport Canberra and City Services Directorate

## Emissions Reduction Plan 2019-20 to 2024-25

### Background

The ACT Government has committed to reducing its greenhouse-gas emissions in its operations to zero by 2040. It has also committed to reduce its emissions by more than 33% over the period 2019-20 to 2020-25.

Given the unusual business conditions caused by the COVID-19 pandemic, data from calendar year 2019 has been used as a proxy for the 2019-20 baseline. All targets are calculated as a percentage change on that base year.

TCCS produced 39,028 tCO<sub>2</sub>-e emissions in 2019, 93.1% of which were associated with transport fuels. Emissions from the public transport sector represented over half of all ACT Government emissions and efforts are underway to increase efficiency of the Transport Canberra bus network. The Zero-Emission Transition Plan for Transport Canberra was released in 2020 and outlines the pathway to achieve the ACT Government's ambition of zero-emission public transport system by 2040. The Plan will see the government replace up to 17% of ageing diesel and CNG buses with battery electric buses powered with the ACT's 100% renewable electricity in line with the existing fleet retirement profile.<sup>1</sup> This will be timed with plans for new bus depots with electric charging infrastructure to support the growing fleet of zero-emission buses. Following an initial short-term lease of 34 replacement diesel buses, Transport Canberra will progress to procurement of 90 zero-emission buses and supporting infrastructure.

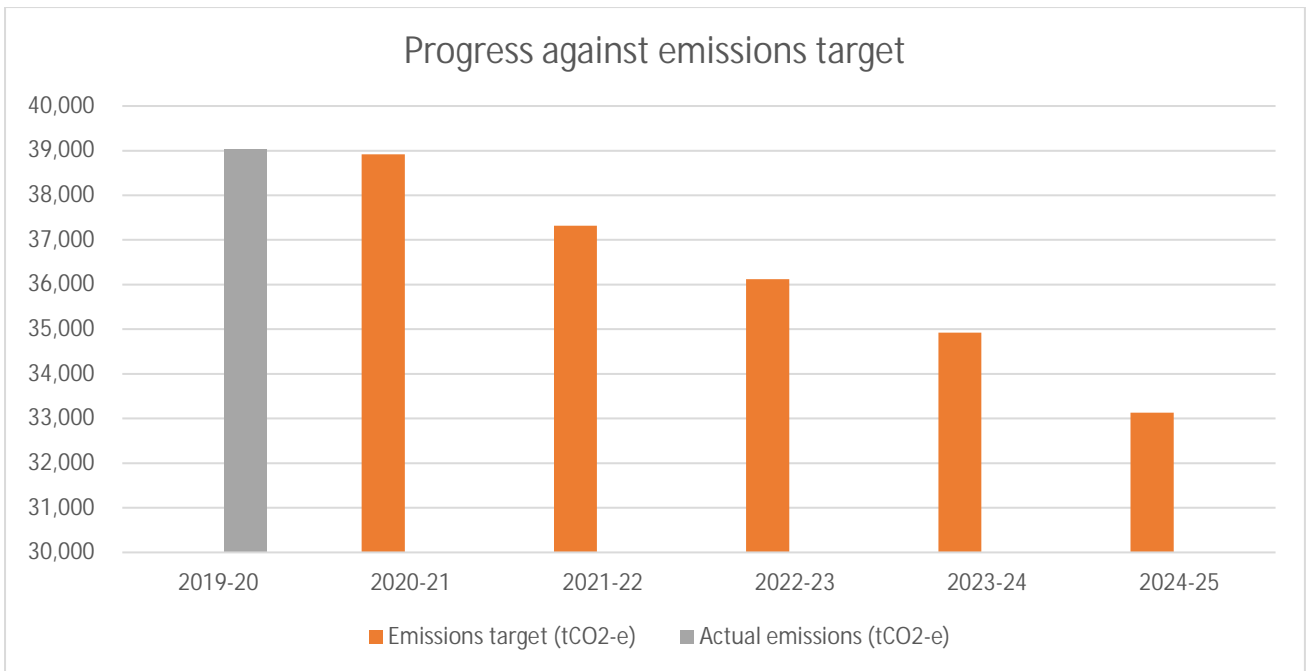
Given limited opportunity to transition fleet to zero emission vehicles in the short-term, TCCS have identified a potential of 15.1% reductions in emissions by 2024-25.

**Table 1: Transport Canberra and City Services emissions target and results**

	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Emissions target (tCO <sub>2</sub> -e)						33,130
Actual emissions (tCO <sub>2</sub> -e)	39,029 <sup>2</sup>					
Change in emissions from 2019-20 (%)						

<sup>1</sup> [REDACTED]

<sup>2</sup> Calendar year 2019 used as a proxy for 2019-20



## Emissions reduction plan to 2024-25

Table 2: Key emissions sources

Emissions source	tonnes CO <sub>2</sub> -e <sup>3</sup>	% of total emissions
Transport fuels	36,348	93.1%
<i>Bus network (Diesel)</i>	29,078	74.5%
<i>Bus network (CNG)</i>	4,183	10.7%
<i>TCCS Fleet (passenger vehicles)</i>	73	0.2%
<i>TCCS Fleet (non-passenger vehicles)</i>	3,014	7.7%
Natural gas	2,620	6.7%
Refrigerants	60	0.2%

## Emissions reduction activities

### Transport Canberra bus network

- The [Zero-Emission Transition Plan for Transport Canberra](#) outlines the pathway to achieve the ACT Government's ambition of zero-emission public transport system by 2040.
- Estimated emissions savings of activity:
  - See table below.
- How emissions savings were estimated:
  - Future fleet replacement profile, [REDACTED] was used to apply an average network tCO<sub>2</sub>-e/pa using existing diesel and CNG data for 2019.
  - Driver training to deliver more efficient driving of buses.

<sup>3</sup> Calendar year 2019 used as a proxy for 2019-20

- Fleet allocation so lower emission vehicles deliver a higher proportion of service kms.
- Timeframes:
  - Procurement of electric vehicles to commence 2021-22 with emissions savings ongoing for the usable life of the vehicle.
- Verification plan:
  - Tracking to be undertaken using actual fuel and emission data for the network.
- Responsibility for activity:
  - Project: DDG, Transport Canberra
  - Reporting: TCCS Sustainability Program.

#### Tuggeranong Bus Depot – Heating, Ventilation and Air Conditioning (HVAC) upgrade and solar PV

- The project proposes conversion of existing heating boilers from gas to electric heat pumps (with a small gas condensing boiler) and a 200kWh solar PV array.
- Estimated emissions savings of activity:
  - See table below.
- How emissions savings were estimated:
  - Robust savings calculations were included in application to the zero-emission Government loan fund and reviewed by an expert panel.
- Timeframes:
  - Project completion anticipated in early 2021.
- Verification plan:
  - To ensure that high quality before and after data for this project is captured, TCCS will apply a formal measurement and verification program to this project, informed by the International Performance Measurement and Verification Protocol.
- Responsibility for activity:
  - Project: TCCS Facilities/DDG, Transport Canberra
  - Reporting: TCCS Sustainability Program.

#### TCCS passenger fleet vehicles

- The ACT's Transition to Zero Emissions Vehicles Action Plan 2018-21 commits all newly leased ACT Government fleet passenger vehicles being zero-emissions (ZEV), where fit for purpose, by 2020-21.
- Estimated emissions savings of activity:
  - See table below.
- How emissions savings were estimated:
  - Future fleet replacement profile was used to estimate emissions savings from transitioning vehicles to zero-emissions, based on 2019 actual data.
- Timeframes:
  - Subject to operational requirements, leasing cycles and industry availability, 39% of passenger vehicles are scheduled to be transitioned to ZEV in 2020-21; a further 25% in 2021-22; and 14% in 2023-24.
- Verification plan:
  - Emissions savings will be measured using average tCO<sub>2</sub>-e/km data for similar diesel fleet compared with km travelled by ZEV.
- Responsibility for activity:
  - Project: TCCS Fleet Services
  - Reporting: TCCS Sustainability Program.

#### TCCS non-passenger fleet vehicles

- 12-month trial of a fully electric litter/leaf collection truck. The trial will provide a comprehensive understanding of features and benefits of EV for heavy commercial vehicles.

- Estimated emissions savings of activity:
  - See table below.
- How emissions savings were estimated:
  - Robust emission savings calculations were included in application to the zero-emission Government loan fund and reviewed by an expert panel.
- Timeframes:
  - Late 2020/early 2021.
- Verification plan:
  - Emissions savings will be measured using average tCO<sub>2</sub>-e/km data for similar diesel fleet compared with km travelled by ZEV.
  - Fit for purpose elements will be established to determine operational suitability, safety and driver usability is assessed.
- Responsibility for activity:
  - Project: TCCS Fleet Services/Executive Branch Manager, City Presentation
  - Reporting: TCCS Sustainability Program.

TCCS move to 480 Northbourne Avenue (NBA)

- Under the ACT Climate Change Strategy, the ACT Government is leading by example in the transition to a net zero emissions future with 480 NBA being a zero-emissions building with climate-wise design and energy efficient appliances.
- Estimated emissions savings of activity:
  - See Table below.
- How emissions savings were estimated:
  - Gas savings from previous accommodation in 496 Northbourne Avenue base building was used to quantify emissions savings.
- Timeframes:
  - TCCS relocated to 480NBA in June 2020.
- Verification plan:
  - n/a.
- Responsibility for activity:
  - Reporting: TCCS Sustainability Program.

**Table 3: Summary of projected emissions savings**

Activity name	tCO <sub>2</sub> -e				
	2020-21	2021-22	2022-23	2023-24	2024-25
Transport Canberra Bus Network <sup>4</sup>		1,454	1,195	1,195	1,793
Tuggeranong Bus Depot – HVAC upgrade	41	123			
TCCS passenger fleet – transition to EV	21	21	8		
Electric leaf litter truck 12-month EV trial	1.8	2.6			
Move to 480NBA	44				
<b>TOTAL</b>	<b>108</b>	<b>2,069</b>	<b>1,203</b>	<b>1,195</b>	<b>1,793</b>

<sup>4</sup> [Redacted]

### Changes to previous estimates

- Placeholder to explain any variation in the emissions reductions identified in previous years.

Table 4: Cost of emission reduction activities

Activity name	Total cost (projected or actual) (\$)	Funding bid successful [Yes/partial/pending/no]
Transport Canberra Bus Network – transition to ZEV		
Tuggeranong Bus Depot HVAC/solar upgrade	\$1.3M	Yes
TCCS Fleet Services Electric tipper truck trial	\$0.1M <sup>5</sup>	Yes
TCCS Fleet Services Passenger vehicle transition to ZEV		
<b>TOTAL</b>		

### Transition to zero emissions vehicles (ZEV)<sup>7</sup>

The ACT Government has made the following commitments under The ACT’s Transition to Zero Emissions Vehicles Action Plan:

- From 2019-20 at least 50% of all newly leased Government fleet passenger vehicles will be zero emissions vehicles (where fit for purpose); and
- From 2020-21 all newly leased ACT Government passenger fleet vehicles will be zero emissions vehicles (where fit for purpose).

Table 5: TCCS Passenger vehicle transition to ZEV

5 [REDACTED]  
6 [REDACTED]

<sup>7</sup> The ACT Government is working from the following definitions of ‘fit for purpose’, ‘passenger vehicle’ and ‘fleet vehicle’:

<b>Fit for purpose</b>	A fleet vehicle is deemed ‘fit for purpose’ for replacement with an electric vehicle where there is an available electric vehicle model which can deliver equivalent function and utility for the purpose that the vehicle is used. This will take into consideration any modifications that have been made to the vehicle being replaced and any specific requirements such as equipment loads, or distances travelled. From 2020-21 the responsible area will be required to demonstrate due cause for leasing a passenger vehicle which is not a zero emissions vehicle
<b>Passenger vehicle</b>	A motor vehicle used for the primary purpose of transporting up to nine passengers including the driver. This includes sedans, hatchbacks and station wagons as well as small and medium sports utility vehicles (SUVs). Small vans considered suitable for replacement with electric vehicles are included. Other light commercial vehicles, such as utility vehicles, are not included at this stage. Replacement of light commercial vehicles with electric vehicles will be considered as models become more widely available.
<b>Fleet vehicle</b>	All Government-leased vehicles including pool and non-pool vehicles. This excludes Executive vehicles where these vehicles are not leased by Government.

	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Total passenger vehicle leases held on 30 June	36	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>
Total ZEV passenger vehicles leases held on 30 June	9	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>
Total <i>new</i> leases of passenger vehicles	5	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>
Total <i>new</i> leases of ZEV passenger vehicles	3	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>
% of <i>newly</i> leased passenger vehicles that are ZEV	60%	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>

### Summary of non-ZEV vehicle leases

TCCS entered into two new non-ZEV vehicle leases during 2019-20. Both vehicles have 8 seat capacity, an operational requirement, for which there is currently no fit for purpose ZEV vehicles available.

In addition to TCCS passenger vehicles, TCCS operates a fleet of light commercial vehicles, agricultural equipment, trucks, buses, plant and equipment. TCCS are demonstrating leadership with an electric truck trial commencing in 2020-21, as well as keeping abreast of opportunities across all vehicle types as the ZEV industry matures. The emissions associated with this non-passenger fleet equates to 98% of annual emissions for TCCS (excluding the bus fleet).

### Further detail

#### Other Key Performance Indicators

Growth in the Territory will result in TCCS increasing service delivery and operations resulting in a commensurate increase in energy use. Energy intensity measures track efficiencies where changes in operations or environment occur. This includes the Transport Canberra bus network with energy use per passenger kilometre and Capital Linen Services with energy use against volume of linen sold.

**Table 6: Energy intensity measures**

	2019-20 <sup>8</sup>	2020-21	2021-22	2022-23	2023-24	2024-25
Transport Canberra bus network - (GJ/100 passenger km)	0.30	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>
Capital Linen Services – Energy/kg linen sold <sup>9</sup>	0.86	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>

<sup>8</sup> Calendar year 2019 used as a proxy for 2019-20

<sup>9</sup> Normalised number. Consumption data provided by CLS and based on a 70% proportional split with Sterilisation Services.

## Preparing for emissions reductions beyond 2025

The Yarralumla Nursery is one of a number of facilities under review for replacement of gas-based heating systems with low emissions alternatives. The gas replacement study, conducted by the Environment, Planning and Sustainable Development Directorate (EPSDD) for TCCS and other Directorates, will recommend options that can be implemented before the interim target end date of 2025.

The Capital Linen Services facility is also being reviewed under the EPSDD gas replacement study. Owing to the nature of operations at CLS and the limited options for alternative steam-raising plant, lower emissions alternatives may not be feasible within the 2025 interim target period.

**From:** [Campbell, Trish](#)  
**To:** [EPD ZeroEmission](#); [Mossfield, Steve](#); [Yagnambhat, Samata](#)  
**Subject:** Attachment B - Draft - Annual Update 2022-23 - TCCS Five Year Emissions Reduction Plan (A43922996)  
**Date:** Tuesday, 17 October 2023 11:46:00 AM  
**Attachments:** [Attachment B - Annual Update 2022-23 - TCCS Five Year Emissions Reduction Plan.docx](#)  
**Importance:** High

---

OFFICIAL

Hi,

With apologies for the delay, please see attached draft version of TCCS reporting on 5-year ERP, currently going through approvals.

I will advise once the A/g DG has cleared.

Many thanks,

Trish

Trish Campbell | Senior Director  
TCCS Sustainability, Facilities and Fleet Unit  
Building Management Services Team  
Phone: 02 6205 1574 | Email: [trish.campbell@act.gov.au](mailto:trish.campbell@act.gov.au)  
Governance and Ministerial | Chief Operating Officer | Transport Canberra and City Services Directorate | ACT Government  
480 Northbourne Avenue, Dickson ACT 2602 | GPO Box 158 Canberra ACT 2601 | [www.act.gov.au](http://www.act.gov.au)

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Trish Campbell has sent you a copy of "Attachment B - Annual Update 2022-23 - TCCS Five Year Emissions Reduction Plan" (A43922996) v3.0 from Objective.



# Transport Canberra and City Services Directorate

## Emissions Reduction Plan 2019-20 to 2024-25

### 2022-23 Progress Report

#### 1. Background

The ACT Climate Change Strategy 2019-25 (the Strategy) was released in September 2019 and outlines the next steps for Canberra to reduce emissions by 50–60% (below 1990 levels) by 2025 and establish a pathway for achieving net zero emissions by 2045.

In order to demonstrate leadership in emission reductions, the Strategy includes a Zero Emissions Government (ZEG) Framework with an interim target to reduce emissions from government operations by over 33% by 2025 (from 2020 levels<sup>1</sup>) and achieve zero emissions from Government operations by 2040.

The TCCS Five-year Emissions Reduction Plan was endorsed in November 2020 with a 15.1% reduction in emissions forecast by 2024-25 in contribution to the ZEG Framework. With the majority of TCCS emissions associated with transport fuels (>90%) and numerous constraints with transitioning to zero emission vehicles (ZEV) including technical, infrastructure, financial and implementation, it is anticipated that emissions savings for TCCS will be realised in future years.

This report provides an overview on emission reduction activities for TCCS in 2022-23 as well as progress against the five-year emission target.

#### 2. TCCS emissions target and results

Table 1: Transport Canberra and City Services emissions target and result<sup>2</sup>

	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Emissions target (tCO <sub>2</sub> -e)	39,034					33,130
Actual emissions (tCO <sub>2</sub> -e)	39,034	43,457	40,107	40,144		
Change in emissions from 2019-20 (%)		+11	+3%	+3%		

Currently TCCS are tracking above the emission target for 2022-23 by 3 percent.

#### 3. 2022-23 Emissions Reduction Activities

Transport Canberra progressed implementation of its Zero-emissions Transition Plan, with Canberra's public transport system on a pathway to a fully zero emissions fleet by 2040. The first phase of the transition plan has involved replacement of the fleet's 34 orange Renault PR100.2 vehicles with lease of battery electric buses and low and zero-emission vehicles, and the purchase of 90 battery electric buses.

<sup>1</sup> 2019 calendar year was used as a proxy due to impacts of COVID-19

<sup>2</sup> Note that some data reported in Table 1 may differ slightly from figures reported in the TCCS Annual Reports. These are due to retrospective updates and historical consumption data.

These procurements will transition approximately one quarter of the Transport Canberra bus fleet to zero emissions, with a total of 106 battery electric buses in the fleet, expected by the end of 2026.

In addition to the public transport network, TCCS holds the largest and most complex fleet within ACT Government including passenger, commercial, heavy vehicle, plant and equipment. TCCS are actively engaging with industry and monitoring rapidly changing developments within electric vehicles, running trials where relevant and installing suitable charging infrastructure across relevant TCCS sites.

In 2022-23, TCCS undertook successful trials of an electric compact street sweeper and electric mini excavator which resulted in one of each entering TCCS fleet in 2023-24. In the same year, City Presentation will introduce four electric mowers, into the mowing fleet of 80, for further field testing and staff familiarisation.

TCCS continued to ensure that 100 per cent of all newly leased government passenger vehicles were zero emissions where fit for purpose. As at 30 June 2023, 38 per cent of TCCS passenger vehicles were zero emission vehicles including 20 per cent electric and 18 per cent hydrogen fuelled.

TCCS is also reducing emissions by reducing our reliance on gas. Capital Linen Services are investigating and applying reduction strategies where possible and have implemented measures such as heat recovery systems to reduce gas usage in 2020-21. As a result, consumption of gas per kilogram of laundry sold has improved by 11 per cent. However, the laundry is still the largest user of gas (~68%) for TCCS. Currently there are very little substituting options available for industrial laundry application. It is predicted that as technology and markets mature gas alternatives will become more readily available.

This is the same situation for Gungahlin Crematorium, the fourth largest user of gas (~4%) in the Directorate with no commercially viable options at present, however with technology constantly evolving and investigations continuing action will be taken at the earliest opportunity.

Additional measures to reduce gas in 2022-23 included progressing the Yarralumla Nursery glasshouse heating replacement project design and installation of solar PV at Tuggeranong Bus Depot under a combined heating upgrade/solar PV project.

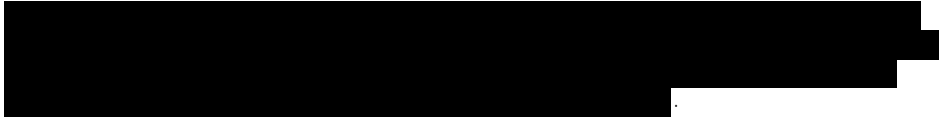
Emissions source	tonnes CO <sub>2</sub> -e	% of total emissions	tonnes CO <sub>2</sub> -e	% of total emissions	tonnes CO <sub>2</sub> -e	% of total emissions
	2019	2019	2021-22	2021-22	2022-23	2022-23
<b>Transport fuels</b>	36,348	93.12%	37,664	93.91%	37,310	92.9%
<i>Bus network</i>	33,261	85.21%	34,011	84.80%	33,737	84.0%
o Diesel	29,078	74.49%	29,542	73.66%	29,694	74.0%
o CNG	4,183	10.72%	4,469	11.14%	4,043	10.1%
<i>TCCS Fleet</i>	3,087	7.91%	3,653	9.11%	3,573	8.9%
o Diesel	2,970	7.61%	3,570	8.90%	3,505	8.7%
o Petrol	117	0.30%	83	0.21%	68	0.2%
Natural gas	2,620	6.71%	2638	6.58%	2271	5.7%
Refrigerants	60	0.15%	92	0.23%	92	0.2%

Commented [HC1]: Should we also be included crematoria and gas emissions? Not sure how much that usage is compared to YN and/or CLS

Commented [TC2R1]: Cleared by Phillip Middleton

	2019-20	2020-21	2021-22	2022-23
Total passenger vehicle leases held on 30 June	36	44	40	42
Total ZEV passenger vehicles leases held on 30 June	9	15	14	19
Total <i>new</i> leases of passenger vehicles	5	13	1	1
Total <i>new</i> leases of ZEV passenger vehicles	3	10	1	3
% of <i>newly</i> leased passenger vehicles that are ZEV	60%	77%	100%	75%

#### Emissions reduction projects expected to commence in 2023-24



Fleet Services will continue to identify and trial zero emission commercial, heavy vehicle, plant and equipment. This will include trialling an electric flexible transport bus, second electric tipper truck and electric litter picking truck.

#### Other key performance indicators

Growth in the Territory will result in TCCS increasing service delivery and operations resulting in a commensurate increase in energy use. Energy intensity measures track efficiencies where changes in operations or environment occur. This includes the Capital Linen Services with energy use against volume of linen sold and Transport Canberra bus network with energy use per passenger kilometre<sup>3</sup>.

Table 6: Energy Intensity measures

	2019-20 <sup>4</sup>	2020-21	2021-22	2022-23	2023-24	2024-25
Transport Canberra bus network - (GJ/100 passenger km)	<i>Superseded<sup>3</sup></i>					
Capital Linen Services – Energy/kg linen sold <sup>5</sup>	0.86	↓ 0.86	↓ 0.81	↓ 0.75	<i>track</i>	<i>track</i>

<sup>3</sup> Due to unavailability of data at time of publication and strategic indicators capturing efficiency of the public transport network, reported in TCCS Annual Report, this measure has been discontinued.

<sup>4</sup> Calendar year 2019 used as a proxy for 2019-20.

<sup>5</sup> Normalised number. Consumption data provided by CLS and based on a 70% proportional split with Sterilisation Services.

**From:** [Campbell, Trish](#)  
**To:** [EPD ZeroEmission](#)  
**Cc:** [Haraldson, Greg](#)  
**Subject:** RE: TCCS Emissions Reduction reporting for 2020-21  
**Date:** Wednesday, 3 November 2021 4:23:00 PM  
**Attachments:** [Attachment A\\_TCCS Five Year Emissions Reduction Plan 2020-21 results for Endorsement.docx](#)

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OFFICIAL

Good afternoon,

Please see attached draft TCCS Five Year Emissions Reduction Plan 2020-21 Results in order for you to commence development of the whole of government report.

Please note that this document is going through executive approvals and has not yet been endorsed by our Director General.

Many thanks,

Trish

**Trish Campbell | Senior Director**

**TCCS Sustainability, Facilities and Fleet Unit**

**Building Management Services Team**

Phone: 02 6205 1574 | Email: [trish.campbell@act.gov.au](mailto:trish.campbell@act.gov.au)

**Governance and Ministerial | Chief Operating Officer | Transport Canberra and City Services Directorate | ACT Government**

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**From:** EPD ZeroEmission <[ZeroEmission@act.gov.au](mailto:ZeroEmission@act.gov.au)>

**Sent:** Friday, 17 September 2021 8:34 AM

**To:** Campbell, Trish <[Trish.Campbell@act.gov.au](mailto:Trish.Campbell@act.gov.au)>

**Subject:** TCCS Emissions Reduction reporting for 2020-21

**Importance:** High

OFFICIAL

Hi Trish,

This email is in regards to the DG approved emissions reduction activities reporting that is required under the Climate Change Strategy 2019-25 as a KPI (pg77).

Please find attached the TCCS emissions reduction 5-year plan to be updated with 2020-21 results.

- I have added the 2020-21 results from envizi in track changes. Whilst every effort has been made to ensure these are accurate please check these figures are correct.
- Comments have been added where new content is required. Please update sections 2 and 3. Any updates you wish to make to the rest of the report is optional.
- Please remove all track changes and comments upon completion.
- An MS Word copy of the completed report with **DG approval** is required by the **22<sup>nd</sup> October**. Please send the completed report to [zeroemission@act.gov.au](mailto:zeroemission@act.gov.au)

Please get in touch if you have any questions.

Thanks,

Angela

Angela Caird – Senior Project Officer (Zero Emissions Government & Community)

P (02) 6205 2216

E [angela.caird@act.gov.au](mailto:angela.caird@act.gov.au) | [zeroemission@act.gov.au](mailto:zeroemission@act.gov.au) | [EPSDDcommunitygrants@act.gov.au](mailto:EPSDDcommunitygrants@act.gov.au)

Zero Emissions Government, Schools and Community | Climate Change and Energy Division

Environment, Planning and Sustainable Development Directorate | ACT Government

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# Transport Canberra and City Services Directorate

## Emissions Reduction Plan 2019-20 to 2024-25

### 1. Background

The ACT Government has committed to reducing its greenhouse-gas emissions in its operations to zero by 2040. It has also committed to reduce its emissions by more than 33% over the period 2019-20 to 2020-25.

Given the unusual business conditions caused by the COVID-19 pandemic, data from calendar year 2019 has been used as a proxy for the 2019-20 baseline. All targets are calculated as a percentage change on that base year.

TCCS produced 39,028 tCO<sub>2</sub>-e emissions in 2019, 93.1% of which were associated with transport fuels. Emissions from the public transport sector represented over half of all ACT Government emissions and efforts are underway to increase efficiency of the Transport Canberra bus network. The Zero-Emission Transition Plan for Transport Canberra was released in 2020 and outlines the pathway to achieve the ACT Government's ambition of zero-emission public transport system by 2040. The Plan will see the government replace up to 17% of ageing diesel and CNG buses with battery electric buses powered with the ACT's 100% renewable electricity in line with the existing fleet retirement profile.<sup>1</sup> This will be timed with plans for new bus depots with electric charging infrastructure to support the growing fleet of zero-emission buses. Following an initial short-term lease of 34 replacement diesel buses, Transport Canberra will progress to procurement of 90 zero-emission buses and supporting infrastructure.

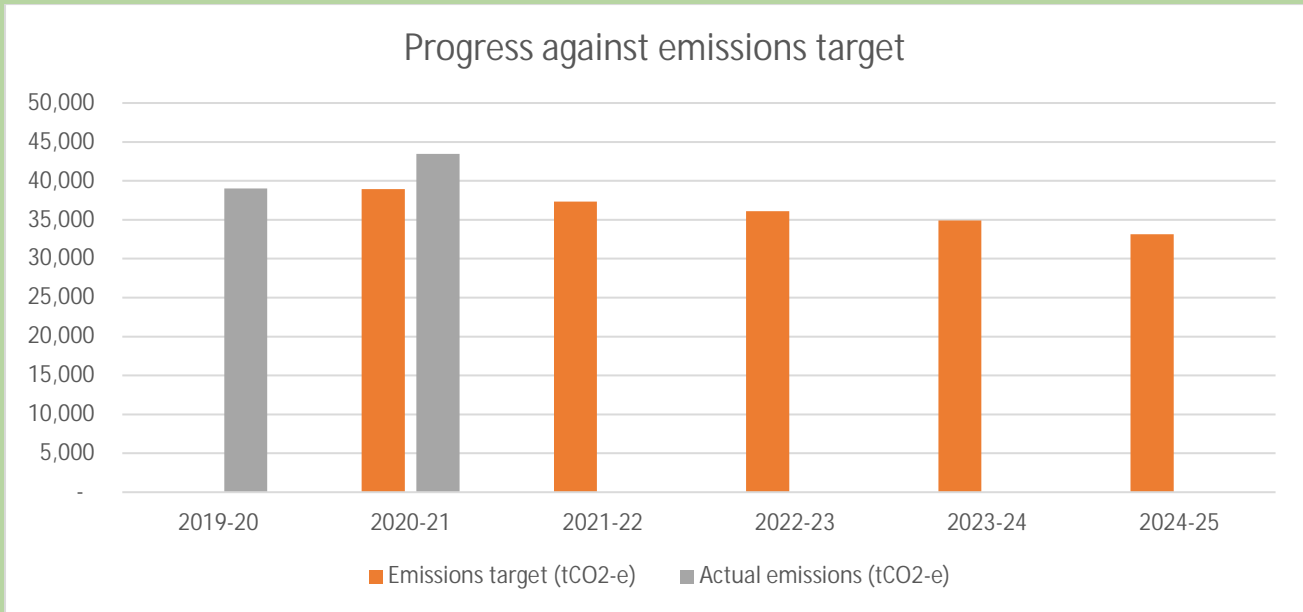
Given limited opportunity to transition fleet to zero emission vehicles in the short-term, TCCS have identified a potential of 15.1% reductions in emissions by 2024-25.

### 2. TCCS emissions target and results for 2020-21

Table 1: Transport Canberra and City Services emissions target and results

	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Emissions target (tCO <sub>2</sub> -e)						33,130
Actual emissions (tCO <sub>2</sub> -e)	39,029 <sup>2</sup>	43457				
Change in emissions from 2019-20 (%)		+11.7%				

<sup>2</sup> Calendar year 2019 used as a proxy for 2019-20



### 3. 2020-21 Emissions Reduction Activities

#### Transport Canberra

The Zero-Emission Transition Plan for Transport Canberra was released in September 2020 and outlines the pathway to achieve the ACT Government’s ambition of zero-emission public transport system by 2040. With this Plan TCCS is taking nation-leading action to transition our city’s bus fleet to zero emissions, including the infrastructure, investment and skills needed to make the transition operationally successful.

Over the next 3 years, the Transition Plan will see the government replace over 20% of ageing diesel and CNG buses with battery electric buses powered with the ACT’s 100% renewable electricity in line with the existing fleet retirement profile. This will be timed with plans for new bus depots with electric charging infrastructure to support the growing fleet of zero-emission buses. Following an initial short-term lease of 26 replacement diesel buses and 8 battery electric buses, Transport Canberra will progress to procurement of 90 zero-emission buses and supporting infrastructure.

An increase in weekday bus services from July 2020 and an uplift in weekend bus services commencing in October 2020 has contributed to an increase in fuel use for the Transport Canberra bus fleet for 2020-21 compared with 2019-20.

#### TCCS Fleet

With only 9% of TCCS fleet falling within the passenger vehicle range, TCCS commenced a 12-month trial of a fully electric tipper truck introducing ZEV within its heavy vehicle fleet.

Charging infrastructure was further expanded with works commenced at Reid and Curtin depots for the addition of two 25KW DC fast chargers, making a total of 15 sites and 20 EV charging units available across TCCS sites. The EV tipper truck is fit for purpose for general cleaning and maintenance tasks and will provide vital data on the suitability of electrification of vehicles within the ACT government heavy vehicle fleet.

Increase in emissions for 2020-21 for TCCS fleet was a result of additional fleet vehicles required for Jobs for Canberra and operational requirements due to COVID-19; and an increase in mowing schedules in 2020-21 compared with 2019.

### TCCS move to 480 Northbourne Avenue (NBA)

In June 2020, TCCS relocated to an activity-based, multi-tenanted ACT-Government leased zero emissions building at 480 Northbourne Avenue (NBA) with climate-wise design and energy efficient appliances. 480 NBA achieved outstanding environmental credentials including 5 star Greenstar rating and 5 star NABERS rating for energy efficiency; water usage; waste management and indoor air quality.

Emissions source	tonnes CO <sub>2</sub> -e <sup>3</sup> 2019	% of total emissions 2019	tonnes CO <sub>2</sub> -e 2020-21	% of total emissions 2020-21
Transport fuels	36,348	93.1%	40,949	94.2%
<i>Bus network (Diesel)</i>	29,078	74.5%	32,241	74.2%
<i>Bus network (CNG)</i>	4,183	10.7%	4,937	11.4%
<i>TCCS Fleet (passenger vehicles)</i>	73	0.2%	89	0.2%
<i>TCCS Fleet (non- passenger vehicles)</i>	3,014	7.7%	3,682	8.5%
Natural gas	2,620	6.7%	2,480	5.7%
Refrigerants	60	0.2%	27	<0.0%

### Energy intensity measures

	2019-20 <sup>4</sup>	2020-21
Transport Canberra bus network - (GJ/100 passenger km)	0.30	0.45
Capital Linen Services – Energy/kg linen sold <sup>5</sup>	0.86	0.86

### Zero Emissions Vehicles Transition 2020-21

TCCS Fleet ensured all passenger fleet vehicle leases were replaced with ZEV, where fit for purpose, during 2020-21. This included introduction of seven Nexo hydrogen vehicles to the fleet. The three vehicles that were not ZEV were people movers, critical for Transport Canberra Operations and where no ZEV alternatives are currently available.

<sup>3</sup> Calendar year 2019 used as a proxy for 2019-20<sup>4</sup> Calendar year 2019 used as a proxy for 2019-20

<sup>4</sup> Calendar year 2019 used as a proxy for 2019-20

<sup>5</sup> Normalised number. Consumption data provided by CLS and based on a 70% proportional split with Sterilisation Services.

	2019-20	2020-21
Total passenger vehicle leases held on 30 June	36	44
Total ZEV passenger vehicles leases held on 30 June	9	15
Total <i>new</i> leases of passenger vehicles	5	13 <sup>6</sup>
Total <i>new</i> leases of ZEV passenger vehicles	3	10
% of <i>newly</i> leased passenger vehicles that are ZEV	60%	77%

### Emissions reduction projects expected to commence in 2021-22

Pending funding approvals, Fleet Services are pursuing trials of an electric bus for Flexible Transport and hydrogen ute in 2021-22. A hydrogen generator trial is also being explored for 2021-22.

Delays were experienced to the heating, ventilation and air conditioning and solar PV upgrade at Tuggeranong bus depot due to COVID-19 in 2020-21, however it is expected that this project will commence in 2021-22.

## 4. Emissions reduction plan to 2024-25

Table 2: Key emissions sources

Emissions source	tonnes CO <sub>2</sub> -e <sup>7</sup>	% of total emissions
Transport fuels	36,348	93.1%
<i>Bus network (Diesel)</i>	29,078	74.5%
<i>Bus network (CNG)</i>	4,183	10.7%
<i>TCCS Fleet (passenger vehicles)</i>	73	0.2%
<i>TCCS Fleet (non-passenger vehicles)</i>	3,014	7.7%
Natural gas	2,620	6.7%
Refrigerants	60	0.2%

### Emissions reduction activities

Transport Canberra bus network

<sup>6</sup> Excludes short term lease vehicles required to accommodate Jobs for Canberra and/or to meet COVID-19 fleet protocols

<sup>7</sup> Calendar year 2019 used as a proxy for 2019-20



- The [Zero-Emission Transition Plan for Transport Canberra](#) outlines the pathway to achieve the ACT Government's ambition of zero-emission public transport system by 2040.
- Estimated emissions savings of activity:
  - See table below.
- How emissions savings were estimated:
  - Future fleet replacement profile, [REDACTED] was used to apply an average network tCO<sub>2</sub>-e/pa using existing diesel and CNG data for 2019.
  - Driver training to deliver more efficient driving of buses.
  - Fleet allocation so lower emission vehicles deliver a higher proportion of service kms.
- Timeframes:
  - Procurement of electric vehicles to commence 2021-22 with emissions savings ongoing for the usable life of the vehicle.
- Verification plan:
  - Tracking to be undertaken using actual fuel and emission data for the network.
- Responsibility for activity:
  - Project: DDG, Transport Canberra
  - Reporting: TCCS Sustainability Program.

#### Tuggeranong Bus Depot – Heating, Ventilation and Air Conditioning (HVAC) upgrade and solar PV

- The project proposes conversion of existing heating boilers from gas to electric heat pumps (with a small gas condensing boiler) and a 200kWh solar PV array.
- Estimated emissions savings of activity:
  - See table below.
- How emissions savings were estimated:
  - Robust savings calculations were included in application to the zero-emission Government loan fund and reviewed by an expert panel.
- Timeframes:
  - Project completion anticipated in early 2021.
- Verification plan:
  - To ensure that high quality before and after data for this project is captured, TCCS will apply a formal measurement and verification program to this project, informed by the International Performance Measurement and Verification Protocol.
- Responsibility for activity:
  - Project: TCCS Facilities/DDG, Transport Canberra
  - Reporting: TCCS Sustainability Program.

#### TCCS passenger fleet vehicles

- The ACT's Transition to Zero Emissions Vehicles Action Plan 2018-21 commits all newly leased ACT Government fleet passenger vehicles being zero-emissions (ZEV), where fit for purpose, by 2020-21.
- Estimated emissions savings of activity:
  - See table below.
- How emissions savings were estimated:
  - Future fleet replacement profile was used to estimate emissions savings from transitioning vehicles to zero-emissions, based on 2019 actual data.
- Timeframes:
  - Subject to operational requirements, leasing cycles and industry availability, 39% of passenger vehicles are scheduled to be transitioned to ZEV in 2020-21; a further 25% in 2021-22; and 14% in 2023-24.
- Verification plan:

- Emissions savings will be measured using average tCO<sub>2</sub>-e/km data for similar diesel fleet compared with km travelled by ZEV.
- Responsibility for activity:
  - Project: TCCS Fleet Services
  - Reporting: TCCS Sustainability Program.

#### TCCS non-passenger fleet vehicles

- 12-month trial of a fully electric litter/leaf collection truck. The trial will provide a comprehensive understanding of features and benefits of EV for heavy commercial vehicles.
- Estimated emissions savings of activity:
  - See table below.
- How emissions savings were estimated:
  - Robust emission savings calculations were included in application to the zero-emission Government loan fund and reviewed by an expert panel.
- Timeframes:
  - Late 2020/early 2021.
- Verification plan:
  - Emissions savings will be measured using average tCO<sub>2</sub>-e/km data for similar diesel fleet compared with km travelled by ZEV.
  - Fit for purpose elements will be established to determine operational suitability, safety and driver usability is assessed.
- Responsibility for activity:
  - Project: TCCS Fleet Services/Executive Branch Manager, City Presentation
  - Reporting: TCCS Sustainability Program.

#### TCCS move to 480 Northbourne Avenue (NBA)

- Under the ACT Climate Change Strategy, the ACT Government is leading by example in the transition to a net zero emissions future with 480 NBA being a zero-emissions building with climate-wise design and energy efficient appliances.
- Estimated emissions savings of activity:
  - See Table below.
- How emissions savings were estimated:
  - Gas savings from previous accommodation in 496 Northbourne Avenue base building was used to quantify emissions savings.
- Timeframes:
  - TCCS relocated to 480NBA in June 2020.
- Verification plan:
  - n/a.
- Responsibility for activity:
  - Reporting: TCCS Sustainability Program.

### Table 3: Summary of projected emissions savings

Activity name	tCO2-e				
	2020-21	2021-22	2022-23	2023-24	2024-25
Transport Canberra Bus Network <sup>8</sup>		1,454	1,195	1,195	1,793
Tuggeranong Bus Depot – HVAC upgrade	41	123			
TCCS passenger fleet – transition to EV	21	21	8		
Electric leaf litter truck 12-month EV trial	1.8	2.6			
Move to 480NBA	44				
<b>TOTAL</b>	<b>108</b>	<b>2,069</b>	<b>1,203</b>	<b>1,195</b>	<b>1,793</b>

### Changes to previous estimates

- Placeholder to explain any variation in the emissions reductions identified in previous years.

Table 4: Cost of emission reduction activities

Activity name	Total cost (projected or actual) (\$)	Funding bid successful [Yes/partial/pending/no]
Transport Canberra Bus Network – transition to ZEV		
Tuggeranong Bus Depot HVAC/solar upgrade	\$1.3M	Yes
TCCS Fleet Services Electric tipper truck trial	\$0.1M <sup>9</sup>	Yes
TCCS Fleet Services Passenger vehicle transition to ZEV		
<b>TOTAL</b>		

### Transition to zero emissions vehicles (ZEV)<sup>11</sup>

The ACT Government has made the following commitments under The ACT’s Transition to Zero Emissions Vehicles Action Plan:

8 [Redacted]  
9 [Redacted]  
10 [Redacted]

<sup>11</sup> The ACT Government is working from the following definitions of ‘fit for purpose’, ‘passenger vehicle’ and ‘fleet vehicle’:

<b>Fit for purpose</b>	A fleet vehicle is deemed ‘fit for purpose’ for replacement with an electric vehicle where there is an available electric vehicle model which can deliver equivalent function and utility for the purpose that the vehicle is used. This will take into consideration any modifications that have been made to the vehicle being replaced and any specific requirements such as equipment loads, or distances travelled. From 2020-21 the responsible area will be required to demonstrate due cause for leasing a passenger vehicle which is not a zero emissions vehicle
<b>Passenger vehicle</b>	A motor vehicle used for the primary purpose of transporting up to nine passengers including the driver. This includes sedans, hatchbacks and station wagons as well as small and medium sports utility vehicles (SUVs). Small vans considered suitable for replacement with electric vehicles are included. Other light commercial vehicles, such

- From 2019-20 at least 50% of all newly leased Government fleet passenger vehicles will be zero emissions vehicles (where fit for purpose); and
- From 2020-21 all newly leased ACT Government passenger fleet vehicles will be zero emissions vehicles (where fit for purpose).

Table 5: TCCS Passenger vehicle transition to ZEV

	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Total passenger vehicle leases held on 30 June	36	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>
Total ZEV passenger vehicles leases held on 30 June	9	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>
Total <i>new</i> leases of passenger vehicles	5	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>
Total <i>new</i> leases of ZEV passenger vehicles	3	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>
% of <i>newly</i> leased passenger vehicles that are ZEV	60%	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>

### Summary of non-ZEV vehicle leases

TCCS entered into two new non-ZEV vehicle leases during 2019-20. Both vehicles have 8 seat capacity, an operational requirement, for which there is currently no fit for purpose ZEV vehicles available.

In addition to TCCS passenger vehicles, TCCS operates a fleet of light commercial vehicles, agricultural equipment, trucks, buses, plant and equipment. TCCS are demonstrating leadership with an electric truck trial commencing in 2020-21, as well as keeping abreast of opportunities across all vehicle types as the ZEV industry matures. The emissions associated with this non-passenger fleet equates to 98% of annual emissions for TCCS (excluding the bus fleet).

## 5. Further detail

### Other Key Performance Indicators

Growth in the Territory will result in TCCS increasing service delivery and operations resulting in a commensurate increase in energy use. Energy intensity measures track efficiencies where changes in operations or environment occur. This includes the Transport Canberra bus network with energy use per passenger kilometre and Capital Linen Services with energy use against volume of linen sold.

	as utility vehicles, are not included at this stage. Replacement of light commercial vehicles with electric vehicles will be considered as models become more widely available.
Fleet vehicle	All Government-leased vehicles including pool and non-pool vehicles. This excludes Executive vehicles where these vehicles are not leased by Government.

**Table 6: Energy intensity measures**

	2019-20 <sup>12</sup>	2020-21	2021-22	2022-23	2023-24	2024-25
Transport Canberra bus network - (GJ/100 passenger km)	0.30	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>
Capital Linen Services – Energy/kg linen sold <sup>13</sup>	0.86	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>

## Preparing for emissions reductions beyond 2025

The Yarralumla Nursery is one of a number of facilities under review for replacement of gas-based heating systems with low emissions alternatives. The gas replacement study, conducted by the Environment, Planning and Sustainable Development Directorate (EPSDD) for TCCS and other Directorates, will recommend options that can be implemented before the interim target end date of 2025.

The Capital Linen Services facility is also being reviewed under the EPSDD gas replacement study. Owing to the nature of operations at CLS and the limited options for alternative steam-raising plant, lower emissions alternatives may not be feasible within the 2025 interim target period.

<sup>12</sup> Calendar year 2019 used as a proxy for 2019-20

<sup>13</sup> Normalised number. Consumption data provided by CLS and based on a 70% proportional split with Sterilisation Services.

**From:** [Caird, Angela](#)  
**To:** [Campbell, Trish](#)  
**Cc:** [Haraldson, Greg](#); [Bourne, Sarah](#)  
**Subject:** RE: TCCS Emissions Reduction reporting for 2020-21  
**Date:** Wednesday, 8 December 2021 11:04:20 AM

---

OFFICIAL

Hi Trish,

Thank you for sending through the report. This version of the report will be sent with the Head of Service brief for emissions reduction activities in 2020-21.

Thanks,

Angela

Angela Caird – Project Officer (Zero Emissions Government & Community)

P (02) 6205 2216

E [angela.caird@act.gov.au](mailto:angela.caird@act.gov.au) | [zeroemission@act.gov.au](mailto:zeroemission@act.gov.au) | [EPSDDcommunitygrants@act.gov.au](mailto:EPSDDcommunitygrants@act.gov.au)

Zero Emissions Government, Schools and Community | Climate Change and Energy Division

Environment, Planning and Sustainable Development Directorate | ACT Government

480 Northbourne Avenue Dickson | GPO Box 158 Canberra City ACT 2601 | [www.actsmart.gov.au](http://www.actsmart.gov.au)

---

**From:** Campbell, Trish <Trish.Campbell@act.gov.au>  
**Sent:** Wednesday, 8 December 2021 10:39 AM  
**To:** EPD ZeroEmission <ZeroEmission@act.gov.au>  
**Cc:** Haraldson, Greg <Greg.Haraldson@act.gov.au>; Bourne, Sarah <Sarah.Bourne@act.gov.au>; Caird, Angela <Angela.Caird@act.gov.au>  
**Subject:** RE: TCCS Emissions Reduction reporting for 2020-21

OFFICIAL

Hi Angela,

As discussed, please see final DG endorsed TCCS Five Year Emissions Reduction Plan 2020-21 Results (highlighted in Green).

If you could please replace the draft previously provided that would be great.

Many thanks,

Trish

**Trish Campbell | Senior Director**

**TCCS Sustainability, Facilities and Fleet Unit**

**Building Management Services Team**

Phone: 02 6205 1574 | Email: [trish.campbell@act.gov.au](mailto:trish.campbell@act.gov.au)

**Governance and Ministerial | Chief Operating Officer | Transport Canberra and City Services Directorate | ACT Government**

480 Northbourne Avenue, Dickson ACT 2602 | GPO Box 158 Canberra ACT 2601 | [www.act.gov.au](http://www.act.gov.au)

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---

**From:** Campbell, Trish  
**Sent:** Wednesday, 3 November 2021 4:24 PM  
**To:** EPD ZeroEmission <[ZeroEmission@act.gov.au](mailto:ZeroEmission@act.gov.au)>  
**Cc:** Haraldson, Greg <[Greg.Haraldson@act.gov.au](mailto:Greg.Haraldson@act.gov.au)>  
**Subject:** RE: TCCS Emissions Reduction reporting for 2020-21

OFFICIAL

Good afternoon,

Please see attached draft TCCS Five Year Emissions Reduction Plan 2020-21 Results in order for you to commence development of the whole of government report.

Please note that this document is going through executive approvals and has not yet been endorsed by our Director General.

Many thanks,

Trish

**Trish Campbell | Senior Director**

**TCCS Sustainability, Facilities and Fleet Unit**

**Building Management Services Team**

Phone: 02 6205 1574 | Email: [trish.campbell@act.gov.au](mailto:trish.campbell@act.gov.au)

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---

**From:** EPD ZeroEmission <[ZeroEmission@act.gov.au](mailto:ZeroEmission@act.gov.au)>

**Sent:** Friday, 17 September 2021 8:34 AM

**To:** Campbell, Trish <[Trish.Campbell@act.gov.au](mailto:Trish.Campbell@act.gov.au)>

**Subject:** TCCS Emissions Reduction reporting for 2020-21

**Importance:** High

OFFICIAL

Hi Trish,

This email is in regards to the DG approved emissions reduction activities reporting that is required under the Climate Change Strategy 2019-25 as a KPI (pg77).

Please find attached the TCCS emissions reduction 5-year plan to be updated with 2020-21 results.

- I have added the 2020-21 results from envizi in track changes. Whilst every effort has been made to ensure these are accurate please check these figures are correct.
- Comments have been added where new content is required. Please update sections 2 and 3. Any updates you wish to make to the rest of the report is optional.
- Please remove all track changes and comments upon completion.
- An MS Word copy of the completed report with **DG approval** is required by the **22<sup>nd</sup> October**. Please send the completed report to [zeroemission@act.gov.au](mailto:zeroemission@act.gov.au)

Please get in touch if you have any questions.

Thanks,

Angela

Angela Caird – Senior Project Officer (Zero Emissions Government & Community)

P (02) 6205 2216

E [angela.caird@act.gov.au](mailto:angela.caird@act.gov.au) | [zeroemission@act.gov.au](mailto:zeroemission@act.gov.au) | [EPSDDcommunitygrants@act.gov.au](mailto:EPSDDcommunitygrants@act.gov.au)

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**From:** [Campbell, Trish](#)  
**To:** [EPD ZeroEmission](#)  
**Cc:** [Haraldson, Greg](#); [Bourne, Sarah](#); [Caird, Angela](#)  
**Subject:** RE: TCCS Emissions Reduction reporting for 2020-21  
**Date:** Wednesday, 8 December 2021 10:39:00 AM  
**Attachments:** [Attachment A\\_TCCS Five Year Emissions Reduction Plan 2020-21 DG Approved.docx](#)

---

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As discussed, please see final DG endorsed TCCS Five Year Emissions Reduction Plan 2020-21 Results (highlighted in Green).

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**Subject:** RE: TCCS Emissions Reduction reporting for 2020-21

OFFICIAL

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**Subject:** TCCS Emissions Reduction reporting for 2020-21  
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Hi Trish,



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- I have added the 2020-21 results from envizi in track changes. Whilst every effort has been made to ensure these are accurate please check these figures are correct.
- Comments have been added where new content is required. Please update sections 2 and 3. Any updates you wish to make to the rest of the report is optional.
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Please get in touch if you have any questions.

Thanks,

Angela

Angela Caird – Senior Project Officer (Zero Emissions Government & Community)

P (02) 6205 2216

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# Transport Canberra and City Services Directorate

## Emissions Reduction Plan 2019-20 to 2024-25

### 1. Background

The ACT Government has committed to reducing its greenhouse-gas emissions in its operations to zero by 2040. It has also committed to reduce its emissions by more than 33% over the period 2019-20 to 2020-25.

Given the unusual business conditions caused by the COVID-19 pandemic, data from calendar year 2019 has been used as a proxy for the 2019-20 baseline. All targets are calculated as a percentage change on that base year.

TCCS produced 39,028 tCO<sub>2</sub>-e emissions in 2019, 93.1% of which were associated with transport fuels. Emissions from the public transport sector represented over half of all ACT Government emissions and efforts are underway to increase efficiency of the Transport Canberra bus network. The Zero-Emission Transition Plan for Transport Canberra was released in 2020 and outlines the pathway to achieve the ACT Government's ambition of zero-emission public transport system by 2040. The Plan will see the government replace up to 17% of ageing diesel and CNG buses with battery electric buses powered with the ACT's 100% renewable electricity in line with the existing fleet retirement profile. This will be timed with plans for new bus depots with electric charging infrastructure to support the growing fleet of zero-emission buses. Following an initial short-term lease of 34 replacement diesel buses, Transport Canberra will progress to procurement of 90 zero-emission buses and supporting infrastructure.

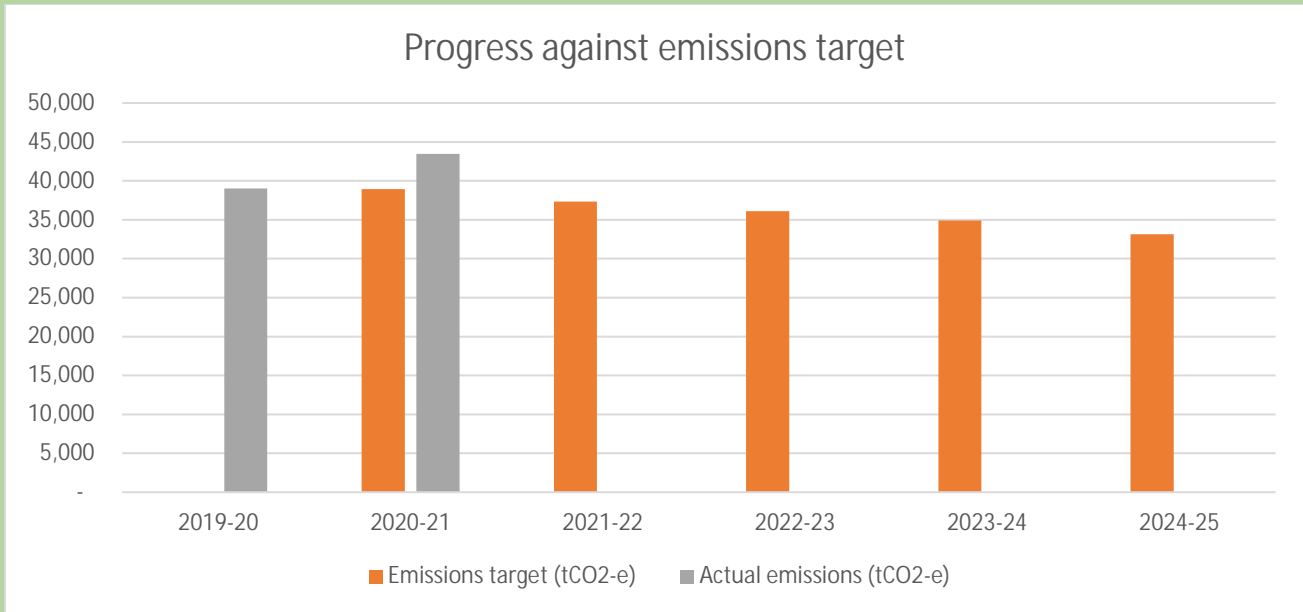
Given limited opportunity to transition fleet to zero emission vehicles in the short-term, TCCS have identified a potential of 15.1% reductions in emissions by 2024-25.

### 2. TCCS emissions target and results for 2020-21

Table 1: Transport Canberra and City Services emissions target and results

	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Emissions target (tCO <sub>2</sub> -e)						33,130
Actual emissions (tCO <sub>2</sub> -e)	39,029 <sup>1</sup>	43,457				
Change in emissions from 2019-20 (%)		+11.7%				

<sup>1</sup> Calendar year 2019 used as a proxy for 2019-20



### 3. 2020-21 Emissions Reduction Activities

#### Transport Canberra

The Zero-Emission Transition Plan for Transport Canberra was released in September 2020 and outlines the pathway to achieve the ACT Government’s ambition of zero-emission public transport system by 2040. With this Plan TCCS is taking nation-leading action to transition our city’s bus fleet to zero emissions, including the infrastructure, investment and skills needed to make the transition operationally successful.

Over the next 3 years, the Transition Plan will see the government replace over 20% of ageing diesel and CNG buses with battery electric buses powered with the ACT’s 100% renewable electricity in line with the existing fleet retirement profile. This will be timed with plans for new bus depots with electric charging infrastructure to support the growing fleet of zero-emission buses. Transport Canberra are progressing with the procurement of 34 replacement buses, some of which will be zero emissions and following this an additional 90 zero emission buses will be procured.

An increase in weekday bus services from July 2020 and an uplift in weekend bus services commencing in October 2020 has contributed to an increase in fuel use for the Transport Canberra bus fleet for 2020-21 compared with 2019-20.

#### TCCS Fleet

With only 9% of TCCS fleet falling within the passenger vehicle range, TCCS commenced a 12-month trial of a fully electric tipper truck introducing ZEV within its heavy vehicle fleet.

Charging infrastructure was further expanded with works commenced at Reid and Curtin depots for the addition of two 25KW DC fast chargers, making a total of 15 sites and 20 EV charging units available across TCCS sites. The EV tipper truck is fit for purpose for general cleaning and maintenance tasks and will provide vital data on the suitability of electrification of vehicles within the ACT government heavy vehicle fleet.

Increase in emissions for 2020-21 for TCCS fleet was a result of additional fleet vehicles required service level increases associated with the Jobs for Canberrans and operational requirements due to COVID-19; and an increase in mowing schedules in 2020-21 compared with 2019.

## TCCS move to 480 Northbourne Avenue (NBA)

In June 2020, TCCS relocated to an activity-based, multi-tenanted ACT-Government leased zero emissions building at 480 Northbourne Avenue (NBA) with climate-wise design and energy efficient appliances. 480 NBA achieved outstanding environmental credentials including 5 star Greenstar rating and 5 star NABERS rating for energy efficiency; water usage; waste management and indoor air quality.

Emissions source	tonnes CO <sub>2</sub> -e <sup>2</sup> 2019	% of total emissions 2019	tonnes CO <sub>2</sub> -e 2020-21	% of total emissions 2020-21
Transport fuels	36,348	93.1%	40,949	94.2%
<i>Bus network (Diesel)</i>	29,078	74.5%	32,241	74.2%
<i>Bus network (CNG)</i>	4,183	10.7%	4,937	11.4%
<i>TCCS Fleet (passenger vehicles)</i>	73	0.2%	89	0.2%
<i>TCCS Fleet (non- passenger vehicles)</i>	3,014	7.7%	3,682	8.5%
Natural gas	2,620	6.7%	2,480	5.7%
Refrigerants	60	0.2%	27	<0.0%

## Energy intensity measures

	2019-20 <sup>3</sup>	2020-21
Transport Canberra bus network - (GJ/100 passenger km)	0.30	0.45
Capital Linen Services – Energy/kg linen sold <sup>4</sup>	0.86	0.86

## Zero Emissions Vehicles Transition 2020-21

TCCS Fleet ensured all passenger fleet vehicle leases were replaced with ZEV, where fit for purpose, during 2020-21. This included introduction of seven Nexo hydrogen vehicles to the fleet. The three vehicles that were not ZEV were people movers, critical for Transport Canberra Operations and where no ZEV alternatives are currently available.

<sup>2</sup> Calendar year 2019 used as a proxy for 2019-20<sup>3</sup> Calendar year 2019 used as a proxy for 2019-20

<sup>3</sup> Calendar year 2019 used as a proxy for 2019-20

<sup>4</sup> Normalised number. Consumption data provided by CLS and based on a 70% proportional split with Sterilisation Services.

	2019-20	2020-21
Total passenger vehicle leases held on 30 June	36	44
Total ZEV passenger vehicles leases held on 30 June	9	15
Total <i>new</i> leases of passenger vehicles	5	13 <sup>5</sup>
Total <i>new</i> leases of ZEV passenger vehicles	3	10
% of <i>newly</i> leased passenger vehicles that are ZEV	60%	77%

### Emissions reduction projects expected to commence in 2021-22

Pending funding approvals, Fleet Services are pursuing trials of an electric bus for Flexible Transport and hydrogen ute in 2021-22. A hydrogen generator trial is also being explored for 2021-22.

Delays were experienced to the heating, ventilation and air conditioning and solar PV upgrade at Tuggeranong bus depot due to COVID-19 in 2020-21, however it is expected that this project will commence in 2021-22.

## 4. Emissions reduction plan to 2024-25

Table 2: Key emissions sources

Emissions source	tonnes CO <sub>2</sub> -e <sup>6</sup>	% of total emissions
Transport fuels	36,348	93.1%
<i>Bus network (Diesel)</i>	29,078	74.5%
<i>Bus network (CNG)</i>	4,183	10.7%
<i>TCCS Fleet (passenger vehicles)</i>	73	0.2%
<i>TCCS Fleet (non-passenger vehicles)</i>	3,014	7.7%
Natural gas	2,620	6.7%
Refrigerants	60	0.2%

### Emissions reduction activities

Transport Canberra bus network

<sup>5</sup> Excludes short term lease vehicles required to accommodate Jobs for Canberra and/or to meet COVID-19 fleet protocols

<sup>6</sup> Calendar year 2019 used as a proxy for 2019-20

- The [Zero-Emission Transition Plan for Transport Canberra](#) outlines the pathway to achieve the ACT Government's ambition of zero-emission public transport system by 2040.
- Estimated emissions savings of activity:
  - See table below.
- How emissions savings were estimated:
  - Future fleet replacement profile, [REDACTED] was used to apply an average network tCO<sub>2</sub>-e/pa using existing diesel and CNG data for 2019.
  - Driver training to deliver more efficient driving of buses.
  - Fleet allocation so lower emission vehicles deliver a higher proportion of service kms.
- Timeframes:
  - Procurement of electric vehicles to commence 2021-22 with emissions savings ongoing for the usable life of the vehicle.
- Verification plan:
  - Tracking to be undertaken using actual fuel and emission data for the network.
- Responsibility for activity:
  - Project: DDG, Transport Canberra
  - Reporting: TCCS Sustainability Program.

#### Tuggeranong Bus Depot – Heating, Ventilation and Air Conditioning (HVAC) upgrade and solar PV

- The project proposes conversion of existing heating boilers from gas to electric heat pumps (with a small gas condensing boiler) and a 200kWh solar PV array.
- Estimated emissions savings of activity:
  - See table below.
- How emissions savings were estimated:
  - Robust savings calculations were included in application to the zero-emission Government loan fund and reviewed by an expert panel.
- Timeframes:
  - Project completion anticipated in early 2021.
- Verification plan:
  - To ensure that high quality before and after data for this project is captured, TCCS will apply a formal measurement and verification program to this project, informed by the International Performance Measurement and Verification Protocol.
- Responsibility for activity:
  - Project: TCCS Facilities/DDG, Transport Canberra
  - Reporting: TCCS Sustainability Program.

#### TCCS passenger fleet vehicles

- The ACT's Transition to Zero Emissions Vehicles Action Plan 2018-21 commits all newly leased ACT Government fleet passenger vehicles being zero-emissions (ZEV), where fit for purpose, by 2020-21.
- Estimated emissions savings of activity:
  - See table below.
- How emissions savings were estimated:
  - Future fleet replacement profile was used to estimate emissions savings from transitioning vehicles to zero-emissions, based on 2019 actual data.
- Timeframes:
  - Subject to operational requirements, leasing cycles and industry availability, 39% of passenger vehicles are scheduled to be transitioned to ZEV in 2020-21; a further 25% in 2021-22; and 14% in 2023-24.
- Verification plan:

- Emissions savings will be measured using average tCO<sub>2</sub>-e/km data for similar diesel fleet compared with km travelled by ZEV.
- Responsibility for activity:
  - Project: TCCS Fleet Services
  - Reporting: TCCS Sustainability Program.

#### TCCS non-passenger fleet vehicles

- 12-month trial of a fully electric litter/leaf collection truck. The trial will provide a comprehensive understanding of features and benefits of EV for heavy commercial vehicles.
- Estimated emissions savings of activity:
  - See table below.
- How emissions savings were estimated:
  - Robust emission savings calculations were included in application to the zero-emission Government loan fund and reviewed by an expert panel.
- Timeframes:
  - Late 2020/early 2021.
- Verification plan:
  - Emissions savings will be measured using average tCO<sub>2</sub>-e/km data for similar diesel fleet compared with km travelled by ZEV.
  - Fit for purpose elements will be established to determine operational suitability, safety and driver usability is assessed.
- Responsibility for activity:
  - Project: TCCS Fleet Services/Executive Branch Manager, City Presentation
  - Reporting: TCCS Sustainability Program.

#### TCCS move to 480 Northbourne Avenue (NBA)

- Under the ACT Climate Change Strategy, the ACT Government is leading by example in the transition to a net zero emissions future with 480 NBA being a zero-emissions building with climate-wise design and energy efficient appliances.
- Estimated emissions savings of activity:
  - See Table below.
- How emissions savings were estimated:
  - Gas savings from previous accommodation in 496 Northbourne Avenue base building was used to quantify emissions savings.
- Timeframes:
  - TCCS relocated to 480NBA in June 2020.
- Verification plan:
  - n/a.
- Responsibility for activity:
  - Reporting: TCCS Sustainability Program.

#### Table 3: Summary of projected emissions savings

Activity name	tCO2-e				
	2020-21	2021-22	2022-23	2023-24	2024-25
Transport Canberra Bus Network <sup>7</sup>		1,454	1,195	1,195	1,793
Tuggeranong Bus Depot – HVAC upgrade	41	123			
TCCS passenger fleet – transition to EV	21	21	8		
Electric leaf litter truck 12-month EV trial	1.8	2.6			
Move to 480NBA	44				
<b>TOTAL</b>	<b>108</b>	<b>2,069</b>	<b>1,203</b>	<b>1,195</b>	<b>1,793</b>

### Changes to previous estimates

- Placeholder to explain any variation in the emissions reductions identified in previous years.

Table 4: Cost of emission reduction activities

Activity name	Total cost (projected or actual) (\$)	Funding bid successful [Yes/partial/pending/no]
Transport Canberra Bus Network – transition to ZEV		
Tuggeranong Bus Depot HVAC/solar upgrade	\$1.3M	Yes
TCCS Fleet Services Electric tipper truck trial	\$0.1M <sup>8</sup>	Yes
TCCS Fleet Services Passenger vehicle transition to ZEV		
<b>TOTAL</b>		

### Transition to zero emissions vehicles (ZEV)<sup>10</sup>

The ACT Government has made the following commitments under The ACT’s Transition to Zero Emissions Vehicles Action Plan:

7 [Redacted]  
8 [Redacted]  
9 [Redacted]

<sup>10</sup> The ACT Government is working from the following definitions of ‘fit for purpose’, ‘passenger vehicle’ and ‘fleet vehicle’:

<b>Fit for purpose</b>	A fleet vehicle is deemed ‘fit for purpose’ for replacement with an electric vehicle where there is an available electric vehicle model which can deliver equivalent function and utility for the purpose that the vehicle is used. This will take into consideration any modifications that have been made to the vehicle being replaced and any specific requirements such as equipment loads, or distances travelled. From 2020-21 the responsible area will be required to demonstrate due cause for leasing a passenger vehicle which is not a zero emissions vehicle
<b>Passenger vehicle</b>	A motor vehicle used for the primary purpose of transporting up to nine passengers including the driver. This includes sedans, hatchbacks and station wagons as well as small and medium sports utility vehicles (SUVs). Small vans considered suitable for replacement with electric vehicles are included. Other light commercial vehicles, such



- From 2019-20 at least 50% of all newly leased Government fleet passenger vehicles will be zero emissions vehicles (where fit for purpose); and
- From 2020-21 all newly leased ACT Government passenger fleet vehicles will be zero emissions vehicles (where fit for purpose).

Table 5: TCCS Passenger vehicle transition to ZEV

	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Total passenger vehicle leases held on 30 June	36	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>
Total ZEV passenger vehicles leases held on 30 June	9	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>
Total <i>new</i> leases of passenger vehicles	5	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>
Total <i>new</i> leases of ZEV passenger vehicles	3	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>
% of <i>newly</i> leased passenger vehicles that are ZEV	60%	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>

### Summary of non-ZEV vehicle leases

TCCS entered into two new non-ZEV vehicle leases during 2019-20. Both vehicles have 8 seat capacity, an operational requirement, for which there is currently no fit for purpose ZEV vehicles available.

In addition to TCCS passenger vehicles, TCCS operates a fleet of light commercial vehicles, agricultural equipment, trucks, buses, plant and equipment. TCCS are demonstrating leadership with an electric truck trial commencing in 2020-21, as well as keeping abreast of opportunities across all vehicle types as the ZEV industry matures. The emissions associated with this non-passenger fleet equates to 98% of annual emissions for TCCS (excluding the bus fleet).

## 5. Further detail

### Other Key Performance Indicators

Growth in the Territory will result in TCCS increasing service delivery and operations resulting in a commensurate increase in energy use. Energy intensity measures track efficiencies where changes in operations or environment occur. This includes the Transport Canberra bus network with energy use per passenger kilometre and Capital Linen Services with energy use against volume of linen sold.

	as utility vehicles, are not included at this stage. Replacement of light commercial vehicles with electric vehicles will be considered as models become more widely available.
Fleet vehicle	All Government-leased vehicles including pool and non-pool vehicles. This excludes Executive vehicles where these vehicles are not leased by Government.

**Table 6: Energy intensity measures**

	2019-20 <sup>11</sup>	2020-21	2021-22	2022-23	2023-24	2024-25
Transport Canberra bus network - (GJ/100 passenger km)	0.30	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>
Capital Linen Services – Energy/kg linen sold <sup>12</sup>	0.86	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>

## Preparing for emissions reductions beyond 2025

The Yarralumla Nursery is one of a number of facilities under review for replacement of gas-based heating systems with low emissions alternatives. The gas replacement study, conducted by the Environment, Planning and Sustainable Development Directorate (EPSDD) for TCCS and other Directorates, will recommend options that can be implemented before the interim target end date of 2025.

The Capital Linen Services facility is also being reviewed under the EPSDD gas replacement study. Owing to the nature of operations at CLS and the limited options for alternative steam-raising plant, lower emissions alternatives may not be feasible within the 2025 interim target period.

<sup>11</sup> Calendar year 2019 used as a proxy for 2019-20

<sup>12</sup> Normalised number. Consumption data provided by CLS and based on a 70% proportional split with Sterilisation Services.

**From:** [Campbell, Trish](#)  
**To:** [Yagnambhat, Samata](#)  
**Cc:** [EPSD Government Services](#); [Spain, Andrew](#); [TCCS\\_GBS Sustainability](#)  
**Subject:** RE: DG Approved Emissions Reduction Report for TCCS  
**Date:** Wednesday, 18 October 2023 1:25:00 PM  
**Attachments:** [Attachment B - Annual Update 2022-23 - TCCS Five Year Emissions Reduction Plan.docx](#)

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OFFICIAL

Hi Samata,

Please see attached DG endorsed report with kind regards,

Trish

**Trish Campbell | Senior Director**  
**TCCS Sustainability, Facilities and Fleet Unit**  
**Building Management Services Team**  
Phone: 02 6205 1574 | Email: [trish.campbell@act.gov.au](mailto:trish.campbell@act.gov.au)  
**Governance and Ministerial | Chief Operating Officer | Transport Canberra and City Services Directorate | ACT Government**  
480 Northbourne Avenue, Dickson ACT 2602 | GPO Box 158 Canberra ACT 2601 | [www.act.gov.au](http://www.act.gov.au)

*Connected services for the people of Canberra*

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**From:** Yagnambhat, Samata <[Samata.Yagnambhat@act.gov.au](mailto:Samata.Yagnambhat@act.gov.au)>  
**Sent:** Wednesday, October 18, 2023 1:24 PM  
**To:** Campbell, Trish <[Trish.Campbell@act.gov.au](mailto:Trish.Campbell@act.gov.au)>  
**Cc:** EPSD Government Services <[EPSDGovernmentServices@act.gov.au](mailto:EPSDGovernmentServices@act.gov.au)>; Spain, Andrew <[Andrew.Spain@act.gov.au](mailto:Andrew.Spain@act.gov.au)>  
**Subject:** DG Approved Emissions Reduction Report for TCCS

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Hi Trish,

As discussed, please respond to this email with a copy of your DG Approved Emission Reduction Report for further processing.

Thanks,

**Sama Yagnambhat**

ESP Program Officer – Zero Emissions Government  
Climate Change and Energy Division  
Phone: (02) 6205 9495 | Email: [Samata.Yagnambhat@act.gov.au](mailto:Samata.Yagnambhat@act.gov.au)  
Environment, Planning and Sustainable Development Directorate - ACT Government  
Ginini, Level 2 480 Northbourne Avenue Dickson ACT 2602 - GPO Box 158 Canberra City ACT 2601

# Transport Canberra and City Services Directorate

## Emissions Reduction Plan 2019-20 to 2024-25

### 2022-23 Progress Report

## 1. Background

The ACT Climate Change Strategy 2019-25 (the Strategy) was released in September 2019 and outlines the next steps for Canberra to reduce emissions by 50–60% (below 1990 levels) by 2025 and establish a pathway for achieving net zero emissions by 2045.

In order to demonstrate leadership in emission reductions, the Strategy includes a Zero Emissions Government (ZEG) Framework with an interim target to reduce emissions from government operations by over 33% by 2025 (from 2020 levels<sup>1</sup>) and achieve zero emissions from Government operations by 2040.

The TCCS Five-year Emissions Reduction Plan was endorsed in November 2020 with a 15.1% reduction in emissions forecast by 2024-25 in contribution to the ZEG Framework. With the majority of TCCS emissions associated with transport fuels (>90%) and numerous constraints with transitioning to zero emission vehicles (ZEV) including technical, infrastructure, financial and implementation, it is anticipated that emissions savings for TCCS will be realised in future years.

This report provides an overview on emission reduction activities for TCCS in 2022-23 as well as progress against the five-year emission target.

## 2. TCCS emissions target and results

Table 1: Transport Canberra and City Services emissions target and result<sup>2</sup>

	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Emissions target (tCO <sub>2</sub> -e)	39,034					33,130
Actual emissions (tCO <sub>2</sub> -e)	39,034	43,457	40,107	40,144		
Change in emissions from 2019-20 (%)		+11	+3%	+3%		

Currently TCCS are tracking above the emission target for 2022-23 by 3 percent.

## 3. 2022-23 Emissions Reduction Activities

Transport Canberra progressed implementation of its Zero-emissions Transition Plan, with Canberra's public transport system on a pathway to a fully zero emissions fleet by 2040. The first phase of the transition plan has involved replacement of the fleet's 34 orange Renault PR100.2 vehicles with lease of battery electric buses and low and zero-emission vehicles, and the purchase of 90 battery electric buses.

<sup>1</sup> 2019 calendar year was used as a proxy due to impacts of COVID-19

<sup>2</sup> Note that some data reported in Table 1 may differ slightly from figures reported in the TCCS Annual Reports. These are due to retrospective updates and historical consumption data.

These procurements will transition approximately one quarter of the Transport Canberra bus fleet to zero emissions, with a total of 106 battery electric buses in the fleet, expected by the end of 2026.

In addition to the public transport network, TCCS holds the largest and most complex fleet within ACT Government including passenger, commercial, heavy vehicle, plant and equipment. TCCS are actively engaging with industry and monitoring rapidly changing developments within electric vehicles, running trials where relevant and installing suitable charging infrastructure across relevant TCCS sites.

In 2022-23, TCCS undertook successful trials of an electric compact street sweeper and electric mini excavator which resulted in one of each entering TCCS fleet in 2023-24. In the same year, City Presentation will introduce four electric mowers, into the mowing fleet of 80, for further field testing and staff familiarisation.

TCCS continued to ensure that 100 per cent of all newly leased government passenger vehicles were zero emissions where fit for purpose. As at 30 June 2023, 38 per cent of TCCS passenger vehicles were zero emission vehicles including 20 per cent electric and 18 per cent hydrogen fuelled.

TCCS is also reducing emissions by reducing our reliance on gas. Capital Linen Services are investigating and applying reduction strategies where possible and have implemented measures such as heat recovery systems to reduce gas usage in 2020-21. As a result, consumption of gas per kilogram of laundry sold has improved by 11 per cent. However, the laundry is still the largest user of gas (~68%) for TCCS. Currently there are very limited substituting options available for industrial laundry application. It is expected that as technology and markets mature gas alternatives will become more readily available.

This is the same situation for Gungahlin Crematorium, the fourth largest user of gas (~4%) in the Directorate with no commercially viable options at present, however with technology constantly evolving and investigations continuing action will be taken at the earliest opportunity.

Additional measures to reduce gas in 2022-23 included progressing the Yarralumla Nursery glasshouse heating replacement project design and installation of solar PV at Tuggeranong Bus Depot under a combined heating upgrade/solar PV project.

Emissions source	tonnes CO <sub>2</sub> -e	% of total emissions	tonnes CO <sub>2</sub> -e	% of total emissions	tonnes CO <sub>2</sub> -e	% of total emissions
	2019	2019	2021-22	2021-22	2022-23	2022-23
<b>Transport fuels</b>	36,348	93.12%	37,664	93.91%	37,310	92.9%
<i>Bus network</i>	33,261	85.21%	34,011	84.80%	33,737	84.0%
o <i>Diesel</i>	29,078	74.49%	29,542	73.66%	29,694	74.0%
o <i>CNG</i>	4,183	10.72%	4,469	11.14%	4,043	10.1%
<i>TCCS Fleet</i>	3,087	7.91%	3,653	9.11%	3,573	8.9%
o <i>Diesel</i>	2,970	7.61%	3,570	8.90%	3,505	8.7%
o <i>Petrol</i>	117	0.30%	83	0.21%	68	0.2%
Natural gas	2,620	6.71%	2638	6.58%	2271	5.7%
Refrigerants	60	0.15%	92	0.23%	92	0.2%

	2019-20	2020-21	2021-22	2022-23
Total passenger vehicle leases held on 30 June	36	44	40	42
Total ZEV passenger vehicles leases held on 30 June	9	15	14	19
Total <i>new</i> leases of passenger vehicles	5	13	1	1 <sup>3</sup>
Total <i>new</i> leases of ZEV passenger vehicles	3	10	1	3
% of <i>newly</i> leased passenger vehicles that are ZEV	60%	77%	100%	75%

### Emissions reduction projects expected to commence in 2023-24






Fleet Services will continue to identify and trial zero emission commercial, heavy vehicle, plant and equipment. This will include trialling an electric flexible transport bus, second electric tipper truck and electric litter picking truck.

### Other key performance indicators

Growth in the Territory will result in TCCS increasing service delivery and operations resulting in a commensurate increase in energy use. Energy intensity measures track efficiencies where changes in operations or environment occur. This includes the Capital Linen Services with energy use against volume of linen sold and Transport Canberra bus network with energy use per passenger kilometre<sup>4</sup>.

**Table 6: Energy intensity measures**

	2019-20 <sup>5</sup>	2020-21	2021-22	2022-23	2023-24	2024-25
Transport Canberra bus network - (GJ/100 passenger km)	<i>Superseded<sup>4</sup></i>					
Capital Linen Services – Energy/kg linen sold <sup>6</sup>	0.86	 0.86	 0.81	 0.75	<i>track</i>	<i>track</i>

<sup>3</sup> A short term petrol lease was in place whilst a ZEV was on order.

<sup>4</sup> Due to unavailability of data at time of publication and strategic indicators capturing efficiency of the public transport network, reported in TCCS Annual Report, this measure has been discontinued.

<sup>5</sup> Calendar year 2019 used as a proxy for 2019-20.

<sup>6</sup> Normalised number. Consumption data provided by CLS and based on a 70% proportional split with Sterilisation Services.

## ADVISORY NOTE

Minister for Transport and City Services

<b>Subject</b>	TCCS reporting against Zero Emission Government (ZEG) Framework
<b>Critical Date</b>	In the normal course of business
<b>Deputy Director-General Transport Canberra and Business Services</b>	Ben McHugh 8/12/2021
<b>Deputy Director-General City Services</b>	Jim Corrigan 19/11/2021
<b>A/g Chief Operating Officer</b>	Meghan Oldfield 18/11/2021

### Purpose:

- To update you on TCCS' annual emission results for 2020-21 submitted to the Zero Emission Government (ZEG) team in Environment, Planning and Sustainable Development Directorate (EPSDD).
- The original plan for TCCS is provided at [Attachment A](#). TCCS' annual emission results are provided at [Attachment B](#) and will inform a Whole of Government (WhoG) report which will be made publicly available on the EPSDD website. Pending a brief to the Head of Service, publication is anticipated in late January 2022.

### Background

- The ZEG Framework forms part of the ACT Climate Change Strategy 2019-25 and commits ACT Government to achieving zero emissions from Government operations by 2040. Directorates provide annual emission results at the end of each financial year.
- TCCS Five-year Emissions Reduction Plan (ERP) 2019-20 to 2024-25 identified a potential of 15.1% reduction in emissions by 2024-25 against 2019 baseline<sup>1</sup> outlined in [Attachment A](#).

### TCCS emissions data for 2020-21

- [Attachment B](#) details how TCCS recorded 43,429 tCO<sub>2</sub>-e in 2020-21 which was 11.3% over the baseline and 11.6% over the forecast of 38,921 tCO<sub>2</sub>-e. Of this, 94.2% was attributed to transport emissions; 5.7% to natural gas and less than 0.1% to refrigerants.
- The increase in emissions was attributed to transport (up 12.7%) resulting from an increase in Transport Canberra bus services and fuel use in 2020; additional fleet vehicle emissions resulting from service level increases for Jobs for Canberrans, COVID-19 safety measures (less vehicle sharing), and an increase in mowing compared with 2019.

<sup>1</sup> Calendar year 2019 was used as baseline due to COVID-19

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- Efforts have been made to reduce emissions from transport in 2020-21. The Zero-Emission Transition Plan for Transport Canberra was released in September 2020 and in 2020-21 saw the progression of the procurement of an initial short-term lease of 26 replacement diesel buses and 8 battery electric buses.
- TCCS Fleet, where fit for purpose, leased zero emission vehicles (ZEV) to replace existing internal combustion vehicles when renewing leases. As at 30 June 2021, 34% of the TCCS passenger fleet were ZEVs. With only 9% of TCCS fleet falling within the passenger vehicle range, TCCS commenced a 12-month trial of a fully electric tipper truck introducing ZEV within its heavy vehicle fleet. The results of this trial will inform future transition of commercial fleet to ZEV.
- It is anticipated that emissions savings for transport will be realised in future years as Transport Canberra progresses procurement of 90 zero-emission buses and supporting infrastructure; and in 2021-22 will be pursuing trials of an electric bus for Flexible Transport. A hydrogen ute and generator trial are also being explored pending funding arrangements. As TCCS progresses with transition of fleet to zero emission vehicles over the coming years, it is recommended that the emissions target for 2024-25 of 33,130 tCO<sub>2</sub>-e (down 15.1% from baseline) remain in place.
- Natural gas use saw a decrease of 5.3% in 2020-21, compared with the baseline largely attributed to TCCS relocating to a zero-emissions building at 480 Northbourne Avenue in June 2020. A delay in upgrades at the Tuggeranong Bus Depot due to COVID-19 will see savings in gas realised in 2021-22.
- Energy productivity metrics were affected by COVID-19 in 2020-21 with the Transport Canberra bus network (GJ/100 passenger km) up 49% due to lower passenger numbers. Capital Linen Services (GJ/kg linen processed) remained stable with <1% variation from CY 2019.

  
**Noted / Please Discuss**

**Chris Steel MLA**  
**Minister for Transport and City Services**

10/12/21



# Transport Canberra and City Services Directorate

## Emissions Reduction Plan 2019-20 to 2024-25

### Background

The ACT Government has committed to reducing its greenhouse-gas emissions in its operations to zero by 2040. It has also committed to reduce its emissions by more than 33% over the period 2019-20 to 2020-25.

Given the unusual business conditions caused by the COVID-19 pandemic, data from calendar year 2019 has been used as a proxy for the 2019-20 baseline. All targets are calculated as a percentage change on that base year.

TCCS produced 39,028 tCO<sub>2</sub>-e emissions in 2019, 93.1% of which were associated with transport fuels. Emissions from the public transport sector represented over half of all ACT Government emissions and efforts are underway to increase efficiency of the Transport Canberra bus network. The Zero-Emission Transition Plan for Transport Canberra was released in 2020 and outlines the pathway to achieve the ACT Government's ambition of zero-emission public transport system by 2040. The Plan will see the government replace up to 17% of ageing diesel and CNG buses with battery electric buses powered with the ACT's 100% renewable electricity in line with the existing fleet retirement profile.<sup>1</sup> This will be timed with plans for new bus depots with electric charging infrastructure to support the growing fleet of zero-emission buses. Following an initial short-term lease of 34 replacement diesel buses, Transport Canberra will progress to procurement of 90 zero-emission buses and supporting infrastructure.

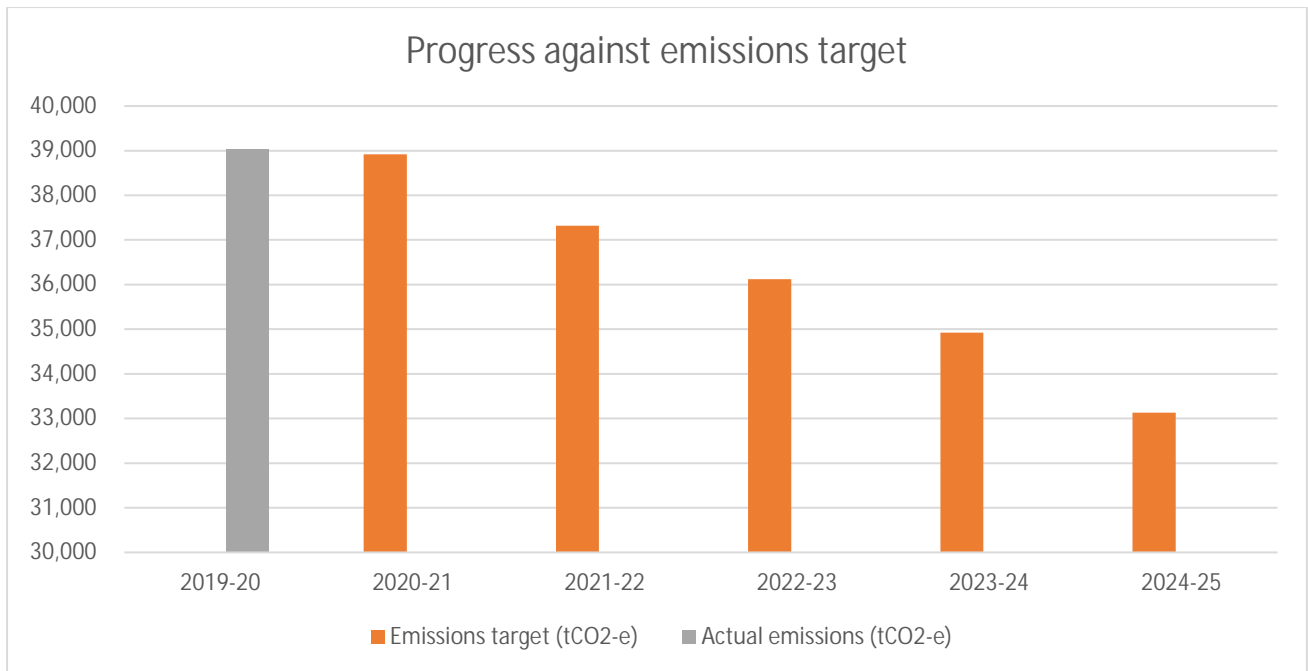
Given limited opportunity to transition fleet to zero emission vehicles in the short-term, TCCS have identified a potential of 15.1% reductions in emissions by 2024-25.

**Table 1: Transport Canberra and City Services emissions target and results**

	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Emissions target (tCO <sub>2</sub> -e)						33,130
Actual emissions (tCO <sub>2</sub> -e)	39,029 <sup>2</sup>					
Change in emissions from 2019-20 (%)						

<sup>1</sup> [Redacted]

<sup>2</sup> Calendar year 2019 used as a proxy for 2019-20



## Emissions reduction plan to 2024-25

Table 2: Key emissions sources

Emissions source	tonnes CO <sub>2</sub> -e <sup>3</sup>	% of total emissions
Transport fuels	36,348	93.1%
<i>Bus network (Diesel)</i>	29,078	74.5%
<i>Bus network (CNG)</i>	4,183	10.7%
<i>TCCS Fleet (passenger vehicles)</i>	73	0.2%
<i>TCCS Fleet (non-passenger vehicles)</i>	3,014	7.7%
Natural gas	2,620	6.7%
Refrigerants	60	0.2%

## Emissions reduction activities

### Transport Canberra bus network

- The [Zero-Emission Transition Plan for Transport Canberra](#) outlines the pathway to achieve the ACT Government’s ambition of zero-emission public transport system by 2040.
- Estimated emissions savings of activity:
  - See table below.
- How emissions savings were estimated:
  - Future fleet replacement profile, [REDACTED] was used to apply an average network tCO<sub>2</sub>-e/pa using existing diesel and CNG data for 2019.
  - Driver training to deliver more efficient driving of buses.

<sup>3</sup> Calendar year 2019 used as a proxy for 2019-20

- Fleet allocation so lower emission vehicles deliver a higher proportion of service kms.
- Timeframes:
  - Procurement of electric vehicles to commence 2021-22 with emissions savings ongoing for the usable life of the vehicle.
- Verification plan:
  - Tracking to be undertaken using actual fuel and emission data for the network.
- Responsibility for activity:
  - Project: DDG, Transport Canberra
  - Reporting: TCCS Sustainability Program.

#### Tuggeranong Bus Depot – Heating, Ventilation and Air Conditioning (HVAC) upgrade and solar PV

- The project proposes conversion of existing heating boilers from gas to electric heat pumps (with a small gas condensing boiler) and a 200kWh solar PV array.
- Estimated emissions savings of activity:
  - See table below.
- How emissions savings were estimated:
  - Robust savings calculations were included in application to the zero-emission Government loan fund and reviewed by an expert panel.
- Timeframes:
  - Project completion anticipated in early 2021.
- Verification plan:
  - To ensure that high quality before and after data for this project is captured, TCCS will apply a formal measurement and verification program to this project, informed by the International Performance Measurement and Verification Protocol.
- Responsibility for activity:
  - Project: TCCS Facilities/DDG, Transport Canberra
  - Reporting: TCCS Sustainability Program.

#### TCCS passenger fleet vehicles

- The ACT's Transition to Zero Emissions Vehicles Action Plan 2018-21 commits all newly leased ACT Government fleet passenger vehicles being zero-emissions (ZEV), where fit for purpose, by 2020-21.
- Estimated emissions savings of activity:
  - See table below.
- How emissions savings were estimated:
  - Future fleet replacement profile was used to estimate emissions savings from transitioning vehicles to zero-emissions, based on 2019 actual data.
- Timeframes:
  - Subject to operational requirements, leasing cycles and industry availability, 39% of passenger vehicles are scheduled to be transitioned to ZEV in 2020-21; a further 25% in 2021-22; and 14% in 2023-24.
- Verification plan:
  - Emissions savings will be measured using average tCO<sub>2</sub>-e/km data for similar diesel fleet compared with km travelled by ZEV.
- Responsibility for activity:
  - Project: TCCS Fleet Services
  - Reporting: TCCS Sustainability Program.

#### TCCS non-passenger fleet vehicles

- 12-month trial of a fully electric litter/leaf collection truck. The trial will provide a comprehensive understanding of features and benefits of EV for heavy commercial vehicles.

- Estimated emissions savings of activity:
  - See table below.
- How emissions savings were estimated:
  - Robust emission savings calculations were included in application to the zero-emission Government loan fund and reviewed by an expert panel.
- Timeframes:
  - Late 2020/early 2021.
- Verification plan:
  - Emissions savings will be measured using average tCO<sub>2</sub>-e/km data for similar diesel fleet compared with km travelled by ZEV.
  - Fit for purpose elements will be established to determine operational suitability, safety and driver usability is assessed.
- Responsibility for activity:
  - Project: TCCS Fleet Services/Executive Branch Manager, City Presentation
  - Reporting: TCCS Sustainability Program.

TCCS move to 480 Northbourne Avenue (NBA)

- Under the ACT Climate Change Strategy, the ACT Government is leading by example in the transition to a net zero emissions future with 480 NBA being a zero-emissions building with climate-wise design and energy efficient appliances.
- Estimated emissions savings of activity:
  - See Table below.
- How emissions savings were estimated:
  - Gas savings from previous accommodation in 496 Northbourne Avenue base building was used to quantify emissions savings.
- Timeframes:
  - TCCS relocated to 480NBA in June 2020.
- Verification plan:
  - n/a.
- Responsibility for activity:
  - Reporting: TCCS Sustainability Program.

**Table 3: Summary of projected emissions savings**

Activity name	tCO <sub>2</sub> -e				
	2020-21	2021-22	2022-23	2023-24	2024-25
Transport Canberra Bus Network <sup>4</sup>		1,454	1,195	1,195	1,793
Tuggeranong Bus Depot – HVAC upgrade	41	123			
TCCS passenger fleet – transition to EV	21	21	8		
Electric leaf litter truck 12-month EV trial	1.8	2.6			
Move to 480NBA	44				
<b>TOTAL</b>	<b>108</b>	<b>2,069</b>	<b>1,203</b>	<b>1,195</b>	<b>1,793</b>

<sup>4</sup> [Redacted]

### Changes to previous estimates

- Placeholder to explain any variation in the emissions reductions identified in previous years.

Table 4: Cost of emission reduction activities

Activity name	Total cost (projected or actual) (\$)	Funding bid successful [Yes/partial/pending/no]
Transport Canberra Bus Network – transition to ZEV		
Tuggeranong Bus Depot HVAC/solar upgrade	\$1.3M	Yes
TCCS Fleet Services Electric tipper truck trial	\$0.1M <sup>5</sup>	Yes
TCCS Fleet Services Passenger vehicle transition to ZEV		
<b>TOTAL</b>		

### Transition to zero emissions vehicles (ZEV)<sup>7</sup>

The ACT Government has made the following commitments under The ACT’s Transition to Zero Emissions Vehicles Action Plan:

- From 2019-20 at least 50% of all newly leased Government fleet passenger vehicles will be zero emissions vehicles (where fit for purpose); and
- From 2020-21 all newly leased ACT Government passenger fleet vehicles will be zero emissions vehicles (where fit for purpose).

Table 5: TCCS Passenger vehicle transition to ZEV

5 [Redacted]  
6 [Redacted]

<sup>7</sup> The ACT Government is working from the following definitions of ‘fit for purpose’, ‘passenger vehicle’ and ‘fleet vehicle’:

<b>Fit for purpose</b>	A fleet vehicle is deemed ‘fit for purpose’ for replacement with an electric vehicle where there is an available electric vehicle model which can deliver equivalent function and utility for the purpose that the vehicle is used. This will take into consideration any modifications that have been made to the vehicle being replaced and any specific requirements such as equipment loads, or distances travelled. From 2020-21 the responsible area will be required to demonstrate due cause for leasing a passenger vehicle which is not a zero emissions vehicle
<b>Passenger vehicle</b>	A motor vehicle used for the primary purpose of transporting up to nine passengers including the driver. This includes sedans, hatchbacks and station wagons as well as small and medium sports utility vehicles (SUVs). Small vans considered suitable for replacement with electric vehicles are included. Other light commercial vehicles, such as utility vehicles, are not included at this stage. Replacement of light commercial vehicles with electric vehicles will be considered as models become more widely available.
<b>Fleet vehicle</b>	All Government-leased vehicles including pool and non-pool vehicles. This excludes Executive vehicles where these vehicles are not leased by Government.

	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Total passenger vehicle leases held on 30 June	36	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>
Total ZEV passenger vehicles leases held on 30 June	9	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>
Total <i>new</i> leases of passenger vehicles	5	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>
Total <i>new</i> leases of ZEV passenger vehicles	3	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>
% of <i>newly</i> leased passenger vehicles that are ZEV	60%	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>

### Summary of non-ZEV vehicle leases

TCCS entered into two new non-ZEV vehicle leases during 2019-20. Both vehicles have 8 seat capacity, an operational requirement, for which there is currently no fit for purpose ZEV vehicles available.

In addition to TCCS passenger vehicles, TCCS operates a fleet of light commercial vehicles, agricultural equipment, trucks, buses, plant and equipment. TCCS are demonstrating leadership with an electric truck trial commencing in 2020-21, as well as keeping abreast of opportunities across all vehicle types as the ZEV industry matures. The emissions associated with this non-passenger fleet equates to 98% of annual emissions for TCCS (excluding the bus fleet).

### Further detail

#### Other Key Performance Indicators

Growth in the Territory will result in TCCS increasing service delivery and operations resulting in a commensurate increase in energy use. Energy intensity measures track efficiencies where changes in operations or environment occur. This includes the Transport Canberra bus network with energy use per passenger kilometre and Capital Linen Services with energy use against volume of linen sold.

**Table 6: Energy intensity measures**

	2019-20 <sup>8</sup>	2020-21	2021-22	2022-23	2023-24	2024-25
Transport Canberra bus network - (GJ/100 passenger km)	0.30	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>
Capital Linen Services – Energy/kg linen sold <sup>9</sup>	0.86	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>

<sup>8</sup> Calendar year 2019 used as a proxy for 2019-20

<sup>9</sup> Normalised number. Consumption data provided by CLS and based on a 70% proportional split with Sterilisation Services.

## Preparing for emissions reductions beyond 2025

The Yarralumla Nursery is one of a number of facilities under review for replacement of gas-based heating systems with low emissions alternatives. The gas replacement study, conducted by the Environment, Planning and Sustainable Development Directorate (EPSDD) for TCCS and other Directorates, will recommend options that can be implemented before the interim target end date of 2025.

The Capital Linen Services facility is also being reviewed under the EPSDD gas replacement study. Owing to the nature of operations at CLS and the limited options for alternative steam-raising plant, lower emissions alternatives may not be feasible within the 2025 interim target period.

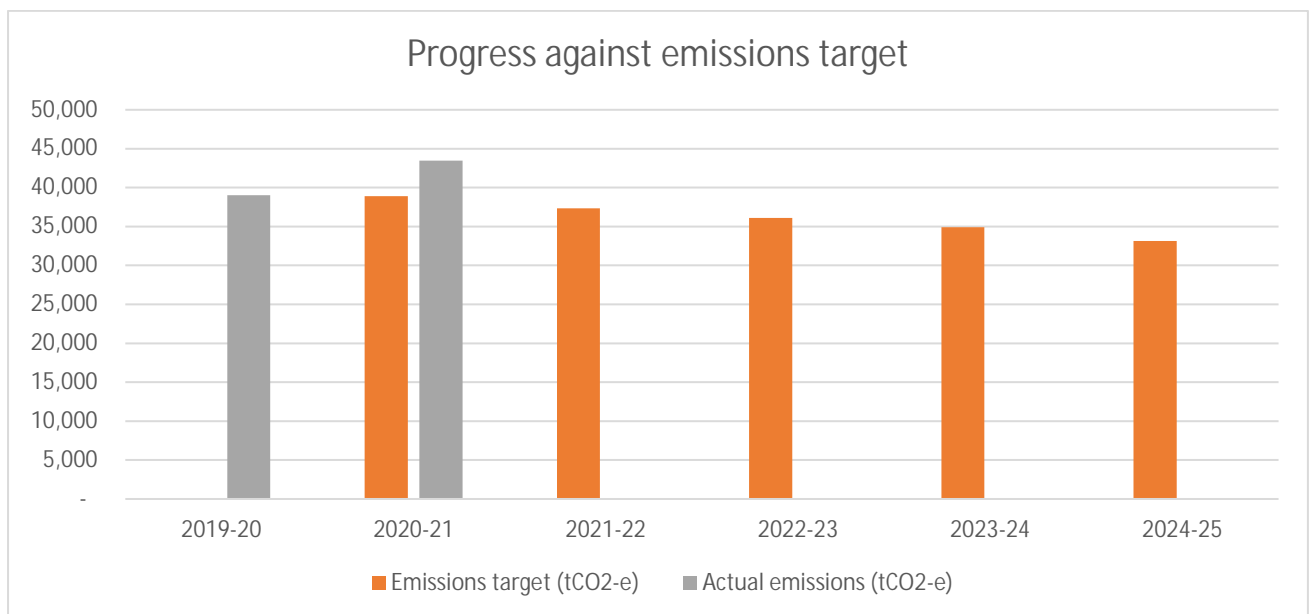
# Transport Canberra and City Services Directorate

## Emissions Reduction Plan 2019-20 to 2024-25

### TCCS emissions target and results for 2020-21

Table 1: Transport Canberra and City Services emissions target and results

	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Emissions target (tCO <sub>2</sub> -e)						33,130
Actual emissions (tCO <sub>2</sub> -e)	39,029 <sup>1</sup>	43,457				
Change in emissions from 2019-20 (%)		+11.7%				



### 2020-21 Emissions Reduction Activities

#### Transport Canberra

The Zero-Emission Transition Plan for Transport Canberra was released in September 2020 and outlines the pathway to achieve the ACT Government's ambition of zero-emission public transport system by 2040. With this Plan TCCS is taking nation-leading action to transition our city's bus fleet to zero emissions, including the infrastructure, investment and skills needed to make the transition operationally successful.

Over the next 3 years, the Transition Plan will see the government replace over 20% of ageing diesel and CNG buses with battery electric buses powered with the ACT's 100% renewable electricity in line with the existing fleet retirement profile. This will be timed with plans for new bus depots with electric charging infrastructure to support the growing fleet of zero-emission buses. Transport Canberra are progressing with

<sup>1</sup> Calendar year 2019 used as a proxy for 2019-20



the procurement of 34 replacement buses, some of which will be zero emissions and following this an additional 90 zero emission buses will be procured.

An increase in weekday bus services from July 2020 and an uplift in weekend bus services commencing in October 2020 has contributed to an increase in fuel use for the Transport Canberra bus fleet for 2020-21 compared with 2019-20.

### TCCS Fleet

With only 9% of TCCS fleet falling within the passenger vehicle range, TCCS commenced a 12-month trial of a fully electric tipper truck introducing ZEV within its heavy vehicle fleet.

Charging infrastructure was further expanded with works commenced at Reid and Curtin depots for the addition of two 25KW DC fast chargers, making a total of 15 sites and 20 EV charging units available across TCCS sites. The EV tipper truck is fit for purpose for general cleaning and maintenance tasks and will provide vital data on the suitability of electrification of vehicles within the ACT government heavy vehicle fleet.

Increase in emissions for 2020-21 for TCCS fleet was a result of additional fleet vehicles required service level increases associated with the Jobs for Canberrans and operational requirements due to COVID-19; and an increase in mowing schedules in 2020-21 compared with 2019.

### **TCCS move to 480 Northbourne Avenue (NBA)**

In June 2020, TCCS relocated to an activity-based, multi-tenanted ACT-Government leased zero emissions building at 480 Northbourne Avenue (NBA) with climate-wise design and energy efficient appliances. 480 NBA achieved outstanding environmental credentials including 5-star Greenstar rating and 5 star NABERS rating for energy efficiency; water usage; waste management and indoor air quality.

Emissions source	tonnes CO <sub>2</sub> -e <sup>2</sup> 2019	% of total emissions 2019	tonnes CO <sub>2</sub> -e 2020-21	% of total emissions 2020-21
Transport fuels	36,348	93.1%	40,949	94.2%
<i>Bus network (Diesel)</i>	29,078	74.5%	32,241	74.2%
<i>Bus network (CNG)</i>	4,183	10.7%	4,937	11.4%
<i>TCCS Fleet (passenger vehicles)</i>	73	0.2%	89	0.2%
<i>TCCS Fleet (non- passenger vehicles)</i>	3,014	7.7%	3,682	8.5%
Natural gas	2,620	6.7%	2,480	5.7%
Refrigerants	60	0.2%	27	<0.0%

<sup>2</sup> Calendar year 2019 used as a proxy for 2019-20<sup>3</sup> Calendar year 2019 used as a proxy for 2019-20

### Energy intensity measures

	2019-20 <sup>3</sup>	2020-21
Transport Canberra bus network - (GJ/100 passenger km)	0.30	0.45
Capital Linen Services – Energy/kg linen sold <sup>4</sup>	0.86	0.86

### Zero Emissions Vehicles Transition 2020-21

TCCS Fleet ensured all passenger fleet vehicle leases were replaced with ZEV, where fit for purpose, during 2020-21. This included introduction of seven Nexo hydrogen vehicles to the fleet. The three vehicles that were not ZEV were people movers, critical for Transport Canberra Operations and where no ZEV alternatives are currently available.

	2019-20	2020-21
Total passenger vehicle leases held on 30 June	36	44
Total ZEV passenger vehicles leases held on 30 June	9	15
Total <i>new</i> leases of passenger vehicles	5	13 <sup>5</sup>
Total <i>new</i> leases of ZEV passenger vehicles	3	10
% of <i>newly</i> leased passenger vehicles that are ZEV	60%	77%

### Emissions reduction projects expected to commence in 2021-22

Pending funding approvals, Fleet Services are pursuing trials of an electric bus for Flexible Transport and hydrogen ute in 2021-22. A hydrogen generator trial is also being explored for 2021-22.

Delays were experienced to the heating, ventilation and air conditioning and solar PV upgrade at Tuggeranong bus depot due to COVID-19 in 2020-21, however it is expected that this project will commence in 2021-22.

<sup>3</sup> Calendar year 2019 used as a proxy for 2019-20

<sup>4</sup> Normalised number. Consumption data provided by CLS and based on a 70% proportional split with Sterilisation Services.

<sup>5</sup> Excludes short term lease vehicles required to accommodate Jobs for Canberra and/or to meet COVID-19 fleet protocols

## ADVISORY NOTE

Minister for Transport and City Services

<b>Subject</b>	TCCS reporting against Zero Emission Government (ZEG) Framework
<b>Critical Date</b>	In the normal course of business
<b>Director-General</b>	...../...../.....
<b>Deputy Director-General City Services</b>	...../...../.....
<b>Deputy Director-General Transport Canberra and Business Services</b>	...../...../.....
<b>A/g Chief Operating Officer</b>	...../...../.....

### Purpose:

- To update you on TCCS' annual emission results and updates submitted to the Zero Emission Government (ZEG) team Environment, Planning and Sustainable Development Directorate (EPSDD). Data at [Attachment A](#) will inform a Whole of Government (WhoG) report which will be made publicly available on the EPSDD website.

### Background

- The ZEG Framework forms part of the ACT Climate Change Strategy 2019-25 and commits ACT Government to achieving emission reduction targets including zero emissions from Government operations by 2040. Under the framework, directorates to provide annual emission results and updates to EPSDD at the end of each financial year.
- TCCS Five-year Emissions Reduction Plan (ERP) 2019-20 to 2024-25 identified a potential of 15.1% reduction in emissions by 2024-25 and forms the basis of the 2019 baseline outlined in [Attachment A](#).

### Emissions data for 2020-21

- TCCS recorded 43,429 tCO<sub>2</sub>-e in 2020-21 which was 11.3% over the 2019 baseline<sup>1</sup> and 11.6% over the forecast of 38,921 tCO<sub>2</sub>-e. Of this, 94.2% was attributed to transport emissions; 5.7% to natural gas and less than 0.1% to refrigerants.
- The increase in emissions was attributed to transport (up 12.7%) resulting from an increase in Transport Canberra bus services and fuel use in 2020; additional fleet vehicle emissions resulting from service level increases for Jobs for Canberrans, operational requirements and

<sup>1</sup> Calendar year 2019 was used as baseline due to COVID-19

UNCLASSIFIED

COVID-19 safety measures (less vehicle sharing), and an increase in mowing compared with 2019.

- Efforts have been made to reduce emissions from transport in 2020-21. The Zero-Emission Transition Plan for Transport Canberra was released in September 2020 and in 2020-21 saw the progression of an initial short-term lease of 26 replacement diesel buses and 8 battery electric buses.
- In support of the ACT's Transition to the Zero Emissions Vehicles Action Plan 2018-21, TCCS Fleet, where fit for purpose, leased zero emission vehicles (ZEV) to replace existing internal combustion vehicles when renewing leases. As at 30 June 2021, 34% of the TCCS passenger fleet were ZEV vehicles. With only 9% of TCCS fleet falling within the passenger vehicle range, TCCS commenced a 12-month trial of a fully electric tipper truck introducing ZEV within its heavy vehicle fleet. The results of this trial will inform future transition of commercial fleet to ZEV.
- It is anticipated that emissions savings for transport will be realised in future years as Transport Canberra progresses procurement of 90 zero-emission buses and supporting infrastructure; and in 2021-22 will be pursuing trials of an electric bus for Flexible Transport. A hydrogen ute and generator trial are also being explored pending funding arrangements. As TCCS progresses with transition of fleet to zero emission vehicles over the coming years, it is recommended that the emissions target for 2024-25 of 33,130 tCO<sub>2</sub>-e (down 15.1% from baseline) remain in place.
- Natural gas use saw a decrease of 5.3% in 2020-21, compared with the baseline largely attributed to TCCS relocating to a zero-emissions building at 480 Northbourne Avenue in June 2020. A delay in upgrades at the Tuggeranong Bus Depot due to COVID-19 will see savings in gas realised in 2021-22.
- Energy productivity metrics were affected by COVID-19 in 2020-21 with the Transport Canberra bus network (GJ/100 passenger km) up 49% due to lower passenger numbers. Capital Linen Services (GJ/kg linen processed) remained stable with <1% variation from CY 2019.

**Noted / Please Discuss**

Chris Steel MLA  
Minister for Transport and City Services

.../.../...

Objective: DG2021/01615

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**To:** Director-General, Transport Canberra and City Services

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**Through:** Deputy Director-General, Transport Canberra and Business Services  
Deputy Director-General, City Services  
Executive Group Manager, Transport Operations  
Executive Group Manager, Territory and Business Services  
a/g Chief Operating Officer

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**From:** Executive Branch Manager, Governance and Ministerial Services

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**Subject:** 2020-21 Update Report to EPSDD: TCCS Five-year Emissions Reduction Plan  
2019-20 to 2024-25

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**Critical Date:** 3 November 2021

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**Critical Reason:** To meet performance reporting commitments in delivery of the Zero Emission  
Government Framework

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**Purpose**

To provide a summary progress report on the Directorate's performance against the TCCS Five-year Emissions Reduction Plan (ERP) 2019-20 to 2024-25 at the request of the Environment, Planning and Sustainable Development Directorate (EPSDD).

**Recommendations**

That you agree to provide EPSDD with results for 2020-21 against the TCCS Five-year ERP at Attachment A.

**Agreed / Not Agreed / Please Discuss**

Alison Playford, Director-General..... /...../.....

Director-General's Office Feedback

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## Background

1. The Zero Emission Government (ZEG) Framework forms part of the ACT Climate Change Strategy 2019-25 (the Strategy) which was released in September 2019. The ZEG Framework commits ACT Government to lead by example through achieving emission reduction targets including zero emissions from Government operations by 2040.
2. You endorsed the TCCS Five-year Emissions Reduction Plan (ERP) 2019-20 to 2024-25 in November 2020 which identified a potential of 15.1% reduction in emissions by 2024-25.
3. The Environment, Planning and Sustainable Development Directorate (EPSDD) requires directorates to provide annual emission results and updates to be cleared by Directors-General and submitted to the ZEG team after the end of the reporting period.

## Issues

4. TCCS emission results for 2020-21 can be found in Sections 2 and 3 (highlighted green) at Attachment A. Only Section 2 and 3 (green text boxes) require your review and endorsement, as the remainder of the document was endorsed in November 2020.
5. TCCS recorded 43,429 tCO<sub>2</sub>-e in 2020-21 which was 11.3% over the 2019 baseline<sup>1</sup> and 11.6% over the forecast decrease of 38,921 tCO<sub>2</sub>-e. Of this, 94.2% was attributed to transport emissions; 5.7% to natural gas and less than 0.1% to refrigerants.
6. The increase in emissions was attributed to transport (up 12.7%) resulting from an increase of bus services and fuel use in 2020 for the Transport Canberra bus network; additional fleet vehicle emissions resulting from service level increases from Jobs for Canberrans, operational requirements and COVID-19 (less vehicle sharing), and an increase in mowing compared with 2019.
7. Efforts have been made to reduce emissions from transport in 2020-21. The Zero-Emission Transition Plan for Transport Canberra was released in September 2020 and in 2020-21 saw the progression of an initial short-term lease of 26 replacement diesel buses and 8 battery electric buses.
8. In support of the *ACT's Transition to the Zero Emissions Vehicles Action Plan 2018-21*, TCCS Fleet, where fit for purpose, leased zero emission vehicles (ZEV) to replace existing internal combustion vehicles when renewing leases. As at 30 June 2021, 34% of the TCCS passenger fleet were ZEV vehicles. With only 9% of TCCS fleet falling within the passenger vehicle range, TCCS commenced a 12-month trial of a fully electric tipper truck introducing ZEV within its heavy vehicle fleet. The results of this trial will inform future transition of commercial fleet to ZEV.
9. It is anticipated that emissions savings for transport will be realised in future years as Transport Canberra will progress to procurement of 90 zero-emission buses and supporting infrastructure; and in 2021-22 will be pursuing trials of an electric bus for Flexible Transport. A hydrogen ute and generator trial are also being explored pending funding arrangements. As TCCS progresses with transition of fleet to zero emission vehicles over the coming years, it is recommended that the emissions target for 2024-25 of 33,130 tCO<sub>2</sub>-e (down 15.1% from baseline) remain in place.
10. Natural gas use saw a decrease of 5.3% in 2020-21, compared with the baseline largely

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<sup>1</sup> Calendar 2019 year was used as baseline due to COVID-19

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attributed to TCCS relocating to a zero-emissions building at 480 Northbourne Avenue in June 2020. A delay in upgrades at the Tuggeranong Bus Depot due to COVID-19 will see savings in gas realised in 2021-22. Further reductions in gas may be achieved in 2021-22 at Yarralumla Nursery, pending application for funding under the Social Cost of Carbon fund to upgrade several gas heating units to electric.

11. Energy productivity metrics were affected by COVID-19 in 2020-21 with the Transport Canberra bus network (GJ/100 passenger km) up 49% due to lower passenger numbers. Capital Linen Services (GJ/kg linen processed) remained stable with <1% variation from CY 2019.

**Consultation**

Internal

12. Senior Director, Procurement & Asset Management, Transport Canberra and Business Services
13. Director, TCCS Fleet Services

Cross Directorate

14. Zero Emission Government Team, EPSDD

External

15. n/a

**Media Implications**

16. EPSDD will use results provided in Attachment A to prepare a Whole of Government (WhoG) report which will be made publicly available on the EPSDD website. Attachment A in itself will not be made publicly available.

Greg Haraldson  
A/g Executive Branch Manager  
28 October 2021

Phone: 6205 5187

Action Officer: Director, Sustainability, Facilities and Fleet Unit

Phone: 6205 1574

Attachment	
Attachment A	2020-21 Update Report to EPSDD: TCCS Five-year Emissions Reduction Plan 2019-20 to 2024-25

**From:** [Playford, Alison](#)  
**To:** [Riley, Lindsay](#)  
**Subject:** RE: FOR DG CLEARANCE: FW: DG2021/01615 Final Approval - DUE: 03.11.21 - GAMS - DG2021/01615 - 2020-21 Update Report to EPSDD: TCCS Five-year Emissions Reduction Plan 2019-20 to 2024-25 - DG Brief  
**Date:** Monday, 15 November 2021 1:31:06 PM  
**Attachments:** [image004.png](#)  
[image005.png](#)  
[image006.png](#)  
[image007.png](#)  
[image008.png](#)  
[image009.png](#)  
[image002.jpg](#)

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approved

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**From:** Riley, Lindsay <Lindsay.Riley@act.gov.au>  
**Sent:** Monday, 15 November 2021 1:15 PM  
**To:** Playford, Alison <Alison.Playford@act.gov.au>  
**Subject:** FOR DG CLEARANCE: FW: DG2021/01615 Final Approval - DUE: 03.11.21 - GAMS - DG2021/01615 - 2020-21 Update Report to EPSDD: TCCS Five-year Emissions Reduction Plan 2019-20 to 2024-25 - DG Brief

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Alison

Returned for your clearance now incorporating your below request.

- Greg has cleared.
- Return to Responder by Helen Willson on 12 Nov 2021, 07:49 AM."Hi Eb - can we please incorporate **Ben's comment - Approved**. We may wish to better explain the service level increases associated with the Jobs For Canberrans additional resources, as one of the reasons for an increase in emissions, rather than just the 'jobs for Canberrans' Can we also do an Advisory note and send up to the Min so he is aware of the reasons we havent achieved and when likely to go public. thanks Helen"
- Approve by Ben McHugh on 11 Nov 2021, 15:18 PM."Approved. We may wish to better explain the service level increases associated with the Jobs For Canberrans additional resources, as one of the reasons for an increase in emissions, rather than just the 'jobs for Canberrans'."
- Approve by Jim Corrigan on 8 Nov 2021, 14:47 PM.

Let me know if

**Lindsay Riley | Executive Assistant**

Phone 02 6207 1229 | Email: [Lindsay.riley@act.gov.au](mailto:Lindsay.riley@act.gov.au)

**Office of the Director-General** | Transport Canberra and City Services Directorate | **ACT Government**

480 Northbourne Avenue, Dickson | GPO Box 158 Canberra ACT 2601 | [www.act.gov.au](http://www.act.gov.au)

*Connected services for the people of Canberra*





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**From:** Playford, Alison <[Alison.Playford@act.gov.au](mailto:Alison.Playford@act.gov.au)>  
**Sent:** Thursday, 11 November 2021 5:00 PM  
**To:** Riley, Lindsay <[Lindsay.Riley@act.gov.au](mailto:Lindsay.Riley@act.gov.au)>  
**Cc:** Willson, Helen <[Helen.Willson@act.gov.au](mailto:Helen.Willson@act.gov.au)>; Willson, Helen <[Helen.Willson@act.gov.au](mailto:Helen.Willson@act.gov.au)>  
**Subject:** RE: FOR DG CLEARANCE: FW: DG2021/01615 Final Approval - DUE: 03.11.21 - GAMS - DG2021/01615 - 2020-21 Update Report to EPSDD: TCCS Five-year Emissions Reduction Plan 2019-20 to 2024-25 - DG Brief

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Can you get them to change to incorporate Ben comment. Can we also do an Advisory note and send up to the Min so he is aware of the reasons we havent achieved and when likely to go public.

---

**From:** Riley, Lindsay <[Lindsay.Riley@act.gov.au](mailto:Lindsay.Riley@act.gov.au)>  
**Sent:** Thursday, 11 November 2021 3:46 PM  
**To:** Playford, Alison <[Alison.Playford@act.gov.au](mailto:Alison.Playford@act.gov.au)>  
**Cc:** Willson, Helen <[Helen.Willson@act.gov.au](mailto:Helen.Willson@act.gov.au)>  
**Subject:** FOR DG CLEARANCE: FW: DG2021/01615 Final Approval - DUE: 03.11.21 - GAMS - DG2021/01615 - 2020-21 Update Report to EPSDD: TCCS Five-year Emissions Reduction Plan 2019-20 to 2024-25 - DG Brief

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Alison

For your approval please, noting Ben's comments below.

- Approve by Ben McHugh on 11 Nov 2021, 15:18 PM."Approved. We may wish to better explain the service level increases associated with the Jobs For Canberrans additional resources, as one of the reasons for an increase in emissions, rather than just the 'jobs for Canberrans'."
- Approve by Jim Corrigan on 8 Nov 2021, 14:47 PM.
- Approve by Craig Jordan on 3 Nov 2021, 09:43 AM."Approved"
- Approve by Meghan Oldfield on 2 Nov 2021, 17:24 PM.

**Lindsay Riley | Executive Assistant**

Phone 02 6207 1229 | Email: [Lindsay.riley@act.gov.au](mailto:Lindsay.riley@act.gov.au)

Office of the Director-General | Transport Canberra and City Services Directorate | **ACT Government**

480 Northbourne Avenue, Dickson | GPO Box 158 Canberra ACT 2601 | [www.act.gov.au](http://www.act.gov.au)

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**From:** Objective Administrator <[Objective@act.gov.au](mailto:Objective@act.gov.au)>

**Sent:** Thursday, 11 November 2021 3:44 PM

**To:** Riley, Lindsay <[Lindsay.Riley@act.gov.au](mailto:Lindsay.Riley@act.gov.au)>

**Subject:** DG2021/01615 Final Approval - DUE: 03.11.21 - GAMS - DG2021/01615 - 2020-21 Update Report to EPSDD: TCCS Five-year Emissions Reduction Plan 2019-20 to 2024-25 - DG Brief

## Final Approval



<b>OM DATE DUE TO OWNER</b>  <b>3</b>  <b>NOV 2021</b>	<b>PRIORITY</b>  <b>BRIEF - URGENT</b>
--	--

Hello Lindsay Riley,

Please review the draft response document and select one of the following actions:

- Open Final Approval task: use this to open the task, choose any of the available actions and update any metadata.

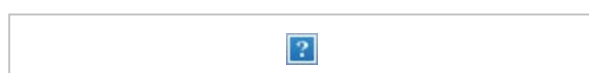
- All other buttons: will open an email so you can enter comments and complete this task with the selected action.

### Item for Action

[GAMS - DG2021/01615 - 2020-21 Update Report to EPSDD: TCCS Five-year Emissions Reduction Plan 2019-20 to 2024-25 - DG Brief](#)

<b>OM Action Required String:</b>	DG Brief
<b>OM Reference:</b>	DG2021/01615
<b>OM Owner String:</b>	Director General
<b>OM Topic:</b>	DG Brief
<b>OM Division:</b>	Division - COO - Chief Operating Officer
<b>OM Branch:</b>	Branch - COO - Governance and Ministerial Services (GAMS)
<b>OM Section:</b>	
<b>OM Current Approval Officer:</b>	Deputy Director General, Transport Canberra
<b>OM Responder:</b>	Ebony Bakavgas
<b>OM Final Approver:</b>	DG, TCCS - E00918
<b>OM QA Responder:</b>	Minister/DG - EA - Director-General
<b>OM Dispatch Officer:</b>	DG, TCCS - E00918

### Available Actions





## History

**Lindsay Riley** completed task **QA Response** action taken **Send to Final Approval**

Actioned on: 11 Nov 2021 3:42 pm

Comment: *"With DG for clearance. "*

**Ben McHugh** completed task **Approve Response** action taken **Approve**

Actioned on: 11 Nov 2021 3:18 pm

Comment: *"Approved. We may wish to better explain the service level increases associated with the Jobs For Canberrans additional resources, as one of the reasons for an increase in emissions, rather than just the 'jobs for Canberrans'."*

**Imogen Gambale** completed task **Approve Response** action taken **Approve**

Actioned on: 09 Nov 2021 4:52 pm

Comment: *"Progressing to DDG for review and approval. "*

**Jim Corrigan** completed task **Approve Response** action taken **Approve**

Actioned on: 08 Nov 2021 2:47 pm

Comment: *""*

**Vanessa Althorp** completed task **Approve Response** action taken **Approve**

Actioned on: 05 Nov 2021 1:09 pm

Comment: *"Ready for DDG CS approval"*

**Shonah Stratton** completed task **Approve Response** action taken **Approve**

Actioned on: 04 Nov 2021 4:35 pm

Comment: *"Cleared by EGM TC."*

**Craig Jordan** completed task **Approve Response** action taken **Approve**

Actioned on: 03 Nov 2021 9:43 am

Comment: *"Approved"*

**Meghan Oldfield** completed task **Approve Response** action taken **Approve**

Actioned on: 02 Nov 2021 5:24 pm

Comment: *""*

**Greg Haraldson** completed task **Approve Response** action taken **Approve**

Actioned on: 29 Oct 2021 4:46 pm

Comment: *"Updated with missing CLS data. Ready to progress."*

**Meghan Oldfield** completed task **Approve Response** action taken **Return to Previous Approver**

Actioned on: 28 Oct 2021 6:31 pm

Comment: *"There is data missing from both the brief and attachment. to be added please"*

**Greg Haraldson** completed task **Approve Response** action taken **Approve**

Actioned on: 28 Oct 2021 4:51 pm

Comment: *"Cleared - one piece of data pending from Capital Linen otherwise ready for a/COO approval. "*

**Ebony Bakavgas** completed task **Respond** action taken **Send for Approval**

Actioned on: 28 Oct 2021 3:51 pm

Comment: *""*

**Ebony Bakavgas** started workflow

Started on: 28 Oct 2021 3:46 pm

Comment: *""*

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Objective: A43922690

OFFICIAL

**To:** Director-General, Transport Canberra and City Services

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**Through:** Deputy-Director General, City Services  
Deputy-Director General, Transport Canberra and Business Services  
Chief Operating Officer  
Executive Group Manager, Transport Canberra and Business Services  
~~Executive Group Manager, Transport Canberra~~

---

**From:** Executive Branch Manager, Governance and Ministerial Services

---

**Subject:** TCCS 2022-23 Progress Report: Five-year Emissions Reduction Plan 2019-20 to 2024-25

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**Critical Date:** 18 October 2023

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**Critical Reason:** To allow preparation of a WhoG results paper on Directorate's five-year emissions reduction plans - due to Strategic Board before 25 October 2023

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**Purpose**

To meet performance reporting commitments in delivery of the Zero Emission Government Framework.

**Recommendations**

That you approve the TCCS 2022-23 Progress Report on the TCCS Five-year Emission Reduction Plan 2019-20 to 2024-25 at Attachment B.

**Agreed / Not Agreed / Please Discuss**

Karen Doran, A/g Director-General..... /...../.....

Director-General's Office Feedback

## Background

1. The ACT Government has committed to reducing its greenhouse gas emissions in its operations to zero by 2040 through the ACT Climate Change Strategy 2019-25 (the Strategy) with an interim target to reduce emissions from government operations by over 33% by 2025 (from 2020 levels<sup>1</sup>).
2. The TCCS Five-year Emissions Reduction Plan was endorsed in November 2020 with a 15.1% reduction in emissions forecast by 2024-25 in contribution to the ZEG Framework (see [Attachment A](#)).
3. The Environment, Planning and Sustainable Development Directorate (EPSDD) requires Directorates to provide annual emission results and updates to be cleared by Directors-General and presented to the Head of Service each year.
4. The 2022-23 Progress Report for TCCS Emissions Reduction Plan can be found at [Attachment B](#) for your approval.

## Issues

5. TCCS recorded 40,144 tCO<sub>2</sub>-e in 2022-23 which was 3% over the 2019 baseline and 11% over the forecast decrease of 36,118 tCO<sub>2</sub>-e. Of this, 93% was attributed to transport emissions; 7% to natural gas and less than 1% to refrigerants.
6. While TCCS is not currently on track to achieve the emission reduction target set for 2024-25, progress has been made amidst numerous constraints including construction cost increases which has delayed upgrades at Tuggeranong Bus Depot and Yarralumla Nursery and technical, infrastructure, financial and implementation issues needing to be worked through for the public transport network and non-public transport fleet.
7. With work progressing in all aspects toward the transition as outlined in [Attachment B](#), it is anticipated that larger scale emission reductions will be realised for TCCS in future years as we progress past 2025.
8. The content used in the development of the TCCS 2022-23 Progress Report has been extracted from the TCCS 2022-23 Annual Report with a view of streamlining the approvals process.
9. EPSDD has been provided a draft of the report with a note that it is still going through Executive approvals to enable development of the whole of government report, scheduled for submission on 25 October 2023 to Strategic Board for early November 2023.
10. Energy productivity metrics for Capital Linen Services showed an improvement in 2022-23, associated with heat recovery systems implemented in 2020-21. The measure for the Transport Canberra bus network (GJ/100 passenger km) has been discontinued and superseded by strategic indicators capturing the efficiency of the public transport network and unavailability of data at the time of publication. Strategic indicators are reported in TCCS Annual Report.

<sup>1</sup> 2019 calendar year was used as a proxy due to impacts of COVID-19

## Consultation

### Internal

11. Assets and Contracts, Capital Linen Services
12. Strategic Planning and Policy, Transport Canberra.

### Cross Directorate

13. Zero Emission Government Team, EPSDD.

### External

14. N/A.

## Benefits/Sensitivities

15. This report will provide evidence of TCCS' efforts in contributing to the ZEG Framework target and the Director-General Key Performance Indicator requiring all government Directors-General to report emissions reductions and activities undertaken as part of the ZEG framework.

## Media Implications

16. EPSDD will use results provided in Attachment B to prepare a Whole of Government (WhoG) report which will be made publicly available on the EPSDD website. Attachment B in itself will not be made publicly available.

Signatory Name:	Lisa Johnson, Executive Branch Manager, Governance and Ministerial Services Branch	Phone:	6205 5187
Action Officer:	Trish Campbell, Senior Director Sustainability, Facilities and Fleet Unit	Phone:	6205 1574

**From:** [Doran, Karen](#)  
**To:** [TCCS\\_DG DirectorGeneralOffice](#)  
**Subject:** RE: FOR DG CLEARANCE: FW: DG2023/02536 QA Response - DUE: 18.10.23 - COO - DG2023/02536 - TCCS DG Brief - TCCS 2022-23 Report - Five-Year Emission Reduction Target 2024-25 - DG Brief  
**Date:** Wednesday, 18 October 2023 8:52:47 AM  
**Attachments:** [image001.png](#)  
[image002.gif](#)

Hi Lindsay  
I have queried one figure in the Table pg3 of the Appendix B.  
Subject to clarification on that issue, the Brief and Report is approved.  
Thanks  
Karen

---

**From:** TCCS\_DG DirectorGeneralOffice <[TCCSDirectorGeneralOffice@act.gov.au](mailto:TCCSDirectorGeneralOffice@act.gov.au)>  
**Sent:** Tuesday, October 17, 2023 5:08 PM  
**To:** Doran, Karen <[Karen.Doran@act.gov.au](mailto:Karen.Doran@act.gov.au)>  
**Subject:** FOR DG CLEARANCE: FW: DG2023/02536 QA Response - DUE: 18.10.23 - COO - DG2023/02536 - TCCS DG Brief - TCCS 2022-23 Report - Five-Year Emission Reduction Target 2024-25 - DG Brief  
**Importance:** High

OFFICIAL

Karen  
For priority DG review/clearance please.  
Cleared by Ben, Jim, Cherie, Daniel and Judith.  
Lindsay Riley | Executive Assistant  
Office of the Director-General | Alison Playford  
M [REDACTED] E [TCCSDirectorGeneralOffice@act.gov.au](mailto:TCCSDirectorGeneralOffice@act.gov.au)  
Transport Canberra and City Services | ACT Government  
480 Northbourne Avenue, Dickson | GPO Box 158 Canberra ACT 2601 | [www.act.gov.au](http://www.act.gov.au)  
*Connected services for the people of Canberra*

---

**From:** Objective Administrator <[objective@objective.act.gov.au](mailto:objective@objective.act.gov.au)>  
**Sent:** Tuesday, October 17, 2023 4:58 PM  
**To:** Riley, Lindsay <[Lindsay.Riley@act.gov.au](mailto:Lindsay.Riley@act.gov.au)>  
**Subject:** DG2023/02536 QA Response - DUE: 18.10.23 - COO - DG2023/02536 - TCCS DG Brief - TCCS 2022-23 Report - Five-Year Emission Reduction Target 2024-25 - DG Brief

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## QA Response

Ministerials logo



OM DATE DUE TO  
OWNER

18

PRIORITY

BRIEF - STANDARD



OCT 2023

Hello Lindsay Riley,

Please conduct a quality review of the response documents. then Please conduct a quality review of the response documents. then select one of the following actions:

- Open QA Response task: use this to open the task, choose any of the available actions and update any metadata.

- All other buttons: will open an email so you can enter comments and complete this task with the selected action.

**Item for Action**

[COO - DG2023/02536 - TCCS DG Brief - TCCS 2022-23 Report - Five-Year Emission Reduction Target 2024-25 - DG Brief](#)

<b>OM Action Required String:</b>	DG Brief
<b>OM Reference:</b>	DG2023/02536
<b>OM Owner String:</b>	Director General
<b>OM Topic:</b>	DG Brief
<b>OM Division:</b>	Division - COO - Chief Operating Officer
<b>OM Branch:</b>	Branch - COO - Governance and Ministerial Services (GAMS)
<b>OM Section:</b>	
<b>OM Final Approver:</b>	DG, TCCS - E00918
<b>OM Dispatch Officer:</b>	Office of the DG
<b>OM Current Approval Officer:</b>	EGM - Transport Canberra - E01006
<b>OM Responder:</b>	EBM - Governance and Ministerial Services - E00821

**Available Actions**







**History**

**Ebony Bakavgas** completed task **Approve Response** action taken **Approve**

Actioned on: 17 Oct 2023 4:56 pm

Comment: "TC approves too - Judith was consulted on the 11/10 about our input. Eb"

**Ben McHugh** completed task **Approve Response** action taken **Approve**

Actioned on: 17 Oct 2023 4:40 pm

Comment: "OFFICIAL Approved."

**Imogen Gambale** completed task **Approve Response** action taken **Approve**

Actioned on: 17 Oct 2023 4:18 pm

Comment: *"Progressing to DDG for review and approval, noting EGM TC is away. Have put line through title on cover page. Brief also notes that TC Planning and Delivery were consulted in development of brief."*

**Vanessa Althorp** completed task **Approve Response** action taken **Approve**

Actioned on: 17 Oct 2023 2:25 pm

Comment: *"DDG CS approved via email."*

**Trish Campbell** completed task **Respond** action taken **Send for Approval**

Actioned on: 16 Oct 2023 4:18 pm

Comment: *""*

**Ellie Ballard** completed task **Respond** action taken **Send to New Responder**

Actioned on: 16 Oct 2023 3:45 pm

Comment: *""*

**Cherie Hughes** completed task **Approve Response** action taken **Return to Responder**

Actioned on: 16 Oct 2023 12:35 pm

Comment: *"CH reviewed, minor edits, comment to be considered regarding inclusion of Crematoria in the section discussing gas usage. Once considered and/or addressed, the doc is approved."*

**Daniel Childs** completed task **Approve Response** action taken **Approve**

Actioned on: 13 Oct 2023 4:56 pm

Comment: *""*

**Gregory Mirenda** completed task **Approve Response** action taken **Approve**

Actioned on: 13 Oct 2023 4:30 pm

Comment: *"Progressing to next approver"*

**Lisa Johnson** completed task **Approve Response** action taken **Approve**

Actioned on: 12 Oct 2023 5:18 pm

Comment: *""*

**Ellie Ballard** completed task **Respond** action taken **Send for Approval**

Actioned on: 11 Oct 2023 4:49 pm

Comment: *""*

**Ellie Ballard** started workflow

Started on: 11 Oct 2023 4:39 pm

Comment: *""*

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## Background

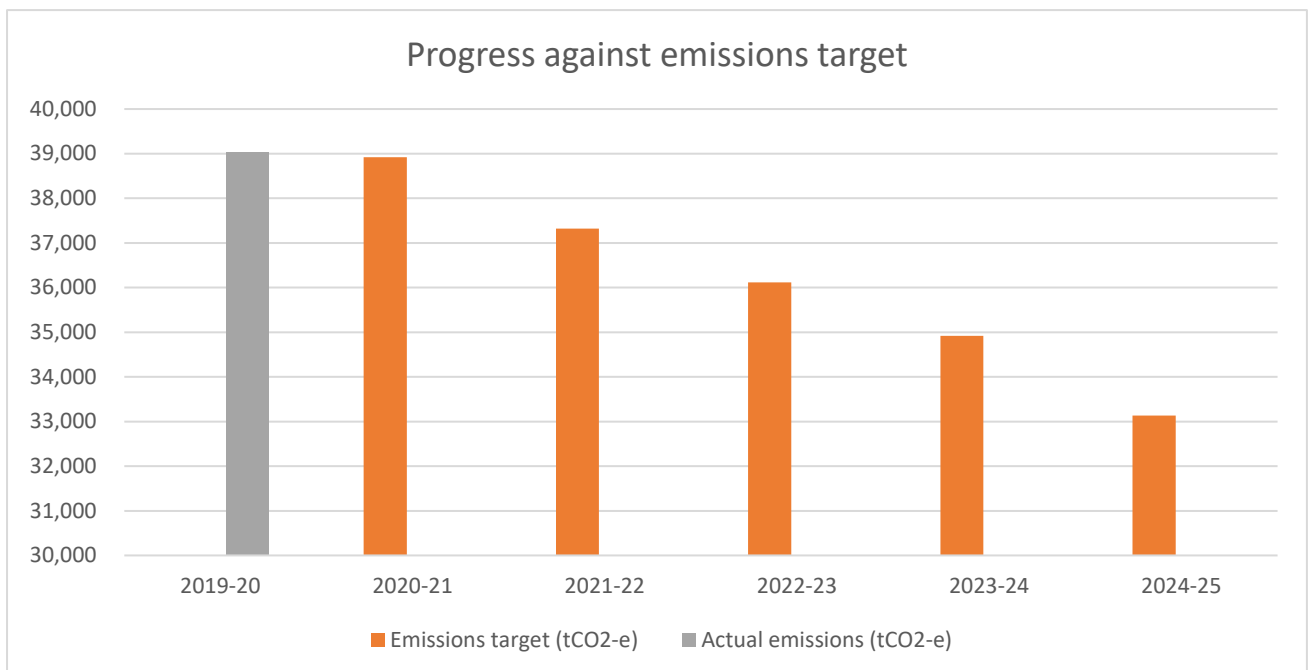
The ACT Government has committed to reducing its greenhouse-gas emissions in its operations to zero by 2040. It has also committed to reduce its emissions by more than 33% over the period 2019-20 to 2020-25.

Given the unusual business conditions caused by the COVID-19 pandemic, data from calendar year 2019 has been used as a proxy for the 2019-20 baseline. All targets are calculated as a percentage change on that base year.

TCCS produced 39,028 tCO<sub>2</sub>-e emissions in 2019, 93.1% of which were associated with transport fuels. Given limited opportunity to transition fleet to zero emission vehicles in the short-term, TCCS have identified a potential of 15.1% reductions in emissions by 2024-25.

## Transport Canberra and City Services emissions target and results

	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Emissions target (tCO <sub>2</sub> -e)						33,130
Actual emissions (tCO <sub>2</sub> -e)	39,029 <sup>1</sup>					
Change in emissions from 2019-20 (%)						



<sup>1</sup> Calendar year 2019 used as a proxy for 2019-20

## Emissions reduction plan to 2024-25

### Background: key emissions sources

Emissions source	tonnes CO <sub>2</sub> -e <sup>2</sup>	% of total emissions
Transport fuels	36,348	93.1%
<i>Bus network (Diesel)</i>	29,078	74.5%
<i>Bus network (CNG)</i>	4,183	10.7%
<i>TCCS Fleet (passenger vehicles)</i>	73	0.2%
<i>TCCS Fleet (non-passenger vehicles)</i>	3,014	7.7%
Natural gas	2,620	6.7%
Refrigerants	60	0.2%

### Emissions reduction activities

#### Transport Canberra bus network

- The Zero-Emission Transition Plan for Transport Canberra outlines the pathway to achieve the ACT Government’s ambition of zero-emission public transport system by 2040. The Plan will see the government replace up to 17% of ageing diesel and CNG buses with battery electric buses powered with the ACT’s 100% renewable electricity.<sup>3</sup> This will be timed with plans for new bus depots with electric charging infrastructure to support the growing fleet of zero-emission buses. Following an initial short-term lease of 34 replacement diesel buses, Transport Canberra will progress to procurement of 90 zero-emission buses and supporting infrastructure.
- Estimated emissions savings of activity:
  - See table below.
- How emissions savings were estimated:
  - Future fleet replacement profile, [REDACTED] was used to apply an average network tCO<sub>2</sub>-e/pa using existing diesel and CNG data for 2019.
  - Driver training to deliver more efficient driving of buses.
  - Fleet allocation so lower emission vehicles deliver a higher proportion of service kms.
- Timeframes:
  - Procurement of electric vehicles to commence 2021-22 with emissions savings ongoing for the usable life of the vehicle.
- Verification plan:
  - Tracking to be undertaken using actual fuel and emission data for the network.
- Responsibility for activity:
  - Project: DDG, Transport Canberra
  - Reporting: TCCS Sustainability Program.

#### Tuggeranong Bus Depot – Heating, Ventilation and Air Conditioning (HVAC) upgrade and solar PV

- The project proposes conversion of existing heating boilers from gas to electric heat pumps (with a small gas condensing boiler) and a 200kWh solar PV array.

<sup>2</sup> Calendar year 2019 used as a proxy for 2019-20

<sup>3</sup> [REDACTED]

- Estimated emissions savings of activity:
  - See table below.
- How emissions savings were estimated:
  - Robust savings calculations were included in application to the zero-emission Government loan fund and reviewed by an expert panel.
- Timeframes:
  - Project completion anticipated in early 2021.
- Verification plan:
  - To ensure that high quality before and after data for this project is captured, TCCS will apply a formal measurement and verification program to this project, informed by the International Performance Measurement and Verification Protocol.
- Responsibility for activity:
  - Project: TCCS Facilities/DDG, Transport Canberra
  - Reporting: TCCS Sustainability Program.

#### TCCS passenger fleet vehicles

- The ACT's Transition to Zero Emissions Vehicles Action Plan 2018-21 commits all newly leased ACT Government fleet passenger vehicles being zero-emissions (ZEV), where fit for purpose, by 2020-21.
- Estimated emissions savings of activity:
  - See table below.
- How emissions savings were estimated:
  - Future fleet replacement profile was used to estimate emissions savings from transitioning vehicles to zero-emissions, based on 2019 actual data.
- Timeframes:
  - Subject to operational requirements, leasing cycles and industry availability, 39% of passenger vehicles are scheduled to be transitioned to ZEV in 2020-21; a further 25% in 2021-22; and 14% in 2023-24.
- Verification plan:
  - Emissions savings will be measured using average tCO<sub>2</sub>-e/km data for similar diesel fleet compared with km travelled by ZEV.
- Responsibility for activity:
  - Project: TCCS Fleet Services
  - Reporting: TCCS Sustainability Program.

#### TCCS non-passenger fleet vehicles

- 12-month trial of a fully electric litter/leaf collection truck. The trial will provide a comprehensive understanding of features and benefits of EV for heavy commercial vehicles.
- Estimated emissions savings of activity:
  - See table below.
- How emissions savings were estimated:
  - Robust emission savings calculations were included in application to the zero-emission Government loan fund and reviewed by an expert panel.
- Timeframes:
  - Late 2020/early 2021.
- Verification plan:
  - Emissions savings will be measured using average tCO<sub>2</sub>-e/km data for similar diesel fleet compared with km travelled by ZEV.
  - Fit for purpose elements will be established to determine operational suitability, safety and driver usability is assessed.
- Responsibility for activity:
  - Project: TCCS Fleet Services/Executive Branch Manager, City Presentation

- Reporting: TCCS Sustainability Program.

TCCS move to 480 Northbourne Avenue (NBA)

- Under the ACT Climate Change Strategy, the ACT Government is leading by example in the transition to a net zero emissions future with 480 NBA being a zero-emissions building with climate-wise design and energy efficient appliances.
- Estimated emissions savings of activity:
  - See Table below.
- How emissions savings were estimated:
  - Gas savings from previous accommodation in 496 Northbourne Avenue base building was used to quantify emissions savings.
- Timeframes:
  - TCCS relocated to 480NBA in June 2020.
- Verification plan:
  - n/a.
- Responsibility for activity:
  - Reporting: TCCS Sustainability Program.

Summary of projected emissions savings

Activity name	tCO2-e				
	2020-21	2021-22	2022-23	2023-24	2024-25
Transport Canberra Bus Network <sup>4</sup>		1,454	1,195	1,195	1,793
Tuggeranong Bus Depot – HVAC upgrade	41	123			
TCCS passenger fleet – transition to EV	21	21	8		
Electric leaf litter truck 12-month EV trial	1.8	2.6			
Move to 480NBA	44				
<b>TOTAL</b>	<b>108</b>	<b>2,069</b>	<b>1,203</b>	<b>1,195</b>	<b>1,793</b>

Changes to previous estimates

- Placeholder to explain any variation in the emissions reductions identified in previous years.

<sup>4</sup> [REDACTED]

### Cost of emission reduction activities

Activity name	Total cost (projected or actual) (\$)	Funding bid successful [Yes/partial/pending/no]
Transport Canberra Bus Network – transition to ZEV		
Tuggeranong Bus Depot HVAC/solar upgrade	\$1.3M	Yes
TCCS Fleet Services Electric tipper truck trial	\$0.1M <sup>5</sup>	Yes
TCCS Fleet Services Passenger vehicle transition to ZEV		
<b>TOTAL</b>		

### Transition to zero emissions vehicles (ZEV)<sup>7</sup>

The ACT Government has made the following commitments under The ACT’s Transition to Zero Emissions Vehicles Action Plan:

- From 2019-20 at least 50% of all newly leased Government fleet passenger vehicles will be zero emissions vehicles (where fit for purpose); and
- From 2020-21 all newly leased ACT Government passenger fleet vehicles will be zero emissions vehicles (where fit for purpose).

5 [REDACTED]  
6 [REDACTED]

<sup>7</sup> The ACT Government is working from the following definitions of ‘fit for purpose’, ‘passenger vehicle’ and ‘fleet vehicle’:

<b>Fit for purpose</b>	A fleet vehicle is deemed ‘fit for purpose’ for replacement with an electric vehicle where there is an available electric vehicle model which can deliver equivalent function and utility for the purpose that the vehicle is used. This will take into consideration any modifications that have been made to the vehicle being replaced and any specific requirements such as equipment loads, or distances travelled. From 2020-21 the responsible area will be required to demonstrate due cause for leasing a passenger vehicle which is not a zero emissions vehicle
<b>Passenger vehicle</b>	A motor vehicle used for the primary purpose of transporting up to nine passengers including the driver. This includes sedans, hatchbacks and station wagons as well as small and medium sports utility vehicles (SUVs). Small vans considered suitable for replacement with electric vehicles are included. Other light commercial vehicles, such as utility vehicles, are not included at this stage. Replacement of light commercial vehicles with electric vehicles will be considered as models become more widely available.
<b>Fleet vehicle</b>	All Government-leased vehicles including pool and non-pool vehicles. This excludes Executive vehicles where these vehicles are not leased by Government.

	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Total passenger vehicle leases held on 30 June	36	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>
Total ZEV passenger vehicles leases held on 30 June	9	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>
Total <i>new</i> leases of passenger vehicles	5	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>
Total <i>new</i> leases of ZEV passenger vehicles	3	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>
% of <i>newly</i> leased passenger vehicles that are ZEV	60%	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>

### Summary of non-ZEV vehicle leases

Of the TCCS passenger vehicle fleet, there were two new non-ZEV vehicle leases to replace existing vehicles entered into in 2019-20 due to operational purposes with the vehicles being 8 seaters. No fit for purpose ZEV vehicles were available at this time for 8 seaters.

In addition to TCCS passenger vehicles, TCCS operates a fleet of light commercial vehicles, agricultural equipment, trucks, buses, plant and equipment. The emissions associated with this non-passenger fleet equates to 98% of annual emissions for TCCS Fleet Services (excluding the bus fleet). TCCS are demonstrating leadership with an electric truck trial commencing in 2020-21, as well as keeping abreast of opportunities across all vehicle types as the ZEV industry matures.

### Further detail

#### Other Key Performance Indicators

Growth in the Territory will result in TCCS increasing service delivery and operations resulting in a commensurate increase in energy use. Energy intensity measures track efficiencies where changes in operations or environment occur. This includes the Transport Canberra bus network with energy use per passenger kilometre and Capital Linen Services with energy use against volume of linen sold.

#### Energy intensity measures

	2019-20 <sup>8</sup>	2020-21	2021-22	2022-23	2023-24	2024-25
Transport Canberra bus network - (GJ/100 passenger km)	0.30	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>
Capital Linen Services – Energy/kg linen sold <sup>9</sup>	0.86	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>

<sup>8</sup> Calendar year 2019 used as a proxy for 2019-20

<sup>9</sup> Normalised number. Consumption data provided by CLS and based on a 70% proportional split with Sterilisation Services.



## Preparing for emissions reductions beyond 2025

The Yarralumla Nursery is one of a number of facilities under review for replacement of gas-based heating systems with low emissions alternatives. The gas replacement study, conducted by the Environment, Planning and Sustainable Development Directorate (EPSDD) for TCCS and other Directorates, will recommend options that can be implemented before the interim target end date of 2025.

The Capital Linen Services facility is also being reviewed under the EPSDD gas replacement study. Owing to the nature of operations at CLS and the limited options for alternative steam-raising plant, lower emissions alternatives may not be feasible within the 2025 interim target period.

**From:** [Blake, Callum](#) on behalf of [TCCS\\_DLO](#)  
**To:** [TCCS\\_AssemblyLiaison](#)  
**Cc:** [Bourne, Sarah](#); [TCCS\\_DLO](#)  
**Subject:** FW: Annual Reports 2020-2021 Inquiry – ECCB QON 11 - TCCS Emissions reduction commitments  
**Date:** Tuesday, 8 March 2022 2:57:58 PM  
**Attachments:** [ECCB QON 11 - CLAY to STEEL - TCCS Emissions reduction commitments.pdf](#)  
[ECCB QON 11 - CLAY to STEEL - TCCS Emissions reduction commitments.doc](#)  
[image001.jpg](#)

Hi Chloe  
Please see below another QON for TCCS' attention – we didn't attend the Hearing but it is allocated to Steel.  
Thanks

**Callum Blake | Directorate Liaison Officer**  
Office of Minister Steel MLA  
Office of Minister Berry MLA (Sportsgrounds)  
Phone: 02 6205 9763 | [\[REDACTED\]](#) | Email: [tccs.dlo@act.gov.au](mailto:tccs.dlo@act.gov.au)  
Transport Canberra and City Services Directorate | ACT Government | [act.gov.au](http://act.gov.au)



**From:** LA Committee - ECCB <LACCommitteeECCB@parliament.act.gov.au>  
**Sent:** Tuesday, 8 March 2022 2:57 PM  
**To:** TCCS\_DLO <TCCS.DLO@act.gov.au>  
**Subject:** Annual Reports 2020-2021 Inquiry – ECCB QON 11 - TCCS Emissions reduction commitments

**Hi Callum**

Please find attached question on notice as follows:

Type of Question	No	Received Date (QON)	Hearing Date (QON)	Date distributed to DLO	DLO	Asked By	Directorate/ Portfolio	Subject	Answer Due date	Minister name
QON	ECCB QON 5	4-Mar-22	25-Feb-22	8-Mar-22	EPSDDDLO	LAWDER	EPSDD/Environment	Biodiversity Research and Monitoring Program	16-Mar-22	Vassarotti
QON	ECCB QON 6	4-Mar-22	1-Mar-22	8-Mar-22	CMCDDLO	CLAY	CMTEDD	CMTEDD Emissions reduction commitments	16-Mar-22	Barr
QON	ECCB QON 7	4-Mar-22	1-Mar-22	8-Mar-22	CMCDDLO	CLAY	CMTEDD	Solar contracts	16-Mar-22	Barr
QON	ECCB QON 8	4-Mar-22	1-Mar-22	8-Mar-22	EDUDLO	CLAY	Emissions reduction	ED Emissions reduction commitments	16-Mar-22	Berry
QON	ECCB QON 9	4-Mar-22	1-Mar-22	8-Mar-22	EPSDDDLO	CLAY	Emissions reduction	EPSDD Emissions reduction commitments	16-Mar-22	Gentleman
QON	ECCB QON 10	4-Mar-22	1-Mar-22	8-Mar-22	AGDLO	CLAY	Emissions reduction	JACS Emissions reduction commitments	16-Mar-22	Gentleman
QON	ECCB QON 11	4-Mar-22	1-Mar-22	8-Mar-22	TCCSDLO	CLAY	Emissions reduction	TCCS Emissions reduction commitments	16-Mar-22	Steel
QON	ECCB QON 12	4-Mar-22	1-Mar-22	8-Mar-22	CSDLO	CLAY	Emissions reduction	CSD Emissions reduction commitments	16-Mar-22	Stephen-Smith
QON	ECCB QON 13	4-Mar-22	1-Mar-22	8-Mar-22	ACTHealthDLO	CLAY	Emissions reduction	HD Emissions reduction commitments	16-Mar-22	Stephen-Smith

*\*Refer Standing Order 254D(a) - A member must lodge a question on notice with the Committee within 5 business days following the conclusion of a Committee hearing. A response is due within 5 business days of receipt of the question.*

Please acknowledge receipt.  
Thank you.  
Lydia Chung

**From:** [Campbell, Trish](#)  
**To:** [Irons, Samantha](#)  
**Subject:** FW: URGENT - FOR TCCS RESPONSE - AR ECCB QON 11 - TCCS Emissions reduction commitments  
**Date:** Tuesday, 23 January 2024 5:00:32 PM  
**Attachments:** [QON 11 - TCCS Emissions reduction commitments.obr](#)  
**Importance:** High

---

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**From:** Campbell, Trish  
**Sent:** Thursday, March 10, 2022 12:30 PM  
**To:** Anderson-Clift, Chloe <[Chloe.Anderson-Clift@act.gov.au](mailto:Chloe.Anderson-Clift@act.gov.au)>; Johnson, Lisa <[Lisa.Johnson@act.gov.au](mailto:Lisa.Johnson@act.gov.au)>  
**Subject:** FW: URGENT - FOR TCCS RESPONSE - AR ECCB QON 11 - TCCS Emissions reduction commitments  
**Importance:** High

Hi Chloe,

I have drafted response and note Lisa Johnson isn't back until tomorrow but should be included in clearance process. TC will also need to be included and I haven't put any detail in for NoWaste on the transition to ZEV garbage trucks – so you may wish to also ask for a contribution of words as this is commitment in the PAGAs.

Kind regards,

Trish

**Trish Campbell | Senior Director**  
**TCCS Sustainability, Facilities and Fleet Unit**  
**Building Management Services Team**  
Phone: 02 6205 1574 | Email: [trish.campbell@act.gov.au](mailto:trish.campbell@act.gov.au)  
**Governance and Ministerial | Chief Operating Officer | Transport Canberra and City Services Directorate | ACT Government**  
480 Northbourne Avenue, Dickson ACT 2602 | GPO Box 158 Canberra ACT 2601 | [www.act.gov.au](http://www.act.gov.au)

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---

**From:** Anderson-Clift, Chloe <[Chloe.Anderson-Clift@act.gov.au](mailto:Chloe.Anderson-Clift@act.gov.au)>  
**Sent:** Tuesday, 8 March 2022 3:35 PM  
**To:** Campbell, Trish <[Trish.Campbell@act.gov.au](mailto:Trish.Campbell@act.gov.au)>  
**Subject:** URGENT - FOR TCCS RESPONSE - AR ECCB QON 11 - TCCS Emissions reduction commitments  
**Importance:** High

Hi Trish

Please see below, no one from TCCS attended this 1 March Hearing, however, it's been assigned

to us for a response.

Can you tell me whether this relates to your work? If so, these have a strict 5-day turnaround.  
**Could I please get back by 12PM FRI, 11 MAR** and I'll take care of the clearance process.

**Chloe Anderson-Clift | Ministerial Liaison Officer**

Phone 02 6205 5357 | Email: [Chloe.Anderson-Clift@act.gov.au](mailto:Chloe.Anderson-Clift@act.gov.au)

**Governance and Ministerial Services** | Transport Canberra and City Services Directorate | **ACT Government**

Transport Canberra and City Services | **ACT Government**

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---

**From:** Blake, Callum <[Callum.Blake@act.gov.au](mailto:Callum.Blake@act.gov.au)> **On Behalf Of** TCCS\_DLO

**Sent:** Tuesday, 8 March 2022 2:58 PM

**To:** TCCS\_AssemblyLiaison <[TCCS.AssemblyLiaison@act.gov.au](mailto:TCCS.AssemblyLiaison@act.gov.au)>

**Cc:** Bourne, Sarah <[Sarah.Bourne@act.gov.au](mailto:Sarah.Bourne@act.gov.au)>; TCCS\_DLO <[TCCS.DLO@act.gov.au](mailto:TCCS.DLO@act.gov.au)>

**Subject:** FW: Annual Reports 2020-2021 Inquiry – ECCB QON 11 - TCCS Emissions reduction commitments

Hi Chloe

Another QON for TCCS' attention – we didn't attend the Hearing but it is allocated to Steel.

Thanks

**Callum Blake | Directorate Liaison Officer**

Office of Minister Steel MLA

Office of Minister Berry MLA (Sportsgrounds)

Phone: 02 6205 9763 | [REDACTED] | Email: [tccs.dlo@act.gov.au](mailto:tccs.dlo@act.gov.au)

**Transport Canberra and City Services Directorate | ACT Government** | [act.gov.au](http://act.gov.au)



**From:** [Campbell, Trish](#)  
**To:** [Irons, Samantha](#)  
**Subject:** FW: Annual Report QON's - Due to MSU 10am 8 November 2022  
**Date:** Tuesday, 23 January 2024 4:54:49 PM  
**Attachments:** [QON - PTCS 01 - Clay - TCCS Emissions Reduction Reporting.obr](#)  
[QON - PTCS 02 - Clay - Garden City Route.obr](#)  
[QON - PTCS 03 - Clay - DDA Diesel Buses.obr](#)  
[QON - PTCS 04 - Clay - TCCS Emissions Reduction Working Group.obr](#)

---

OFFICIAL

FYI

---

**From:** Johnson, Lisa <Lisa.Johnson@act.gov.au>  
**Sent:** Friday, November 4, 2022 9:32 AM  
**To:** Campbell, Trish <Trish.Campbell@act.gov.au>; Wilson, Chris <Chris.Wilson@act.gov.au>  
**Subject:** FW: Annual Report QON's - Due to MSU 10am 8 November 2022

OFFICIAL

Trish can you pls work with Chris on the first QON, this relates to the Annual Reporting process, noting we don't usually publish against our strat plan in an annual report like this and this reporting should already be public through EPSDD as I understand

---

**From:** Bourne, Sarah <[Sarah.Bourne@act.gov.au](mailto:Sarah.Bourne@act.gov.au)>  
**Sent:** Thursday, 3 November 2022 1:34 PM  
**To:** Campbell, Trish <[Trish.Campbell@act.gov.au](mailto:Trish.Campbell@act.gov.au)>; Fangupo, Salote <[Salote.Fangupo@act.gov.au](mailto:Salote.Fangupo@act.gov.au)>; Simic, Yasmin <[Yasmin.Simic@act.gov.au](mailto:Yasmin.Simic@act.gov.au)>  
**Cc:** TCCS\_AssemblyLiaison <[TCCS.AssemblyLiaison@act.gov.au](mailto:TCCS.AssemblyLiaison@act.gov.au)>; Green, Lizzy <[Lizzy.Green@act.gov.au](mailto:Lizzy.Green@act.gov.au)>; Halls, Luke <[Luke.Halls@act.gov.au](mailto:Luke.Halls@act.gov.au)>; Johnson, Lisa <[Lisa.Johnson@act.gov.au](mailto:Lisa.Johnson@act.gov.au)>; Willson, Helen <[Helen.Willson@act.gov.au](mailto:Helen.Willson@act.gov.au)>  
**Subject:** Annual Report QON's - Due to MSU 10am 8 November 2022

OFFICIAL

Good Afternoon

We have received the following QON's today.

No	Member	Title	Line Area
1	Clay	TCCS Emissions Reduction Reporting	GAMS - Sustainability
2	Clay	Garden City Cycle Loop	Infrastructure Delivery
3	Clay	DDA Diesel Buses	Transport Canberra
4	Clay	TCCS Emissions Reduction Working Group	GAMS - Sustainability

I have attached the Objective links for you to provide the responses.

Could you please complete and return to the TCCS Assembly inbox cleared by DDG (TC) and EGM (CS) by no later than **10am Tuesday 8 November**.

Please let me know if you have any questions.

Thanks  
Sarah

Salote – Can you please send the DDA one out in Lizzy's absence.

Luke – I am sending to Yasmin in your absence

**Sarah Bourne** | Senior Director

T 02 6207 5495 | E [Sarah.Bourne@act.gov.au](mailto:Sarah.Bourne@act.gov.au)

**Ministerial Services Unit | Transport Canberra and City Services | ACT Government**

480 Northbourne Avenue, Dickson | GPO Box 158 Canberra ACT 2601 | [www.act.gov.au](http://www.act.gov.au)

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**From:** [Campbell, Trish](#)  
**To:** [Irons, Samantha](#)  
**Subject:** FW: Annual Report QON's - Due to MSU 10am 8 November 2022  
**Date:** Tuesday, 23 January 2024 4:58:58 PM

---

OFFICIAL

---

**From:** Wilson, Chris <Chris.Wilson@act.gov.au>  
**Sent:** Friday, November 4, 2022 12:33 PM  
**To:** Campbell, Trish <Trish.Campbell@act.gov.au>  
**Cc:** Johnson, Lisa <Lisa.Johnson@act.gov.au>; Bourne, Sarah <Sarah.Bourne@act.gov.au>  
**Subject:** RE: Annual Report QON's - Due to MSU 10am 8 November 2022

OFFICIAL

Thanks Trish, as discussed, I've drawn from your input and set out draft proposed responses under each question.

Back to you all for your views.

**1. Why was this reporting not included in the 21-22 Annual Report?**

Following release of the 2021-2024 Strategic Plan in September 2021, a review of the Directorate's Strategic and Accountability Indicators was undertaken to ensure alignment with the Objectives and Goals of the Strategic Plan. That process was completed in June 2022. Reporting against the Goals and Objectives of the Strategic Plan was delayed to enable completion of the alignment process.

It is also noted that the TCCS Annual Report includes details of a range of activities being undertaken by the Directorate that contribute to achievement of the ACT Climate Change Strategy.

**2. When will six monthly reporting begin?**

Reporting to the TCCS Executive Board against the 2021-2024 TCCS Strategic Plan will commence in 2022-23.

**3. What will be included in the six-monthly reporting which does not form part of an Annual Report?**

Information reported through routine reporting will be consistent with information reported in the TCCS Annual Report.

**4. Will this six-monthly reporting be published?**

No. TCCS reports annually on actions taken in support of achievement of the Climate Change

strategy, through its Annual Report.

You may like to include the below with the response to item 3:

TCCS is in the process of establishing an Emission Reduction Working Group that will comprise members who are responsible for delivering actions as defined in the Parliamentary and Governing Agreement for the 10th Legislative Assembly; Climate Change Strategy; the Zero Emission Government Framework; Canberra's Living Infrastructure Plan; ACT's Zero Emissions Vehicles Strategy 2022-30; TCCS Strategic Plan and other ACT Government Policy relating to emission reduction activities. Routine reporting against delivery of the actions identified in those strategies will form the basis of reporting in the TCCS Annual Report, under the Ecological and Sustainable Development section.

---

**From:** Campbell, Trish <[Trish.Campbell@act.gov.au](mailto:Trish.Campbell@act.gov.au)>  
**Sent:** Friday, 4 November 2022 11:19 AM  
**To:** Wilson, Chris <[Chris.Wilson@act.gov.au](mailto:Chris.Wilson@act.gov.au)>  
**Cc:** Johnson, Lisa <[Lisa.Johnson@act.gov.au](mailto:Lisa.Johnson@act.gov.au)>; Bourne, Sarah <[Sarah.Bourne@act.gov.au](mailto:Sarah.Bourne@act.gov.au)>  
**Subject:** RE: Annual Report QON's - Due to MSU 10am 8 November 2022

OFFICIAL

Hi Chris,

I have drafted some text in the QON (shown also below) for consideration:

[REDACTED]

[REDACTED]

*TCCS is currently in the process of establishing a TCCS Emission Reduction Working Group that will comprise members who are responsible for delivering actions as defined in the Parliamentary and Governing Agreement for the 10th Legislative Assembly; Climate Change Strategy; the Zero Emission Government Framework; Canberra's Living Infrastructure Plan; ACT's Zero Emissions Vehicles Strategy 2022-30; TCCS Strategic Plan and other ACT Government Policy relating to emission reduction activities. Efforts of this Working Group will be reported in TCCS Annual Report, under the Ecological and Sustainable Development section.*



As noted in the QON, EPSDD should review the first two paragraphs (not sure if we note in CAB paper #s but left it there for inclusion/removal) and I understand Sarah is in discussion with them.

Kind regards,

Trish

**Trish Campbell | Senior Director**

**TCCS Sustainability, Facilities and Fleet Unit**

**Building Management Services Team**

Phone: 02 6205 1574 | Email: [trish.campbell@act.gov.au](mailto:trish.campbell@act.gov.au)

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**Subject:** FW: Annual Report QON's - Due to MSU 10am 8 November 2022

OFFICIAL

Trish can you pls work with Chris on the first QON, this relates to the Annual Reporting process, noting we don't usually publish against our strat plan in an annual report like this and this reporting should already be public through EPSDD as I understand

---

**From:** Bourne, Sarah <[Sarah.Bourne@act.gov.au](mailto:Sarah.Bourne@act.gov.au)>  
**Sent:** Thursday, 3 November 2022 1:34 PM  
**To:** Campbell, Trish <[Trish.Campbell@act.gov.au](mailto:Trish.Campbell@act.gov.au)>; Fangupo, Salote <[Salote.Fangupo@act.gov.au](mailto:Salote.Fangupo@act.gov.au)>; Simic, Yasmin <[Yasmin.Simic@act.gov.au](mailto:Yasmin.Simic@act.gov.au)>  
**Cc:** TCCS\_AssemblyLiaison <[TCCS.AssemblyLiaison@act.gov.au](mailto:TCCS.AssemblyLiaison@act.gov.au)>; Green, Lizzy <[Lizzy.Green@act.gov.au](mailto:Lizzy.Green@act.gov.au)>; Halls, Luke <[Luke.Halls@act.gov.au](mailto:Luke.Halls@act.gov.au)>; Johnson, Lisa <[Lisa.Johnson@act.gov.au](mailto:Lisa.Johnson@act.gov.au)>; Willson, Helen <[Helen.Willson@act.gov.au](mailto:Helen.Willson@act.gov.au)>  
**Subject:** Annual Report QON's - Due to MSU 10am 8 November 2022

OFFICIAL

Good Afternoon

We have received the following QON's today.

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4	Clay	TCCS Emissions Reduction Working Group	GAMS - Sustainability

I have attached the Objective links for you to provide the responses.

Could you please complete and return to the TCCS Assembly inbox cleared by DDG (TC) and EGM (CS) by no later than **10am Tuesday 8 November**.

Please let me know if you have any questions.

Thanks  
Sarah

Salote – Can you please send the DDA one out in Lizzy’s absence.

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**Sarah Bourne | Senior Director**

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**From:** [Campbell, Trish](#)  
**To:** [Irons, Samantha](#)  
**Subject:** FW: Annual Report QON's - Due to MSU 10am 8 November 2022  
**Date:** Tuesday, 23 January 2024 4:56:13 PM

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OFFICIAL

---

**From:** Wilson, Chris <Chris.Wilson@act.gov.au>  
**Sent:** Friday, November 4, 2022 11:55 AM  
**To:** Johnson, Lisa <Lisa.Johnson@act.gov.au>; Campbell, Trish <Trish.Campbell@act.gov.au>  
**Cc:** Bourne, Sarah <Sarah.Bourne@act.gov.au>  
**Subject:** RE: Annual Report QON's - Due to MSU 10am 8 November 2022

OFFICIAL

I couldn't find it when I looked, so I don't think it's public. From memory there was going to be a single annual report publicly released by CSD [REDACTED] that summarised the progress against the strategy. I don't think the first report has yet been done.

I'm working on the response now to slot in info under each of the four questions. I'll send it through soon.

---

**From:** Johnson, Lisa <[Lisa.Johnson@act.gov.au](#)>  
**Sent:** Friday, 4 November 2022 11:53 AM  
**To:** Campbell, Trish <[Trish.Campbell@act.gov.au](#)>; Wilson, Chris <[Chris.Wilson@act.gov.au](#)>  
**Cc:** Bourne, Sarah <[Sarah.Bourne@act.gov.au](#)>  
**Subject:** RE: Annual Report QON's - Due to MSU 10am 8 November 2022

OFFICIAL

Thanks Trish, did we find out whether they are publishing the quarterly reports [REDACTED]  
[REDACTED] I'll review later today

---

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**Sent:** Friday, 4 November 2022 11:19 AM  
**To:** Wilson, Chris <[Chris.Wilson@act.gov.au](#)>  
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As noted in the QON, EPSDD should review the first two paragraphs (not sure if we note in CAB paper #s but left it there for inclusion/removal) and I understand Sarah is in discussion with them.

Kind regards,

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**Trish Campbell | Senior Director**  
**TCCS Sustainability, Facilities and Fleet Unit**  
**Building Management Services Team**  
Phone: 02 6205 1574 | Email: [trish.campbell@act.gov.au](mailto:trish.campbell@act.gov.au)  
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**Cc:** TCCS\_AssemblyLiaison <[TCCS.AssemblyLiaison@act.gov.au](mailto:TCCS.AssemblyLiaison@act.gov.au)>; Green, Lizzy <[Lizzy.Green@act.gov.au](mailto:Lizzy.Green@act.gov.au)>; Halls, Luke <[Luke.Halls@act.gov.au](mailto:Luke.Halls@act.gov.au)>; Johnson, Lisa <[Lisa.Johnson@act.gov.au](mailto:Lisa.Johnson@act.gov.au)>; Willson, Helen <[Helen.Willson@act.gov.au](mailto:Helen.Willson@act.gov.au)>  
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480 Northbourne Avenue, Dickson | GPO Box 158 Canberra ACT 2601 | [www.act.gov.au](http://www.act.gov.au)

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**From:** [EPD ZeroEmission](#)  
**To:** [Bailey, Kylie](#); [Fraval, Elliot \(Health\)](#); [Chan, NoelW](#); [Landon, Daniel \(Health\)](#); [Anderson, Damien](#); [Mitchell, BethL](#); [Andersen, Kai](#); [Campbell, Trish](#); [Thompson, Justin](#); [Bink, Paul](#)  
**Cc:** [Killeen, Alexander](#); [Mossfield, Steve](#); [Roden, Helen](#); [Morson, Claude](#); [EPD, ESP](#)  
**Subject:** Emissions Reduction Reporting to 2024-25 template and reporting timeline  
**Date:** Wednesday, 26 August 2020 10:57:20 AM  
**Attachments:** [Directorate emissions reduction target template to 2024-25.docx](#)  
[Feedback on Draft Directorate Emissions Target template - August 2020.docx](#)

---

## OFFICIAL

Dear Sustainability Managers

This email outlines the emissions reduction reporting activities for the remainder of 2020.

### **Emissions Reduction Reporting to 2024-25**

#### **Template**

- Attached is the new Directorate emissions reduction target template to fill out with your Directorates baseline, targets and emissions reduction projects.
- If you require support to map out emissions reduction projects please contact the ZEG team at [ZeroEmission@act.gov.au](mailto:ZeroEmission@act.gov.au).

#### **Baseline**

- The ZEG framework outlines a Government target of a 33% reduction on 2020 emissions by 2025. As the 2019-20 financial year is not representative of 'business as usual' emissions profiles due to impacts of COVID19, the baseline is set as the 2019 calendar year as this is the best proxy for 2019-20 emissions.
- If you require assistance to determine your baseline, please contact Zefan Yu at [ESP@act.gov.au](mailto:ESP@act.gov.au).

#### **Timing**

- Completed (draft) copies of the template are due by the 30 September 2020. Please send them in MS Word format to the ZEG team at [ZeroEmission@act.gov.au](mailto:ZeroEmission@act.gov.au). This will allow us to review targets and hence assess overall progress towards the 33% whole of government target.
- DG approved targets are due back to the ZEG team by the end of November 2020.

### **Feedback on draft directorate emission target template – August 2020 document**

- This document is a collation of the feedback received from all Directorates. It also outlines the result of consideration of this feedback including what has been incorporated into the template.

### **2019-20 financial year 6 monthly emissions reduction reporting**

- Templates are currently being prepared for the final 6 monthly emissions reduction reporting that will cover the 2019-20 financial year.
- These reports will be due in October 2020, further details on the reporting process will be sent out with the templates.

### **Emissions reduction reporting timeline to the end of December 2020**

01 September: 2019-20 financial year 6 monthly reporting templates sent to Directorates (dependent on the availability of emissions data in ESP).

16 October: 2019-20 financial year 6 monthly emissions reduction reports due (DG approved).

30 September: Draft 5 year emissions reduction targets due to the ZEG team.

30 November: DG approved 5 year emissions reduction targets due.

04 December: Head of Service briefed on 2019-20 financial year emissions reduction reporting and targets set to 2024-25.

If you have any questions or require assistance with any of the above, please contact the ZEG team at [ZeroEmission@act.gov.au](mailto:ZeroEmission@act.gov.au).

Kind regards,

Angela

Angela Caird – Program Officer (ZEG Fund Administrator)

E [zeroemission@act.gov.au](mailto:zeroemission@act.gov.au) | [angela.caird@act.gov.au](mailto:angela.caird@act.gov.au)

Zero Emissions Government, Schools and Community |

Climate Change and Sustainability Division |

Environment, Planning and Sustainable Development Directorate | ACT Government

Level 2 Dame Pattie Menzies House Dickson ACT | GPO Box 158 Canberra City ACT 2601 |

[www.actsmart.gov.au](http://www.actsmart.gov.au)



**From:** [Campbell, Trish](#)  
**To:** [Wilkins, Susan](#)  
**Cc:** [Childs, Daniel](#)  
**Subject:** TCCS Emission Reduction Target 2024-25  
**Date:** Tuesday, 29 September 2020 9:35:00 AM  
**Attachments:** [Directorate emissions reduction target template to 2024-25.docx](#)

---

OFFICIAL

Hi Susan,

I am currently working on the TCCS Emission Reduction Target to 2024-25 (draft attached) and would be most grateful if you could please give me a call to discuss emission reduction activities for Capital Linen Services planned &/or being investigated to 2024-25.

Many thanks,

Trish

**Trish Campbell | Senior Director**

**TCCS Sustainability, Facilities and Fleet Unit**

**Building Management Services Team**

Phone: 02 6205 1574 | Email: [trish.campbell@act.gov.au](mailto:trish.campbell@act.gov.au)

**Governance and Ministerial | Chief Operating Officer | Transport Canberra and City Services Directorate | ACT Government**

480 Northbourne Avenue, Dickson ACT 2602 | GPO Box 158 Canberra ACT 2601 | [www.act.gov.au](http://www.act.gov.au)

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**From:** [Wilkins, Susan](#)  
**To:** [Campbell, Trish](#)  
**Subject:** RE: Multiple Documents - "Attachment A: Feedback on Draft Directorate Emissions Target template - August 2020" (A26601676), "Attachment B - Directorate emissions reduction target template to 2024-25" (A26601678), "Data" (A26650394), "DG Brief - Five Year"  
**Date:** Friday, 30 October 2020 2:38:25 PM

---

OFFICIAL

Hi Trish

We are not going to get a 1/3 reduction by 2025

I also could not see this para??

I would not give a % at all but say something more general such as we will explore savings etc (if that 33 applies to CLS - not sure from reading)

-----Original Message-----

From: Campbell, Trish <Trish.Campbell@act.gov.au>  
Sent: Tuesday, 27 October 2020 11:07 AM  
To: Wilkins, Susan <Susan.Wilkins@act.gov.au>  
Subject: FW: Multiple Documents - "Attachment A: Feedback on Draft Directorate Emissions Target template - August 2020" (A26601676), "Attachment B - Directorate emissions reduction target template to 2024-25" (A26601678), "Data" (A26650394), "DG Brief - Five Year"  
Importance: High

OFFICIAL

Hi Susan,

Please see attached DG brief package for TCCS Five-year Emissions Reduction Plan 2019-20 to 2024-25, due for DG sign off by 11 November 2020.

I would be most grateful if you could review for CLS inputs (no forecast emissions savings at this stage, however I have continued to include KPI for energy/kg linen processed and also noted ' Further emission saving opportunities will continue to be explored to push further toward a 33% emissions savings target by 2024-25, including funding of projects through the Zero Emission Government Loan Fund where relevant. One such example is the gas replacement study, conducted by EPSDD which may provide options that can be implemented before the interim target end date of 2025 with Capital Linen Services and/or Yarralumla Nursery.'

If you could provide any changes back before COB Thursday, 29 October that would be super.

Many thanks,

Trish

Trish Campbell | Senior Director  
TCCS Sustainability, Facilities and Fleet Unit Building Management Services Team  
Phone: 02 6205 1574 | Email: trish.campbell@act.gov.au Governance and Ministerial | Chief Operating Officer  
| Transport Canberra and City Services Directorate| ACT Government  
480 Northbourne Avenue, Dickson ACT 2602 | GPO Box 158 Canberra ACT 2601 | www.act.gov.au

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Trish Campbell has sent you copies of the following 4 documents from Objective:

"Attachment A: Feedback on Draft Directorate Emissions Target template - August 2020" (A26601676) v1.0  
"Attachment B - Directorate emissions reduction target template to 2024-25" (A26601678) v10.0 "Data"  
(A26650394) v10.0 "DG Brief - Five Year Emissions Reduction Plan 2019-20 to 2024-25" (A26910410) v7.0

**From:** [Campbell, Trish](#)  
**To:** [Barnett, Vanessa](#)  
**Cc:** [Dougall, Glenn](#)  
**Subject:** Multiple Documents - "Attachment A: Feedback on Draft Directorate Emissions Target template - August 2020" (A26601676), "Attachment B - Directorate emissions reduction target template to 2024-25" (A26601678), "Data" (A26650394), "DG Brief - Five Year E...  
**Date:** Tuesday, 27 October 2020 11:03:00 AM  
**Attachments:** [Attachment A - Feedback on Draft Directorate Emissions Target template - August 2020.docx](#)  
[Attachment B - Directorate emissions reduction target template to 2024-25.docx](#)  
[Data.xlsx](#)  
[DG Brief - Five Year Emissions Reduction Plan 2019-20 to 2024-25.docx](#)  
**Importance:** High

---

OFFICIAL

Hi Vanessa,

As discussed, please see attached DG brief package for TCCS Five-year Emissions Reduction Plan 2019-20 to 2024-25, due for DG sign off by 11 November 2020.

I would be most grateful if you could

1. review the package; and
2. provide an estimate in Attachment B - Cost of emission reduction activities for Bus Network

If you could get the brief package with any changes back before COB Thursday, 29 October that would be super.

Within the attached excel Data File, please refer to TC Bus Network TAB for workings.

Many thanks,

Trish

Trish Campbell | Senior Director  
TCCS Sustainability, Facilities and Fleet Unit  
Building Management Services Team  
Phone: 02 6205 1574 | Email: [trish.campbell@act.gov.au](mailto:trish.campbell@act.gov.au)  
Governance and Ministerial | Chief Operating Officer | Transport Canberra and City Services Directorate | ACT Government  
480 Northbourne Avenue, Dickson ACT 2602 | GPO Box 158 Canberra ACT 2601 | [www.act.gov.au](http://www.act.gov.au)

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Trish Campbell has sent you copies of the following 4 documents from Objective:  
"Attachment A: Feedback on Draft Directorate Emissions Target template - August 2020" (A26601676) v1.0  
"Attachment B - Directorate emissions reduction target template to 2024-25" (A26601678) v10.0  
"Data" (A26650394) v10.0  
"DG Brief - Five Year Emissions Reduction Plan 2019-20 to 2024-25" (A26910410) v7.0

**From:** [Campbell, Trish](#)  
**To:** [Satinder Sahota](#)  
**Cc:** [Devine, Emma](#)  
**Subject:** Multiple Documents - "Attachment A: Feedback on Draft Directorate Emissions Target template - August 2020 alias" (zA851457), "Attachment B - Directorate emissions reduction target template to 2024-25 alias" (zA845740), "Data alias" (zA845744), "DG Brie...  
**Date:** Tuesday, 27 October 2020 11:09:00 AM  
**Attachments:** [ObjRef.obr](#)  
**Importance:** High

---

OFFICIAL

Hi Satinder,

Most grateful if you could review the attached brief package and provide an estimate in Attachment B - Cost of emission reduction activities for transitioning passenger vehicles to ZEV.

Need to get this away for Exec approvals this week.

Happy to discuss this afternoon with kind regards,

Trish

Trish Campbell has sent you links to the following 4 documents from Objective:

"Attachment A: Feedback on Draft Directorate Emissions Target template - August 2020 alias" (zA851457)

"Attachment B - Directorate emissions reduction target template to 2024-25 alias" (zA845740)

"Data alias" (zA845744)

"DG Brief - Five Year Emissions Reduction Plan 2019-20 to 2024-25" (A26910410)

Open in Navigator

Double click on the attachment

Open in ECM for Browser

Attachment A: Feedback on Draft Directorate Emissions Target template - August 2020 alias

<https://objective.act.gov.au:8443/#/documents/zA851457/details>

Attachment B - Directorate emissions reduction target template to 2024-25 alias

<https://objective.act.gov.au:8443/#/documents/zA845740/details>

Data alias

<https://objective.act.gov.au:8443/#/documents/zA845744/details>

DG Brief - Five Year Emissions Reduction Plan 2019-20 to 2024-25

<https://objective.act.gov.au:8443/#/documents/A26910410/details>

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Attachment A: Feedback on Draft Directorate Emissions Target template - August 2020

Latest: <https://objective.act.gov.au/id:A26601676/document/versions/latest>

Published: <https://objective.act.gov.au/id:A26601676/document/versions/published>

Attachment B - Directorate emissions reduction target template to 2024-25

Latest: <https://objective.act.gov.au/id:A26601678/document/versions/latest>

Published: <https://objective.act.gov.au/id:A26601678/document/versions/published>

Data

Latest: <https://objective.act.gov.au/id:A26650394/document/versions/latest>

Published: <https://objective.act.gov.au/id:A26650394/document/versions/published>

DG Brief - Five Year Emissions Reduction Plan 2019-20 to 2024-25

Latest: <https://objective.act.gov.au/id:A26910410/document/versions/latest>

Published: <https://objective.act.gov.au/id:A26910410/document/versions/published>

**From:** [Sahota, Satinder](#)  
**To:** [Campbell, Trish](#)  
**Subject:** RE: Multiple Documents - "Attachment A: Feedback on Draft Directorate Emissions Target template - August 2020 alias" (zA851457), "Attachment B - Directorate emissions reduction target template to 2024-25 alias" (zA845740), "Data alias" (zA845744), "DG Bri"  
**Date:** Wednesday, 28 October 2020 9:25:06 PM  
**Attachments:** [Sgfleet Listing - 15-10-2020.xlsx](#)

---

OFFICIAL

Hi Trish,

Based on 2019 data, we have 33 internal combustion engine passenger vehicles which will be replaced by end of 2024 as per the leasing cycle of each vehicle.

Based on current estimates, on average, lease cost will be increased by 50% for ZEVs. Cost may vary based on number of factors such as availability of fit for purpose vehicles in people mover segment, cost increase, interest rates and residual values.

Current lease cost (ex GST) for remaining 33 vehicles

Monthly lease rental:	\$24,672.51
Annual lease rental:	\$296,070.12
Estimated new monthly lease rental:	\$37,008.76
Estimated new annual lease rental	\$444,105.12

I have attached a spreadsheet which I used to get these estimates.

Regards  
Satinder

-----Original Message-----

From: Campbell, Trish <Trish.Campbell@act.gov.au>  
Sent: Wednesday, 28 October 2020 9:41 AM  
To: Sahota, Satinder <Satinder.Sahota@act.gov.au>  
Cc: Devine, Emma <Emma.Devine@act.gov.au>  
Subject: RE: Multiple Documents - "Attachment A: Feedback on Draft Directorate Emissions Target template - August 2020 alias" (zA851457), "Attachment B - Directorate emissions reduction target template to 2024-25 alias" (zA845740), "Data alias" (zA845744), "DG Bri"

OFFICIAL

Hi Satinder,

Can you give me a call this afternoon to discuss?

Many thanks,

Trish

Trish Campbell | Senior Director  
TCCS Sustainability, Facilities and Fleet Unit Building Management Services Team  
Phone: 02 6205 1574 | Email: trish.campbell@act.gov.au Governance and Ministerial | Chief Operating Officer  
| Transport Canberra and City Services Directorate| ACT Government  
480 Northbourne Avenue, Dickson ACT 2602 | GPO Box 158 Canberra ACT 2601 | www.act.gov.au

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-----Original Message-----

From: Sahota, Satinder <Satinder.Sahota@act.gov.au>  
Sent: Wednesday, 28 October 2020 6:02 AM

To: Campbell, Trish <Trish.Campbell@act.gov.au>  
Cc: Devine, Emma <Emma.Devine@act.gov.au>  
Subject: RE: Multiple Documents - "Attachment A: Feedback on Draft Directorate Emissions Target template - August 2020 alias" (zA851457), "Attachment B - Directorate emissions reduction target template to 2024-25 alias" (zA845740), "Data alias" (zA845744), "DG Bri

OFFICIAL

Hi Trish

Just one question, how would you like to capture the cost of emission reduction activity for Passenger vehicle transition to ZEV?

This cost will be dependable on availability of fit for purpose vehicles.

In addition, we lease vehicles therefore any increase in cost will be on-going unlike to TC, they have one-off increase (purchase price).

I have made other changes as discussed yesterday.

I will contact you later today and finalise this information for you.

Regards  
Satinder

-----Original Message-----

From: Campbell, Trish <Trish.Campbell@act.gov.au>  
Sent: Tuesday, 27 October 2020 11:10 AM  
To: Sahota, Satinder <Satinder.Sahota@act.gov.au>  
Cc: Devine, Emma <Emma.Devine@act.gov.au>  
Subject: Multiple Documents - "Attachment A: Feedback on Draft Directorate Emissions Target template - August 2020 alias" (zA851457), "Attachment B - Directorate emissions reduction target template to 2024-25 alias" (zA845740), "Data alias" (zA845744), "DG Brie...  
Importance: High

OFFICIAL

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Need to get this away for Exec approvals this week.

Happy to discuss this afternoon with kind regards,

Trish

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Data alias

<https://objective.act.gov.au:8443/#/documents/zA845744/details>

DG Brief - Five Year Emissions Reduction Plan 2019-20 to 2024-25

<https://objective.act.gov.au:8443/#/documents/A26910410/details>

Open in Your Browser

Attachment A: Feedback on Draft Directorate Emissions Target template - August 2020

Latest: <https://objective.act.gov.au/id:A26601676/document/versions/latest>

Published: <https://objective.act.gov.au/id:A26601676/document/versions/published>

Attachment B - Directorate emissions reduction target template to 2024-25

Latest: <https://objective.act.gov.au/id:A26601678/document/versions/latest>

Published: <https://objective.act.gov.au/id:A26601678/document/versions/published>

Data

Latest: <https://objective.act.gov.au/id:A26650394/document/versions/latest>

Published: <https://objective.act.gov.au/id:A26650394/document/versions/published>

DG Brief - Five Year Emissions Reduction Plan 2019-20 to 2024-25

Latest: <https://objective.act.gov.au/id:A26910410/document/versions/latest>

Published: <https://objective.act.gov.au/id:A26910410/document/versions/published>



**From:** [Barnett, Vanessa](#)  
**To:** [Campbell, Trish](#)  
**Cc:** [Dougall, Glenn](#)  
**Subject:** RE: Multiple Documents - "Attachment A: Feedback on Draft Directorate Emissions Target template - August 2020" (A26601676), "Attachment B - Directorate emissions reduction target template to 2024-25" (A26601678), "Data" (A26650394), "DG Brief - Five Year  
**Date:** Tuesday, 10 November 2020 5:21:19 PM  
**Attachments:** [DG Brief - Five Year Emissions Reduction Plan 2019-20 to 2024-25vb edits.docx](#)  
[Attachment B - Directorate emissions reduction target template to 2024-25vb edits.docx](#)  
[Copy of Data vb edits TC.xlsx](#)  
**Importance:** High

---

OFFICIAL

Hi Trish

At long last - please see amendments attached. I have used the gas retirement profile and average emissions so this has brought down the reduction % - but think it would be safer to use this than bind ourselves to a higher target.

I have highlighted the numbers in the brief which may need adjustment because of these.

Let me know if you have any queries - sorry to be conservative and bring the average down!!

Thanks  
Vanessa

-----Original Message-----

From: Campbell, Trish <Trish.Campbell@act.gov.au>  
Sent: Tuesday, 10 November 2020 9:49 AM  
To: Barnett, Vanessa <Vanessa.Barnett@act.gov.au>  
Cc: Dougall, Glenn <Glenn.Dougall@act.gov.au>  
Subject: FW: Multiple Documents - "Attachment A: Feedback on Draft Directorate Emissions Target template - August 2020" (A26601676), "Attachment B - Directorate emissions reduction target template to 2024-25" (A26601678), "Data" (A26650394), "DG Brief - Five Year  
Importance: High

OFFICIAL

Hi Vanessa,

Just a follow up as we need to get the brief into the approvals process. If you are able to give me a call that would be super!

Many thanks,

Trish

Trish Campbell | Senior Director  
TCCS Sustainability, Facilities and Fleet Unit Building Management Services Team  
Phone: 02 6205 1574 | Email: [trish.campbell@act.gov.au](mailto:trish.campbell@act.gov.au) Governance and Ministerial | Chief Operating Officer  
| Transport Canberra and City Services Directorate| ACT Government  
480 Northbourne Avenue, Dickson ACT 2602 | GPO Box 158 Canberra ACT 2601 | [www.act.gov.au](http://www.act.gov.au)

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-----Original Message-----

From: Campbell, Trish  
Sent: Monday, 2 November 2020 9:34 AM  
To: Barnett, Vanessa <Vanessa.Barnett@act.gov.au>  
Cc: Dougall, Glenn <Glenn.Dougall@act.gov.au>

Subject: FW: Multiple Documents - "Attachment A: Feedback on Draft Directorate Emissions Target template - August 2020" (A26601676), "Attachment B - Directorate emissions reduction target template to 2024-25" (A26601678), "Data" (A26650394), "DG Brief - Five Year  
Importance: High

OFFICIAL

Hi Vanessa,

Just a friendly follow up on the below with many thanks,

Trish

Trish Campbell | Senior Director  
TCCS Sustainability, Facilities and Fleet Unit Building Management Services Team  
Phone: 02 6205 1574 | Email: trish.campbell@act.gov.au Governance and Ministerial | Chief Operating Officer  
| Transport Canberra and City Services Directorate| ACT Government  
480 Northbourne Avenue, Dickson ACT 2602 | GPO Box 158 Canberra ACT 2601 | www.act.gov.au

Connected services for the people of Canberra

-----Original Message-----

From: Campbell, Trish  
Sent: Tuesday, 27 October 2020 11:04 AM  
To: Barnett, Vanessa <Vanessa.Barnett@act.gov.au>  
Cc: Dougall, Glenn <Glenn.Dougall@act.gov.au>  
Subject: Multiple Documents - "Attachment A: Feedback on Draft Directorate Emissions Target template - August 2020" (A26601676), "Attachment B - Directorate emissions reduction target template to 2024-25" (A26601678), "Data" (A26650394), "DG Brief - Five Year E...  
Importance: High

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I would be most grateful if you could

1. review the package; and
2. provide an estimate in Attachment B - Cost of emission reduction activities for Bus Network

If you could get the brief package with any changes back before COB Thursday, 29 October that would be super.

Within the attached excel Data File, please refer to TC Bus Network TAB for workings.

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Trish

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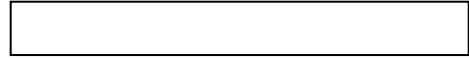
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(A26650394) v10.0 "DG Brief - Five Year Emissions Reduction Plan 2019-20 to 2024-25" (A26910410) v7.0



UNCLASSIFIED

**To:** Alison Playford, Director-General, Transport Canberra and City Services

---

**Through:** Cherie Hughes, Chief Operating Officer  
Jim Corrigan, Deputy Director-General, City Services  
Ben McHugh, Deputy Director-General, Transport Canberra and Business Services  
Judith Sturman, Executive Group Manager, Transport Operations  
Craig Jordan, Executive Group Manager, Territory and Business Services

---

**From:** Lisa Johnson, Executive Branch Manager, Governance and Ministerial Services

---

**Subject:** Five-year Emissions Reduction Plan 2019-20 to 2024-25

---

**Critical Date:** 11 November 2020

---

**Critical Reason:** Environment, Planning and Sustainable Development Directorate (EPSDD) require directorate's five-year emissions reduction plans to compile a whole of government plan for Head of Service.

---

**Purpose**

To provide (EPSDD) with a draft Five-year Emissions Reduction Plan (ERP) 2019-20 to 2024-25.

**Recommendations**

That you approve the draft TCCS Five-year ERP to be provided to EPSDD's Zero Emissions Government team

**Agreed / Not Agreed / Please Discuss**

Alison Playford, Director-General..... /...../.....

Director-General's Office Feedback

## Background

1. The ACT Climate Change Strategy 2019-25 (the Strategy) was released in September 2019 and outlines the next steps for Canberra to reduce emissions by 50–60% (below 1990 levels) by 2025 and establish a pathway for achieving net zero emissions by 2045.
2. In order to demonstrate leadership in emission reductions, the Strategy includes a Zero Emissions Government (ZEG) Framework which replaces the previous Carbon Neutral Government (CNG) Framework.
3. The ZEG Framework includes targets to reduce emissions from government operations by over 33% by 2025 (from 2020 levels) and achieve zero emissions from Government operations by 2040. The baseline has been adjusted to the 2019 calendar year to accommodate for the impacts of COVID-19.
4. EPSDD have updated the Five-year Emission Reduction Plan 2019-20 to 2024-25 (Five-year ERP) template following feedback from agencies (refer to [Attachment A](#)) to ensure a consistent approach to setting emission targets and reporting across government. EPSDD are seeking completed drafts to allow assessment of ACT Governments overall pathway towards the 33% whole of government target.
5. EPSDD will organise a meeting with agencies following collection and assessment of all directorates draft Five-year ERP's require DG approved versions by the end of November 2020.

## Issues

6. The TCCS Five-year ERP draft is at [Attachment B](#) for your approval to be provided to EPSDD.
7. Budgeting for the emission savings projects can prove challenging and what can be delivered will be impacted on the availability of budget in the future. EPSDD have indicated that 'the projects included in agency Five-year ERP's and the projected costs associated with them are indicative only ... and it is expected that the information in the templates will change over time'.
8. To achieve a 33% reduction target by 2025 based on 2019 figures, TCCS would need to reduce annual emissions by 12.9 kt CO<sub>2</sub>-e (26 kT CO<sub>2</sub>-e in 2025 compared with 38 kT CO<sub>2</sub>-e in 2019) which equates to 60% of the total Government reduction (22 kt CO<sub>2</sub>-e).
9. The draft TCCS ER Plan provides a pathway to **achieving 28%** emission reductions by 2024-25 through:
  - 10,643 tCO<sub>2</sub>-e savings for the Transport Canberra bus network, providing a minimum 17% reduction in emissions for the bus network and **97.6%** contribution to TCCS overall emissions target;
  - 54 tCO<sub>2</sub>-e savings for TCCS Fleet Services, including 67% reduction in emissions for passenger fleet; 0.1% reduction in emissions for non-passenger fleet and 0.5% contribution to TCCS overall emissions target; and
  - 208 tCO<sub>2</sub> savings from natural gas, contributed to by the move to 480 Northbourne Avenue as well as efficiency upgrades at Tuggeranong Bus Depot, providing a reduction in overall natural gas emissions for TCCS of 7.9% and contribution of 1.9% to TCCS overall emissions.

Further emission saving opportunities will continue to be explored to push further toward a 33% emissions savings target by 2024-25, including funding of projects through the Zero Emission Government Loan Fund where relevant, bus fleet allocation and more efficient driving practices for Transport Canberra bus drivers. One such example is the gas replacement study, conducted by EPSDD which may provide options that can be implemented before the interim target end date of 2025 with Capital Linen Services and/or Yarralumla Nursery.

10. While the ZEG Framework requires directors-general to report emission reductions and activities undertaken, the accountability of individual directorates for their emissions through Director-General key performance indicators should be carefully considered with TCCS owning such a high proportion of the ZEG target, particularly due to the availability of budget to support the Five-year ERP.

### Consultation

11. TCCS Sustainability Program consulted with key stakeholders across the Directorate (Glenn Dougall, in the development of the TCCS Five-year ERP).

### Media Implications

12. Progress toward the ZEG targets will be publicly reported each year in the Minister's Annual Report under the *Climate Change and Greenhouse Gas Reduction Act 2010*.
13. ACT Government agency emission reduction targets are published on the ACT Government website. This may result in a greater level of activity around Ministerial responses for TCCS emission profile.

Cherie Hughes  
Chief Operating Officer  
October 2020

Phone: 6205 8316

Action Officer: Trish Campbell  
Director, Sustainability, Facilities and Fleet Unit

Phone: 6205 1574

Attachment	
Attachment A	WhoG Summary of feedback on Five-year ER template and EPSDD response
Attachment B	TCCS Draft Five-year Emissions Reduction Plan 2019-20 to 2024-25

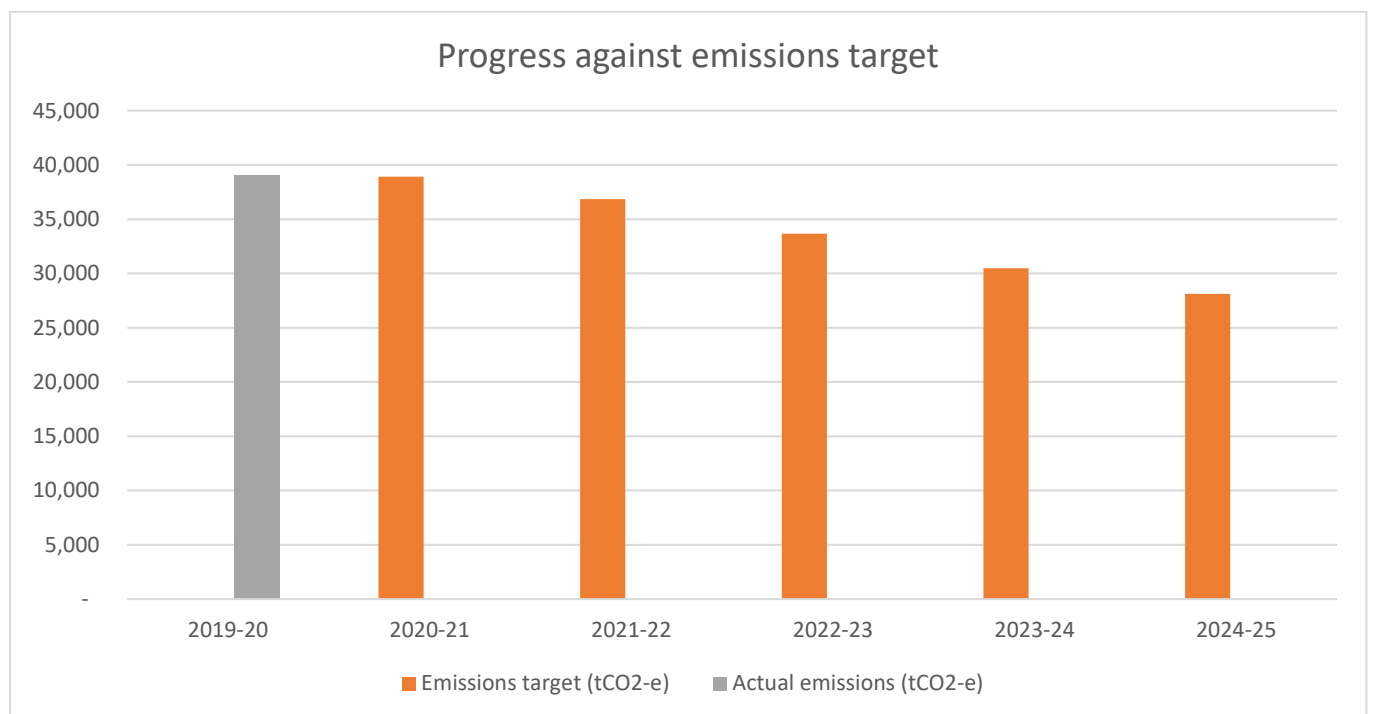
## Background

The ACT Government has committed to reducing its greenhouse-gas emissions in its operations to zero by 2040. It has also committed to reduce its emissions by more than 33% over the period 2019-20 to 2020-25. The Transport Canberra and City Services Directorate has set a target of 28% by 2025. It produced 39,028 tCO<sub>2</sub>-e emissions in 2019. This means a 12,879 tCO<sub>2</sub>-e emissions reduction by 2025 and additional 26,149 tCO<sub>2</sub>-e emissions over the following 15 years.

Given the unusual business conditions caused by the COVID-19 pandemic, data from calendar year 2019 has been used as a proxy for the 2019-20 baseline. All targets are calculated as a percentage change on that base year.

## Transport Canberra and City Services emissions target and results

	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Emissions target (tCO <sub>2</sub> -e)						28,124
Actual emissions (tCO <sub>2</sub> -e)	39,029 <sup>1</sup>					
Change in emissions from 2019-20 (%)						



<sup>1</sup> Calendar year 2019 used as a proxy for 2019-20

## Emissions reduction plan to 2024-25

### Background: key emissions sources

Emissions source	tonnes CO <sub>2</sub> -e <sup>2</sup>	% of total emissions
Transport fuels	36,348	93.1%
<i>Bus network (Diesel)</i>	29,078	74.5%
<i>Bus network (CNG)</i>	4,183	10.7%
<i>TCCS Fleet (passenger vehicles)</i>	73	0.2%
<i>TCCS Fleet (non-passenger vehicles)</i>	3,014	7.7%
Natural gas	2,620	6.7%
Refrigerants	60	0.2%

### Emissions reduction activities

#### Transport Canberra bus network

- The Zero-Emission Transition Plan for Transport Canberra outlines the pathway to achieve the ACT Government’s ambition of zero-emission public transport system by 2040. The Plan will see the government replace up to 17% of ageing diesel and CNG buses with battery electric buses powered with the ACT’s 100% renewable electricity<sup>3</sup>. This will be timed with plans for new bus depots with electric charging infrastructure to support the growing fleet of zero-emission buses. Following an initial short term lease of 34 replacement diesel buses, Transport Canberra will progress to procurement of 90 zero-emission buses and supporting infrastructure.
- Estimated emissions savings of activity
  - See table below.
- How emissions savings were estimated
  - Future fleet replacement profile, [REDACTED] was used to apply an average network tCO<sub>2</sub>-e/pa using existing diesel and CNG data for 2019.
  - Driver training to deliver more efficient driving of buses.
  - Fleet allocation so lower emission vehicles deliver a higher proportion of service kms.
- Timeframes
  - Procurement of electric vehicles to commence 2021-22 with emissions savings ongoing for the usable life of the vehicle.
- Verification plan
  - Tracking to be undertaken using actual fuel and emission data for the network.
- Responsibility for activity
  - Project: DDG, Transport Canberra
  - Reporting: TCCS Sustainability Program

#### Tuggeranong Bus Depot – Heating, Ventilation and Air Conditioning (HVAC) upgrade and solar PV

- The project proposes conversion of existing heating boilers from gas to electric heat pumps (with a small gas condensing boiler) and a 200kWh solar PV array.
- Estimated emissions savings of activity

<sup>2</sup> Calendar year 2019 used as a proxy for 2019-20

<sup>3</sup> [REDACTED]



- See table below.
- How emissions savings were estimated
  - Robust savings calculations were included in application to the zero-emission Government loan fund and reviewed by an expert panel.
- Timeframes
  - Project completion anticipated in early 2021.
- Verification plan
  - To ensure that high quality before and after data for this project are captured, TCCS will apply a formal measurement and verification program to this project, informed by the International Performance Measurement and Verification Protocol.
- Responsibility for activity
  - Project: TCCS Facilities/DDG, Transport Canberra
  - Reporting: TCCS Sustainability Program

#### TCCS passenger fleet vehicles

- The ACT's Transition to Zero Emissions Vehicles Action Plan 2018-21 commits all newly leased ACT Government fleet passenger vehicles being zero-emissions (ZEV), where fit for purpose by 2020-21.
- Estimated emissions savings of activity
  - See table below.
- How emissions savings were estimated
  - Future fleet replacement profile was used to estimate emissions savings from transitioning vehicles to zero-emissions, based on 2019 actual data.
- Timeframes
  - Subject to operational requirements, leasing cycles and industry availability, 39% of passenger vehicles are scheduled to be transitioned to ZEV in 2020-21; a further 25% in 2021-22; and 14% in 2023-24.
- Verification plan
  - Emissions savings will be measured using average tCO<sub>2</sub>-e/km data for similar diesel fleet compared with km travelled by ZEV.
- Responsibility for activity
  - Project: TCCS Fleet Services
  - Reporting: TCCS Sustainability Program

#### TCCS non-passenger fleet vehicles

- 12-month trial of a fully electric litter/leaf collection truck. The trial will provide a comprehensive understanding of features and benefits of EV for heavy commercial vehicles.
- Estimated emissions savings of activity
  - See table below.
- How emissions savings were estimated
  - Robust emission savings calculations were included in application to the zero-emission Government loan fund and reviewed by an expert panel.
- Timeframes
  - Late 2020/early 2021.
- Verification plan
  - Emissions savings will be measured using average tCO<sub>2</sub>-e/km data for similar diesel fleet compared with km travelled by ZEV.
  - Fit for purpose elements will be established to determine operational suitability, safety and driver usability is assessed.
- Responsibility for activity
  - Project: TCCS Fleet Services/Executive Branch Manager, City Presentation
  - Reporting: TCCS Sustainability Program

TCCS move to 480 Northbourne Avenue (NBA)

- Under the ACT Climate Change Strategy, ACT Government is leading by example in the transition to a net zero emissions future with 480 NBA being a zero-emissions building with climate-wise design and energy efficient appliances.
- Estimated emissions savings of activity
  - See Table below.
- How emissions savings were estimated
  - Gas savings from previous accommodation in 496 Northbourne Avenue base building was used to quantify emissions savings.
- Timeframes
  - TCCS relocated to 480NBA in June 2020.
- Verification plan
  - n/a
- Responsibility for activity
  - Reporting: TCCS Sustainability Program

Summary of projected emissions savings

Activity name	tCO2-e				
	2020-21	2021-22	2022-23	2023-24	2024-25
Transport Canberra Bus Network <sup>4</sup>		1,454	1,195	1,195	1,792.58
Tuggeranong Bus Depot – HVAC upgrade	41	123			
TCCS passenger fleet – transition to EV	21	21	8		
Electric leaf litter truck 12-month EV trial	1.8	2.6			
Move to 480NBA	44				
<b>TOTAL</b>	<b>108</b>	<b>1,600</b>	<b>1,203</b>	<b>1,195</b>	<b>1,793</b>

Changes to previous estimates

- Placeholder to explain any variation in the emissions reductions identified in previous years.

<sup>4</sup> [REDACTED]

### Cost of emission reduction activities

Activity name	Total cost (projected or actual) (\$)	Funding bid successful [Yes/partial/pending/no]
Transport Canberra Bus Network – transition to ZEV		
Tuggeranong Bus Depot HVAC/solar upgrade	\$1.3M	Yes
TCCS Fleet Services Electric truck trial	\$100k	Yes
TCCS Fleet Services Passenger vehicle transition to ZEV		
<b>TOTAL</b>	<b>\$xx</b>	

\*Includes cost of vehicles and infrastructure (total gross capital) excludes operational costs

### Transition to zero emissions vehicles (ZEV)<sup>5</sup>

The ACT Government has made the following commitments under The ACT’s Transition to Zero Emissions Vehicles Action Plan:

- From 2019-20 at least 50% of all newly leased Government fleet passenger vehicles will be zero emissions vehicles (where fit for purpose); and
- From 2020-21 all newly leased ACT Government passenger fleet vehicles will be zero emissions vehicles (where fit for purpose).

<sup>5</sup> The ACT Government is working from the following definitions of ‘fit for purpose’, ‘passenger vehicle’ and ‘fleet vehicle’:

<b>Fit for purpose</b>	A fleet vehicle is deemed ‘fit for purpose’ for replacement with an electric vehicle where there is an available electric vehicle model which can deliver equivalent function and utility for the purpose that the vehicle is used. This will take into consideration any modifications that have been made to the vehicle being replaced and any specific requirements such as equipment loads, or distances travelled. From 2020-21 the responsible area will be required to demonstrate due cause for leasing a passenger vehicle which is not a zero emissions vehicle
<b>Passenger vehicle</b>	A motor vehicle used for the primary purpose of transporting up to nine passengers including the driver. This includes sedans, hatchbacks and station wagons as well as small and medium sports utility vehicles (SUVs). Small vans considered suitable for replacement with electric vehicles are included. Other light commercial vehicles, such as utility vehicles, are not included at this stage. Replacement of light commercial vehicles with electric vehicles will be considered as models become more widely available.
<b>Fleet vehicle</b>	All Government-leased vehicles including pool and non-pool vehicles. This excludes Executive vehicles where these vehicles are not leased by Government.

	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Total passenger vehicle leases held on 30 June	36	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>
Total ZEV passenger vehicles leases held on 30 June	9	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>
Total <i>new</i> leases of passenger vehicles	5	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>
Total <i>new</i> leases of ZEV passenger vehicles	3	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>
% of <i>newly</i> leased passenger vehicles that are ZEV	60%	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>

### Summary of non-ZEV vehicle leases

Of the TCCS passenger vehicle fleet, there were two new non-ZEV vehicle leases to replace existing vehicles entered into in 2019-20 due to operational purposes with the vehicles being eight seaters. No fit for purpose ZEV vehicles were available at this time for eight seaters.

In addition to TCCS passenger vehicles, TCCS operates a fleet of light commercial, vehicles, agricultural equipment, trucks, buses, plant and equipment. The emissions associated with this non-passenger fleet equates to 98% of annual emissions for TCCS Fleet Services (excluding the bus fleet). TCCS are demonstrating leadership with the electric truck trial commencing in 2020-21, as well as keeping abreast of opportunities across all vehicle types as the ZEV industry matures.

### Further detail

#### Other Key Performance Indicators

Growth in the Territory will result in TCCS increasing service delivery and operations resulting in a commensurate increase in energy use. Energy intensity measures track efficiencies where changes in operations or environment occur. This includes Transport Canberra bus network with energy use per passenger kilometre and Capital Linen Services with energy use against volume of linen sold.

#### Energy intensity measures

	2019-20 <sup>6</sup>	2020-21	2021-22	2022-23	2023-24	2024-25
Transport Canberra bus network - (GJ/100 passenger km)	0.30	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>
Capital Linen Services – Energy/kg linen sold <sup>7</sup>	0.86	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>	<i>track</i>

<sup>6</sup> Calendar year 2019 used as a proxy for 2019-20

<sup>7</sup> Normalised number. Consumption data provided by CLS and based on a 70% proportional split with Sterilisation Services.

## Preparing for emissions reductions beyond 2025

The Yarralumla Nursery is one of a number of facilities under review for replacement of gas-based heating systems with low emissions alternatives. The gas replacement study, conducted by the Environment, Planning and Sustainable Development Directorate (EPSDD) for TCCS and other Directorates, will recommend options that can be implemented before the interim target end date of 2025.

The Capital Linen Services facility is also being reviewed under the EPSDD gas replacement study. Owing to the nature of operations at CLS and the limited options for alternative steam-raising plant, lower emissions alternatives may not be feasible within the 2025 interim target period.

**From:** Barnett, Vanessa  
**Sent:** Thursday, 1 October 2020 1:06 PM  
**To:** Campbell, Trish; Dougall, Glenn  
**Cc:** Shields, Jemma  
**Subject:** RE: Modelling emission pathway for TC 2024-25

OFFICIAL

Hi Trish

Please see the find the tables below. Let me know if you have any queries on these.

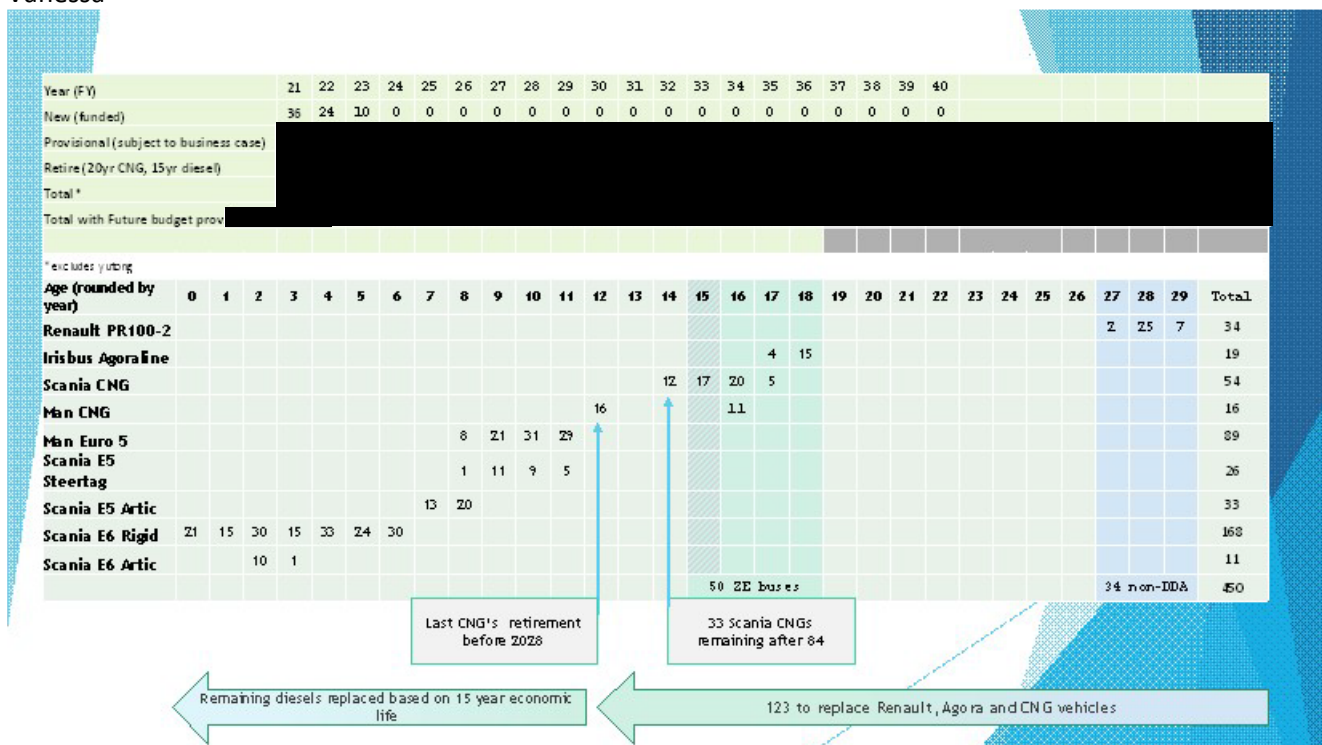
Table 2 Planned fleet retirement with existing funding

	02/20	07/20	20-21	21-22	22-23
Man CNG*	16	16	16	16	16
Irisbus Agora†	19	19	17	0	0
Scania CNG*	54	54	54	54	32
Renault PR100-2 (non-DDA)	55	34	0	0	0
Renault PR100-3 (non-DDA)	11	0	0	0	0
<b>Numbers retired</b>	<b>n/a</b>	<b>11</b>	<b>36</b>	<b>17</b>	<b>22</b>
<b>Proposed purchase profile of 84 buses</b>	<b>0</b>	<b>0</b>	<b>36</b>	<b>24</b>	<b>24</b>

\* based on 20-year CNG tank life

† Average age is 16 years. Vehicles have high failure rate and no rear door.

Thanks  
Vanessa



**From:** Campbell, Trish <Trish.Campbell@act.gov.au>  
**Sent:** Thursday, 1 October 2020 10:52 AM  
**To:** Dougall, Glenn <Glenn.Dougall@act.gov.au>  
**Cc:** Shields, Jemma <Jemma.Shields@act.gov.au>; Barnett, Vanessa <Vanessa.Barnett@act.gov.au>  
**Subject:** RE: Modelling emission pathway for TC 2024-25

OFFICIAL

Ripper – thanks Glenn. Awaiting planned replacement timeline to progress with kind regards,

Trish

Trish Campbell | Senior Director  
TCCS Sustainability, Facilities and Fleet Unit  
Building Management Services Team  
Phone: 02 6205 1574 | Email: [trish.campbell@act.gov.au](mailto:trish.campbell@act.gov.au)  
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**From:** Dougall, Glenn <[Glenn.Dougall@act.gov.au](mailto:Glenn.Dougall@act.gov.au)>  
**Sent:** Thursday, 1 October 2020 10:40 AM  
**To:** Campbell, Trish <[Trish.Campbell@act.gov.au](mailto:Trish.Campbell@act.gov.au)>  
**Cc:** Shields, Jemma <[Jemma.Shields@act.gov.au](mailto:Jemma.Shields@act.gov.au)>; Barnett, Vanessa <[Vanessa.Barnett@act.gov.au](mailto:Vanessa.Barnett@act.gov.au)>  
**Subject:** RE: Modelling emission pathway for TC 2024-25

OFFICIAL

Hi Trish,

From where I stand I can't see there being an increase in fuel use out to 2024-25 for the following reasons:

1. We can't expand fleet numbers until at least 2023 when Woden opens.
2. Any expansion or growth would be zero emissions buses.
3. Once Woden opens the network redesign is likely to increase efficiency thus reducing fuel use through dead running reductions.

So my view would be to use 1 July 2020 as the baseline for the fleet profile and reduce emissions based on:

1. Replacing the 34 orange buses with 34 diesel buses in 2021-22 and then follow the predictions in the ZETP for introduction of zero emissions buses replacing diesel and CNG buses for the rest of the timeline.

Vanessa, if you could provide the planned replacement timeline from the presentation last week that will give us the numbers we need to complete the prediction of reduced emissions.

Regards,

Glenn Dougall | Senior Director, Strategic Assets Procurement and Contract Management.  
Transport Canberra | Transport Canberra and City Services Directorate | ACT Government  
**Phone** 02 62077647 | **Mobile** [REDACTED]  
480 Northbourne Avenue Dickson, ACT 2602 | GPO Box 158 Canberra ACT 2601



**From:** Campbell, Trish <[Trish.Campbell@act.gov.au](mailto:Trish.Campbell@act.gov.au)>  
**Sent:** Thursday, 1 October 2020 9:36 AM  
**To:** Dougall, Glenn <[Glenn.Dougall@act.gov.au](mailto:Glenn.Dougall@act.gov.au)>  
**Cc:** Shields, Jemma <[Jemma.Shields@act.gov.au](mailto:Jemma.Shields@act.gov.au)>; Barnett, Vanessa <[Vanessa.Barnett@act.gov.au](mailto:Vanessa.Barnett@act.gov.au)>  
**Subject:** RE: Modelling emission pathway for TC 2024-25

OFFICIAL

Roger that Glenn, will do.

Can you provide me with the following fleet mix forecast to 2024-25, based on current projected pathway, as well as an estimated annual adjustment to accommodate operationally changing fuel use (ie conservative 1% increase per annum?). Note also we are working off a proxy CY2019 baseline, rather than FY2019-20 due to COVID-19 impact:

	2020-21		2021-22		2022-23		2023-24		2024-25	
	Number	Forecast emissions	Number	Forecast emissions	Number	Forecast emissions	Number	Forecast emissions	Number	Forecast emissions
EV	1									
Diesel										
CNG										
Total										

Many thanks,

Trish

Trish Campbell | Senior Director  
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Building Management Services Team  
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**From:** Dougall, Glenn <[Glenn.Dougall@act.gov.au](mailto:Glenn.Dougall@act.gov.au)>  
**Sent:** Thursday, 1 October 2020 9:28 AM  
**To:** Campbell, Trish <[Trish.Campbell@act.gov.au](mailto:Trish.Campbell@act.gov.au)>; Barnett, Vanessa <[Vanessa.Barnett@act.gov.au](mailto:Vanessa.Barnett@act.gov.au)>  
**Cc:** Shields, Jemma <[Jemma.Shields@act.gov.au](mailto:Jemma.Shields@act.gov.au)>  
**Subject:** RE: Modelling emission pathway for TC 2024-25

OFFICIAL

Hi Trish,

We have total fleet km and average fuel consumption (diesel and CNG) across the fleet.



We don't have annual km travelled by bus type or any way to predict the way the fleet will be utilised in future networks.

I believe method 1 will provide the basis for predictions in emission reduction and we can work on more robust methods as our reporting and understanding of the changes in fleet mix matures.

Regards,

Glenn Dougall | Senior Director, Strategic Assets Procurement and Contract Management.  
Transport Canberra | Transport Canberra and City Services Directorate | ACT Government  
**Phone** 02 62077647 | **Mobile** [REDACTED]  
480 Northbourne Avenue Dickson, ACT 2602 | GPO Box 158 Canberra ACT 2601



**From:** Campbell, Trish <[Trish.Campbell@act.gov.au](mailto:Trish.Campbell@act.gov.au)>  
**Sent:** Wednesday, 30 September 2020 5:38 PM  
**To:** Barnett, Vanessa <[Vanessa.Barnett@act.gov.au](mailto:Vanessa.Barnett@act.gov.au)>  
**Cc:** Dougall, Glenn <[Glenn.Dougall@act.gov.au](mailto:Glenn.Dougall@act.gov.au)>; Shields, Jemma <[Jemma.Shields@act.gov.au](mailto:Jemma.Shields@act.gov.au)>  
**Subject:** Modelling emission pathway for TC 2024-25

**OFFICIAL**

Hi Vanessa,

Following our meeting, I have put together two methods to derive annual emission savings from converting diesel or CNG to EV:

Method 1: Average emissions per bus fuel type

Bus Fuel type	Number	Average annual emissions/vehicle	Annual Emission Savings from conversion to EV
Electric vehicles	1	0	
Diesel	380	76.52	76.52
CNG (average Euro III/IV)	70	59.75	59.75

451

Method 2: Average emissions per annual km/fuel efficiency per bus type

Bus type	Number	Annual km	Fuel efficiency average L/100km	Average annual emissions/veh
Electric vehicles	1	-	-	Nil
Post 2004 vehicles	X			
Euro IV or higher – (average)	X			
CNG (average Euro III/IV)	X			

From here, I can just use the fleet mix to multiply out the forecast emissions to 2024-25. Happy to go with either, but if annual km is not able to be derived, we could just use Method 1 to put pen to paper at least for now (as we can adjust in the future).

Emission Target\* (annual average emissions/vehicle X estimated annual operational increase)

	2020-21		2021-22		2022-23		2023-24		2024-25	
	Number	Forecast emissions	Number	Forecast emissions	Number	Forecast emissions	Number	Forecast emissions	Number	Forecast emissions
EV										
Diesel – Post 2004										
Diesel – Euro IV +										
CNG										
Total										

The email trail below shows some work undertaken in this space some years ago.

Many thanks,

Trish

Trish Campbell | Senior Director

TCCS Sustainability, Facilities and Fleet Unit

Building Management Services Team

Phone: 02 6205 1574 | Email: [trish.campbell@act.gov.au](mailto:trish.campbell@act.gov.au)

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Emissions calculations:

<https://www.industry.gov.au/sites/default/files/2020-07/national-greenhouse-accounts-factors-august-2019.pdf>

Table 4: Fuel combustion emission factors – fuels used for transport

Transport equipment type	Fuel combusted	Energy content factor (GJ/kL unless otherwise indicated)
General transport		
	Gasoline (other than for use as fuel in an aircraft)	34.2
	Diesel oil	38.6
	Gasoline for use as fuel in an aircraft	33.1
	Kerosene for use as fuel in an aircraft	36.8
	Fuel oil	39.7
	Liquefied petroleum gas	26.2
	Biodiesel	34.6
	Ethanol for use as fuel in an internal combustion engine	23.4
	Biofuels other than those mentioned in items above	23.4
	Compressed natural gas that has converted to standard conditions (light duty vehicles)	$39.3 \times 10^{-3} \text{ GJ/m}^3$
	Compressed natural gas that has converted to standard conditions (heavy duty vehicles)	$39.3 \times 10^{-3} \text{ GJ/m}^3$
	Liquefied natural gas (light duty vehicles)	25.3
	Liquefied natural gas (heavy duty vehicles)	25.3

**From:** Campbell, Trish  
**Sent:** Friday, 26 April 2019 4:03 PM  
**To:** Hall, Damon <[Damon.Hall@act.gov.au](mailto:Damon.Hall@act.gov.au)>  
**Cc:** Dougall, Glenn <[Glenn.Dougall@act.gov.au](mailto:Glenn.Dougall@act.gov.au)>  
**Subject:** Emission calculations

UNCLASSIFIED

Hi Damon,

Table 4 of the National Greenhouse Accounts Factors (July 2018) provides the emission factors for fuels used for transport energy purposes and as shown below, indicates a higher amount of emissions are produced with Euro I and III compared with Euro IV or higher. The complication, however, comes when looking at the efficiency of vehicles in litres/100km, due to air conditioning.

I did a bit of research with Glenn a few years back (see table below) and while not up to date with Euro VI:

- Post 2004 vehicles – (average) 36.56 litres/100km
- Euro III – 57.72 CuM/100km
- Euro IV or higher – (average) 48.71 litres/100km

Emissions for Electric buses (due to the ACT’s Renewable Electricity Target) will be zero from 1 July 2020.

How would you like to crunch the numbers?

Make	Model	Type	Fleet Number	Number	Body	Delivery
Renault	Pr100.2 Mk II	Rigid	870 to 982		85 ANSAIR	8/1990 to
Renault	Pr100.3	Rigid	990 to 999 & 100 to 1		29 Austral Denning	8/1993 to
Renault	Pr100.3a	Rigid	113 and 126 to 131		4 Austral Denning	7/1996 to
Dennis	Dart SLF	Midi	132 to 156		6 Wright	5/1997 to
Irisbus	Agoraline Euro II	Rigid	300 to 319		18 Custom Coaches	12/2003 to
Scania	L94UBCNG Euro III	Rigid	320 to 373		54 Custom Coaches	1/2004 -
MAN	A69 18.310 CNG Euro IV	Rigid	374 - 389		16 Custom Coaches	6/2008 -
MAN	A69 18.320 HOUCL-R-NL Euro IV	Rigid	390 - 391 and 394 - 5		87 Custom Coaches	8/2009 -
MAN	A69 18.310 HOUCL-R-NL Euro IV	Rigid	392 & 393		2 Custom Coaches	Sep-
Scania 14.5m	K320 UB 6X2X4 Euro V EEV	Rigid	464 - 489		26 Custom Coaches	Feb 2010 to
Scania	K360UA Euro V EEV	Artic	506 - 538		33 Custom Coaches	July 2012- J
Scania Hire	K320 UB 6X2X2 Euro V EEV	Rigid	490		1 Custom Coaches	re from Feb
Scania	K320UB Euro VI	Rigid	539-620		55 Custom Coaches	May2014 to
<b>Total</b>					<b>418</b>	
Training					4	
Non operational buses					19	
					<b>439</b>	
	Emissions Factor			Number		Proportion
Post 2004 vehicles	69.81 kgCO <sub>2</sub> -e/GJ			142		34%
Euro IV or higher	69.75 kgCO <sub>2</sub> -e/GJ			220		53%
Euro III	69.8 kgCO <sub>2</sub> -e/GJ			54		13%

**Table 4: Fuel combustion emission factors - fuels used for transport**

Transport equipment type	Fuel combusted	Energy content factor (GJ/kL unless otherwise indicated)
General transport		
	Gasoline (other than for use as fuel in an aircraft)	34.2
	Diesel oil	38.6
	Gasoline for use as fuel in an aircraft	33.1
	Kerosene for use as fuel in an aircraft	36.8
	Fuel oil	39.7
	Liquefied petroleum gas	26.2
	Biodiesel	34.6
	Ethanol for use as fuel in an internal combustion engine	23.4
	Biofuels other than those mentioned in items above	23.4
	Compressed natural gas that has converted to standard conditions (light duty vehicles)	$39.3 \times 10^{-3} \text{ GJ/m}^3$
	Compressed natural gas that has converted to standard conditions (heavy duty vehicles)	$39.3 \times 10^{-3} \text{ GJ/m}^3$
	Liquefied natural gas (light duty vehicles)	25.3
	Liquefied natural gas (heavy duty vehicles)	25.3

Trish Campbell | Director, Sustainability, Facilities and Fleet

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