

CHAPTER 12: ENVIRONMENTAL OUTCOMES

Key findings of the Committee:

- 12.1 Overall, the ten government departments and two environmental agencies reduced the amount of energy used and increased the proportion of that energy coming from Green Power, leading to a 2 per cent reduction in overall greenhouse gas emissions from energy use.
- 12.2 Green Power accounted for 19 per cent of the 12 entities' office-based energy use in 2008-09, heading towards but still some distance from the Government's policy to achieve 25 per cent by 2010.
- 12.3 The data suggest that the total amount of waste disposed of in 2008-09 was 26 per cent more than in 2007-08, but that the recycling rates are up and that overall the amount of waste sent to landfill declined. However, there are reasons to believe that at least some of the apparent changes may be more due to imprecise measurement techniques than to actual usage.
- 12.4 The overall amount of paper used by government entities increased, with a decrease in the proportion of recycled content paper being used.
- 12.5 Reported water usage increased in 2008-09, primarily as a result of increased data coverage. Some entities have made significant reductions in their water usage per full time employee.
- 12.6 Greenhouse gas emissions from the entities' vehicle fleets were reduced by 8 per cent in 2008-09. This was primarily achieved through an increase in the use of low emissions vehicles.
- 12.7 Overall, less greenhouse gas has been emitted, with decreases due to energy use and vehicle fleets, and increases from air travel and waste production.
- 12.8 Work done by the environmental agencies suggests that the total amount of greenhouse gas emitted by entities' activities is significantly more than just what comes from the four sources specified in FRD 24C. FRD 24C lists reporting on other sources as an optional measure. Four departments and the two environmental agencies chose to disclose data about additional sources of greenhouse gases in 2008-09.
- 12.9 The environmental agencies and the Department of Justice were the only entities to purchase greenhouse gas offsets other than the Department of Sustainability and Environment, which purchased offsets for the whole government's vehicle fleet.
- 12.10 All departments had included environmental considerations in at least some of their procurement activities.
- 12.11 A significant number of entities did not comply with the requirement in FRD 24C to provide future targets for all seven aspects. In many cases, there was limited reporting of progress against previous targets.

12.12 Many entities have improved the scope and quality of data in 2008-09. However, there remain issues including non-compliance with requirements, incomplete data coverage, limited trend data, trend data which is not comparable and failure to provide explanations of significant changes. There is scope for further improvement in all these areas so that a full accounting can be provided and proper trends be established.

12.1. Introduction

The Victorian Government has included the ‘*efficient use of natural resources*’ amongst its goals for Growing Victoria Together and has stated its commitment ‘*to playing a leading role in the national and international efforts to tackle climate change.*’²⁶⁹

Financial Reporting Direction (FRD) 24C (Reporting of Office-based Environmental Data by Government Entities) requires all government departments and the two environmental agencies (the Environment Protection Authority and Sustainability Victoria) to report their performance on a number of environmental indicators. This enables the government’s progress towards a reduced environmental impact to be monitored. This information has also been used by the Commissioner for Environmental Sustainability in undertaking strategic audits of Victorian government agencies’ Environmental Management Systems (EMS),²⁷⁰ which in 2009 included the production of a supplementary report examining agencies’ reporting against FRD 24C in 2007-08.²⁷¹ Four recommendations specifically relating to reporting have been made in those reports.

12.2. Financial Reporting Direction 24C

Under FRD 24C, entities are required to disclose information about their performance relating to the following seven aspects:

- energy use;
- waste production;
- paper use;
- water consumption;
- transportation fuel consumption;
- greenhouse gas emissions; and
- sustainable procurement.

FRD 24C only applies to the ten departments plus the Environment Protection Authority and Sustainability Victoria. In addition, it only requires entities to report on their office-based activities. Although a number of departments have voluntarily provided data about non-office-based data in 2008-09, most have still only provided office-based data. The Commissioner for

269 Victorian Government, *Annual Statement of Government Intentions*, February 2009, p.74

270 Commissioner for Environmental Sustainability, *Strategic Audit of Victorian Government Agencies’ Environmental Management Systems*, January 2009

271 Commissioner for Environmental Sustainability, *Strategic Audit: Environmental Performance Reporting Supplementary Report 2007-08*, January 2009

Environmental Sustainability has highlighted that these limitations provide a significantly limited amount of data and make it difficult for whole-of-government trends to be concluded on the basis of this information.²⁷²

The following sections of this report examine the performance of departments and agencies in relation to each of the reporting requirements of FRD 24C.

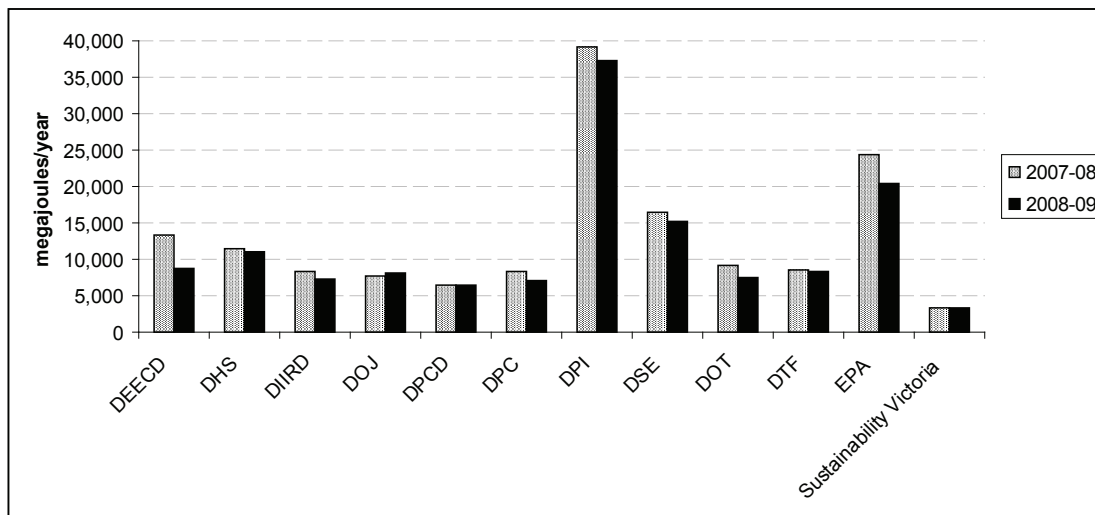
12.2.1 Energy Use

Overall, there was a 2 per cent reduction in the amount of greenhouse gas emissions coming from energy use by the 10 departments and two agencies in 2008-09 compared to 2007-08 (see Table 12.10). This was largely achieved by reductions in the total amount of energy used from 306,413 to 299,116 gigajoules. There was also a small increase in the amount of Green Power used from 41,172 to 42,492 gigajoules. More details are provided in Table 12.1 and Table 12.2.

The majority of departments reduced their total energy use between 2007-08 and 2008-09. Those reducing the most overall were the Department of Premier and Cabinet, the Department of Education and Early Childhood Development and the Department of Innovation, Industry and Regional Development.

The largest reduction came from the Department of Premier and Cabinet, which reduced its usage by 32 per cent. The Department explained that its actions included computers automatically switching off after 30 minutes of inactivity, a culture of turning off computers and a new lighting system.²⁷³ The Department of Education and Early Childhood Development and the Department of Innovation, Industry and Regional Development cited similar programs, with the Department of Innovation, Industry and Regional Development also enabling sleep mode on printers and multifunction devices.²⁷⁴ The Department of Education and Early Childhood Development achieved the highest reduction in energy use per full time employee (FTE) of any of the government entities (see Figure 12.1).

Figure 12.1: Energy Consumption per FTE by Department/Agency



Sources: Department and agency 2007-08 and 2008-09 annual reports

272 Commissioner for Environmental Sustainability, *Strategic Audit: Environmental Performance Reporting Supplementary Report 2007-08*, January 2009, pp.16, 19

273 Department of Premier and Cabinet, *Annual Report 2008-09*, October 2009, p.114

274 Department of Education and Early Childhood Development, *Annual Report 2008-09*, October 2009, p.173; Department of Innovation, Industry and Regional Development, *Annual Report 2008-09*, October 2009, pp.180-1

The Department of Transport, although achieving only a small reduction in the total amount of energy used, did so despite an increase in the number of FTEs and achieved the second largest reduction in energy used per FTE (18 per cent). The Department's actions also included ensuring computers were switched off and introducing computers with smaller environmental footprints. In addition, it sought to limit the growth of peripheral electronic equipment and ensure new office fit-outs were energy efficient.²⁷⁵

The actions of the Environment Protection Authority, which achieved a 10 per cent reduction in its total energy use, included energy audits, the installation of insulation at one site and an internal cap and trade scheme across its sites.²⁷⁶ The cap and trade scheme consisted of setting an overall cap for energy use of each site, which can only be exceeded by purchasing permits which are traded in a 'carbon market'. Energy use included in the scheme covered both electricity and transport, which make up 80 per cent of the Environment Protection Authority's emissions. In addition to reducing its environmental impact, the Environment Protection Authority also hopes to build their capacity '*to service clients impacted by the national [carbon pollution reduction] scheme ... gaining practical experience in the challenges some of our clients will face.*'²⁷⁷

Of the departments, the Department of Planning and Community Development had the largest increase, with a 10 per cent increase in energy use. The Department explained that this was due to a 9 per cent increase in the number of staff,²⁷⁸ and the Committee notes that the amount of energy used per FTE is approximately the same in 2008-09 as it was in 2007-08 (see Table 12.1).

Sustainability Victoria similarly recorded an increase in overall energy use due to an increased number of staff²⁷⁹ and, similarly, little change in the amount of energy use per FTE.

The Department of Primary Industries had the largest usage overall and per FTE, but its figures include '*research, farming and agricultural plant breeding, which form a significant portion of the department's total energy expenditure.*'²⁸⁰ The Environment Protection Authority, which reported the second highest amount of energy use per FTE, also included laboratories and air monitoring stations in its totals. The Committee notes that FRD 24C specifically relates to office-based activities and that it is important for all agencies to report in a similar way in order to enable comparison and meaningful interpretation of data. The Committee commends these agencies for tracking the environmental impact of their non-office-based activities as well as their office-based activities, but considers that it would be preferable to follow the approach taken by the Department of Human Services and the Department of Innovation, Industry and Regional Development, which report office-based and non-office-based data separately.

Recommendation 24: The Department of Primary Industries and the Environment Protection Authority consider reporting office-based and non-office-based data separately in future reports.

275 Department of Transport, *Annual Report 2008-09*, October 2009, p.178

276 Environment Protection Authority, *Annual Report 2009*, October 2009, p.49

277 *ibid.*, p.12

278 Department of Planning and Community Development, *Annual Report 2008-09*, October 2009, p.156

279 Sustainability Victoria, *Annual Report 08-09*, October 2009, p.90, n.4

280 Department of Primary Industries, *Financial Statements and Appendices 2008-09*, October 2009, p.66

Table 12.1: Energy Consumption by Department/Agency

	Total Energy Use			Units of Energy Used per FTE		
	2008-09	2007-08	Variation	2008-09	2007-08	Variation
	(gigajoules)	(gigajoules)	(%)	(megajoules)	(megajoules)	(%)
Department of Education and Early Childhood Development ^(a)	22,018	24,400	-10	8,781	13,345	-34
Department of Human Services ^(a)	76,409	79,093	-3	11,045	11,524	-4
Department of Innovation, Industry and Regional Development	6,916	7,532	-8	7,322	8,366	-12
Department of Justice ^(b)	26,268	26,165	0	8,124	7,718	5
Department of Planning and Community Development	6,871	6,236	10	6,556	6,508	1
Department of Premier and Cabinet	2,398	3,525	-32	7,032	8,232	-15
Department of Primary Industries ^(c)	91,385	91,947	-1	37,228	39,120	-5
Department of Sustainability and Environment	43,504	42,833	2	15,168	16,538	-8
Department of Transport	9,768	9,914	-1	7,519	9,216	-18
Department of Treasury and Finance	4,887	5,157	-5	8,391	8,544	-2
Total (departments)	290,424	296,802	-2			
Environment Protection Authority ^(c)	8,241	9,203	-10	20,502	24,346	-16
Sustainability Victoria	451	408	11	3,365	3,344	1
Total (all entities)	299,116	306,413	-2			

Notes:

(a) figures for 2007-08 revised in 2008-09

(b) figures for 2008-09 cover significantly larger proportion of FTEs and sites than figures for 2007-08

(c) includes office and non-office facilities (such as laboratories, air monitoring stations, farms and agricultural plant breeding facilities)

Sources: Department and agency 2007-08 and 2008-09 annual reports

Across the twelve entities, looking at only their office-based activities, Green Power constituted 19 per cent of electricity use in 2008-09 (see Table 12.2). The three largest users of electricity were the Department of Sustainability and Environment, the Department of Primary Industries and the Department of Human Services. The Department of Sustainability and Environment acquired 29 per cent of its electricity from Green Power in 2008-09, the Department of Primary Industries acquired 20 per cent but the Department of Human Services is significantly lower with only 14 per cent of its electricity coming from Green Power.

Overall, the proportion of energy purchased as Green Power increased from 17 to 19 per cent. The proportion of electricity coming from Green Power increased or stayed the same in all agencies except for the Environment Protection Authority. The Environment Protection Authority reduced the proportion of its electricity purchased as Green Power from 100 per cent to 17 per cent ‘due to cost and Carbon Pollution Reduction Scheme implications.’²⁸¹ The Authority added that ‘additional offsets have been purchased to cover the remaining emissions in electricity.’²⁸²

The Environment Protection Authority further explained in its annual ‘carbon neutral update’ that:²⁸³

EPA is committed to purchasing the highest quality products to neutralise our emissions which meet our criteria. As such, we decided against the purchase of GreenPower as part of our carbon neutrality in 2008–09. We will reassess both the cost and the demonstration of additionality of GreenPower each year and will include it again when appropriate.

The Committee considers that the Environment Protection Authority’s decision to reduce the amount of Green Power it purchases and, in particular, to reduce it to a level below the Government’s target for 2010, is significant, given the Environment Protection Authority’s expertise and role as a model for other entities.

Recommendation 25: The Environment Protection Authority include in future annual reports its assessment of the value of using Green Power.

281 Environment Protection Authority, *Annual Report 2009*, p.49. This year’s figures also included diesel used for backup generators, which previous years did not – *ibid*.

282 *ibid*.

283 Environment Protection Authority, *EPA’s carbon neutral update 2008–09*, December 2009, p.1

Table 12.2: Use of Green Power by Department/Agency

	2008-09		2007-08	
	(gigajoules)	(% of total electricity use)	(gigajoules)	(% of total electricity use)
Department of Education and Early Childhood Development ^(a)	2,191	15	2,205	13
Department of Human Services ^(a)	8,355	14	5,831	10
Department of Innovation, Industry and Regional Development	1,451	21	1,141	15
Department of Justice ^(b)	2,736	13	2,150	10
Department of Planning and Community Development	1,509	22	1,344	22
Department of Premier and Cabinet	456	19	529	15
Department of Primary Industries ^(c)	12,172	20	7,148	11
Department of Sustainability and Environment	9,341	29	9,455	28
Department of Transport	1,540	16	1,556	16
Department of Treasury and Finance	977	20	774	15
Total (departments)	40,728	18	32,133	14
Environment Protection Authority ^(c)	1,313	17	8,630	100
Sustainability Victoria	451	100	409	100
Total (all entities)	42,492	19	41,172	17

Notes:

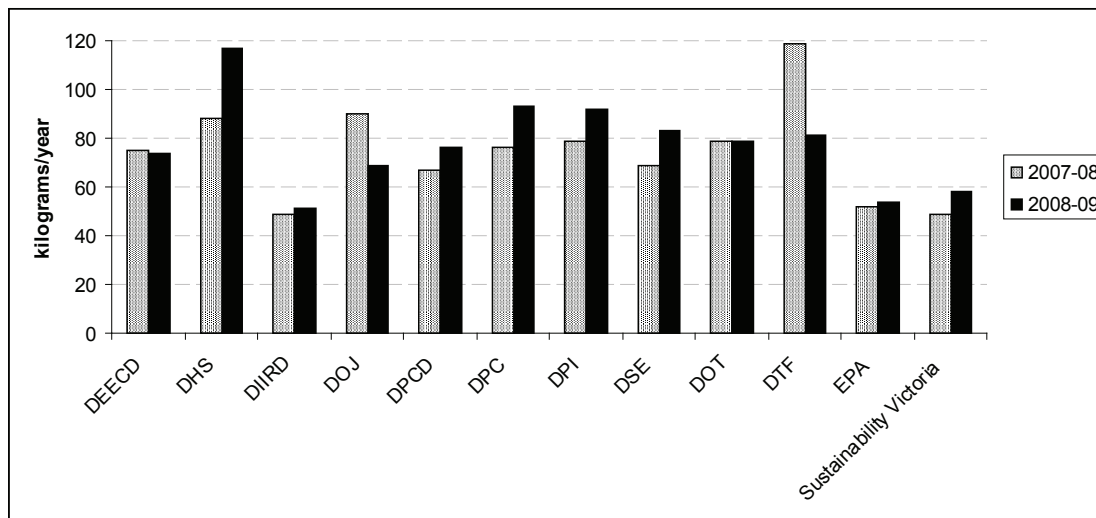
- (a) *Figures for 2007-08 revised in 2008-09*
- (b) *Figures for 2008-09 cover significantly larger proportion of FTEs and sites than figures for 2007-08*
- (c) *Includes office and non-office facilities (such as laboratories, air monitoring stations, farms and agricultural plant breeding facilities)*

Sources: *Department and agency 2007-08 and 2008-09 annual reports*

12.2.2 Waste Production

Most government entities increased the amount of waste they disposed of in 2008-09, both in total terms and per FTE. Overall, there was a 26 per cent increase in the amount of waste disposed of (see Table 12.3). Significant variations were recorded by entities between their 2007-08 and 2008-09 results, both in total and per FTE (see Table 12.3, Figure 12.2).

Figure 12.2: Waste Disposed of per FTE by Department/Agency



Sources: Department and agency 2007-08 and 2008-09 annual reports

The largest increase in waste production was by the Department of Human Services, who explained that, ‘As the 2008-09 waste audits were carried out at different sites than those in 2007-08 that data between the years is not strictly comparable.’²⁸⁴

The Department of Education and Early Childhood Development’s increase in total waste disposed of can be explained by reference to an increase in FTEs, as the amount of waste per FTE is approximately the same between years.

The Department of Primary Industries recorded a 46 per cent increase in total waste. It explained that this was due to an increase in the number of sites and FTEs²⁸⁵ but the department also recorded a 16 per cent increase in waste per FTE.

Other departments with large increases in either the total waste production or quantity of waste per FTE – the Department of Planning and Community Development, the Department of Premier and Cabinet and the Department of Sustainability and Environment – did not provide any explanations for the increase. The Committee noted previously²⁸⁶ that it would expect to see more detailed and precise reporting to explain such variations and reiterates that requirement at this point. See further discussion in Section 12.5.4.

On the other hand, the Department of Justice and the Department of Treasury and Finance both recorded significant reductions in the amount of waste produced, both in total and per FTE.

The Committee considers that there are reasons to believe that the variation in the amount of waste between 2007-08 and 2008-09 may be at least partially due to the methods employed to estimate the amount of waste rather than an actual increase in the disposing of waste.²⁸⁷ The Committee suggests that some entities adopt more accurate methods for estimating waste usage in the future in order to make their figures more meaningful.

284 Department of Human Services, *Annual Report 2008-09*, October 2009, p.182

285 Department of Primary Industries, *Financial Statements and Appendices 2008-09*, October 2009, p.68

286 Public Accounts and Estimates Committee, *Report on the 2007-08 Financial and Performance Outcomes*, May 2009, p.266

287 Commissioner for Environmental Sustainability, *Strategic Audit: Environmental Performance Reporting Supplementary Report 2007-08*, January 2009, p.19

Table 12.3: Office Waste Disposed of by Department/Agency

	Total Office Waste Disposed of			Office Waste Disposed of per FTE		
	2008-09	2007-08	Variation	2008-09	2007-08	Variation
	(kilograms)	(kilograms)	(%)	(kilograms)	(kilograms)	(%)
Department of Education and Early Childhood Development ^(a)	184,602	137,693	34	74	75	-1
Department of Human Services	897,271	593,120	51	117	88	33
Department of Innovation, Industry and Regional Development	50,050	49,710	1	51	49	4
Department of Justice ^(b)	138,760	182,426	-24	69	90	-23
Department of Planning and Community Development	79,770	64,661	23	76	67	13
Department of Premier and Cabinet	31,762	32,332	-2	93	76	22
Department of Primary Industries ^{(b)(c)}	106,913	73,220	46	92	79	16
Department of Sustainability and Environment ^(a)	240,575	180,040	34	83	69	20
Department of Transport	78,153	84,765	-8	79	79	0
Department of Treasury and Finance	47,154	71,891	-34	81	119	-32
Total (departments)	1,855,010	1,469,858	26			
Environment Protection Authority	21,512	19,779	9	54	52	4
Sustainability Victoria ^(d)	7,772	5,978	30	58	49	18
Total (all entities)	1,884,294	1,495,615	26			

Notes:

- (a) Figures for 2007-08 revised in 2008-0-9
 (b) Figures for 2008-09 cover different proportions of FTEs and sites than figures for 2007-08.
 (c) Includes office and non-office activities.
 (d) Total figures extrapolated from FTE figures.

Sources: Department and agency 2007-08 and 2008-09 annual reports

Although still needing to be cautious about the data, the results suggest that recycling rates improved in 2008-09, with the majority of entities improving their performance (see Table 12.4). Overall, the recycling rate increased from 82 to 85 per cent. However, as a result of the increase in total waste, the amount of waste going to landfill from these government entities increased from approximately 262,000 to 288,000 kilograms.²⁸⁸

Sustainability Victoria recorded the largest increase in its recycling rate, explaining that it included more recycling streams in 2008-09, including secure paper recycling and additional plastics recycling,²⁸⁹ although it also noted that staff members were bringing items to be recycled to work which were not handled in their home municipality.²⁹⁰ Other reasons given by entities for increased recycling rates included providing recycling facilities to a greater proportion of staff in 2008-09 and staff awareness campaigns.

None of the entities reporting a reduction in their recycling rates provided any explanations.

Table 12.4: Recycling Rate by Department/Agency

	2008-09	2007-08	Variation
	(%)	(%)	(%)
Department of Education and Early Childhood Development ^(a)	83	78	6
Department of Human Services	83	80 ^(b)	4
Department of Innovation, Industry and Regional Development	90	88	2
Department of Justice	78	83	-6
Department of Planning and Community Development	89	85	5
Department of Premier and Cabinet	90	93	-3
Department of Primary Industries	85	80	6
Department of Sustainability and Environment	91	87	5
Department of Transport	87	83	5
Department of Treasury and Finance	89	91	-2
Environment Protection Authority	78	82	-5
Sustainability Victoria	97	90	8
Total (all entities^(c))	85	82	3

Notes:

- (a) *Figures for 2007-08 revised in 2008-09.*
- (b) *Figure reported as 73 per cent in the Department's annual report but amended by the Public Accounts and Estimates Committee based on figures for units of waste presented in the annual report.*
- (c) *Excluding Sustainability Victoria, which did not provide data on the total amount of waste produced.*

Sources: Department and agency 2007-08 and 2008-09 annual reports

288 This figure excludes Sustainability Victoria, which did not provide data on the total amount of waste produced.

289 Sustainability Victoria, *Annual Report 2008-09*, p.50

290 *ibid.*, n.6, p.90

12.2.3 Paper Use

Overall, 2008-09 saw the government entities using more paper in total. The amount of paper used increased by 3 per cent from 2007-08 to 2008-09 to a total of 401,277 reams (see Table 12.5). This follows on from an increase of 2 per cent between 2006-07 and 2007-08.²⁹¹ The average proportion of paper used with a recycled content of 50 per cent or greater fell by 3 per cent (see Table 12.6) between 2007-08 and 2008-09. No data was kept on the use of paper sourced from plantations.

Some departments and agencies made significant reductions in the amount of paper used per FTE. The Department of Education and Early Childhood Development reduced its usage per FTE by 30 per cent. Its actions included an online records management program and incorporating paper consumption reduction targets into the business planning cycle.²⁹² The Department of Transport, which also made a significant reduction per FTE, listed an online records management system as one of its actions for the year too.

Of the four entities whose usage of paper per FTE increased by more than 10 per cent, only the Department of Planning and Community Development provided any explanation, attributing it to the Department's growth and an increase in the level of project activities.²⁹³ The Department of Justice, which recorded a 5 per cent increase per FTE attributed the increase to an '*increase in the demand of paper-rich processes, such as the Bushfire Royal Commission.*'²⁹⁴ The Department of Innovation, Industry and Regional Development had by far the largest increase, with total paper use increasing by 39 per cent and usage per FTE increasing by 24 per cent.

291 Public Accounts and Estimates Committee, *Report on the 2007-08 Financial and Performance Outcomes*, May 2009, p.268

292 Department of Education and Early Childhood Development, *Annual Report 2008-09*, October 2009, p.175

293 Department of Planning and Community Development, *Annual Report 2008-09*, October 2009, p.158

294 Department of Justice, *Annual Report 2008-09*, October 2009, p.143

Table 12.5: A4 Equivalent Copy Paper Used by Department/Agency

	Total A4 Equivalent Copy Papers Used			A4 Equivalent Copy Papers Used per FTE		
	2008-09	2007-08	Variation	2008-09	2007-08	Variation
	(reams)	(reams)	(%)	(reams)	(reams)	(%)
Department of Education and Early Childhood Development ^(a)	40,272	41,943	-4	16	23	-30
Department of Human Services	128,218	132,602	-3	11	12	-8
Department of Innovation, Industry and Regional Development	21,148	15,242	39	21	17	24
Department of Justice ^(b)	67,576	60,674	11	21	20	5
Department of Planning and Community Development	19,008	15,724	21	18	16	13
Department of Premier and Cabinet	8,990	9,880	-9	26	23	13
Department of Primary Industries ^(a)	27,765	27,990	-1	11	12	-8
Department of Sustainability and Environment ^(c)	50,020	44,982	11	17	17	0
Department of Transport	22,028	21,493	2	17	20	-15
Department of Treasury and Finance	12,246	13,171	-7	21	22	-5
Total (departments)	397,271	383,701	4			
Environment Protection Authority	3,133	3,575	-12	8	9	-11
Sustainability Victoria	873	793	10	7	6	17
Total (all entities)	401,277	388,069	3			

Notes:

(a) Figures for 2007-08 revised in 2008-09

(b) Figures for 2008-09 cover larger proportions of FTEs and sites than figures for 2007-08

(c) Figures have been amended from what was published in the Department's annual report based on advice to the Committee from the Department

Sources: Department and agency 2007-08 and 2008-09 annual reports

Seven departments used a smaller proportion of recycled paper than in the previous year. The Department of Sustainability and Environment explained that the paper used with less than 50 per cent recycled content was ‘almost entirely A3 size and coloured A4 papers not available with higher recycled content.’²⁹⁵

The guidance provided for FRD 24C reporting recommends reporting on the usage of recycled paper by reporting on the amount of used paper falling within three categories, each covering a different range of recycled content values.²⁹⁶ Not all entities reported as recommended. Where different entities do not provide data on the same basis, it is difficult to monitor the entities’ performance relative to other departments and agencies. The PAEC would like to see all entities reporting in line with the guidance in 2009-10.

Table 12.6: Percentage of Paper Used with a Recycled Content of 50 per cent or Higher by Department

	2008-09	2007-08	Variation
	(%)	(%)	(%)
Department of Education and Early Childhood Development ^(a)	82	81	1
Department of Human Services	93	94	-1
Department of Innovation, Industry and Regional Development	90	96	-6
Department of Justice ^(b)	90	92	-2
Department of Planning and Community Development	95	94	1
Department of Premier and Cabinet ^(c)	94	100	-6
Department of Primary Industries	83	92	-10
Department of Sustainability and Environment ^(d)	90	92	-2
Department of Transport	99	100	-1
Department of Treasury and Finance ^(c)	99	99	0
Average (departments)	92	94	-3

Notes:

- (a) Figures for 2007-08 revised for 2008-09.
- (b) Figures for 2008-09 cover a wider proportion of sites than figures for 2007-08.
- (c) Report indicates ‘percentage of recycled content copy paper purchased’ without specifying what level of recycling content is included in the category.
- (d) Figures have been amended from what was published in the Department’s annual report based on advice to the Committee from the Department.

Sources: Departments’ 2007-08 and 2008-09 annual reports

295 Department of Sustainability and Environment, *Annual Report 2009*, October 2009, p.14; cf. Department of Transport, *Annual Report 2008-09*, October 2009, p.180

296 Environment Protection Authority, *Guidance for FRD24C Reporting*, p.14, <<http://www.epa.vic.gov.au/projects/docs/FRD24B-Guidance-Notes.pdf>>, accessed 9 December 2009,

12.2.4 Water Consumption

Overall, there was a 13 per cent increase in the total reported amounts of water usage across the 12 government entities, primarily because a larger proportion of sites was reported on.

The largest increase in reported total usage comes from the Department of Justice. This increase is in part due to the inclusion of a significantly larger proportion of the department's staff and sites – from 40 per cent of FTEs and 37 per cent of locations in 2007-08 to 96 per cent of FTEs and 82 per cent of locations in 2008-09.²⁹⁷ The department's water usage per FTE remained approximately constant between 2007-08 and 2008-09.

If one does not include the Department of Justice in the calculation, water usage by government entities as a whole decreased by 4 per cent between 2007-08 and 2008-09.

The Committee notes that there is a significant variation in water usage per FTE across the different entities (Table 12.7). Whilst most managed to achieve between 10 and 15 kilolitres per FTE per year, the Department of Treasury and Finance was a significant outlier, with 21 kilolitres per FTE per year. On the other hand, Department of Transport and Sustainability Victoria had significant smaller rates of usage.

Given the above considerations, it can be seen that overall the government entities achieved improved water use efficiency.

²⁹⁷ Department of Justice, *Annual Report 2008-09*, October 2009, p.143; Department of Justice, *Annual Report 2008*, October 2008, p.139

Table 12.7: Water Consumed by Department/Agency

	Total Metered Water Consumption			Metered Water Consumed per FTE		
	2008-09	2007-08	Variation	2008-09	2007-08	Variation
	(kilolitres)	(kilolitres)	(%)	(kilolitres/year)	(kilolitres/year)	(%)
Department of Education and Early Childhood Development ^{(a),(b)}	15,432	17,192	-10	13	33	-61
Department of Human Services ^(a)	66,142	54,268	22	10	8	25
Department of Innovation, Industry and Regional Development ^(b)	7,788	2,404	224	10	3	233
Department of Justice ^(c)	37,285	8,595	334	12	12	0
Department of Planning and Community Development	11,082	10,995	1	11	12	-8
Department of Premier and Cabinet ^{(b),(d)}	4,851	n/a	n/a	14	n/a	n/a
Department of Primary Industries	9,466	9,658	-2	12	16	-25
Department of Sustainability and Environment ^(c)	13,216	10,183	30	8	8	0
Department of Transport	4,916	4,041	22	4	4	0
Department of Treasury and Finance ^{(b),(d)}	12,469	42,204	-70	21	n/a	n/a
Total (departments)	182,647	159,540	14			
Environment Protection Authority	4,710	5,890	-20	9	11	-18
Sustainability Victoria	135	128	5	1	1	0
Total (all entities)	187,492	165,558	13			

Notes:

- (a) *Figures for 2007-08 revised in 2008-09.*
- (b) *In 2007-08, it was not possible to break down the water usage in the Treasury Reserve according to the proportions used by each of the departments located there (the Department of Education and Early Childhood Development, the Department of Innovation, Industry and Regional Development, the Department of Premier and Cabinet and the Department of Treasury and Finance); consequently, usage by all departments on the Treasury Reserve was reported within the Department of Treasury and Finance's figures; however, a sub-metering system has now been installed, allowing for the water usage to be apportioned to each of the departments, resulting in a significant drop in the Department of Treasury and Finance's figures and a significant increase in the figures for the other affected departments.*
- (c) *Figures for 2008-09 cover a larger proportion of sites than figures for 2007-08.*
- (d) *Figures have been amended from what was published in the Department's annual report based on advice to the Committee from the Department.*

Sources: *Department and agency 2007-08 and 2008-09 annual reports*

12.2.5 Transportation

Across the government entities, the amount of energy used in vehicular travel reduced by 5 per cent in 2008-09 compared to 2007-08 (see Table 12.8) and the amount of greenhouse gases emitted by the vehicle fleets was reduced by 8 per cent (see Table 12.10). This is partly the result of a reduced quantity of vehicular travel (2 per cent less in 2008-09) and also partly a result of improved efficiency of the vehicles being used (see Table 12.9).

A major contributing factor to the savings has been an increase in the number of hybrid electric vehicles, dual-fuel vehicles and four-cylinder vehicles. Most departments increased the proportion of low-emission vehicles in their fleets. The benefits of this can be seen in Table 12.9, which shows an average reduction of 3 per cent in the amount of greenhouse gasses per 1,000 kilometres travelled.

The guidance for FRD 24C advises listing the different mix of vehicle types as part of the context for reporting on the impact of transportation on the environment.²⁹⁸ A number of departments this year provided this information, although some did not. Given that the type of vehicle is a major contributor to reduced greenhouse gasses and that the Government has identified the move towards a more environmentally-friendly fleet as important in a number of its policies,²⁹⁹ the Committee believes that it would assist the tracking of progress towards these goals if all government entities reported on the mix of vehicle types within their fleets.

Recommendation 26: The Department of Treasury and Finance and the Department of Sustainability and Environment revise FRD 24C to make reporting on the number of hybrid-electric, LPG and four-cylinder cars within a government entity's fleet compulsory.

298 Environment Protection Authority, *Guidance for FRD24C Reporting*, p.19, <<http://www.epa.vic.gov.au/projects/docs/FRD24B-Guidance-Notes.pdf>>, accessed 9 December 2009

299 Victorian Government, *Whole-of-Government Standard Motor Vehicle Policy* (December 2009), pp.15, 35; Department of Sustainability and Environment, *Our Environment, Our Future: Sustainability Action Statement 2006*, p.83; Victorian Government, *The Victorian Transport Plan*, p.112

Table 12.8: Quantity of Transportation by Department/Agency

	Total Energy Consumption by Department Vehicle Fleet			Total Vehicle Travel Associated with Entity Operations		
	2008-09	2007-08	Variation	2008-09	2007-08	Variation
	(gigajoules)	(gigajoules)	(%)	(kilometres)	(kilometres)	(%)
Department of Education and Early Childhood Development ^(a)	25,643	30,326	-15	6,971,813	8,891,976	-22
Department of Human Services	146,831	145,542	1	39,745,462	38,095,918	4
Department of Innovation, Industry and Regional Development	4,146	4,397	-6	1,270,532	1,338,838	-5
Department of Justice ^(b)	31,756	39,764	-20	10,029,182	10,958,327	-8
Department of Planning and Community Development	7,580	8,794	-14	2,602,636	2,619,328	-1
Department of Premier and Cabinet	123	175	-30	38,845	56,059	-31
Department of Primary Industries	69,480	72,770	-5	19,522,783	20,979,156	-7
Department of Sustainability and Environment	18,384	17,179	7	5,799,107	5,317,696	9
Department of Transport	8,845	9,135	-3	2,574,291	2,438,663	6
Department of Treasury and Finance	256	264	-3	68,351	80,574	-15
Total (departments)	313,044	328,346	-5	88,623,002	93,839,373	-2
Environment Protection Authority	n/a ^(c)	n/a ^(c)	n/a ^(c)	1,397,400	1,551,229	-10
Sustainability Victoria	188	191	-2	125,074	111,117	13
Total (all entities)	313,232	328,537	-5	90,145,476	924,38881	-2

Notes:

(a) Figures for 2007-08 revised in 2008-09.

(b) Excludes judicial vehicles.

(c) Energy consumption reported in litres of fuel consumed.

Sources: Department and agency 2007-08 and 2008-09 annual reports

Table 12.9: Greenhouse Gas Emissions from the Vehicle Fleet per 1,000 km Travel by Department/Agency

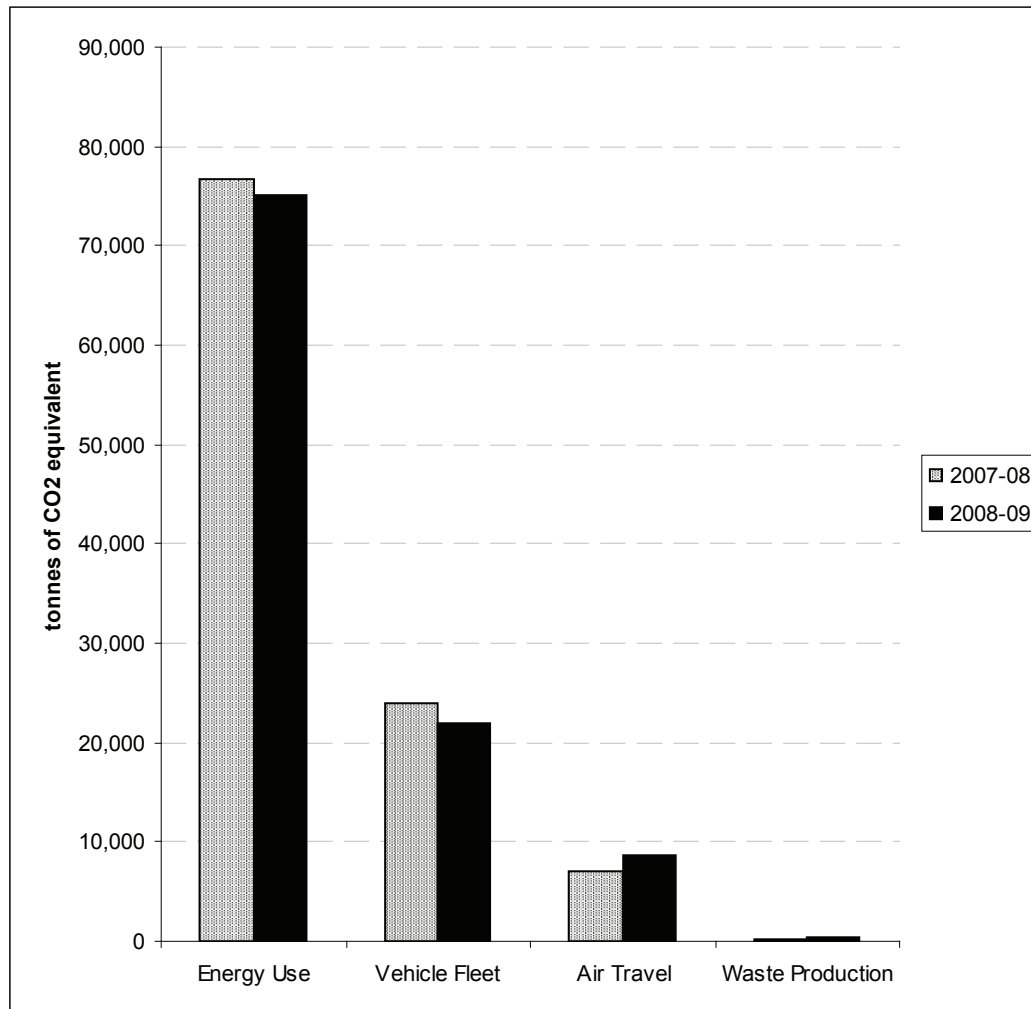
	2008-09	2007-08	Variation
	(t CO ₂ -e)	(t CO ₂ -e)	(%)
Department of Education and Early Childhood Development ^(a)	0.25	0.24	8
Department of Human Services	0.24	0.27	-12
Department of Innovation, Industry and Regional Development	0.23	0.23	0
Department of Justice ^(b)	0.22	0.27	-19
Department of Planning and Community Development	0.21	0.24	-13
Department of Premier and Cabinet	0.23	0.23	2
Department of Primary Industries	0.26	0.25	2
Department of Sustainability and Environment	0.23	0.23	-3
Department of Transport	0.25	0.27	-8
Department of Treasury and Finance	0.27	0.24	14
Environment Protection Authority ^(a)	0.26	0.25	4
Sustainability Victoria	0.10	0.12	-16
Average (all entities)	0.23	0.24	-3

*Notes:**(a) Figures for 2007-08 revised in 2008-09**(b) Excludes judicial vehicles**Sources: Department and agency 2007-08 and 2008-09 annual reports***12.2.6 Greenhouse Gas Emissions**

FRD 24C requires entities to report on the amount of greenhouse gas produced from four sources:

- energy use;
- the vehicle fleet;
- air travel; and
- waste production.

Based on these measures, the amount of greenhouse gas produced by government entities in 2008-09 was 1.6 per cent less than in 2007-08, dropping from an equivalent of 107,994 to 106,225 tonnes of CO₂. This was a result of reductions in the quantity of emissions from energy use and entities' vehicle fleets (see Table 12.10). Greenhouse gas emissions from air travel and waste production increased in 2008-09 (see Table 12.11) but were smaller in quantity than energy use and the vehicle fleets. Total greenhouse gas emissions by the 12 entities across each of the four sources can be seen in Figure 12.3.

Figure 12.3: Total Greenhouse Gas Emissions Across All 12 Entities

Sources: Department and agency 2007-08 and 2008-09 annual reports

Emissions from energy use were reduced by 2 per cent overall. As discussed in Section 12.2.1, above, government agencies have generally both reduced the amount of energy they consume and increased the proportion of their electricity coming from Green Power. Emissions from vehicle fleets decreased by 8 per cent overall. Contrariwise, there was a 25 per cent increase in emissions from air travel in 2008-09. Greenhouse gas emissions related to air travel are clearly related to the distance travelled. As 2007-08 was the first year in which reporting on air travel was required, it is unclear whether the differences in the amount of air travel between 2007-08 and 2008-09 are typical fluctuations or indicative of a trend.

Regarding greenhouse gas emissions associated with waste production, there was a wide variation in the figures reported by entities. Overall, the Committee notes that the amount of waste sent to landfill in 2008-09 decreased by 5 per cent, but that the amount of greenhouse gas associated with waste disposal to landfill increased by 17 per cent.

FRD 24C also allows for reporting on any other known amounts of greenhouse gas from an entity's activities. Four departments did this for some sources, while the Environment Protection Authority and Sustainability Victoria, aiming to achieve a carbon-neutral status in their activities, calculated their total emissions from all sources.

The Environment Protection Authority has provided a more detailed break-down of how it calculated its total greenhouse gas emissions for 2007-08.³⁰⁰ This includes the equivalent of 279 tonnes of CO₂ from fuel extraction, 195 tonnes from catering and 58 tonnes from petrol and oil for boats.

In terms of reporting offsets purchased, as required by FRD 24C, there seemed to be some confusion as to what should be included. Some entities reported the offsets purchased on their behalf by the Department of Sustainability and Environment as part of its program to purchase offsets equivalent to all departments' emissions from passenger vehicles. Others did not include this amount. Three entities reported purchasing additional offsets.

Recommendation 27: The Department of Treasury and Finance and the Department of Sustainability and Environment revise the guidance as to how greenhouse gas emissions and offsets should be calculated.

300 Environment Protection Authority, *EPA's Carbon Neutral Update 2007-08* (www.epa.gov.vic.au/climate-change/EPA-programs-initiatives.asp, accessed 25 January 2010).

Table 12.10: Greenhouse Gas Emissions from Energy Use and Vehicle Fleets by Department/Agency

	Total Greenhouse Gas Emissions – Energy Use			Total Greenhouse Gas Emissions – Vehicle Fleet		
	2008-09 (t CO2-e)	2007-08 (t CO2-e)	Variation (%)	2008-09 (t CO2-e)	2007-08 (t CO2-e)	Variation (%)
Department of Education and Early Childhood Development ^(a)	4,771	5,690	-16	1,770	2,097	-16
Department of Human Services ^(a)	18,813	19,790	-5	9,805	10,375	-5
Department of Innovation, Industry and Regional Development	2,174	2,326	-7	294	312	-6
Department of Justice ^(b)	6,688	7,394	-10	2,232	2,935	-24
Department of Planning and Community Development	1,951	1,780	10	551	641	-14
Department of Premier and Cabinet	707	1,282	-45	9	13	-31
Department of Primary Industries ^(a)	23,953	24,557	-2	5,045	5,303	-5
Department of Sustainability and Environment	9,339	9,284	1	1,305	1,228	6
Department of Transport	2,994	3,041	-2	631	652	-3
Department of Treasury and Finance	1,423	1,601	-11	19	19	0
Total (departments)	72,813	76,745	-5	21,661	23,575	-8
Environment Protection Authority	2,332	31	7,423	356	355	0
Sustainability Victoria	0	0	0	13	14	-7
Total (all entities)	75,145	76,776	-2	22,030	23,944	-8

Notes:

(a) Figures for 2007-08 revised in 2008-09

(b) Excludes judicial vehicles

Sources: Department and agency 2007-08 and 2008-09 annual reports

Table 12.11: Greenhouse Gas Emissions from Air Travel and Waste Production by Department/Agency

	Total Greenhouse Gas Emissions – Air Travel			Total Greenhouse Gas Emissions – Waste Production		
	2008-09	2007-08	Variation	2008-09	2007-08	Variation
	(t CO2-e)	(t CO2-e)	(%)	(t CO2-e)	(t CO2-e)	(%)
Department of Education and Early Childhood Development ^(a)	1,315	1,332	-1	41	33	24
Department of Human Services	519	712	-27	159	135	18
Department of Innovation, Industry and Regional Development	1,123	787	43	13	6	117
Department of Justice	600	537	12	40	34	18
Department of Planning and Community Development ^(a)	538	470	14	10	10	0
Department of Premier and Cabinet ^(b)	718	288	149	4	3	33
Department of Primary Industries	1,404	1,096	28	18	16	13
Department of Sustainability and Environment	1040	829	25	25	25	0
Department of Transport ^(c)	807	478	69	17	16	6
Department of Treasury and Finance ^(b)	390	208	88	7	7	0
Total (departments)	8,454	6,737	25	334	285	17
Environment Protection Authority	80	179	-55	5	5	0
Sustainability Victoria	177	68	160	0.246	0.429	-43
Total (all entities)	8,711	6,984	25	339	290	17

Notes:

(a) Figures for 2007-08 revised in 2008-09

(b) New more inclusive indicator used in 2008-09, making 2007-08 figures not directly comparable

(c) Figures have been amended from what was published in the Department's annual report based on advice to the Committee from the Department

Sources: Department and agency 2007-08 and 2008-09 annual reports

12.2.7 Procurement

All departments had incorporated environmental considerations into at least some of their procurement activities and all were able to list purchases where environmental considerations affected the choice. However, the reporting criteria do not provide any clear way to assess how much consideration is being given to environmental concerns by government entities. The FRD 24C requirements do not give any indications of what proportion of procurement activities are made with environmental consideration, how much weighting is given to environmental considerations or how well environmental considerations are integrated into other procurement policies. The Commissioner for Environmental Sustainability has also noted that *'The reported activity tends to be in policy and program development such as guidelines rather than progress against quantitative targets.'*³⁰¹

Recommendation 28: **The Department of Treasury and Finance and the Department of Sustainability and Environment revise the procurement section of FRD 24C so that the degree to which environmental considerations inform procurement decisions can be ascertained from departmental reporting.**

12.3. Future Targets

FRD 24C also requires entities to disclose at least one future target for each of the seven aspects considered. A number of the government entities did not fully comply with this requirement.

In addition, it was not clear in several cases from reading the 2008-09 annual report what the targets for that year had been, nor whether or not the entity had achieved those targets. In addition, in many cases where 2008-09 targets had not been achieved, no explanation was given as to why this was the case. The Commissioner for Environmental Sustainability has also noted that reporting progress against targets is not stipulated in FRD 24C.³⁰²

Recommendation 29: **All government entities covered by FRD 24C clearly state in each annual report:**

- (a) **targets from the previous year for each of the seven reporting aspects;**
- (b) **whether or not these targets were met; and**
- (c) **targets for the next financial year.**

12.4. Costs/Savings Associated with Environmental Initiatives

In its questionnaire part 2, the Committee asked departments to quantify the financial costs or savings associated with meeting the environmental initiatives discussed above. This is not a requirement of FRD 24C and responses from departments varied in their handling of this question.

301 Commissioner for Environmental Sustainability, *Strategic Audit of Victorian Government Agencies' Environmental Management Systems*, January 2009, p.43

302 Commissioner for Environmental Sustainability, *Strategic Audit: Environmental Performance Reporting Supplementary Report 2007-08*, January 2009, p.5

Some departments were able to provide comparisons between the cost of consuming energy, water, paper and fuel from one year to another, but noted that these costs were also influenced by changes to the number of staff, buildings and prices.

Understanding the costs or savings associated with environmental initiatives is important not just for accountability but also for planning and budgeting purposes. For example, the Government's *Our Environment, Our Future* policy requires departments to 'implement all cost-effective energy efficiency opportunities identified with a payback period of four years or less by 2010.'³⁰³ Capturing these costs may also help to identify which initiatives are more cost-effective and which are less, thereby assisting departments in their selection of which initiatives to pursue.

The Committee anticipates examining the costs and savings associated with environmental initiatives further.

12.5. Issues in the Reporting of Office-Based Environmental Data by Government Entities

12.5.1 Compliance

A number of issues in reporting have been mentioned above, especially the lack of differentiation between office and non-office data, the lack of future targets in some cases and limited information about procurement. There were also a number of other instances where required indicators were not reported against.

The PAEC has noted previously that some entities were not fully complying and the Government has accepted the necessity to reinforce the need for compliance. The Department of Sustainability and Environment was to undertake this through Environmental Management System network meetings.³⁰⁴ It would seem that this reinforcement needs to continue.

12.5.2 Data Coverage

The usefulness of the reported data was also diminished by limited data coverage in some cases. In terms of energy use, coverage of the data was 60 per cent of sites in one case. In terms of water use, the coverage of the data was as low as 16 per cent of sites for one entity. However, several entities are now providing data that cover all of their sites and significant improvements have been made over the last few years in terms of increasing the coverage by many entities.

Although there is a significant improvement in the extent of coverage from previous years, there is still further work to be done in that area. This is especially the case for water, where three departments' data cover less than half of their FTEs.³⁰⁵

Regarding waste audits, there is also a considerable variety of methods used by different entities to estimate total waste. In all cases, extrapolation from limited audits was required, but the basis for the extrapolation varied considerably, from an audit of one day's waste production to an audit of one week's production to one-week-a-month measurements throughout the year.

303 Department of Sustainability and Environment, *Our Environment, Our Future*, July 2006, p.84

304 Public Accounts and Estimates Committee, *Report on the 2007-08 Financial and Performance Outcomes*, p.284 (recommendation 29); *Government Responses to the Recommendations of the Public Accounts and Estimates Committee's 87th Report on the 2007-08 Financial and Performance Outcomes*, p.17

305 Department of Education and Early Childhood Development (*Annual Report 2008-09*, p.176), the Department of Primary Industries (*Financial Statements and Appendices*, p.67) and the Department of Sustainability and Environment (*Annual Report 2009*, p.12)

12.5.3 Trend Data

FRD 24C requires entities to disclose trends in performance for each aspect reported on, and the guidance specifies that trend data must be provided for a minimum of two years.³⁰⁶ The guidance also explains that ‘*For each aspect (energy, water, waste etc.) a performance trend for a chosen indicator must be reported.*’³⁰⁷

Entities have sought to comply with this in a variety of ways. Some have just provided 2008-09 data for most indicators, and only supplied trend data for one indicator per aspect. Others have provided comparative data for each indicator. In some cases data are only supplied for 2007-08 and 2008-09, in other cases data are supplied going back up to four years. In one case, trend data consisted only of comparing the 2008-09 figures with the baseline data.

It is also important for trends to extend back further than one year. The Commissioner for Environmental Sustainability has recommended five rolling years of data.³⁰⁸

Recommendation 30: The Department of Treasury and Finance and the Department of Sustainability and Environment revise FRD 24C to require entities to provide five rolling years of data for every indicator wherever possible.

12.5.4 Significant Variations

A final area where there is scope for improvement in environmental reporting concerns explanations for significant variations. The Committee in many areas of financial and performance reporting regards providing explanations of variance of more than ten per cent between years to be good practice. This practice should also be adopted for environmental reporting. The Committee will, in future years, seek explanations from entities for such variances.

306 Environment Protection Authority, *Guidance for FRD24C Reporting*, p.5, <<http://www.epa.vic.gov.au/projects/docs/FRD24B-Guidance-Notes.pdf>>, accessed 9 December 2009

307 *ibid.*

308 Commissioner for Environmental Sustainability, *Strategic Audit of Victorian Government Agencies' Environmental Management Systems*, January 2009, p.12

