

# **Annex C – Energy Performance League**

## **Tables**



## **Explanatory Notes**

This Annex presents intensity data for the key performance indicator in each end use category for all departments and agencies. The Defence Establishments, Defence Operations and Antarctic Bases categories are not included, because there is only one agency reporting in each, and a league table is pointless. The data for these categories is included in the section on Performance Outcomes.

Key performance indicators are in bold with agencies ordered in ascending order of intensity. Where there no single indicator of energy performance can be defined total energy consumption for each agency in the category is in bold. An additional table is provided for Office – Tenant Light and Power with agencies ordered alphabetically.

**Tables should be read in conjunction with agency comments in Annex B.**

## Office – Tenant Light and Power

This table presents the performance of each agency that reported in the Office – Tenant Light and Power category. The performance is arranged in ascending order of the key indicator MJ/person highlighted in bold and for which a performance target of 10,000 MJ/person applies.

Small agencies (less than 100 staff) have limited opportunities to average their performance over a range of properties and therefore their energy performance is likely to be quite volatile.

Read this table in conjunction with agency comments in Annex B.

Agency	Energy Use (GJ)	No. People	MJ/person	Area (m <sup>2</sup> )	MJ/m <sup>2</sup>
National Office for the Information Economy	744	166	<b>4,483</b>	3,358	222
Australian Quarantine & Inspection Service	7,075	1,427	<b>4,958</b>	15,777	448
National Occupational Health and Safety Commission	585	115	<b>5,075</b>	2,341	250
Refugee Review Tribunal	1,065	199	<b>5,352</b>	4,959	215
Christmas Island Administration	113	21	<b>5,376</b>	1,170	96
Department of the Environment and Heritage	6,192	1,096	<b>5,648</b>	18,506	335
National Library of Australia	2,959	510	<b>5,801</b>	12,370	239
Director of National Parks	302	48	<b>6,295</b>	764	396
Food Standards Australia New Zealand	696	110	<b>6,327</b>	2,152	323
Australian Agency for International Development	3,548	549	<b>6,462</b>	11,061	321
Australian Government Analytical Laboratories	130	20	<b>6,494</b>	345	376
Health Insurance Commission	31,336	4,733	<b>6,621</b>	78,706	398
Bureau of Meteorology	8,067	1,216	<b>6,634</b>	26,097	309
Department of Veterans' Affairs	18,780	2,777	<b>6,763</b>	61,413	306
Land & Water Australia	231	33	<b>7,006</b>	750	308

<b>Agency</b>	<b>Energy Use (GJ)</b>	<b>No. People</b>	<b>MJ/ person</b>	<b>Area (m<sup>2</sup>)</b>	<b>MJ/m<sup>2</sup></b>
Department of Industry Tourism and Resources	10,251	1,433	<b>7,154</b>	28,299	362
Commonwealth Ombudsman	604	84	<b>7,195</b>	2,195	275
Migration Review Tribunal	1,541	200	<b>7,703</b>	3,968	388
Department of Communications, Information Technology and the Arts	4,331	556	<b>7,789</b>	8,975	483
Australian National Audit Office	2,719	349	<b>7,791</b>	4,943	550
Professional Services Review	216	27	<b>8,015</b>	536	404
IP Australia	6,839	850	<b>8,049</b>	19,028	359
Rural Industries Research and Development Corporation	163	20	<b>8,169</b>	446	366
Australian Greenhouse Office	1,430	175	<b>8,170</b>	4,245	337
ARPANSA	314	38	<b>8,255</b>	893	351
Australian Institute of Health & Welfare	1,350	163	<b>8,281</b>	3,632	372
Department of Employment and Workplace Relations	19,617	2,320	<b>8,456</b>	48,505	404
Department of Family and Community Services	9,031	1,066	<b>8,469</b>	19,733	458
National Competition Council	171	20	<b>8,536</b>	559	305
Australian National Training Authority	1,199	140	<b>8,561</b>	3,146	381
Australian Institute of Family Studies	556	64	<b>8,682</b>	1,432	388
Repatriation Medical Authority	89	10	<b>8,711</b>	344	258
Australian Taxation Office	188,437	21,589	<b>8,728</b>	302,177	624
ComSuper	3,630	411	<b>8,831</b>	8,544	425
Superannuation Complaints Tribunal	286	32	<b>8,924</b>	758	377
Private Health Insurance Ombudsman	72	8	<b>9,034</b>	217	333

<b>Agency</b>	<b>Energy Use (GJ)</b>	<b>No. People</b>	<b>MJ/ person</b>	<b>Area (m<sup>2</sup>)</b>	<b>MJ/m<sup>2</sup></b>
Australian Securities and Investments Commission	11,834	1,284	<b>9,217</b>	32,420	365
National Museum of Australia	420	45	<b>9,331</b>	1,679	250
Screensound Australia	2,181	233	<b>9,360</b>	4,610	473
Comcare Australia	2,925	310	<b>9,436</b>	7,042	415
Department of the Treasury	8,281	875	<b>9,464</b>	18,588	446
Great Barrier Reef Marine Park Authority	1,610	169	<b>9,527</b>	3,090	521
Australian Competition and Consumer Commission	4,949	513	<b>9,648</b>	11,272	439
Department of Finance and Administration	8,913	921	<b>9,678</b>	23,513	379
Department of Transport and Regional Services	10,110	1,037	<b>9,749</b>	24,840	407
Commonwealth Scientific and Industrial Research Organisation	2,819	289	<b>9,756</b>	7,621	370
Australian Electoral Commission	3,809	390	<b>9,766</b>	11,932	319
Australian Prudential Regulation Authority	4,523	460	<b>9,832</b>	8,940	506
National Native Title Tribunal	1,898	193	<b>9,833</b>	4,471	424
Department of Immigration and Multicultural and Indigenous Affairs	33,389	3,390	<b>9,849</b>	71,499	467
National Capital Authority	731	74	<b>9,879</b>	1,789	409
Equal Opportunity for Women in the Workplace Agency	244	25	<b>9,962</b>	636	384
National Archives of Australia	3,416	340	<b>10,047</b>	7,130	479
Department of Health and Ageing	35,609	3,530	<b>10,088</b>	59,431	599
Australian Fisheries Management Authority	1,181	116	<b>10,195</b>	1,926	613
Australian Tourist Commission	1,187	115	<b>10,323</b>	2,565	463
Commonwealth Director of Public Prosecutions	4,942	467	<b>10,583</b>	16,811	294

<b>Agency</b>	<b>Energy Use (GJ)</b>	<b>No. People</b>	<b>MJ/ person</b>	<b>Area (m<sup>2</sup>)</b>	<b>MJ/m<sup>2</sup></b>
Australian Public Service Commission	1,903	179	<b>10,631</b>	4,796	397
Australian Bureau of Statistics	32,876	3,000	<b>10,959</b>	76,174	432
Australian Centre for International Agricultural Research	584	53	<b>11,022</b>	1,718	340
Jervis Bay Territory Administration	44	4	<b>11,050</b>	107	413
Australian Government Solicitor	7,975	719	<b>11,091</b>	18,306	436
Centrelink	282,823	25,441	<b>11,117</b>	550,673	514
Australian Institute of Criminology	630	55	<b>11,446</b>	1,729	364
Australian Customs Service	36,698	3,200	<b>11,468</b>	81,104	452
Aboriginal and Torres Strait Islander Commission	16,486	1,435	<b>11,488</b>	42,183	391
Australian Bureau of Criminal Intelligence	750	65	<b>11,535</b>	1,655	453
Productivity Commission	2,391	205	<b>11,665</b>	5,468	437
Office of the Federal Privacy Commissioner	478	41	<b>11,669</b>	1,015	471
Department of Agriculture, Fisheries and Forestry - Australia	15,598	1,318	<b>11,835</b>	33,385	467
Australian Trade Commission	5,463	456	<b>11,980</b>	9,537	573
Department of the Prime Minister and Cabinet	5,415	451	<b>12,007</b>	11,421	474
Department of Foreign Affairs and Trade	24,288	1,979	<b>12,273</b>	43,048	564
National Standards Commission	209	17	<b>12,295</b>	878	238
Department of Defence	210,798	16,802	<b>12,546</b>	335,174	629
Civil Aviation Safety Authority	9,228	733	<b>12,590</b>	17,918	515
Office of National Assessments	823	65	<b>12,654</b>	1,584	519
Australian Communications Authority	5,499	421	<b>13,051</b>	13,432	409
CRS Australia	17,568	1,345	<b>13,062</b>	39,247	448
Insolvency and Trustee Service, Australia	3,739	283	<b>13,211</b>	7,859	476

<b>Agency</b>	<b>Energy Use (GJ)</b>	<b>No. People</b>	<b>MJ/ person</b>	<b>Area (m<sup>2</sup>)</b>	<b>MJ/m<sup>2</sup></b>
Office of Parliamentary Counsel	640	48	<b>13,331</b>	1,953	328
Takeovers Panel	80	6	<b>13,392</b>	317	253
Australian Federal Police	40,872	3,040	<b>13,445</b>	94,011	435
Australian Sports Drug Agency	728	53	<b>13,773</b>	678	1,074
Department of Education, Science and Training	21,595	1,522	<b>14,189</b>	34,682	623
Human Rights & Equal Opportunity Commission	1,352	95	<b>14,236</b>	2,866	472
National Crime Authority	5,894	406	<b>14,518</b>	13,543	435
Australian Law Reform Commission	327	22	<b>14,848</b>	829	394
Australian Film Finance Corporation Ltd	463	31	<b>14,949</b>	1,150	403
Australian Hearing	8,772	581	<b>15,098</b>	23,138	379
Commonwealth Grants Commission	773	48	<b>16,106</b>	1,321	585
Office of Film and Literature Classification	806	50	<b>16,110</b>	2,600	310
Australian Transaction Reports and Analysis Centre	1,814	110	<b>16,491</b>	2,341	775
Australian Broadcasting Authority	2,385	141	<b>16,912</b>	4,591	519
Joint House Department	1,516	85	<b>17,834</b>	2,326	652
Family Court of Australia	1,611	89	<b>18,098</b>	1,761	915
Attorney-General's Department	9,718	526	<b>18,475</b>	18,510	525
Geoscience Australia	3,772	190	<b>19,852</b>	4,500	838
Attorney General's D Branch	11,640	453	<b>25,695</b>	22,565	516
Australian Protective Service	2,219	80	<b>27,741</b>	3,225	688
<b>Commonwealth aggregate</b>	<b>1,278,882</b>	<b>123,194</b>	<b>10,381</b>	<b>2,559,468</b>	<b>500</b>

## Office – Tenant Light and Power – listed alphabetically

This table presents the performance of each agency that reported in the Office – Tenant Light and Power category. The table is arranged in alphabetic order of agency name. The key indicator (MJ/person) is highlighted in bold and has a performance target of 10,000 MJ/person.

Small agencies (less than 100 staff) have limited opportunities to average their performance over a range of properties and therefore their energy performance is likely to be quite volatile.

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Superannuation Complaints Tribunal	286	32	<b>8,924</b>	758	377
Takeovers Panel	80	6	<b>13,392</b>	317	253
<b>Commonwealth aggregate</b>	<b>1,278,882</b>	<b>123,194</b>	<b>10,381</b>	<b>2,559,468</b>	<b>500</b>

## Office – Central Services

This table presents the performance of each agency that reported in the Office –Central Services category. The performance is arranged in ascending order of the key indicator MJ/m<sup>2</sup> highlighted in bold and for which a performance target of 500 MJ/m<sup>2</sup> applies.

Read this table in conjunction with agency comments in Annex B.

<b>Agency</b>	<b>Energy Use (GJ)</b>	<b>Area (m<sup>2</sup>)</b>	<b>MJ/m<sup>2</sup></b>
Australian Electoral Commission	1,711	11,932	<b>143</b>
ARPANSA	134	893	<b>151</b>
National Library of Australia	6,824	40,000	<b>171</b>
Australian Communications Authority	100	580	<b>173</b>
Health Insurance Commission	16,163	78,706	<b>205</b>
National Crime Authority	775	3,699	<b>209</b>
National Standards Commission	90	376	<b>238</b>
National Occupational Health and Safety Commission	220	880	<b>250</b>
Commonwealth Grants Commission	331	1,321	<b>251</b>
Australian Centre for International Agricultural Research	584	1,718	<b>340</b>
Australian Bureau of Statistics	2,454	7,184	<b>342</b>
Attorney General's D Branch	8,272	24,149	<b>343</b>
Great Barrier Reef Marine Park Authority	1,076	3,090	<b>348</b>
Australian Institute of Criminology	630	1,729	<b>364</b>
Christmas Island Administration	452	1,170	<b>386</b>
Australian Institute of Family Studies	565	1,432	<b>394</b>
Director of National Parks	266	664	<b>400</b>
Australian Taxation Office	55,685	136,754	<b>407</b>
Australian National Audit Office	2,925	6,297	<b>465</b>
Department of Foreign Affairs and Trade	19,515	41,091	<b>475</b>
Department of Defence	146,700	304,571	<b>482</b>
Australian Federal Police	45,732	92,651	<b>494</b>

<b>Agency</b>	<b>Energy Use (GJ)</b>	<b>Area (m<sup>2</sup>)</b>	<b>MJ/m<sup>2</sup></b>
Commonwealth Scientific and Industrial Research Organisation	4,012	7,621	<b>526</b>
Property Group	43,946	82,621	<b>532</b>
Screensound Australia	2,630	4,610	<b>570</b>
Bureau of Meteorology	6,288	9,949	<b>632</b>
CRS Australia	35	55	<b>639</b>
Attorney-General's Department	305	460	<b>663</b>
Centrelink	118,913	165,201	<b>720</b>
Civil Aviation Safety Authority	310	427	<b>726</b>
National Archives of Australia	6,535	8,975	<b>728</b>
Australian Customs Service	16,297	20,790	<b>784</b>
Geoscience Australia	3,681	4,500	<b>818</b>
<b>Commonwealth aggregate</b>	<b>514,154</b>	<b>1,066,096</b>	<b>482</b>

## Climate Controlled Stores

This table presents the performance of each agency that reported in the Climate Controlled Stores category. The performance is arranged in ascending order of the key indicator MJ/m<sup>2</sup> highlighted in bold.

Read this table in conjunction with agency comments in Annex B.

Agency	Energy Use (GJ)	Area (m <sup>2</sup> )	MJ/m <sup>2</sup>
National Gallery of Australia	1,744	5,067	<b>344</b>
Christmas Island Administration	345	780	<b>442</b>
National Archives of Australia	26,274	53,828	<b>488</b>
Australian Institute of Marine Science	318	630	<b>504</b>
National Library of Australia	3,830	4,580	<b>836</b>
National Museum of Australia	2,947	3,015	<b>977</b>
Australian War Memorial	13,950	13,743	<b>1,015</b>
National Maritime Museum	2,607	1,874	<b>1,391</b>
Screensound Australia	5,964	4,212	<b>1,416</b>
Director of National Parks	2,239	892	<b>2,510</b>
<b>Commonwealth aggregate</b>	<b>60,217</b>	<b>88,621</b>	<b>679</b>

## Laboratories

This table presents the performance of each agency that reported in the Laboratories category. The performance is arranged in ascending order of the key indicator MJ/m<sup>2</sup> highlighted in bold.

Read this table in conjunction with agency comments in Annex B.

<b>Agency</b>	<b>Energy Use (GJ)</b>	<b>Area (m<sup>2</sup>)</b>	<b>MJ/m<sup>2</sup></b>
Australian Institute of Marine Science	5,324	12,500	<b>426</b>
National Standards Commission	697	1,255	<b>555</b>
Department of Agriculture, Fisheries and Forestry - Australia	657	1,079	<b>609</b>
Commonwealth Scientific and Industrial Research Organisation	648,973	709,062	<b>915</b>
Department of Defence	183,539	163,059	<b>1,126</b>
Screensound Australia	2,618	2,075	<b>1,262</b>
ARPANSA	10,906	7,861	<b>1,387</b>
Therapeutic Goods Administration	33,902	19,782	<b>1,714</b>
Australian Government Analytical Laboratories	32,823	15,250	<b>2,152</b>
<b>Commonwealth aggregate</b>	<b>919,440</b>	<b>931,923</b>	<b>987</b>

## Other Buildings

This table presents the performance of each agency that reported in the Other Buildings category. The performance is arranged in ascending order of the key indicator MJ/m<sup>2</sup> highlighted in bold.

Read this table in conjunction with agency comments in Annex B.

Agency	Energy Use (GJ)	Area (m <sup>2</sup> )	MJ/m <sup>2</sup>
Department of Agriculture, Fisheries and Forestry - Australia	52	6,320	<b>8</b>
Department of Family and Community Services	10	739	<b>13</b>
Attorney-General's Department	11	495	<b>23</b>
Property Group	798	27,140	<b>29</b>
Department of Health and Ageing	23	760	<b>30</b>
Department of Transport and Regional Services	97	1,306	<b>74</b>
Department of the Environment and Heritage	133	1,445	<b>92</b>
Australian Bureau of Statistics	2,283	23,059	<b>99</b>
Great Barrier Reef Marine Park Authority	12	101	<b>114</b>
Screensound Australia	194	1,350	<b>143</b>
IP Australia	975	5,721	<b>170</b>
Department of Veterans' Affairs	948	3,662	<b>259</b>
Australian Customs Service	11,337	42,177	<b>269</b>
Department of Industry Tourism and Resources	490	1,751	<b>280</b>
Australian Quarantine & Inspection Service	10,431	33,284	<b>313</b>
Comcare Australia	222	685	<b>323</b>
Department of Communications, Information Technology and the Arts	434	1,333	<b>325</b>
National Archives of Australia	1,824	5,256	<b>347</b>
Australian Electoral Commission	10,520	28,513	<b>369</b>
Australian Antarctic Division	8,414	21,902	<b>384</b>

<b>Agency</b>	<b>Energy Use (GJ)</b>	<b>Area (m<sup>2</sup>)</b>	<b>MJ/m<sup>2</sup></b>
Australian Communications Authority	365	835	<b>437</b>
CRS Australia	1,077	2,123	<b>507</b>
Special Broadcasting Service	17,467	32,300	<b>541</b>
National Library of Australia	10,937	19,700	<b>555</b>
Christmas Island Administration	7,476	13,155	<b>568</b>
Geoscience Australia	28,680	42,657	<b>672</b>
Governor General's Residences	7,243	9,476	<b>764</b>
Australian Film, Television and Radio School	7,547	9,689	<b>779</b>
Department of the Prime Minister and Cabinet	1,376	1,590	<b>865</b>
National Museum of Australia	1,188	1,336	<b>889</b>
Royal Australian Mint	15,236	15,620	<b>975</b>
Bureau of Meteorology	17,129	16,948	<b>1,011</b>
Australian Broadcasting Corporation	200,996	197,900	<b>1,016</b>
Australian Securities and Investments Commission	9,592	8,942	<b>1,073</b>
Australian Nuclear Science & Technology Organisation	82,256	66,760	<b>1,232</b>
Australian War Memorial	7,869	5,497	<b>1,432</b>
Australian Hearing	11,727	8,104	<b>1,447</b>
Australian Institute of Marine Science	11,515	7,200	<b>1,599</b>
Australian Taxation Office	25,150	13,569	<b>1,853</b>
Director of National Parks	42,598	20,867	<b>2,041</b>
Commonwealth Scientific and Industrial Research Organisation	60,009	16,734	<b>3,586</b>
Department of Foreign Affairs and Trade	6,245	1,735	<b>3,599</b>
Department of Employment and Workplace Relations	3,774	759	<b>4,972</b>
Health Insurance Commission	31,613	5,000	<b>6,323</b>
Centrelink	15,363	1,712	<b>8,974</b>

<b>Agency</b>	<b>Energy Use (GJ)</b>	<b>Area (m<sup>2</sup>)</b>	<b>MJ/m<sup>2</sup></b>
<b>Commonwealth aggregate</b>	<b>673,633</b>	<b>727,207</b>	<b>926</b>

## Passenger Vehicles

This table presents the performance of each agency that reported in the Passenger Vehicles category. The performance is arranged in ascending order of the key indicator MJ/km highlighted in bold.

Read this table in conjunction with agency comments in Annex B.

Agency	Energy Use (GJ)	km	MJ/km	Approx Litres	Litres/100km
Australian Institute of Family Studies	73	31,680	<b>2.31</b>	2,137	6.75
Jervis Bay Territory Administration	72	30,713	<b>2.36</b>	2,116	6.89
Office of the Federal Privacy Commissioner	116	46,598	<b>2.50</b>	3,404	7.31
Human Rights & Equal Opportunity Commission	206	75,280	<b>2.74</b>	6,022	8.00
Australian Sports Drug Agency	973	339,278	<b>2.87</b>	28,442	8.38
National Occupational Health and Safety Commission	554	189,998	<b>2.92</b>	16,200	8.53
Australian Institute of Health & Welfare	327	108,876	<b>3.00</b>	9,548	8.77
Royal Australian Mint	158	52,350	<b>3.02</b>	4,621	8.83
ComSuper	346	111,970	<b>3.09</b>	10,122	9.04
Office of Parliamentary Counsel	739	238,270	<b>3.10</b>	21,621	9.07
National Office for the Information Economy	501	160,801	<b>3.12</b>	14,647	9.11
Commonwealth Grants Commission	295	93,732	<b>3.15</b>	8,630	9.21
Rural Industries Research and Development Corporation	237	74,284	<b>3.19</b>	6,928	9.33
Australian Centre for International Agricultural Research	345	107,949	<b>3.20</b>	10,089	9.35
Department of the Environment and Heritage	2,474	759,831	<b>3.26</b>	72,344	9.52

<b>Agency</b>	<b>Energy Use (GJ)</b>	<b>km</b>	<b>MJ/ km</b>	<b>Approx Litres</b>	<b>Litres/ 100km</b>
National Science and Technology Centre (Questacon)	220	67,493	<b>3.26</b>	6,443	9.55
Joint House Department	3,408	1,030,378	<b>3.31</b>	99,660	9.67
Commonwealth Director of Public Prosecutions	2,894	869,859	<b>3.33</b>	84,609	9.73
Christmas Island Administration	1,446	433,283	<b>3.34</b>	42,271	9.76
Australian Hearing	6,535	1,954,309	<b>3.34</b>	191,088	9.78
Great Barrier Reef Marine Park Authority	467	139,358	<b>3.35</b>	13,653	9.80
Private Health Insurance Ombudsman	135	39,764	<b>3.39</b>	3,947	9.93
Food Standards Australia New Zealand	358	105,398	<b>3.40</b>	10,471	9.94
Professional Services Review	199	58,526	<b>3.40</b>	5,823	9.95
Australian Greenhouse Office	423	124,063	<b>3.41</b>	12,377	9.98
Civil Aviation Safety Authority	2,557	744,952	<b>3.43</b>	74,756	10.04
Australian Bureau of Criminal Intelligence	455	131,000	<b>3.47</b>	13,297	10.15
Department of Communications, Information Technology and the Arts	2,094	601,782	<b>3.48</b>	61,241	10.18
Department of Defence	34,877	9,948,430	<b>3.51</b>	1,019,795	10.25
Comcare Australia	491	139,726	<b>3.51</b>	14,351	10.27
National Library of Australia	552	157,026	<b>3.51</b>	16,132	10.27
Australian National Audit Office	1,400	397,424	<b>3.52</b>	40,946	10.30
Health Insurance Commission	12,656	3,564,401	<b>3.55</b>	370,055	10.38
Department of Transport and Regional Services	3,425	960,309	<b>3.57</b>	100,159	10.43
National Museum of Australia	582	162,512	<b>3.58</b>	17,015	10.47
Department of Industry Tourism and Resources	7,039	1,961,635	<b>3.59</b>	205,812	10.49

<b>Agency</b>	<b>Energy Use (GJ)</b>	<b>km</b>	<b>MJ/km</b>	<b>Approx Litres</b>	<b>Litres/100km</b>
Attorney-General's Department	3,656	1,014,129	<b>3.61</b>	106,902	10.54
Commonwealth Ombudsman	690	190,527	<b>3.62</b>	20,184	10.59
Australian Public Service Commission	567	156,340	<b>3.63</b>	16,577	10.60
Australian War Memorial	841	231,821	<b>3.63</b>	24,605	10.61
Australian Institute of Marine Science	4,700	1,289,114	<b>3.65</b>	137,424	10.66
Centrelink	70,728	19,368,219	<b>3.65</b>	2,068,071	10.68
CRS Australia	15,123	4,130,166	<b>3.66</b>	442,180	10.71
Australian Institute of Criminology	354	96,539	<b>3.67</b>	10,358	10.73
Department of Veterans' Affairs	8,782	2,388,701	<b>3.68</b>	256,780	10.75
Administrative Appeals Tribunal	1,307	355,326	<b>3.68</b>	38,203	10.75
Insolvency and Trustee Service, Australia	819	222,505	<b>3.68</b>	23,948	10.76
Australian Transaction Reports and Analysis Centre	386	104,549	<b>3.69</b>	11,289	10.80
Department of Family and Community Services	5,274	1,428,201	<b>3.69</b>	154,219	10.80
Therapeutic Goods Administration	1,526	413,082	<b>3.70</b>	44,631	10.80
Australian Sports Commission	4,417	1,194,583	<b>3.70</b>	129,148	10.81
Department of the Treasury	2,382	643,599	<b>3.70</b>	69,650	10.82
Office of National Assessments	657	176,180	<b>3.73</b>	19,209	10.90
Australian Antarctic Division	730	195,529	<b>3.73</b>	21,336	10.91
Australian Government Solicitor	4,847	1,298,510	<b>3.73</b>	141,712	10.91
Department of Foreign Affairs and Trade	6,662	1,777,212	<b>3.75</b>	194,795	10.96
Department of Employment and Workplace Relations	11,862	3,159,457	<b>3.75</b>	346,843	10.98
Australian Nuclear Science & Technology Organisation	5,835	1,552,066	<b>3.76</b>	170,626	10.99

<b>Agency</b>	<b>Energy Use (GJ)</b>	<b>km</b>	<b>MJ/km</b>	<b>Approx Litres</b>	<b>Litres/100km</b>
Department of Education, Science and Training	8,943	2,365,438	<b>3.78</b>	261,482	11.05
Australian Law Reform Commission	101	26,670	<b>3.78</b>	2,951	11.06
Department of Health and Ageing	11,755	3,092,734	<b>3.80</b>	343,705	11.11
Australian Bureau of Statistics	7,755	2,038,710	<b>3.80</b>	226,745	11.12
Australian Securities and Investments Commission	3,541	930,689	<b>3.81</b>	103,549	11.13
Australian Taxation Office	94,522	24,754,800	<b>3.82</b>	2,763,792	11.16
Australian Agency for International Development	957	249,373	<b>3.84</b>	27,979	11.22
Department of Agriculture, Fisheries and Forestry - Australia	6,719	1,734,852	<b>3.87</b>	196,471	11.32
Australian Quarantine & Inspection Service	32,816	8,463,763	<b>3.88</b>	959,541	11.34
ARPANSA	654	168,673	<b>3.88</b>	19,125	11.34
Department of the Prime Minister and Cabinet	5,273	1,355,290	<b>3.89</b>	154,186	11.38
National Maritime Museum	570	145,249	<b>3.92</b>	16,664	11.47
Screensound Australia	413	105,141	<b>3.93</b>	12,075	11.48
Australian Electoral Commission	2,803	708,581	<b>3.96</b>	81,968	11.57
Productivity Commission	1,433	361,051	<b>3.97</b>	41,892	11.60
Attorney General's D Branch	8,721	2,181,300	<b>4.00</b>	255,000	11.69
Commonwealth Scientific and Industrial Research Organisation	35,829	8,951,985	<b>4.00</b>	1,047,619	11.70
Australian Trade Commission	2,044	509,187	<b>4.02</b>	59,778	11.74
Australian Competition and Consumer Commission	2,319	572,084	<b>4.05</b>	67,814	11.85
National Capital Authority	540	132,413	<b>4.08</b>	15,798	11.93
Family Court of Australia	5,659	1,373,260	<b>4.12</b>	165,470	12.05

<b>Agency</b>	<b>Energy Use (GJ)</b>	<b>km</b>	<b>MJ/ km</b>	<b>Approx Litres</b>	<b>Litres/ 100km</b>
Department of Finance and Administration	16,123	3,856,388	<b>4.18</b>	471,426	12.22
Supervising Scientist Division	1,671	398,000	<b>4.20</b>	48,855	12.28
Aboriginal and Torres Strait Islander Commission	24,096	5,695,000	<b>4.23</b>	704,576	12.37
Australian National Training Authority	700	165,000	<b>4.24</b>	20,465	12.40
Australian Industrial Registry	3,802	892,261	<b>4.26</b>	111,162	12.46
Refugee Review Tribunal	2,338	548,654	<b>4.26</b>	68,377	12.46
Australian Film, Television and Radio School	483	112,807	<b>4.28</b>	14,122	12.52
Australian Broadcasting Corporation	33,532	7,817,272	<b>4.29</b>	980,479	12.54
Australian Customs Service	21,904	5,103,237	<b>4.29</b>	640,475	12.55
Bureau of Meteorology	6,838	1,589,972	<b>4.30</b>	199,945	12.58
Special Broadcasting Service	4,517	1,049,477	<b>4.30</b>	132,090	12.59
Geoscience Australia	3,160	733,595	<b>4.31</b>	92,392	12.59
Office of Film and Literature Classification	379	87,836	<b>4.31</b>	11,073	12.61
Australian Federal Police	50,948	11,810,412	<b>4.31</b>	1,489,712	12.61
Australian Communications Authority	4,646	1,074,570	<b>4.32</b>	135,836	12.64
Department of Immigration and Multicultural and Indigenous Affairs	11,727	2,705,260	<b>4.33</b>	342,895	12.68
National Standards Commission	35	7,966	<b>4.34</b>	1,010	12.68
Australian Government Analytical Laboratories	1,178	268,773	<b>4.38</b>	34,430	12.81
National Gallery of Australia	597	135,837	<b>4.39</b>	17,445	12.84
Governor General's Residences	477	108,391	<b>4.40</b>	13,939	12.86
Australian Broadcasting Authority	338	75,457	<b>4.49</b>	9,896	13.11
Director of National Parks	12,005	2,611,058	<b>4.60</b>	351,024	13.44

<b>Agency</b>	<b>Energy Use (GJ)</b>	<b>km</b>	<b>MJ/ km</b>	<b>Approx Litres</b>	<b>Litres/ 100km</b>
National Crime Authority	7,546	1,640,515	<b>4.60</b>	220,646	13.45
IP Australia	704	149,930	<b>4.70</b>	20,584	13.73
National Archives of Australia	1,640	347,517	<b>4.72</b>	47,939	13.79
Migration Review Tribunal	455	95,725	<b>4.75</b>	13,302	13.90
National Native Title Tribunal	742	155,144	<b>4.78</b>	21,684	13.98
Equal Opportunity for Women in the Workplace Agency	103	20,801	<b>4.93</b>	2,998	14.41
High Court of Australia	579	116,495	<b>4.97</b>	16,937	14.54
Australian Fisheries Management Authority	447	89,707	<b>4.98</b>	13,070	14.57
Land & Water Australia	75	14,870	<b>5.06</b>	2,201	14.80
Australian Protective Service	6,584	1,233,447	<b>5.34</b>	192,528	15.61
Australian Film Finance Corporation Ltd	194	33,004	<b>5.88</b>	5,673	17.19
<b>Commonwealth aggregate</b>	<b>695,705</b>	<b>178,365,211</b>	<b>3.90</b>	<b>20,342,253</b>	<b>11.40</b>

## Other Transport

This table presents the performance of each agency that reported in the Other Transport category. The performance is arranged in ascending order of energy consumption measured in GJ. There is no appropriate normalised performance indicator for this category.

Read this table in conjunction with agency comments in Annex B.

<b>Agency</b>	<b>Energy Use (GJ)</b>
Comcare Australia	55
Royal Australian Mint	59
Special Broadcasting Service	74
Department of Transport and Regional Services	153
National Library of Australia	158
Australian Film, Television and Radio School	165
Governor General's Residences	280
Australian Sports Commission	1,807
Australian Nuclear Science & Technology Organisation	1,953
Director of National Parks	4,379
Australian Broadcasting Corporation	5,839
Commonwealth Scientific and Industrial Research Organisation	9,148
Australian Institute of Marine Science	14,065
Australian Customs Service	86,393
Department of Defence	184,626
Australian Antarctic Division	225,441
<b>Commonwealth aggregate</b>	<b>534,597</b>

## Law Courts

This table presents the performance of each agency that reported in the Law Courts category. The performance is arranged in ascending order of the key indicator MJ/m<sup>2</sup> highlighted in bold.

Read this table in conjunction with agency comments in Annex B.

<b>Agency</b>	<b>Energy Use (GJ)</b>	<b>Area (m<sup>2</sup>)</b>	<b>MJ/m<sup>2</sup></b>
Australian Industrial Registry	5,674	23,443	<b>242</b>
Administrative Appeals Tribunal	2,881	10,367	<b>278</b>
Family Court of Australia	7,206	17,967	<b>401</b>
Commonwealth Law Courts	69,737	100,418	<b>694</b>
Law Courts Limited	14,359	15,595	<b>921</b>
<b>Commonwealth aggregate</b>	<b>99,857</b>	<b>167,790</b>	<b>595</b>

## Public Buildings

This table presents the performance of each agency that reported in the Public Buildings category. The performance is arranged in ascending order of the key indicator MJ/m<sup>2</sup> highlighted in bold.

Read this table in conjunction with agency comments in Annex B.

Agency	Energy Use (GJ)	Area (m <sup>2</sup> )	MJ/m <sup>2</sup>
Christmas Island Administration	32	140	<b>229</b>
Director of National Parks	1,158	1,930	<b>600</b>
National Library of Australia	3,986	6,490	<b>614</b>
High Court of Australia	11,380	18,500	<b>615</b>
Supervising Scientist Division	3,122	3,800	<b>822</b>
National Maritime Museum	14,771	17,913	<b>825</b>
Department of Communications, Information Technology and the Arts	21,838	25,000	<b>874</b>
Joint House Department	152,588	152,000	<b>1,004</b>
National Science and Technology Centre (Questacon)	10,614	10,500	<b>1,011</b>
Screensound Australia	2,173	1,722	<b>1,262</b>
National Capital Authority	2,292	1,549	<b>1,479</b>
Australian War Memorial	29,406	19,451	<b>1,512</b>
Great Barrier Reef Marine Park Authority	7,138	4,645	<b>1,537</b>
National Gallery of Australia	72,647	35,367	<b>2,054</b>
National Museum of Australia	37,987	16,459	<b>2,308</b>
<b>Commonwealth aggregate</b>	<b>371,131</b>	<b>315,466</b>	<b>1,176</b>

## Other Uses

This table presents the performance of each agency that reported in the Other Uses category. The performance is arranged in ascending order of energy consumption measured in GJ. There is no appropriate normalised performance indicator for this category.

Read this table in conjunction with agency comments in Annex B.

<b>Agency</b>	<b>Energy Use (GJ)</b>
Supervising Scientist Division	77
Christmas Island Administration	163
Property Group	167
Joint House Department	469
Jervis Bay Territory Administration	772
Australian War Memorial	927
National Maritime Museum	1,601
National Capital Authority	15,146
Australian Sports Commission	56,934
<b>Commonwealth aggregate</b>	<b>76,256</b>

**Annex D - Measures for Improving Energy  
Efficiency in Commonwealth Operations**





# Measures for Improving Energy Efficiency in Commonwealth Operations



Energy and Environment Division  
March 2000

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ISBN 0 642 72093 2

ISR 2000/012

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First Edition            1998

Second Edition        1999

Third Edition           2000

Printed on Australian made recycled paper.

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In 1997-98, total energy consumption for Commonwealth operations, was approximately 25 petajoules, roughly equivalent to 2.9 million tonnes of CO<sub>2</sub> emissions. Energy consumption, excluding defence operations, was approximately 9.4 petajoules, roughly equivalent to approximately 1.7 million tonnes of CO<sub>2</sub>. By comparison, total electricity and gas consumption for 1997-98 for the ACT amounted to approximately 14.5 petajoules.

## **Policy Objective**

To improve energy efficiency, and consequently reduce the environmental impact of Government operations, and by so doing, lead the community by example.

## **Contact Information**

### ***Policy and Reporting***

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### ***National Greenhouse Strategy (NGS)***

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## **Summary of the Policy**

- ❖ Energy intensity targets to be met by 2002-2003.
- ❖ Departmental secretaries and agency heads to report to and be accountable to their Ministers for their performance in improving energy efficiency.
- ❖ All departments and agencies to report annual energy consumption and intensity to the Department of Industry, Science and Resources.
- ❖ A whole-of-government energy performance report to be prepared and published annually by the Department of Industry, Science and Resources.
- ❖ Energy performance contracting accepted and encouraged as a vehicle for achieving energy savings.
- ❖ Energy and Environmental Services Team available for specialist energy advice.
- ❖ Minimum energy performance standards apply to new buildings (owned and leased).
- ❖ New building leases to exclude energy from being recovered as an outgoing.
- ❖ All building space to be energy audited regularly and all cost effective recommendations implemented.
- ❖ All new office equipment to be US EPA Energy Star compliant, where available.
- ❖ All new appliances to have 4-star or better energy rating under the Appliance Energy Efficiency Rating Label Scheme.
- ❖ Opportunities to use renewable energy identified, and adopted where cost effective.
- ❖ All new houses (owned or leased) to have a NatHERS rating of 4-star or better, where available.
- ❖ Assess the potential to upgrade all existing houses to 3-star or better, where NatHERS is applicable.
- ❖ Development of fuel consumption targets for the Commonwealth vehicle fleet to apply from 2003.
- ❖ Periodic reviews of the program and an independent review after two years, with results and recommendations to be brought to Cabinet.

## 1. Introduction

In his 20 November 1997 announcement *Safeguarding the Future: Australia's Response to Climate Change*, the Prime Minister set out a number of policies to reduce greenhouse gas emissions. Included in that package was a commitment to lead by example in reducing emissions from the Commonwealth Government's own operations through adopting measures to improve energy efficiency. The requirement and measures are described in this document.

All Commonwealth organisations covered by the energy efficiency policy must meet their annual reporting requirements and achieve performance targets. The reporting process is transparent with both the performance of Commonwealth organisations against the energy efficiency targets and the accuracy and timeliness of reporting subject to public scrutiny.

A number of required efficiency measures considered essential to any energy management program are identified in the policy. These measures must be adopted within the context of accountability of the chief executive officer and the applicability to the agency. Not all requirements are relevant to all agencies and in some cases, there may be practical limitations to their implementation requiring a balance between cost effectiveness and energy savings.

The policy is largely outcomes based; the main goal being to meet required performance levels by 2002-03. Meeting the targets by the due date will be easiest for departments and agencies that have taken a structured approach to energy management which allows them to plan ahead and have adequate time to achieve the targets.

In addition to summarising the policy requirements and administrative structure, this document also identifies the resources and tools that are available to assist organisations improve their energy efficiency. The document has been revised to take account of changes in Commonwealth administrative arrangements and to cover omissions in the April 1998 issue.

### **1.1 National Greenhouse Strategy**

The National Greenhouse Strategy is the primary mechanism through which Australia's international commitments to address the threat of climate change will be met. The Strategy has been developed by the Commonwealth and all State and Territory Governments. The Australian Local Government Association and industry and community consultations have also made important contributions.

The Strategy maintains a comprehensive approach to tackling greenhouse issues. The range of action it encompasses reflects the wide ranging causes of the enhanced greenhouse effect and the pervasive nature of its potential impacts on all aspects of Australian life and the economy.

The Strategy details both existing actions and additional measures, and includes the package of measures announced by the Prime Minister in November 1997. The measures to improve energy efficiency in Commonwealth Government operations broadly address the NGS requirements, in particular, NGS 3.1, although there is room in areas for adjustments for the sake of consistency. In the context of Government operations, where energy use contributes more than 95% of greenhouse gas emissions, energy-related emissions are a measurable substitute for greenhouse gas emissions.

NGS 3.1 requires Governments to pursue their responsibilities for greenhouse gas reduction in their own operations by independent action, although there is also strong encouragement under the NGS for jurisdictions to share information and expertise. This is occurring at present through the work of the Government Energy Management Group on which all jurisdictions are represented.

(For more information see *The National Greenhouse Strategy 1998*, or contact the Australian Greenhouse Office (details on page vi).

## **2. Scope of the Policy**

**This policy applies to all Commonwealth departments and to Commonwealth agencies and bodies whose operations are substantially budget-dependent.**

The policy applies to all departments and agencies covered by the Financial Management and Accountability Act and all agencies and statutory bodies covered by the Commonwealth Authorities and Companies Act and whose operations are substantially budget-dependent. Other organisations, not specifically covered by the policy are encouraged to adopt the measures contained in this document as there are substantial cost savings to be achieved through improved energy efficiency.

Budget dependency is defined as deriving more than half of departmental/agency costs either directly or indirectly from Commonwealth funds.

Example - Agency B derives most of its funding by selling its services to other budget dependent agencies. Agency B is therefore indirectly budget dependent.

### **2.1 Accountability**

The Government expects Commonwealth departments and agencies to lead by example.

Secretaries of departments and heads of budget dependent agencies (CEOs) are accountable to their Ministers for their performance in improving energy efficiency in their own operations and for meeting the performance targets stated in this document.

Good management practice, which results in energy budget savings, reduces the need for savings in operational budgets, allowing your organisation to concentrate on core business.

### **3. Mandatory Reporting and Energy Intensity Targets**

#### **3.1 Energy Consumption Reporting**

##### **3.1.1 Aim**

The reporting process aims to ensure that departments and agencies are aware of the level of energy consumption of their organisations and the relative efficiency of their energy consumption.

The Department of Industry, Science and Resources (ISR) will aggregate individual reports into an annual whole-of government energy report to produce a simple measure of the total energy consumption of the Commonwealth. The report is a means to monitor the efficiency of energy use and the rate of progress towards improving that efficiency, and provides feedback on the effectiveness of energy management programs.

##### **3.1.2 Reporting to Ministers**

Secretaries of departments and heads of budget-dependent agencies will report the energy performance of their organisations to their Minister annually. At a minimum, the report will include total energy use for the previous financial year and the performance of the organisation in improving energy efficiency towards the energy intensity targets described in this document.

##### **3.1.3 Whole-of-Government Energy Report**

Each agency covered by the policy will forward summary reports of energy consumption, including key indicators, to ISR. Electronic reporting software, provided by ISR, must be used to facilitate this process.

ISR will aggregate, summarise and analyse the data and produce a whole-of-Government energy consumption report to be tabled in Parliament before the end of December of each year. The report will include estimates of unreported central services energy consumption and total greenhouse gas emissions.

Energy use has to be monitored before it can be managed. Experience in the UK of detailed monitoring and targeting is of savings of between 5% and 25%, with little or no additional capital expenditure. (UK Department of the Environment, Energy Efficiency Office, “Good Practice Guide 31”).

### **3.1.4 Deadline**

**Both the report to the Minister and the summary report to ISR must be submitted by the close of business on the last working day of October each year.**

Reports to ISR that are not submitted on time will be excluded from the whole-of-Government energy report and the organisations concerned clearly identified in the report.

### **3.1.5 What must be Reported**

All energy used by departments and budget dependent agencies over which they have direct control, must be reported. Reports will be on a financial year basis, by fuel type and by end-use category (see Table 1). Energy consumption by fuel type is required to estimate greenhouse gas emissions. Normalisation factors, such as building floor area, number of people, and kilometres travelled, must also be reported where appropriate. Use net lettable area for all office space.

Departments and agencies should also give reasons for any major changes in energy use.

### **3.1.6 Energy Intensity**

Energy intensity will be calculated by the reporting software using the relevant normalisation factors and will be reported in rates such as MJ/m<sup>2</sup>/annum or MJ/km/annum. Energy intensity figures provide a measure of energy efficiency, and are relatively insensitive to changes in the size, or activity levels, of an organisation. There may be more than one indicator of energy intensity for a given end-use category; for example, the energy intensity of buildings might be expressed in terms of MJ/m<sup>2</sup>, or MJ/person. There is usually one indicator for each end-use category which best represents its energy efficiency. These key indicators are given in Table 1.

### **3.1.7 Assumptions**

The reporting requirement recognises that detailed information is not always available for all end-use categories. For example, tenants in office space which is leased in privately-owned buildings are unlikely to get access to information regarding the energy consumption of the building's central services (air conditioning, lifts etc.) and are therefore not required to report this consumption. In some cases, even the tenant light and power is not measured.

In Commonwealth-owned office buildings, the total energy use of the building is always available, but it is unusual for central services energy use to be metered separately from tenant light and power energy use.

Tenant light and power energy consumption must always be reported. If this information is not directly available, energy consumption for the space can be estimated per unit area as described in Table 1. Where only the total building consumption is known, estimation formulae are also given to apportion energy consumption from central services and tenant light and power to individual tenants.

The estimated consumption rate is set slightly above the target figures to provide an incentive to install meters to measure actual energy use. Lack of adequate metering presents a significant disincentive to the implementation of energy saving measures and prevents effective energy management.

Central services energy use will, wherever possible, be reported by the organisation that is directly responsible for paying the bill. Central services energy use, for which private sector owners are responsible and which is factored into rent, will not normally be available. However, where a tenant is the sole occupant of a building, and the lease agreement requires the tenant to pay the total energy bill for the building, tenant organisations will report the central services energy use. In Commonwealth-owned buildings, the managing organisation will report the central services energy use.

### **3.1.8 Changes in Levels of Activity within Organisations**

If annual normalisation factors, such as floor area and staff numbers vary throughout the reporting year, they will be averaged to equivalent full year factors. This is achieved by summing the normalisation factors that prevail at the end of each month and then dividing by 12. This calculation applies only to significant changes in normalisation factors and department/agencies should use discretion in deciding when it is to be applied.

**Example:** An occupancy of 500 people for 9 months and 1000 people for 3 months would have an equivalent full year average of  $500 \times 9 / 12 + 1000 \times 3 / 12$  equals 625 people. Or, as another example  $500\text{m}^2$  occupied for 3 months is equivalent to  $500 \times 3 / 12$  equals  $125\text{m}^2$  for a full year.

### **3.1.9 Changes in Administrative Responsibilities**

Departments and agencies can be created or abolished, or may gain and lose functions or operational units as a result of administrative changes. When reporting energy use, departments and agencies must report on their structure as it exists on 30 June each year as if it had existed for the whole year. The receiving organisation should liaise with the organisation that is losing the unit to obtain energy data for the entire year. In some cases energy consumption may be impossible to obtain and will need to be estimated by the receiving organisation.

Under this method, if an operational unit is abolished or sold part way through the year, its energy consumption is unreported; a similar methodology is applied to buildings that are sold during the reporting year. This anomaly is accepted in the interests of reporting simplicity.

**Example:** Department A may lose an operational unit part way through a financial year but gain two other units from departments B and C. Department A makes no report on the energy use of the unit that it lost but reports on the full year's energy use of the two operational units that it gained. Likewise Departments B and C make no report on the units that they lost.

## **3.2 Energy Intensity Targets**

**Energy Intensity targets are applied to key energy intensity indicators as listed in Table 1 and explained below.**

### **3.2.1 Rationale**

The current building energy targets are intended to reflect the previous targets of reducing energy use in Commonwealth occupied buildings by 15% within five years and 25% within ten years, using 1992-93 as the base year. The current targets are given in Table 1, have been converted from reductions in absolute energy to reductions in energy intensity, to minimise the impact of changes in the size and activity levels of organisations. Energy intensity targets are more equitable and recognise that some organisations may have taken steps to achieve significant energy reductions. Targets are set only in end-use categories where there is sufficient energy use information and where a target makes sense.

Targets may be set in remaining end-use categories subject to the findings of the two-year review of the program in 2000. This will be done in consultation with departments and agencies reporting within the category

and will take into account current performance, available benchmarks and the time remaining for implementation. It is not expected that targets will be set in the *Other Transport, Defence Operational Fuels* or *Other Uses* categories.

*Defence establishments* have a target based on aggregate energy consumption, recognising that defence bases, which may contain many buildings of varying types, typically have only a single meter at the front gate. It is expected that metering advances will progressively enable the Department of Defence to establish relevant energy intensity targets for a range of activities in many of its establishments. Because the target for *Defence Establishments* is not set in intensity terms, the effect of outsourcing functions, or base closures, on energy consumption needs to be carefully monitored and the targets adjusted if these actions result in significant changes to energy consumption levels.

Table 1 - Description of End-Use Categories and Energy Intensity Targets

End-Use Category	Description	Key Indicator	Target
Office- Tenant Light and Power	ENERGY USED FOR TENANT OPERATIONS IN BUILDINGS WHOSE primary function is office space. It includes tenancy lighting, office equipment, supplementary air conditioners, boiling water units etc. The key indicator recognises that overall energy efficiency is a combination of the efficient use of the space as well as the energy efficiency of the space. If not directly measured, energy consumption is approximately equal to 70% of electricity pro rata with the proportion of total floor area, or 500 MJ/m <sup>2</sup> if no other data is available.	MJ/person/annum	10,000 MJ/person/annum
Office – Central Service	Energy used in the provision of services in office buildings common to all tenants. It includes building air conditioning, lifts, security and lobby lights, domestic hot water etc. If not directly measured, energy consumption is approximately equal to 30% of electricity and 100% of gas.	MJ/m <sup>2</sup> /annum	500 MJ/m <sup>2</sup> /annum
Public Buildings	Energy consumed in buildings visited by the public in significant numbers. Typical buildings in this category are public libraries, museums or art galleries.	MJ/m <sup>2</sup> /annum	None set
Law Courts	This category includes all types of court facilities, whether a relatively small space in a larger building, or housed in a specialised building.	MJ/m <sup>2</sup> /annum	None set
Climate Controlled Stores	Relates to buildings that are required to maintain 24-hour climate controlled conditions for the protection of the goods they house. These include archives, safety equipment stores, art stores etc.	MJ/m <sup>2</sup> /annum	None set
Laboratories	This category covers all energy use in buildings which, as their primary function, are used as laboratories	MJ/m <sup>2</sup> /annum	None set

<b>End-Use Category</b>	<b>Description</b>	<b>Key Indicator</b>	<b>Target</b>
Other Buildings	This category is for facility types that do not fit the other building categories, e.g. simple storage shed, radio transmitter buildings. The actual building type must be defined in the report. Additional Other Buildings categories may be added, if required, by contacting ISR.	MJ/m <sup>2</sup> /annum	None set
Passenger Vehicles	Energy consumption of passenger cars, light commercial vehicles and mini buses and includes the energy consumption of Senior Executive Service vehicles.	MJ/km/annum	None set
Other Transport	Energy consumption of all forms of transport other than passenger vehicles, including transport systems engaged exclusively for operational purposes, but excluding energy used for general public transport such as airlines, trains and buses.	No key indicator as too diverse a category.	None set
Defence Establishments	Covers all buildings and facilities that are within established Defence bases. It does not include office buildings and stores outside bases that must be reported under the appropriate category.	GJ	2.5 million GJ
Defence Operational Fuels	This category covers the fuel used in Defence Operations for aircraft, tanks, ships, vehicles etc. The energy use is reported, but no targets are set for its use.	No key indicator as too diverse a category. No Key	None set
Other Uses	Energy consumption of facilities that do not fit any of the previously defined categories.	indicator as too diverse a category.	None set

### **3.2.2 Application of Targets**

The targets are **not** intended to apply to individual facilities, but to the average consumption of that type of facility throughout an organisation. Typically, efficient facilities will individually perform well under the targets, but it is expected that there will be a wide variation in general facility performance. Individual facility performance will only be measured against recognised performance standards (refer to 4.1).

### **3.2.3 Timing**

The date for meeting the current targets is the end of the 2002-03 financial year. Subject to the two-year review of the program in 2000, it is expected that all organisations will be performing at, or below, the target energy intensities in the 2003-04 financial year.

### **3.2.4 Additional Targets**

The Government intends to set challenging, but realistic, fuel consumption targets for the Commonwealth vehicle fleet to apply from 2003 and to investigate and develop further options to strengthen action on fuel consumption in the fleet. These initiatives will be developed by the Australian Greenhouse Office, in consultation with ISR.

### **3.2.5 Energy End-Use Categories**

The number of energy end-use categories has been limited in the interests of simplicity and minimising reporting costs. It is recognised that reporting against this limited range of categories will involve a degree of compromise, however, the size and diversity of most organisations will ensure that anomalies average out and that the performance indicators and associated targets remain statistically valid.

Assistance will be available from the ISR energy reporting help desk if any further clarification is required (see contact details on page vi).

## **4. Required Efficiency Measures**

The reporting requirement is mandatory for each department and agency covered by the policy. There are a number of additional measures which are mandatory if applicable to an organisation. These are listed below.

### **4.1 Minimum Building Energy Performance Standard**

All new and substantially refurbished buildings, whether Commonwealth-owned or where the Commonwealth is the majority tenant, must meet a minimum energy performance standard. The interim standard is the 1994 BOMA Energy Guidelines (with a 20% margin of leniency for substantially refurbished buildings). Because these standards are limited to office buildings in capital cities, they will be replaced shortly by standards being developed by the EEST.

Funding for building construction and refurbishing will be conditional on certification, by suitably qualified persons, that the building will meet required energy standards. This will be arranged through the EEST.

### **4.2 Lease Agreements**

New lease agreements for buildings should not include any provision permitting the recovery from the tenant of the cost of energy used by building central services during normal working hours. This will ensure that building owners have an incentive to improve the energy efficiency of building central services. Designated special purpose buildings may be excluded from this requirement if a case can be demonstrated.

Energy efficiency planning is not simply minimising the unit cost of gas, fuel or electricity supplied to your organisation. This is only part of the equation. Energy efficiency planning is about managing energy consumption more efficiently. The energy consumption component of an energy bill offers the greatest opportunity to reduce energy costs. It also helps reduce the damaging environmental effects of wasteful energy use.

### **4.3 Energy Audits**

All building space must be energy audited within one year of occupancy and thereafter at intervals not exceeding five years. The audit quality must at least comply with the requirements of the relevant Australian Standard, or alternately, the format of the audit may be put forward as a proposal from an energy performance contractor, a post occupancy evaluation or similar.

All cost-effective energy saving measures identified in the audits must be implemented. Measures shall be considered cost effective if they have an internal rate of return of 15% or better when calculated over the estimated remaining period of occupancy, the life of the equipment involved, or seven years, whichever is the lesser.

Audits are not required if they fall due less than one year before the expected end of occupancy

#### **4.4 Housing**

##### **4.4.1 Planned New/Leased Housing Acquisitions**

All new Commonwealth owned or leased houses shall have a Nationwide House Energy Rating Scheme (NatHERS) 4-star or better, in all regions as it becomes available.

NatHERS is a scheme which allows the energy efficiency of all new and existing housing to be rated on a consistent basis.

##### **4.4.2 Evaluation of Existing Houses**

The EEST will evaluate existing owned and leased Commonwealth housing commenced prior to 1999 to assess the potential to upgrade cost effectively (with costs recovered through rent where necessary) to NatHERS 3-star or better where available. The study will assess the potential to upgrade, cost effectively (with costs recovered through rent) to at least three star by 2002.

#### **4.5 Appliances and Office Equipment**

##### **4.5.1 Appliances**

Departments and agencies are required to purchase appliances and equipment labelled as 4-star or better, under the appliance energy efficiency rating label, where available and fit for the purpose.

Industry will be consulted with a view to lifting the requirement from a minimum 4-star to the 5-star level in 2000.

Some electrical equipment has features such as 'standby' or 'energy saving' mode. However these may not save much energy and as a general rule 'switch off' when not in use. In fact, computers and monitors have a finite life and may fail prematurely if operating time is increased.

#### **4.5.2 Office Equipment**

Departments and agencies are required to purchase only office equipment that complies with the US Environment Protection Agency “Energy Star” standard, where it is available and fit for purpose. A key feature of Energy Star compliance is that equipment has power management features allowing it to meet a minimum energy performance standard. These power management features should be enabled at the time of supply.

It is a fallacy that turning fluorescent lights on and off uses more energy than leaving the lights on. Generally, if there is no operational or safety requirement for the lights to be left on, switch them off if you are going to be away from your area for more than 10 minutes.

#### **4.6 Renewables**

While many energy suppliers are offering “green energy” options for their customers these are rarely, if at all, cost effective in grid connected applications. However, passive solar technologies, involving building design and orientation are normally cost effective in most locations. Active solar technologies, such as solar hot water and photovoltaic arrays may be cost effective in certain sites, particularly in remote areas where conventional energy sources may be relatively expensive. Departments and agencies must identify opportunities to apply these technologies and seek to adopt them wherever it can be demonstrated they are cost effective.

## **5 Energy Management Resources**

### **5.1 Energy and Environmental Services Team (EEST)**

The Energy and Environmental Services Team (EEST) is located in the Australian Greenhouse Office (contact details on page vi). It is available to advise and assist departments/agencies as follows:

- ❖ provide an energy procurement advisory service and represent Commonwealth interests in the deregulated energy market;
- ❖ investigate opportunities for collaborative government energy procurement;
- ❖ assist departments/agencies in the assessment of financial and contractual risks in the evaluation of tenders for energy supply and develop risk management and minimisation strategies;
- ❖ develop best practice energy performance contract documentation and methodology;
- ❖ establish pre-qualified panels of energy service providers;
- ❖ assist in the evaluation of energy performance contract tenders;
- ❖ identify suitable Commonwealth-owned premises for pilot projects in energy performance contracting and monitor contract performance;
- ❖ review and update energy guidelines for Commonwealth-owned and leased buildings;
- ❖ report on energy aspects of proposed major construction projects;
- ❖ develop Commonwealth resource materials, management tools and training packages;
- ❖ organise forums, training events and workshops;
- ❖ assist agencies in the development and implementation of energy management action plans;
- ❖ conduct energy efficiency evaluation of existing Commonwealth-owned and leased housing to assess potential to upgrade cost-effectively to NatHERS 3 star or better;
- ❖ evaluate specifications for planned new/leased housing acquisitions to ensure that they meet 4 star;
- ❖ develop best practice methodologies for evaluating building performance, addressing energy performance targets in the construction/public works function.

## **5.2 Energy Performance Contracting**

Energy performance contracting is a form of contracting for energy efficiency services, or more general facilities improvement. The contractor guarantees a level of energy consumption savings, upgrades the facility using plant at its own expense to achieve the consumption targets and is repaid over a number of years from the resulting stream of energy cost savings. Energy performance contracting provides access to private sector capital, technology and technical expertise at minimal up-front cost to the Commonwealth.

The use of energy performance contractors as an option in the process of meeting energy performance targets is strongly encouraged.

To maintain a consistent Commonwealth approach to the performance contracting industry, departments and agencies are encouraged to refer proposals to the EEST.

Good energy management does not mean 'freezing in the dark' or 'going without' : good energy management is about providing the same, or better energy service by using less or the same amount of energy.

## **6 Responsibilities for Policy Administration**

Overall responsibility for the policy on energy efficiency in Commonwealth operations rests with the Department of Industry, Science and Resources. Responsibility for the implementation of the policy is split between ISR and the Energy and Environmental Services Team in the Australian Greenhouse Office.

Energy efficiency planning as an activity should be treated no differently from planning for other resources (personnel, budgets and information technology equipment) considered essential for the operation of an organisation.

### **6.1 Department of Industry Science & Resources (ISR)**

The Government Operations Section (ISR) has responsibility for the following:

- ❖ policy formulation;
- ❖ reviewing energy intensity targets;
- ❖ disseminating core policy information;
- ❖ provide general advice to departments/agencies on interpretation of decisions;
- ❖ regular reviews of the policy, especially the reporting process and targets, and commissioning an external review early 2000; and
- ❖ collation of energy consumption data for preparation of the annual whole-of-government energy report.

### **6.2 Australian Greenhouse Office (AGO)**

The AGO has responsibility for vehicle policy.

#### **6.2.1 Energy and Environmental Services Team (EEST)**

The EEST, located in the AGO, has implementation responsibilities as outlined in 5.1.

### **6.3 Joint Working Party on Improving Energy Efficiency in Commonwealth Operations (JWP)**

The Joint Working Party provides a broadly representative and responsive co-ordinating body to oversee implementation and review of the Government's policy and evaluate developments and progress towards meeting the Government's energy objectives. The JWP:

- ❖ co-ordinates planning and program development;
- ❖ develops plans, systems and procedures for conducting regular reviews and evaluation of the program, including the two year review, to maintain currency and ensure that the main features are functioning effectively;
- ❖ ensures adequate and constructive communication between stakeholders;
- ❖ encourages departments and agencies to participate fully in the program;
- ❖ oversees formulation and promotion of programs such as Energy Star and purchase of efficient appliances by Commonwealth agencies;
- ❖ identifies opportunities for alternative approaches to improving energy efficiency; and
- ❖ communicates the role, functions and membership of the JWP to the stakeholders.

Recommendations and feedback will not be given by the JWP directly to departments and agencies, but will be communicated via ISR, the EEST and AGO.

The core members of the JWP are the Departments of Industry, Science and Resources, Finance and Administration and Defence and the Australian Greenhouse Office. Temporary membership of the JWP is also offered to other major energy using departments and agencies on a rotating basis. Meetings of the JWP are held about every two months.

## **Glossary of Terms**

*Agencies* - Commonwealth organisations agencies bound by the Financial Management and Accountability Act (see FMA Act Part 3, section 5) and those covered by the Commonwealth Authorities and Companies Act (see the CAC Act Part 3, Division 1, Section 7) whose operations are substantially budget-dependent.

*Appliance Energy Efficiency Rating Label* - Appliance 'Star' Ratings provide a means by which consumers can make informed decisions about appliances based on energy efficiency. Ratings currently apply to refrigerators, freezers, dishwashers, air conditioners, washing machines, clothes dryers and gas appliances. In the future, ratings may apply to electric water heaters and electric cookers. Labelled appliances may vary between States and Territories. Appliances are rated according to how much electricity they use under standardised operating conditions and are awarded a star rating from one to six, with six being the most energy efficient.

*BOMA Energy Guidelines* - The 1994 BOMA Energy Guidelines were prepared by the Victorian Division of the former Building Owners and Managers Association of Australia Limited (BOMA). BOMA has since been reconstituted as the Property Council of Australia (PCA).

*Budget Dependent Agency* - A budget dependent department/agency is defined as deriving more than half of Departmental costs either directly, or indirectly, from Commonwealth funds.

*Chief Executive Officers* - Secretaries of departments of state and heads of agencies.

*Energy Audit* - An energy audit is a periodic examination of an energy system (or part of the system) to identify where energy is being used and in what proportions, to ensure the most appropriate sources of energy are employed, and that this energy is used as efficiently as possible.

*Energy and Environmental Services Team* - A specialist energy and environmental advisory unit within the AGO. It sponsors best practice by advising and assisting departments/agencies on building related energy matters and developing model contracts for energy supply and performance contracts.

*Energy Performance Contracting (EPC)* - A form of contracting for energy efficiency services or broader facilities improvement. The contractor guarantees a level of energy consumption savings, modifies the energy

using plant at its own expense to achieve the consumption targets, and is repaid over a number of years from the resulting stream of energy cost savings. EPC provides access to private sector capital, technology and technical expertise at minimal up-front cost to the client.

*Nationwide House Energy Rating Scheme (NatHERS)* - A scheme which allows the potential energy efficiency of housing to be rated on a consistent basis so one house may be more easily compared with another based on its heating and cooling needs.

*Organisation* – Any department or agency covered by the policy set out in this document.

*Post Occupancy Evaluation (POE)* - A systematic evaluation of the overall performance of a building undertaken 12 months after occupation or the completion of the full cycle of seasons.

*Post Occupancy Energy Evaluation (POEE)* - A combination of Post Occupancy Evaluation and energy audit methodology.

*Recoverable outgoings* - Building expenses which cannot be directly attributed to any tenant and which are recovered from all tenants in a proportional way; for example, the cost of operating lifts, the cost of heating and lighting common use areas and maintenance of the building air conditioning units.

*US Environment Protection Agency Energy Star Compliant* - Introduced in the United States in 1992, the US Environment Protection Agency Energy Star Standard defines energy savings specifications for personal computers, monitors, faxes, laser printers and photocopiers. The key specification is that the equipment has power management features which, if enabled, provide the ability for the equipment to automatically reduce power consumption at idle to a minimum performance level. There is a difference, in energy consumption, of up to 75 per cent between when the Energy Star features are enabled and when they are not enabled.

The volume of a tonne of CO<sub>2</sub> is roughly equivalent to the volume of an average three bedroom house.

**Table 2 - Measurement Units**

Unit	Abbreviation	Measures	Equals
megajoule	MJ	energy	10 <sup>6</sup> joules
gigajoule	GJ	energy	10 <sup>9</sup> joules
petajoules	PJ	energy	10 <sup>15</sup> joules
metre	m	length	
kilogram	kg	mass	
tonne	t	mass	1000 kg
litre	L	volume	0.001m <sup>3</sup>

**Table 3 - Energy Conversion Factors**

Energy Type	Typical Measured Units	Abbreviation	To convert to Gigajoules, multiply by	CO <sub>2</sub> Intensity kg/GJ
Electricity	kilowatt hour	kWh	0.0036	260.0
Natural gas	megajoule	MJ	0.001	54.4
Natural gas	cubic metre	m <sup>3</sup>	0.039 approximate	54.4
LPG (Liquefied Petroleum Gas)	tonnes	t	50.0	59.4
LPG	litre	L	0.0257	59.4
LPG	kilogram	kg	0.05	59.4
Heating Oil/Fuel Oil	litre	L	0.0408	69.7
Automotive Diesel	litre	L	0.0386	69.7
Petrol	litre	L	0.0342	66.0
Aviation Turbine Fuel	litre	L	0.0368	69.7
AVGAS	litre	L	0.0331	68.0
Greenpower	kilowatt hour	kWh	0.0036	0.0
Gas Oil	tonnes	t	44.6976	70.0
Special Antarctic Blend	tonnes	t	46.2584	70.0

**Table 4 - Who to Contact on Various Issues**

<b>Task</b>	<b>Contact Agency</b>	<b>Reference Section</b>
Building Leases	ISR	4.2
Minimum Building Energy Performance Standards	EEST	4.1
Energy Audits	EEST	4.3
Energy Intensity Targets	ISR, AGO (vehicles)	3.2
Energy Management Plans	EEST	5.1
Energy Performance Contracting	EEST	5.2
Energy Procurement	EEST	5.1
Energy Reporting	ISR	3.1
Forums, Training Events and Forums	EEST	5.1
Nationwide House Energy Ratings Scheme	EEST	4.4
Appliances and Office Equipment	ISR	4.5
Policy Formulation, Dissemination and General Advice	ISR	6.1
Renewable Energy	ISR	4.6
Resource Materials, Training Packages, Management Tools	EEST	5.1
Policy Review	ISR	6.1
Vehicles	AGO	3.2.4