



Department of  
**Finance and  
Personnel**

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# Public Sector Energy Campaign



**2005-2007**



**Energy consumption and progress against targets for the  
public sector in Northern Ireland**

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# **SECTION 1: BACKGROUND**

## **1.1 Context**

This is the fourth in a series of reports on the energy performance of buildings occupied by the Northern Ireland public sector. This work is set in the context of the Climate Change Programme undertaken by the United Kingdom and supporting policies at national and regional level for energy management by public bodies.

The strategy document “First Steps Towards Sustainability” published by the Office of the First Minister and Deputy First Minister in May 2006, seeks to secure a 25% reduction in Northern Ireland’s greenhouse gas emissions by 2025 compared to 1990 levels. With regard to public bodies, the strategy calls for the Government estate to be carbon neutral by 2015.

To encourage departments in pursuit of these objectives, from 31 March 2007 a statutory duty has been placed on Northern Ireland departments and District Councils to act in the way best calculated to contribute to the achievement of sustainable development in Northern Ireland.

The work being carried out under the Public Sector Energy Campaign is an important part of the Department of Finance and Personnel’s (DFP) response to these and other similar initiatives.

Specifically, this report looks at the performance of the public sector in Northern Ireland as it aims to improve energy efficiency and reduce carbon consumption across its estate in line with agreed targets.

## **1.2 The Northern Ireland Public Sector Estate**

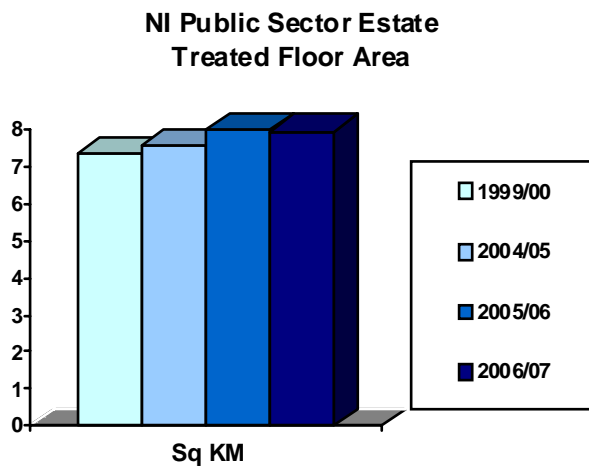
The public sector estate to which this report refers is defined as those buildings occupied by the eleven Northern Ireland Departments and the Northern Ireland Office (NIO), their associated bodies, agencies, boards, executives and trusts; including both the health and education estates. District Councils and relevant Non Departmental Public Bodies (NDPB) are also included.

The report does not however, include property occupied by GB departments such as HM Revenue and Customs (HMRC), the Northern Ireland Court Service, the Identity & Passport Service, MoD etc.; except insofar as they are minor tenants of NI central department buildings.

This report relates to data provided on 3520 buildings. Whilst a number of buildings remain unreported, this is improving year on year and much progress has been made over the last couple of years to improve the timeliness and quality of returns.

Despite this progress some gaps or anomalies in the data remain, particularly in data for the years 2000-2003. Mostly, these can be attributed to failures by Departments/public bodies to return energy consumption data on an annual basis

or to update PSEC on the changing occupancy or profile of their estates. Some 294 buildings or 6.8% of occupied building area, of which PSEC is aware, remained unreported during 2006/07.



The public sector estate in Northern Ireland comprises a diverse range of building types including office blocks, schools, hospitals, leisure centres, prisons and work depots. Since the 1999/00 base year, the size of the occupied floor area in the estate has increased by 8.3% to 7.9km<sup>2</sup>.

Treated floor area of the estate (km)

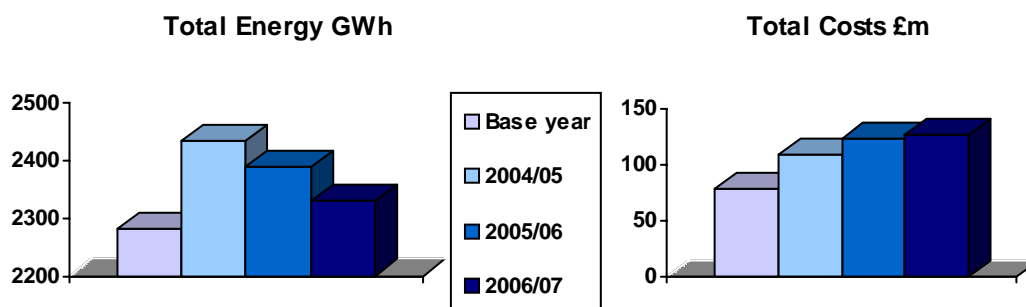
99/00	00/01	01/02	02/03	03/04	04/05	05/06	06/07
7.4	4.7	5.4	5.8	7.0	7.6	7.9	7.9

### 1.3 Energy Profile of the Public Sector Estate

The consumption of energy in the public sector in Northern Ireland has been subject to measurement and reporting since the early 1980s. During this time, targets for the estate have evolved to align with developing national and international priorities and policies on climate change and the consumption of energy.

Despite falling consumption of energy per occupied square metre of the public sector, costs have continued to rise exponentially. With an annual energy bill totalling just under £127 million in 2006/07, the public sector remains a significant consumer in the Northern Ireland energy market. Whilst progress has been made to reduce the amount of energy consumed on the estate in recent years, the overall level of consumption still remains greater than that of the 1999/2000 base year used to measure performance.

Northern Ireland Public Sector  
Total Energy Consumption and Costs (buildings and non-buildings)

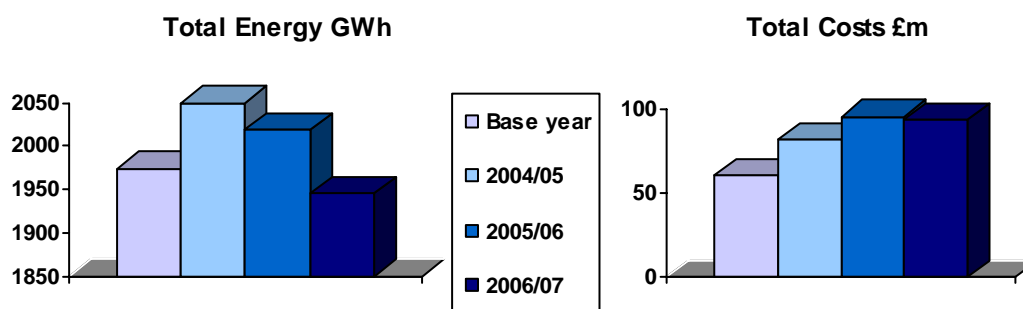


Year	Total energy consumed	% Change since 1999/00 base year	Total cost	% Change since 1999/00 base year
1999/00	2,281 gWh	-	£79m	-
2004/05	2,433 gWh	+ 6.7%	£109m	+ 37.9%
2005/06	2,389 gWh	+ 4.7%	£123 m	+ 55.7%
2006/07	2,322 gWh	+ 1.8%	£127m	+ 60.8%

Whilst total recorded energy consumption remains above that of the base year, a year-on-year reduction has been recorded since energy usage peaked at 2,433 gWh in 2004/05.

Looking more specifically at the energy performance of the buildings that make up the public sector estate in Northern Ireland, 2006/07 saw a fall in consumption of 1.4% from the base year. The cost of this energy also fell in 2006/07 compared to the previous year.

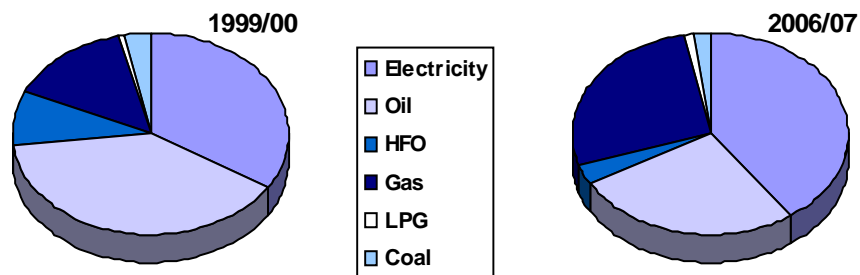
Northern Ireland Public Sector  
Total Energy Consumption and Costs (buildings only)



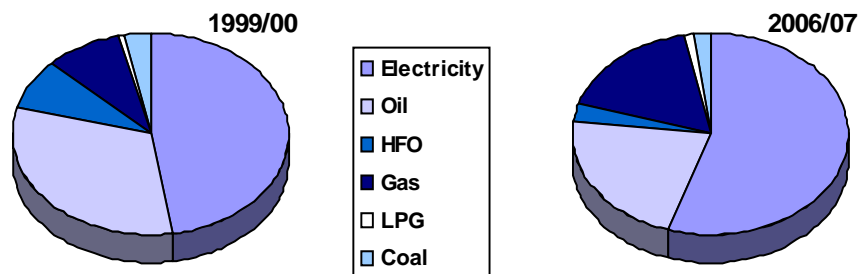
Year	Total energy consumed	% Change since 1999/00 base year	Total cost	% Change since 1999/00 base year
1999/00	1,974 gWh	-	£61m	-
2004/05	2,050 gWh	+ 3.8%	£82m	+ 34.4%
2005/06	2,020 gWh	+ 2.3%	£96 m	+ 57.3%
2006/07	1,946 gWh	- 1.4%	£94m	+ 54.1%

As well as aiming to improve energy efficiency of buildings, targets for the estate have placed increasing focus on the need to reduce the amount of carbon or carbon dioxide emissions. Since the base year of 1999/2000 a number of buildings have undergone conversion from more carbon intensive fuels such as oil and heavy fuel oil to gas with lower associated emissions. More recently, renewable energy technologies have been introduced in a small number of sites across the estate. This is still a relatively new and growing area in the NI public sector with this the first PSEC report to include on-site generation by renewable technologies.

Northern Ireland Public Sector  
Total energy consumed by fuel source (%)



Northern Ireland Public Sector  
Carbon dioxide emissions by fuel source (%)



## 1.4 Energy Targets

The public sector accounts for about 5% of Northern Ireland's total energy consumption. It is therefore of pivotal importance that public bodies should be seen to be taking an active role in pursuing national and local strategies for energy efficiency and lowering carbon emissions. For this reason, specific targets have been set for the public estate in Northern Ireland.

In 2003, the Government published the White Paper *Our Energy Future – Creating a Low Carbon Economy*. Under the White Paper and its Implementation Plan, new targets were set for central Government Departments. However, these did not automatically extend to Northern Ireland. In 2004, the then Minister for Finance and Personnel, Ian Pearson MP subsequently endorsed the following three targets to apply to all public bodies in Northern Ireland:

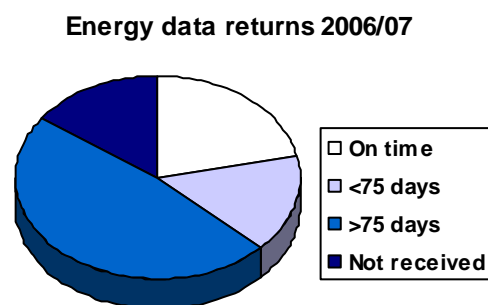
- To increase the energy efficiency of the buildings on their estates measured in terms of kiloWatt-hours (kWh) of fuel and electricity used per square metre of building floor area by 15% by 2010/11, relative to a base year of 1999/2000;
- To reduce absolute carbon, from fuel and electricity used in buildings on their estates by 12.5% by 2010/11, relative to a base year of 1999/2000; and
- To source at least 10% of their electricity from renewable sources by 31 March 2008.

## 1.5 Energy Consumption Data

All Departments, Councils and the major Non Departmental Public Bodies are asked to provide annual energy returns for each of the buildings for which they are responsible. The information may be obtained by Premises Officers from meter readings or bills and sent to a Departmental Energy Manager (DEM) who is responsible for providing the return to DFP. Another option is for the DEM to use the service of the Engineering Services and Energy Unit in DFP to collate the information each year from the remote meter reading high frequency system, which covers all the major buildings in the NI office estate.

It is important to note that while responsibility for the provision of building services for the NI Departments core office estate may be centralised within Properties Division of DFP, buildings may be occupied by another Department or public body. As the occupants of building are a major factor in how efficiently the building is utilised, responsibility for providing the energy returns on which this report is based lies with the main occupying Department for each building.

Overall, the return of energy data remains an issue in preparing this report. Of all data requests issued in 2006/07 only 22% were received by the deadline. The vast majority of data were received between 3 and 10 months later. Almost a fifth of Departments/public bodies did not make a return.



The quality of information returned may also be variable with data omitted or in need of correction.

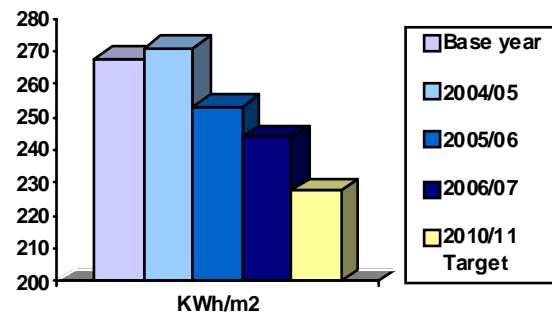
## **SECTION 2: PERFORMANCE AGAINST TARGETS**

## 2.1 Energy Efficiency Target

- To increase the energy efficiency of the buildings on the estate measured in terms of kiloWatt-hours (kWh) of fuel and electricity used per square metre of building floor area by 15% by 2010/11, relative to a base year of 1999/2000.

Energy efficiency per square metre of building area has improved by 9% since the base year of 1999/2000.

This is a continued improvement year-on-year towards the target of a 15% reduction in energy consumption per square metre by 2010/11.



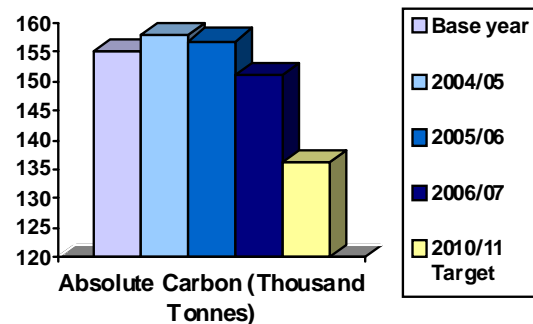
Energy efficiency of buildings (kWh per m<sup>2</sup> of building floor area)

99/00	00/01	01/02	02/03	03/04	04/05	05/06	06/07
268	204	210	218	278	271	253	244

## 2.2 Carbon Emissions Target

- To reduce absolute carbon, from fuel and electricity used in buildings on the estate by 12.5% by 2010/11, relative to a base year of 1999/2000.

Total carbon emissions have reduced by 2.5% from the base year, against a target of 12.5% by 2010/11.

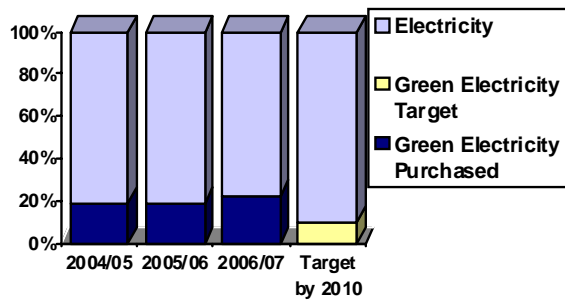


Absolute Carbon (Thousand Tonnes)

99/00	00/01	01/02	02/03	03/04	04/05	05/06	06/07
155	77	89	100	150	158	157	151

## 2.3 Renewable Energy Target

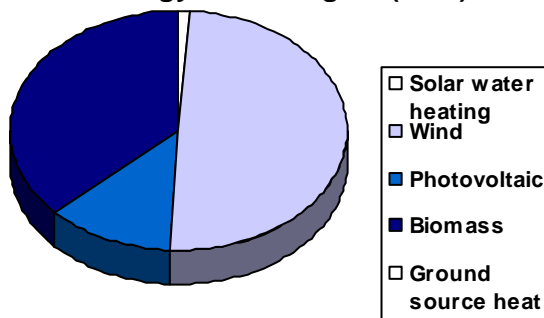
- To source at least 10% of electricity from renewable sources by 31 March 2008.



For the entire estate 19% of the electricity consumed was purchased from renewable sources (green electricity) in 2005/06.

This rose to 22% in 2006/07.

Energy generated by renewable energy technologies (kWh)



In addition to the purchase of green electricity, this is the first year public sector bodies have reported on-site generation of electricity and/or heat from renewable technologies. Whilst the overall contribution remains small, representing just 0.09% of total energy consumption, this is a growing area and future reports will see a growth in the amount of energy generated and the types of technologies utilised.

Renewable Technology	kWh generated
Solar water heating	25,000
Wind	1,009,418
Photovoltaic cells	248,968
Biomass	747,416
Ground source heat	200
<b>Total electricity</b>	<b>2,031,002</b>

## 2.4 Conclusions

Since the base year of 1999/2000, the total energy consumed in the public sector in the Northern Ireland, including water processing and street lighting, has increased by almost 2%. Looking more closely at the buildings on the estate, improved energy efficiency has seen a fall in total energy used by 1.4%. This fall is reported against an increased size of estate, with the occupied floor area showing an increase of 8.3% in 2006/07.

As the size of the estate varies year-on-year, with buildings vacated or newly occupied across the public sector, the measurement of energy efficiency by building area provides a more accurate interpretation of performance. By 2006/07, energy efficiency had improved by 9% per square metre. This is good progress towards the target of a 15% improvement by 2010/11, particularly as most of this improvement has occurred over the last three years. There remains though considerable scope for further improvement and there is no room for complacency in taking forward progress on this target. New opportunities to improve energy efficiency should be sought wherever possible, particularly against rising costs for energy driven by a volatile market for crude oil.

Absolute carbon from fuel and electricity used in buildings on the estate has fallen by 2.5% since the base year. These savings have been realised from fuel conversion from more carbon intensive fossil fuels or electricity to natural gas. Renewable energy technologies have had limited impact to date but this is a growing area however, the impact of which will be demonstrated in future reports. Previous reports have included carbon savings achieved by the purchase of green electricity tariffs towards the measurement of this target. This report however does not count the purchase of green electricity towards this target as these carbon savings have already been claimed at the source of supply. Based on performance to date, the achievement of a 12½% reduction by 2010/11 will be a challenge.

Across the public sector estate, 22% of electricity has been purchased from renewable sources, well ahead of a target of 10% by 31 March 2008. This figure does not include energy generated on site from renewable technologies. This target will not be extended past 31 March 2008 and, for the 11 Northern Ireland Departments will be superseded by a commitment to make their estates carbon neutral by 2015.

The public sector in Northern Ireland is facing increased pressure to improve energy efficiency both to reduce costs and to meet sustainable development and renewable energy targets. In 2006/07, the total cost of energy used in buildings alone stood at £94 million, a 54% increase since the base year. Without the energy efficiency measures put in place since 2000, this increase would have been significantly higher.

The 2004/05 report predicted that, given the trend since the base year, total energy costs, including water processing and street lighting, were likely to pass the £100 million mark within 2005/06. This indeed proved to be the case, with total energy costs for the estate of £123 million in 2005/06 and £127 million in 2006/07.

It should also be noted that energy consumption and performance are becoming increasingly subject to legislation. The EU Directive on Energy Performance of Buildings contains requirements relating to the recording and the display of details relating to energy performance in relation to buildings over 1,000m<sup>2</sup>.

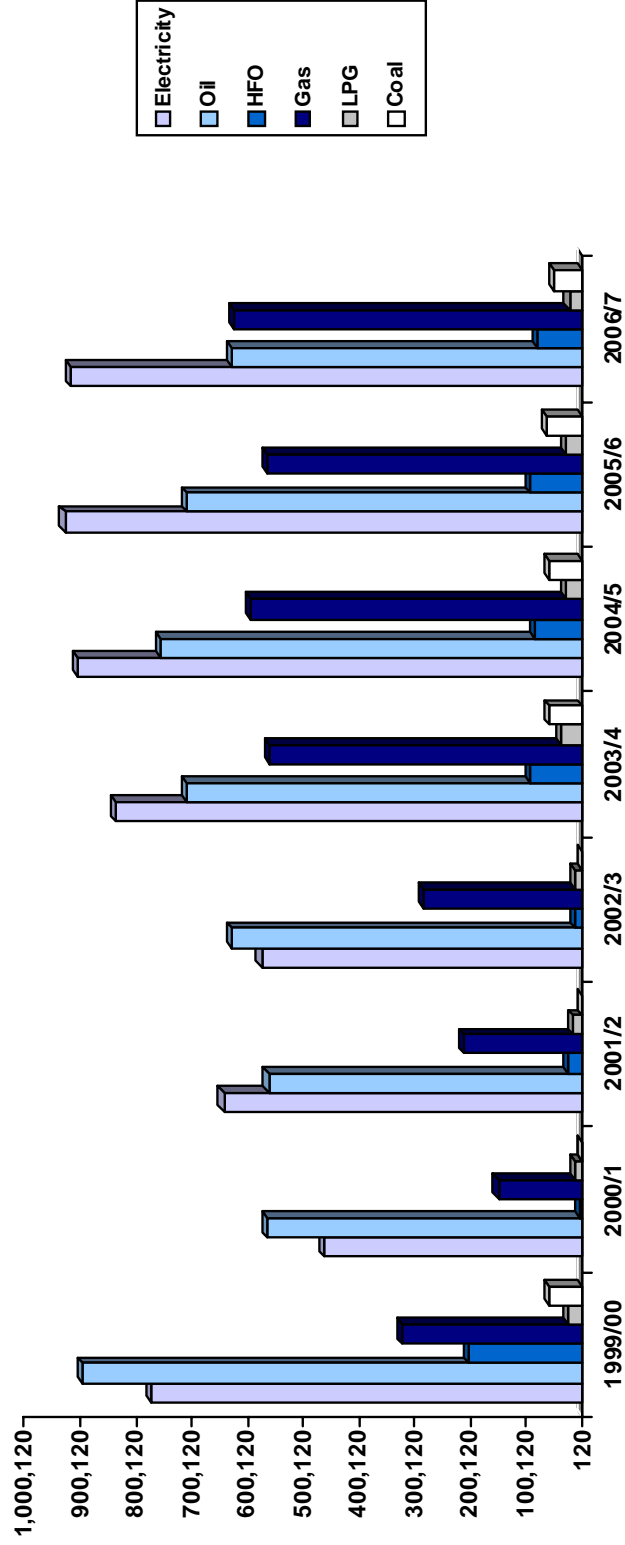
In June 2004, the Department of Enterprise, Trade and Investment published its Strategic Energy Framework for Northern Ireland. One of the objectives in the Framework requires enhanced effort in energy efficiency and conservation so that electricity demand in Northern Ireland reduces by 1% annually from 2007-2012. As the public sector has a responsibility in leading in the pursuance of national and regional strategies, this challenging target will apply to the public sector estate in Northern Ireland from 2007 and will be measured in future reports. The electricity consumption data detailed in this report for 2006/07 will be used to establish the baseline for this target.

## **SECTION 3: DATA TABLES AND CHARTS**

### 3.1 Total energy consumption by fuel type (MWh) – includes non-building use

	1999/00	2000/1	2001/2	2002/3	2003/4	2004/5	2005/6	2006/7
Electricity	773,228	462,203	643,910	575,759	836,323	904,249	928,148	919,317
Oil	896,146	565,557	563,330	630,042	710,203	756,911	707,754	628,954
HFO	202,871	5,000	24,817	14,812	95,568	86,520	94,535	81,418
Gas	323,112	151,171	214,504	285,592	561,926	594,710	565,005	623,266
LPG	26,680	15,211	16,506	15,043	37,067	31,164	31,586	23,563
Coal	59,101	325	20	12	61,246	59,807	62,952	50,173
<b>Totals</b>	<b>2,281,138</b>	<b>1,199,467</b>	<b>1,463,087</b>	<b>1,521,260</b>	<b>2,302,333</b>	<b>2,433,361</b>	<b>2,389,980</b>	<b>2,326,691</b>

Total energy consumption by fuel (MWh)  
Includes non-building use



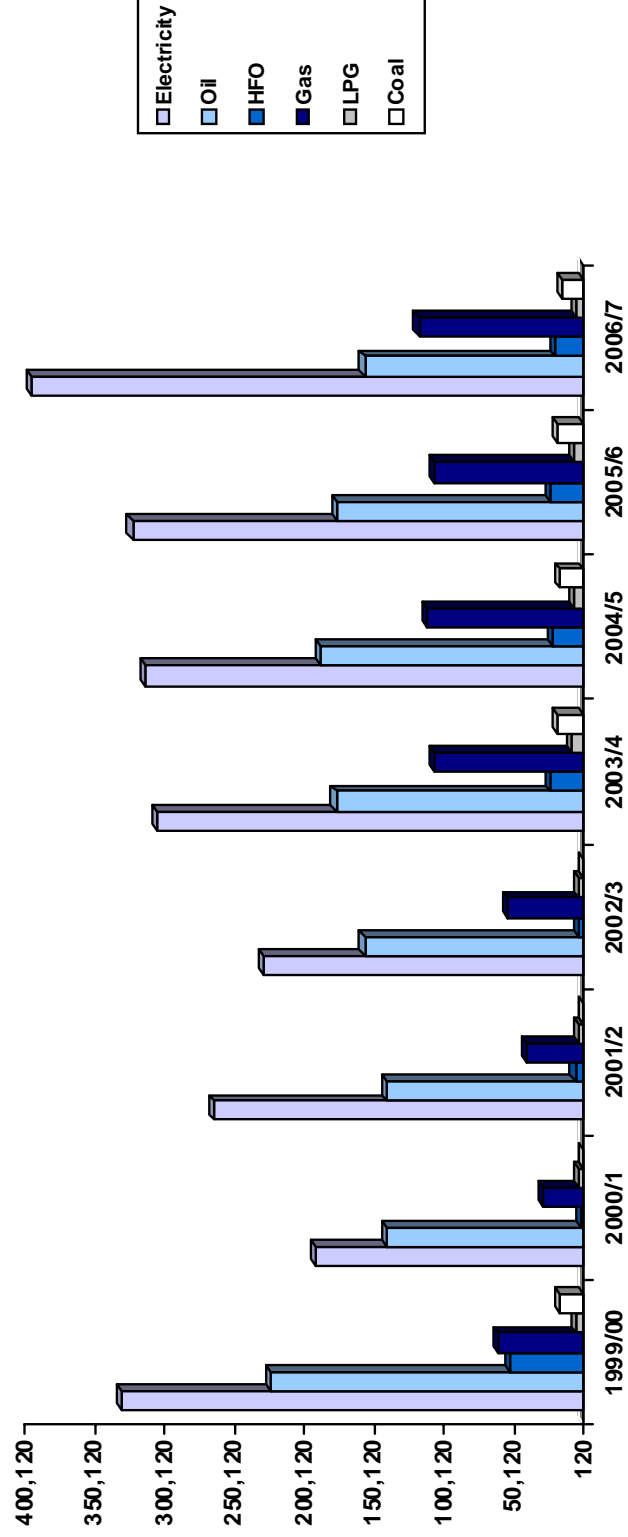
### 3.2 Total energy consumption by Department/Public Body (KWh) – includes non-building use

	1999/00	2000/1	2001/2	2002/3	2003/4	2004/5	2005/6	2006/7
Assembly Commission	6,149,230	6,149,230	5,879,094	5,764,569	5,487,587	5,779,097	4,694,205	4,616,173
Councils	195,624,813	139,699,784	165,465,533	217,878,300	194,693,223	187,590,314	181,984,719	219,494,786
Councils Non Bdg Use	911,597				799,891	1,627,312	1,652,711	7,028,390
DARD	37,755,450	10,401,114	23,708,878	34,316,362	48,674,621	46,800,987	43,881,943	39,472,989
DCAL	3,400,568				941,000	3,381,406	3,381,406	2,718,258
DE	473,325,787	537,985,141	488,159,981	555,009,078	473,643,001	603,259,361	516,269,816	504,282,690
DEL	199,516,982	87,033,114	201,769,861	198,375,692	215,592,703	212,410,605	219,030,205	204,022,618
DEL Core	1,734,359	1,854,538	1,854,538	1,802,875	1,802,875	1,772,575	1,764,025	1,299,000
DETI	4,430,926	497,024	485,555	2,217,006	2,860,049	3,248,574	3,233,767	3,141,679
DFP	7,809,355	312,991	4,341,093	7,114,408	3,531,520	7,176,620	9,532,218	9,273,474
DHSS&PS	768,740,846	6,205,546	7,156,556	6,702,622	755,715,459	736,077,164	769,159,344	699,510,968
DOE	12,538,371	10,843,009	9,468,400	10,799,856	14,085,099	12,272,439	13,712,119	14,559,050
DRD	18,030,024	16,409,564	16,140,460	15,649,373	17,351,198	18,574,797	18,558,731	18,761,359
DRD Street Lights	97,883,192		102,136,160		105,014,800	106,777,296	108,144,000	111,052,856
DRD Water Process	207,691,152	221,433,424	236,514,544	243,693,248	244,441,456	274,564,128	258,545,616	257,811,376
DSD	25,014,308	23,563,769	23,356,476	26,921,620	27,907,718	29,299,824	33,996,494	28,805,182
Major NDPBs	35,949,594	31,238,386	27,487,871	33,666,896	33,899,465	32,730,242	34,118,456	32,495,105
NI Prison Service	74,246,434		44,321,334	52,288,962	47,365,041	42,610,300	58,811,495	59,375,403
NIO	10,606,882	4,875,469	4,420,159	3,982,136	4,497,403	5,905,169	4,912,734	5,537,935
PSNI	99,777,600	100,963,643	100,420,176	105,077,764	104,030,216	101,502,877	103,301,456	98,530,107
<b>Totals</b>	<b>2,281,137,470</b>	<b>1,199,465,746</b>	<b>1,463,086,669</b>	<b>1,521,260,767</b>	<b>2,302,334,325</b>	<b>2,433,361,087</b>	<b>2,388,685,460</b>	<b>2,321,789,398</b>

### 3.3 Total carbon dioxide emissions by fuel type (Tonnes) – includes non-building use

	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07
Electricity	331,639	192,054	265,649	228,808	306,039	314,377	323,623	395,262
Oil	224,036	141,389	140,832	157,510	177,551	189,228	176,938	157,238
HFO	52,746	1,300	6,452	3,851	24,848	22,495	24,579	21,169
Gas	61,391	28,722	40,756	54,262	106,766	112,995	107,351	118,421
LPG	6,136	3,499	3,796	3,460	8,525	7,168	7,265	5,419
Coal	17,730	97	6	4	18,374	17,942	18,886	15,052
<b>Totals</b>	<b>693,678</b>	<b>367,061</b>	<b>457,491</b>	<b>447,895</b>	<b>642,103</b>	<b>664,205</b>	<b>658,642</b>	<b>712,561</b>

Total carbon dioxide emissions by fuel (Tonnes)  
Includes non-building use



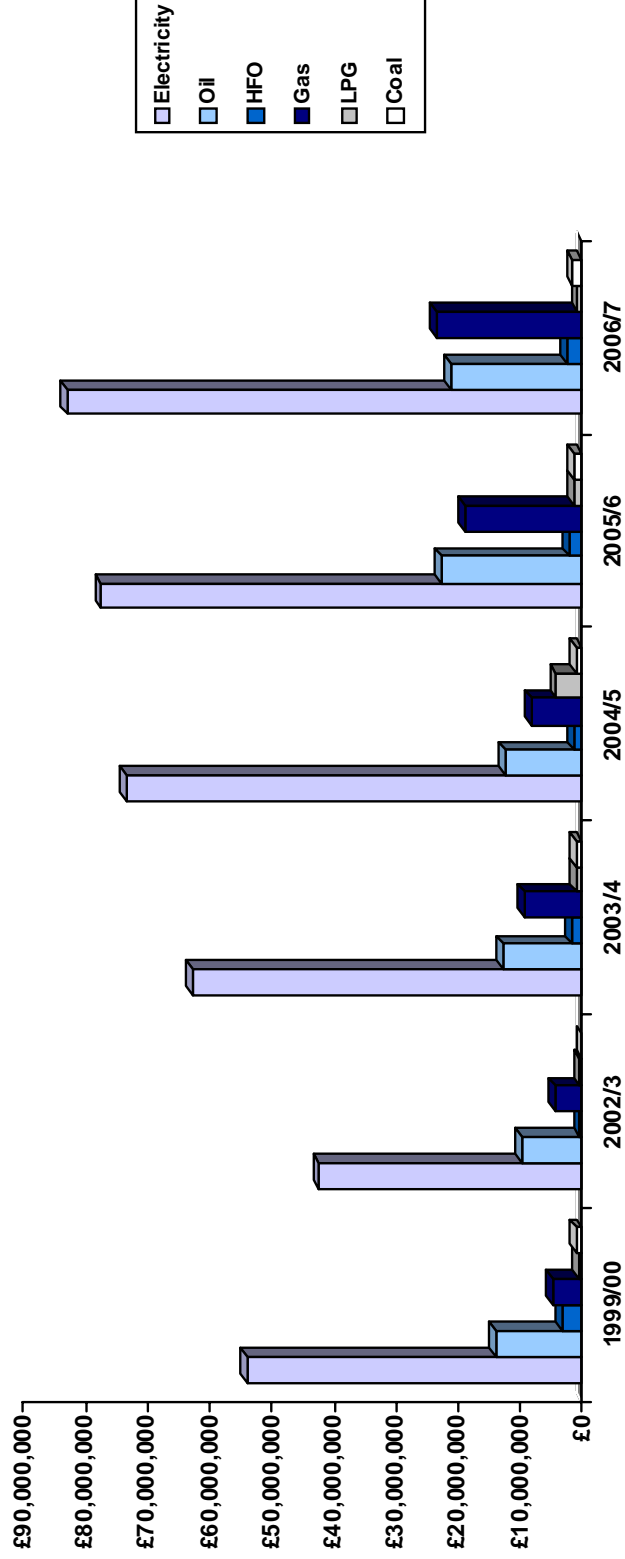
### 3.4 Total carbon dioxide Emissions by Department/Public Body (Tonnes) – includes non-building use

	1999/00	2000/1	2001/2	2002/3	2003/4	2004/5	2005/6	2006/7
Assembly Commission	1,957,054	1,957,054	1,902,015	1,869,301	1,732,190	1,807,617	1,384,004	1,362,357
Councils	57,866,274	41,392,308	46,860,875	61,802,935	55,854,625	53,595,001	52,781,903	61,966,212
Councils Non Bdg Use	375,182	0	0	0	310,446	695,386	707,079	2,027,763
DARD	12,325,056	3,891,088	7,730,187	10,680,463	13,208,939	14,239,292	13,298,487	11,450,942
DCAL	1,101,030	0	0	0	272,390	1,092,790	1,092,790	912,070
DE	132,822,583	147,222,278	135,966,099	151,108,154	131,539,968	165,051,200	143,727,077	139,368,157
DEL	56,221,557	24,638,606	56,828,118	56,552,060	60,153,425	59,354,055	62,023,007	58,997,132
DEL Core	603,466	619,708	619,708	606,606	606,606	586,420	577,637	435,690
DETI	1,414,162	152,357	148,900	658,436	865,838	976,560	964,285	998,361
DFP	2,765,946	102,239	1,805,189	2,684,250	1,342,063	2,396,691	3,150,738	3,180,207
DHSS&PS	212,780,718	1,855,397	2,264,332	2,120,153	205,349,194	202,983,119	213,544,871	192,790,691
DOE	3,853,376	3,246,515	2,883,741	3,222,758	4,225,103	3,740,988	4,148,634	4,396,244
DRD	6,345,873	5,819,923	5,809,354	5,615,850	5,854,543	6,459,191	6,301,106	6,411,795
DRD Street Lights	42,089,773	0	43,918,550	0	45,156,365	45,914,238	46,501,921	47,752,729
DRD Water Process	85,503,807	91,384,381	97,918,495	100,489,463	101,576,234	113,145,847	110,652,492	108,744,656
DSD	8,447,763	7,536,464	7,603,317	8,861,592	9,192,984	9,664,891	11,173,493	9,642,889
Major NDPBs	11,752,161	10,263,075	9,231,237	11,257,626	11,341,610	10,738,050	11,162,296	10,819,017
NI Prison Service	20,753,585	0	13,402,083	14,881,504	13,288,621	12,281,096	16,211,525	16,547,419
NIO	3,040,501	1,635,827	1,518,524	1,231,866	1,329,767	1,804,527	1,627,997	1,849,908
PSNI	32,508,913	32,037,489	32,313,430	33,021,214	32,481,969	32,198,831	32,875,648	31,486,777
<b>Totals</b>	<b>694,528,780</b>	<b>373,754,710</b>	<b>468,724,155</b>	<b>466,664,230</b>	<b>695,682,881</b>	<b>738,725,790</b>	<b>733,906,990</b>	<b>711,141,015</b>

### 3.5 Total costs by fuel type (£) – includes non-building use

	1999/00	2000/1	2001/2	2002/3	2003/4	2004/5	2005/6	2006/7
Electricity	£53,996,079	£32,069,382	£47,323,781	£42,291,570	£62,881,404	£73,531,793	£77,531,207	£83,081,424
Oil	£13,979,891	£8,766,150	£8,618,947	£9,702,639	£12,641,621	£12,489,014	£22,577,365	£21,007,054
HFO	£3,347,366	£82,494	£282,914	£380,666	£1,576,871	£1,427,583	£2,051,406	£2,279,717
Gas	£4,782,066	£2,282,670	£3,324,817	£4,312,437	£9,327,979	£8,088,062	£18,871,160	£23,247,836
LPG	£632,314	£375,724	£425,857	£388,110	£956,332	£4,091,845	£1,313,960	£678,610
Coal	£992,890	£5,420	£337	£209	£1,028,938	£998,770	£1,259,043	£1,505,187
<b>Totals</b>	<b>£77,730,606</b>	<b>£43,581,840</b>	<b>£59,976,653</b>	<b>£57,075,631</b>	<b>£88,413,145</b>	<b>£100,627,067</b>	<b>£123,604,141</b>	<b>£131,799,828</b>

**Total costs by fuel (£)**  
Includes non-building use



### 3.6 Total costs by Department/Public Body (£) – includes non-building use

	1999/00	2000/1	2001/2	2002/3	2003/4	2004/5	2005/6	2006/7
Assembly Commission	£216,955	£216,955	£242,675	£223,407	£227,384	£271,272	£268,641	£214,936
Councils	£6,959,258	£5,877,630	£6,224,988	£7,630,293	£7,914,758	£9,330,217	£9,021,508	£9,966,464
Councils Non Bdg Use	£64,137				£53,476	£137,066	£145,137	£389,530
DARD	£1,649,260	£547,145	£998,362	£1,188,304	£1,447,277	£2,280,573	£2,424,628	£2,168,755
DCAL	£152,076				£41,003	£178,391	£196,895	£173,943
DE	£13,940,829	£16,477,081	£15,180,038	£17,914,055	£16,801,529	£22,419,867	£25,476,272	£26,087,221
DEL	£5,708,432	£2,944,263	£6,863,958	£7,632,266	£7,471,872	£8,265,763	£10,594,991	£9,520,962
DEL Core	£89,997	£102,981	£102,981	£103,616	£103,616	£103,220	£116,590	£87,519
DETI	£165,558	£21,865	£22,151	£91,356	£154,376	£252,040	£279,016	£383,837
DFF	£376,163	£5,790	£305,192	£393,308	£192,686	£423,031	£624,427	£698,400
DHSS&PS	£21,758,036	£247,944	£314,515	£302,027	£23,712,817	£27,353,294	£33,638,708	£30,169,245
DOE	£458,629	£387,933	£385,130	£374,452	£565,582	£602,488	£732,062	£854,535
DRD	£872,718	£804,463	£915,141	£842,491	£893,003	£1,114,376	£1,166,498	£1,242,392
DRD Street Lights	£6,335,261		£6,870,000		£7,581,880	£8,220,693	£8,783,048	£10,039,148
DRD Water								
Process	£11,011,067	£11,593,194	£14,095,876	£14,089,159	£14,547,730	£17,722,421	£17,700,110	£21,933,486
DSD	£1,090,201	£955,743	£1,005,360	£1,147,844	£1,420,791	£1,738,176	£2,105,028	£1,878,114
Major NDPBs	£1,556,871	£1,430,002	£1,670,211	£2,021,325	£1,829,685	£1,802,810	£2,079,120	£2,588,472
NI Prison Service	£2,212,019		£1,261,540	£1,608,281	£1,532,321	£1,645,124	£2,356,505	£2,808,399
NIO	£307,956	£202,464	£209,750	£163,484	£179,596	£253,115	£311,634	£345,981
PSNI	£3,709,923	£3,755,535	£3,909,403	£3,767,893	£3,924,076	£4,425,293	£5,062,357	£5,208,461
<b>Totals</b>								

### 3.7 Summary of total energy consumption performance by Department/Public Body

Energy (KWh)					% move on	
	2006/07	2005/06	2004/05	1999/00	2005/06	1999/00
Assembly Commission	4,616,173	4,694,205	5,779,097	6,149,230	-1.7%	-24.9%
Councils	219,494,786	181,984,719	187,590,314	195,624,813	20.6%	12.2%
Councils Non Bdg Use	7,028,390	1,652,711	1,627,312	911,597	325.3%	671.0%
DARD	39,472,989	43,881,943	46,800,987	37,755,450	-10.0%	4.5%
DCAL	2,718,258	3,381,406	3,381,406	3,400,568	-19.6%	-20.1%
DE	504,282,690	516,269,816	603,259,361	473,325,787	-2.3%	6.5%
DEL	204,022,618	219,030,205	212,410,605	199,516,982	-6.9%	2.3%
DEL Core	1,299,000	1,764,025	1,772,575	1,734,359	-26.4%	-25.1%
DETI	3,141,679	3,233,767	3,248,574	4,430,926	-2.8%	-29.1%
DFP	9,273,474	9,532,218	7,176,620	7,809,355	-2.7%	18.7%
DHSS&PS	699,510,968	769,159,344	736,077,164	768,740,846	-9.1%	-9.0%
DOE	14,559,050	13,712,119	12,272,439	12,538,371	6.2%	16.1%
DRD	18,761,359	18,558,731	18,574,797	18,030,024	1.1%	4.1%
DRD Street Lights	111,052,856	108,144,000	106,777,296	97,883,192	2.7%	13.5%
DRD Water Process	257,811,376	258,545,616	274,564,128	207,691,152	-0.3%	24.1%
DSD	28,805,182	33,996,494	29,299,824	25,014,308	-15.3%	15.2%
Major NDPBs	32,495,105	34,118,456	32,730,242	35,949,594	-4.8%	-9.6%
NI Prison Service	59,375,403	58,811,495	42,610,300	74,246,434	1.0%	-20.0%
NIO	5,537,935	4,912,734	5,905,169	10,606,882	12.7%	-47.8%
PSNI	98,530,107	103,301,456	101,502,877	99,777,600	-4.6%	-1.3%
<b>Totals - includes non-building use</b>	<b>2,321,789,398</b>	<b>2,388,685,460</b>	<b>2,433,361,087</b>	<b>2,281,137,470</b>	<b>-2.8%</b>	<b>1.8%</b>
<b>Totals – buildings only</b>	<b>1,945,896,776</b>	<b>2,020,343,132</b>	<b>2,050,392,350</b>	<b>1,974,651,529</b>	<b>-3.68%</b>	<b>-1.46%</b>

### 3.8 Summary of total carbon dioxide emission performance by Department/Public Body

Carbon dioxide (Kg)						% move on	
	2006/07	2005/06	2004/05	1999/00	2005/06	1999/00	
Assembly Commission	1,362,357	1,384,004	1,807,617	1,957,054	-1.6%	-30.4%	
Councils	61,966,212	52,781,903	53,595,001	57,866,274	17.4%	7.1%	
Councils Non Bdg Use	2,027,763	707,079	695,386	375,182	186.8%	440.5%	
DARD	11,450,942	13,298,487	14,239,292	12,325,056	-13.9%	-7.1%	
DCAL	912,070	1,092,790	1,092,790	1,101,030	-16.5%	-17.2%	
DE	139,368,157	143,727,077	165,051,200	132,822,583	-3.0%	4.9%	
DEL	58,997,132	62,023,007	59,354,055	56,221,557	-4.9%	4.9%	
DEL Core	435,690	577,637	586,420	603,466	-24.6%	-27.8%	
DETI	998,361	964,285	976,560	1,414,162	3.5%	-29.4%	
DFP	3,180,207	3,150,738	2,396,691	2,765,946	0.9%	15.0%	
DHSS&PS	192,790,691	213,544,871	202,983,119	212,780,718	-9.7%	-9.4%	
DOE	4,396,244	4,148,634	3,740,988	3,853,376	6.0%	14.1%	
DRD	6,411,795	6,301,106	6,459,191	6,345,873	1.8%	1.0%	
DRD Street Lights	47,752,729	46,501,921	45,914,238	42,089,773	2.7%	13.5%	
DRD Water Process	108,744,656	110,652,492	113,145,847	85,503,807	-1.7%	27.2%	
DSD	9,642,889	11,173,493	9,664,891	8,447,763	-13.7%	14.1%	
Major NDPBs	10,819,017	11,162,296	10,738,050	11,752,161	-3.1%	-7.9%	
NI Prison Service	16,547,419	16,211,525	12,281,096	20,753,585	2.1%	-20.3%	
NIO	1,849,908	1,627,997	1,804,527	3,040,501	13.6%	-39.2%	
PSNI	31,486,777	32,875,648	32,198,831	32,508,913	-4.2%	-3.1%	
<b>Totals - includes non-building use</b>	<b>711,141,015</b>	<b>733,906,990</b>	<b>738,725,790</b>	<b>694,528,780</b>	<b>-3.1%</b>	<b>2.4%</b>	
<b>Totals – buildings only</b>	<b>552,615,867</b>	<b>576,045,498</b>	<b>578,970,318</b>	<b>566,560,018</b>	<b>-4.1%</b>	<b>-2.5%</b>	

### 3.9 Summary of total energy cost performance by Department/Public Body

Energy costs (£)					% move on	
	2006/07	2005/06	2004/05	1999/00	2005/06	1999/00
Assembly Commission	£214,936	£268,641	£271,272	£216,955	-20.0%	-0.9%
Councils	£9,966,464	£9,021,508	£9,330,217	£6,959,258	10.5%	43.2%
Councils Non Bdg Use	£389,530	£145,137	£137,066	£64,137	168.4%	507.3%
DARD	£2,168,755	£2,424,628	£2,280,573	£1,649,260	-10.6%	31.5%
DCAL	£173,943	£196,895	£178,391	£152,076	-11.7%	14.4%
DE	£26,087,221	£25,476,272	£22,419,867	£13,940,829	2.4%	87.1%
DEL	£9,520,962	£10,594,991	£8,265,763	£5,708,432	-10.1%	66.8%
DEL Core	£87,519	£116,590	£103,220	£89,997	-24.9%	-2.8%
DETI	£383,837	£279,016	£252,040	£165,558	37.6%	131.8%
DFP	£698,400	£624,427	£423,031	£376,163	11.8%	85.7%
DHSS&PS	£30,169,245	£33,638,708	£27,353,294	£21,758,036	-10.3%	38.7%
DOE	£854,535	£732,062	£602,488	£458,629	16.7%	86.3%
DRD	£1,242,392	£1,166,498	£1,114,376	£872,718	6.5%	42.4%
DRD Street Lights	£10,039,148	£8,783,048	£8,220,693	£6,335,261	14.3%	58.5%
DRD Water Process	£21,933,486	£17,700,110	£17,722,421	£11,011,067	23.9%	99.2%
DSD	£1,878,114	£2,105,028	£1,738,176	£1,090,201	-10.8%	72.3%
Major NDPBs	£2,588,472	£2,079,120	£1,802,810	£1,556,871	24.5%	66.3%
NI Prison Service	£2,808,399	£2,356,505	£1,645,124	£2,212,019	19.2%	27.0%
NIO	£345,981	£311,634	£253,115	£307,956	11.0%	12.3%
PSNI	£5,208,461	£5,062,357	£4,425,293	£3,709,923	2.9%	40.4%
<b>Totals - includes non-building use</b>	<b>£126,759,800</b>	<b>£123,083,175</b>	<b>£108,539,230</b>	<b>£78,635,346</b>	<b>3.0%</b>	<b>61.2%</b>
<b>Totals – buildings only</b>	<b>£94,397,636</b>	<b>£96,454,880</b>	<b>£82,459,050</b>	<b>£61,224,881</b>	<b>-2.1%</b>	<b>54.2%</b>

### 3.10 Summary of energy efficiency performance by square metre of building area

Energy (KWh/m <sup>2</sup> )						
					% move on	
	2006/07	2005/06	2004/05	1999/00	2005/06	1999/00
Assembly Commission	247	251	309	329	-1.7%	-24.9%
Councils	280	290	306	345	20.6%	12.2%
DARD	168	182	193	156	325.3%	671.0%
DCAL	234	291	291	286	-10.0%	4.5%
DE	146	152	186	151	-19.6%	-20.1%
DEL	238	253	249	235	-2.3%	6.5%
DEL Core	173	176	177	173	-6.9%	2.3%
DETI	227	234	227	208	-26.4%	-25.1%
DFP	148	197	186	165	-2.8%	-29.1%
DHSS&PS	428	413	439	477	-2.7%	18.7%
DOE	241	250	222	224	-9.1%	-9.0%
DRD	254	248	247	236	6.2%	16.1%
DSD	196	237	227	236	1.1%	4.1%
Major NDPBs	185	193	195	203	2.7%	13.5%
NI Prison Service	591	594	430	622	-0.3%	24.1%
NIO	255	255	384	519	-15.3%	15.2%
PSNI	321	328	334	358	-4.8%	-9.6%
<b>Totals</b>	<b>244</b>	<b>253</b>	<b>271</b>	<b>268</b>	<b>-3.5%</b>	<b>-9.0%</b>

### 3.11 Summary of absolute carbon performance by square metre of building area

Absolute carbon (kg/m <sup>2</sup> )						
					% move on	
	2006/07	2005/06	2004/05	1999/00	2005/06	1999/00
Assembly Commission	20	20	26	29	-1.6%	-30.4%
Councils	22	23	24	28	-5.8%	-22.6%
DARD	13	15	16	14	-11.7%	-4.2%
DCAL	21	26	26	25	-16.5%	-15.2%
DE	11	12	14	12	-4.7%	-4.7%
DEL	19	20	19	18	-4.1%	3.8%
DEL Core	16	16	16	16	0.7%	-3.6%
DETI	20	19	19	18	3.5%	8.9%
DFP	14	18	17	16	-21.8%	-12.9%
DHSS&PS	32	31	33	36	3.0%	-10.5%
DOE	20	21	18	19	-3.6%	5.7%
DRD	24	23	23	23	3.1%	4.2%
DSD	18	21	20	22	-15.9%	-17.6%
Major NDPBs	17	17	17	18	-2.2%	-7.1%
NI Prison Service	45	45	34	47	0.5%	-5.4%
NIO	23	23	32	41	0.6%	-42.8%
PSNI	28	28	29	32	-1.7%	-12.1%
<b>Totals</b>	<b>19</b>	<b>20</b>	<b>21</b>	<b>21</b>	<b>-3.9%</b>	<b>-10.0%</b>

### 3.12 Summary of cost performance by square metre of building area

Costs (£/m <sup>2</sup> )						
					% move on	
	2006/07	2005/06	2004/05	1999/00	2005/06	1999/00
Assembly Commission	£12	£14	£15	£12	-20.0%	-0.9%
Councils	£13	£14	£15	£12	-11.4%	3.5%
DARD	£9	£10	£9	£7	-8.3%	35.7%
DCAL	£15	£17	£15	£13	-11.7%	17.0%
DE	£8	£7	£7	£4	0.6%	70.0%
DEL	£11	£12	£10	£7	-9.4%	65.0%
DEL Core	£12	£12	£10	£9	0.2%	29.8%
DETI	£28	£20	£18	£8	37.6%	257.7%
DFP	£11	£13	£11	£8	-13.4%	40.6%
DHSS&PS	£18	£18	£16	£13	2.3%	36.9%
DOE	£14	£13	£11	£8	6.1%	72.7%
DRD	£17	£16	£15	£11	7.9%	46.8%
DSD	£13	£15	£13	£10	-13.1%	24.4%
Major NDPBs	£15	£12	£11	£9	25.6%	67.7%
NI Prison Service	£28	£24	£17	£19	17.4%	50.7%
NIO	£16	£16	£16	£15	-1.7%	5.6%
PSNI	£17	£16	£15	£13	5.6%	27.5%
<b>Totals</b>	<b>£12</b>	<b>£12</b>	<b>£11</b>	<b>£8</b>	<b>-2.0%</b>	<b>42.3%</b>

### 3.13 Summary of renewable energy generation by Department/Public Body (KWh)

	Total Biomass KWh	Total Wind KWh	Total Hydro-electric KWh	Total Photovoltaic KWh	Total Solar Water Heating KWh	Total Ground Source Heat KWh	TOTAL RENEWABLES KWh
Assembly Commission	0	0	0	0	0	0	0
Councils	0	0	0	6,368	0	0	6,368
Councils Non Bdg Use	0	0	0	0	0	0	0
DARD	0	0	0	0	0	0	0
DCAL	0	0	0	0	0	0	0
DE	0	25,600	0	242,600	22,000	200	290,400
DEL	747,416	0	0	0	0	0	747,416
DEL Core	0	0	0	0	0	0	0
DETI	0	0	0	0	0	0	0
DFP	0	0	0	0	0	0	0
DHSS&PS	0	983,818	0	0	0	0	983,818
DOE	0	0	0	0	0	0	0
DRD	0	0	0	0	0	0	0
DRD Street Lights	0	0	0	0	0	0	0
DRD Water Process	0	0	0	0	0	0	0
DSD	0	0	0	0	0	0	0
Major NDPBs	0	0	0	0	3,000	0	3,000
NI Prison Service	0	0	0	0	0	0	0
NIO	0	0	0	0	0	0	0
PSNI	0	0	0	0	0	0	0
<b>Totals</b>	<b>747,416</b>	<b>1,009,418</b>	<b>0</b>	<b>248,968</b>	<b>25,000</b>	<b>200</b>	<b>2,031,002</b>

### 3.14 Reported building area by Department/Public Body

	1999/2000		2004/05		2005/06		2006/07	
	Total Buildings	Total Area (m <sup>2</sup> )	Total Buildings	Total Area (m <sup>2</sup> )	Total Buildings	Total Area (m <sup>2</sup> )	Total Buildings	Total Area (m <sup>2</sup> )
Assembly Commission	1	18,678	1	18,678	1	18,678	1	18,678
Councils	678	566,350	682	612,801	722	628,357	792	783,307
DARD	56	242,739	54	242,205	53	241,158	50	235,294
DCAL	4	11,905	3	11,636	3	11,636	3	11,636
DE	1331	3,144,008	1439	3,247,360	1434	3,398,929	1424	3,460,054
DEL	199	848,319	155	853,273	154	864,732	142	857,664
DEL Core	2	9,999	2	9,999	2	9,999	1	7,489
DETI	6	21,338	6	14,327	5	13,831	5	13,831
DFP	16	47,425	14	38,494	16	48,494	20	62,616
DHSS&PS	7	1,613,232	7	1,675,481	8	1,862,981	8	1,633,551
DOE	51	55,890	50	55,164	49	54,838	50	60,304
DRD	37	76,251	35	75,134	34	74,933	35	73,932
DSD	61	106,086	74	128,962	72	143,147	73	146,935
Major NDPBs	207	176,816	207	168,232	205	176,888	176	175,307
NI Prison Service	6	119,276	5	99,019	5	99,019	5	100,518
NIO	8	20,431	6	15,383	11	19,237	11	21,737
PSNI	181	278,771	169	304,057	166	315,248	151	307,035
<b>Totals</b>	<b>2851</b>	<b>7,357,514</b>	<b>2909</b>	<b>7,570,205</b>	<b>2940</b>	<b>7,982,105</b>	<b>2947</b>	<b>7,969,888</b>

### 3.15 Energy data return performance 2006/07

#### Data received by deadline

Department	Sub-department	Energy data return performance
Councils	Belfast City Council	On time
Councils	Coleraine Borough Council	On time
Councils	Derry City Council	On time
Councils	Down District Council	On time
DSD	DSD	On time
Councils	Dungannon Borough Council	On time
DEL	East Antrim Institute of Further & Higher Education	On time
Councils	Fermanagh District Council	On time
DEL	North West Institute of Further & Higher Education	On time
DEL	Newry & Kilkeel Institute of Further & Higher Education	On time
DEL	Omagh College of Further & Higher Education	On time
Councils	Omagh District Council	On time
Major NDPBs	Probation Board for Northern Ireland	On time
DEL	Queens University of Belfast	On time
DE	South Eastern Education & Library Board	On time
DEL	St Mary's University College	On time
DRD	Water Service Processing	On time
DETI	DETI	On time
DRD	Street Lighting	On time

#### Up to 75 days late

Department	Sub-department	Number of days late
DEL	University of Ulster	3
Councils	Antrim Borough Council	13
PSNI	PSNI	14
Councils	Armagh City Council	18
DRD	DRD	33
DE	Southern Education & Library Board	33

<b>Department</b>	<b>Sub-department</b>	<b>Number of days late</b>
DARD	DARD	42
Councils	Ards Borough Council	45
DE	North Eastern Education & Library Board	46
DEL	Stranmillis University College	58
DHSSPS	Health & Social Care	75
DHSSPS	NIFRS	75

**Over 75 days late**

<b>Department</b>	<b>Sub-department</b>	<b>Number of days late</b>
Councils	Newtownabbey Borough Council	77
Councils	Cookstown District Council	81
DHSSPS	DHSSPS Core	87
DFP	DFP	96
DEL	North East Institute of Further & Higher Education	97
DE	Western Education & Library Board	97
DOE	DOE	99
Councils	Moyle District Council	101
DEL	East Down Institute of Further & Higher Education	102
DEL	Lisburn Institute of Further & Higher Education	103
Councils	Strabane District Council	103
DEL	Fermanagh College	104
Councils	North Down Borough Council	104
DEL	North Down Ards Institute of Further & Higher Education	123
DEL	Castlereagh College of Further & Higher Education	124
Major NDPBs	NIHE	139
NIO	NIO	139
DE	Belfast Education & Library Board	150
Major NDPBs	Audit Office	151
NIPS	Prisons	161
DE	Rathgael Complex	180
DE	Voluntary Grammar Schools – Grant Maintained Integrated	180

Department	Sub-department	Number of days late
	Schools	
DE	Waterside House	180
Councils	Castlereagh Borough Council	185
DCAL	DCAL	195
Councils	Ballymoney Borough Council	199
Councils	Limavady Borough Council	199
Councils	Ballymena Borough Council	203
DOE	Environment & Heritage Service	213
Major NDPBs	PRONI	216
Councils	Newry & Mourne District Council	217

**No data returned**

Department	Sub-department	Energy data return performance
DEL	Armagh College	Not returned
Councils	Banbridge District Council	Not returned
DEL	Belfast Institute of Further & Higher Education	Not returned
Councils	Carrickfergus Borough Council	Not returned
DEL	Causeway Institute of Further & Higher Education	Not returned
Councils	Craigavon Borough Council	Not returned
DEL	DEL	Not returned
DEL	East Tyrone College of Further & Higher Education	Not returned
DEL	Limavady College	Not returned
Councils	Lisburn City Council	Not returned
Councils	Magherafelt District Council	Not returned
Major NDPBs	Museums	Not returned
Major NDPBs	Public libraries	Not returned

**No sites on which to report**

Department	Sub-department	Energy data return performance
OFMDFM	OFMDFM	No sites in 06/07

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