



Sub-national non-domestic electricity consumption in Northern Ireland (experimental data) 2011

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This factsheet presents the findings of the latest analysis of non-domestic electricity consumption data in Northern Ireland at District Council level. It is intended that the information included in this factsheet will enable central, local and regional bodies in Northern Ireland to understand and explore patterns of electricity usage in local areas and enable them to target and monitor policies more effectively.

The 2011 data included in this factsheet follow on from similar exercises carried out for 2009 and 2010 data published on the DECC website:

<https://www.gov.uk/government/organisations/department-of-energy-climate-change/series/sub-national-electricity-consumption-in-northern-ireland>. It is important to note that these data are classified as experimental statistics and should be viewed and used with care. These data supplement the existing Great Britain sub-national electricity consumption estimates¹, although the Northern Ireland series are not directly comparable to the GB estimates due to differing data sources and time periods. Further information is available in the Methodology and Guidance booklet also available on the DECC website:

<https://www.gov.uk/government/publications/regional-energy-data-guidance-note>.

To produce this analysis DECC are dependent on the excellent co-operation of the electricity industry in Northern Ireland and the Department of Enterprise, Trade and Investment in Northern Ireland (DETINI), who we would like to thank once again for their continuous help and assistance. We welcome all feedback from the users of this data, and if you have any queries or comments on the content of this factsheet, please send these to energyefficiency.stats@decc.gsi.gov.uk.

Background information

On 1 November 2007, the Single Electricity Market (SEM) was introduced to Northern Ireland to help provide a stable, transparent and competitive energy market. This reflected the opening up of markets under EC legislation and built upon the privatisation of the electricity supply market following the Electricity (Northern Ireland) Order 1992.

¹ Sub-national electricity consumption datasets for Great Britain can be accessed here: <https://www.gov.uk/government/statistical-data-sets/regional-and-local-authority-electricity-consumption-statistics-2005-to-2011>.



In 2011, eight supply companies (Airtricity, Board Gais, Budget Energy, Power NI (formerly named NIE Energy), Electric Ireland (formerly named ESBie), Energia, Firmus Energy Supply Ltd and Quinn Energy Supply Ltd operated in the non-domestic market in Northern Ireland. To produce these 2011 estimates, data were derived from information held on Power NI's Distribution Use of System (DUoS) Billing system. These data largely cover the 12 month period 1 April 2011 to 31 March 2012 and are based on billed units to final consumption at the point when it was derived.

The sub-national electricity consumption statistics illustrated in this factsheet cover the 26 District Council levels of Northern Ireland. This dataset excludes electricity produced by companies that generate and consume their own electricity without it passing over the public distribution network. Despite the efforts to obtain complete geographical information, there are still some addresses that do not contain sufficient information to be able to allocate them to a district with any degree of accuracy. These meters, and the associated consumption, are aggregated into an 'unallocated' row at the end of the published sheets and represent 1 per cent of total Northern Ireland consumption (231 meters, with average consumption per meter of 107,164 kWh). It is important to note the consumption values and the number of meters in each region is dependent upon the ability to match meters to their respective areas. Therefore changes in consumption may not reflect an actual change in consumption/meters, but improvements in matching techniques.

The use of administrative data from the electricity industry brings considerable benefits in enabling this level of disaggregation of electricity use to be produced. However, there are some limitations. The meter point data used in this analysis consists of both actual readings and estimated readings. From year-to-year some meter readings change from actual to estimated and vice-versa, which can cause extreme values to be created when an estimate is corrected. The dataset also includes some meter points which have low consumption. These meter points represent sites that have been vacant for a short period of time, landlord's supply (e.g. lights in apartment blocks etc.), sites that have been de-energised throughout the year and also meter points in church halls, playing fields and car parks where use is less than in industry. There are also some meter points which have no consumption attached to them. These are still included with this analysis.

It is important to note that making comparisons between years at a District Council level can be affected by several factors. Change in average consumption between 2010 and 2011 at District Council level can be attributed to several reasons including the impact of the recession, change of premise usage, new sites, closed sites and sites generating their own power. The ability to allocate consumption to a district is dependent upon the quality of the address information (as discussed earlier), which will impact total and average consumption for each region, however nationally this has little impact.



Comparison with the IDBR dataset

In 2011, data from the Inter-Departmental Business Register (IDBR) estimated a total of 67,955² businesses in Northern Ireland which were either VAT registered or operating a Pay As You Earn (PAYE) scheme. In comparison, the dataset analysed in this factsheet contains 60,584 business meters (compared to 59,878 in 2010). The difference in the number of businesses can partially be attributed to businesses working out of domestic premises, such as sole traders.

The IDBR highlighted Northern Ireland's main sectors as agriculture, forestry & fishing sector (24 per cent of businesses), the construction sector (16 per cent) and the retail sector (9 per cent) which accounted for half of total businesses. Of the total 67,955 businesses held on the IDBR, 89 per cent had less than 10 employees, 9 per cent with 10 to 49 employees and 2 per cent with 50 or more employees. Further supporting data from the IDBR can be found at the following website: www.detini.gov.uk/deti-stats-index/stats-surveys/stats-inter-dept-bus-register.htm.

Total annual non-domestic electricity consumption by district

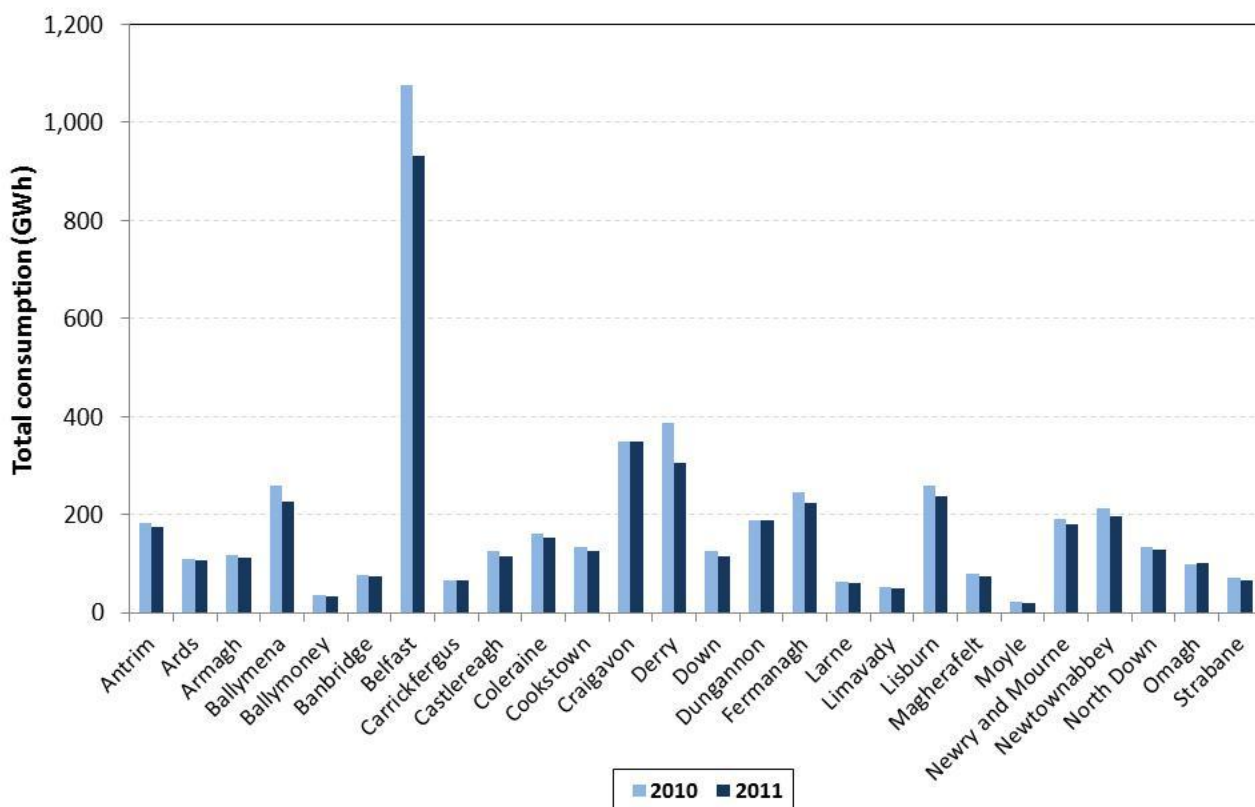
Total annual non-domestic electricity consumption in Northern Ireland in 2011 was estimated to be 4,560 Gigawatt hours (GWh), compared to 4,893 GWh in 2010. Chart 1 below shows the total annual non-domestic electricity consumption per meter in each district in 2010 and 2011.

Belfast was the largest consuming district, responsible for 20 per cent (931 GWh) of non-domestic consumption and 19 per cent of non-domestic meters. Craigavon was the second largest consuming district, responsible for 8 per cent of non-domestic electricity consumption at 349 GWh. Moyle was the lowest consuming district of non-domestic consumption in Northern Ireland, responsible for 0.5 per cent of total non-domestic consumption at 21 GWh.

² There were an estimated 68,525 businesses at March 2010.



Chart 1 Total annual non-domestic electricity consumption at District Council level, 2010 and 2011



Average non-domestic consumption by district

Average non-domestic consumption is a function of the number of non-domestic sites in an area, the type of business and the volume of electricity they use. It is calculated by dividing total consumption by the number of electricity meters, thus reflecting mean consumption per meter rather than per business, as there are situations in which a business has more than one meter.

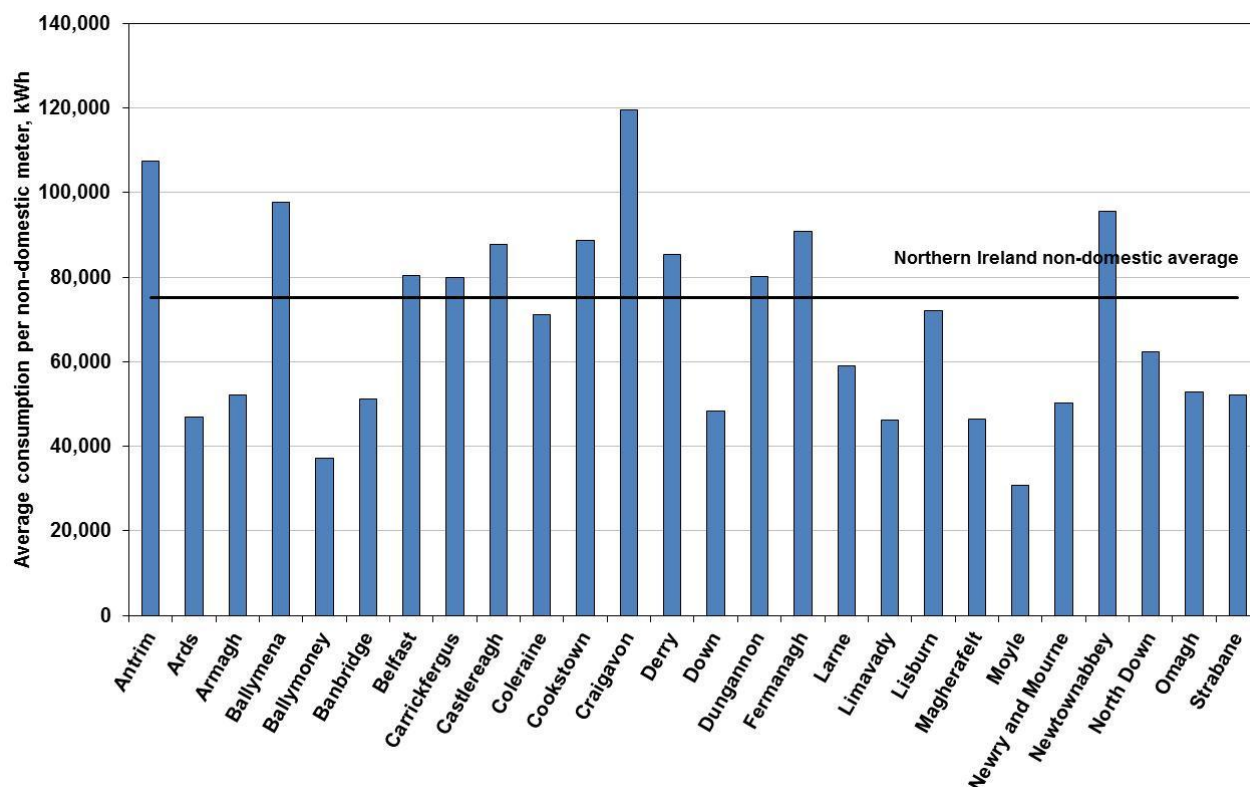
Chart 2 shows average non-domestic consumption per meter by district. Average non-domestic electricity consumption per meter in Northern Ireland was 75,274 kilowatt hours (kWh) in 2011, 8 per cent lower than in 2010 (81,714 kWh per meter). All districts (apart from Omagh) saw a decrease in average consumption, however these decreases varied from 23,840 kWh (22 per cent) for Derry to 414 kWh in Craigavon (0.3 per cent). Omagh increased average consumption by 181 kWh (0.3 per cent), however this may be due to a higher number of meters allocated to Omagh compared with previous years.



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The district with the highest average non-domestic electricity consumption per meter was Craigavon at 119,620 kWh per meter. Moyle had the lowest consumption per meter at 30,901 kWh which reflected both the small population of businesses and the industrial mix.

Chart 2 Average non-domestic electricity consumption per meter at District Council level, 2011



Profile types

The electricity consumption data used in this factsheet are generated from both Half Hourly (HH) meters, which are primarily from larger commercial/industrial customers, and Non-Half Hourly (NHH) meters, which are predominately from small and medium commercial/industrial customers. The NHH meters can also be split down into a further three tariffs namely:

- ‘Commercial Economy 7 and Off-Peak’;
- ‘Commercial Unrestricted and Commercial Evenings and Weekends’ and;
- ‘Unmetered Supplies’ (UMS).

In Northern Ireland in 2011, there were 9,889 HH meters with an average consumption of 359,290 kWh per meter. This was a decrease of 10 per cent from 398,553 kWh in 2010. NHH consumers had an average consumption of 19,872 kWh in 2011 (a decrease of 7 per cent from 21,465 kWh in



2010). The differing level of consumption reflects the varying economic activity in each region, with each activity having a different level of energy intensity³. A high level of average non-domestic consumption tends to occur where there are a small number of relatively larger consumers which dominate the area, whilst a low level of non-domestic consumption may reflect the rural characteristics of an area.

There were 6,380 commercial economy 7 and off-peak meters with an average of 24,075 kWh per meter and 44,154 commercial unrestricted and commercial evenings and weekends meters with an average of 16,466 kWh per meter. There were also an additional 161 UMS which are unallocated to district level. These UMS are mainly attributed to street light and traffic lights. These meters are included in the Northern Ireland total and are classified as unallocated in the sub-national breakdown.

Chart 3 compares the percentage of total meters for each tariff in relation to their respective proportion of electricity consumption in the non-domestic sector in Northern Ireland. The HH meters were responsible for over three-quarters of total consumption, but made-up only 16 per cent of total non-domestic meters. The commercial unrestricted and commercial evening and weekend tariff meters were responsible for 16 per cent of non-domestic consumption but constituted 73 per cent of total meters.

Similar to Chart 3, Chart 4 shows total consumption split by HH and NHH meters. As expected, half hourly meters dominate each district but the ratio varies from 88 per cent of total non-domestic consumption coming from half hourly meters in Craigavon to only 55 per cent in Moyle. On average 78 per cent of non-domestic consumption was from half hourly meters.

³ For further information about the economic activity in each region, please refer to the IDBR: www.detini.gov.uk/deti-stats-index/stats-surveys/stats-inter-dept-bus-register.htm.

Chart 3 Proportion of total consumption and total number of meters by profile, 2011

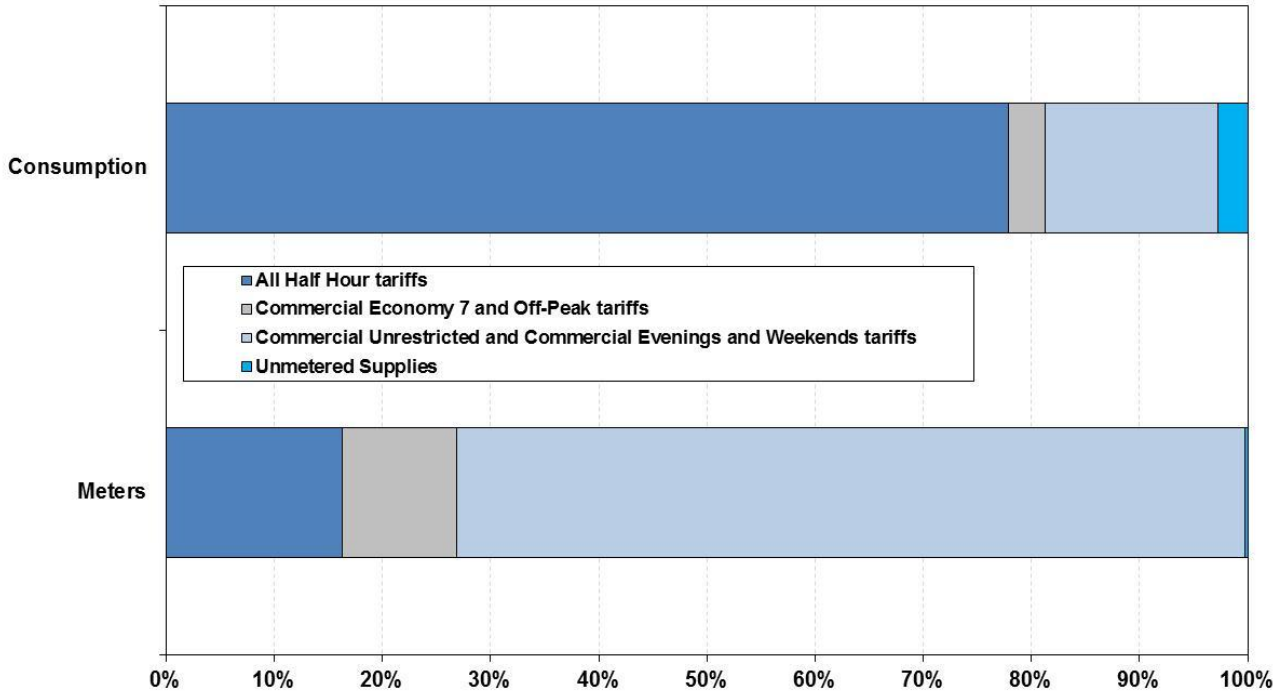
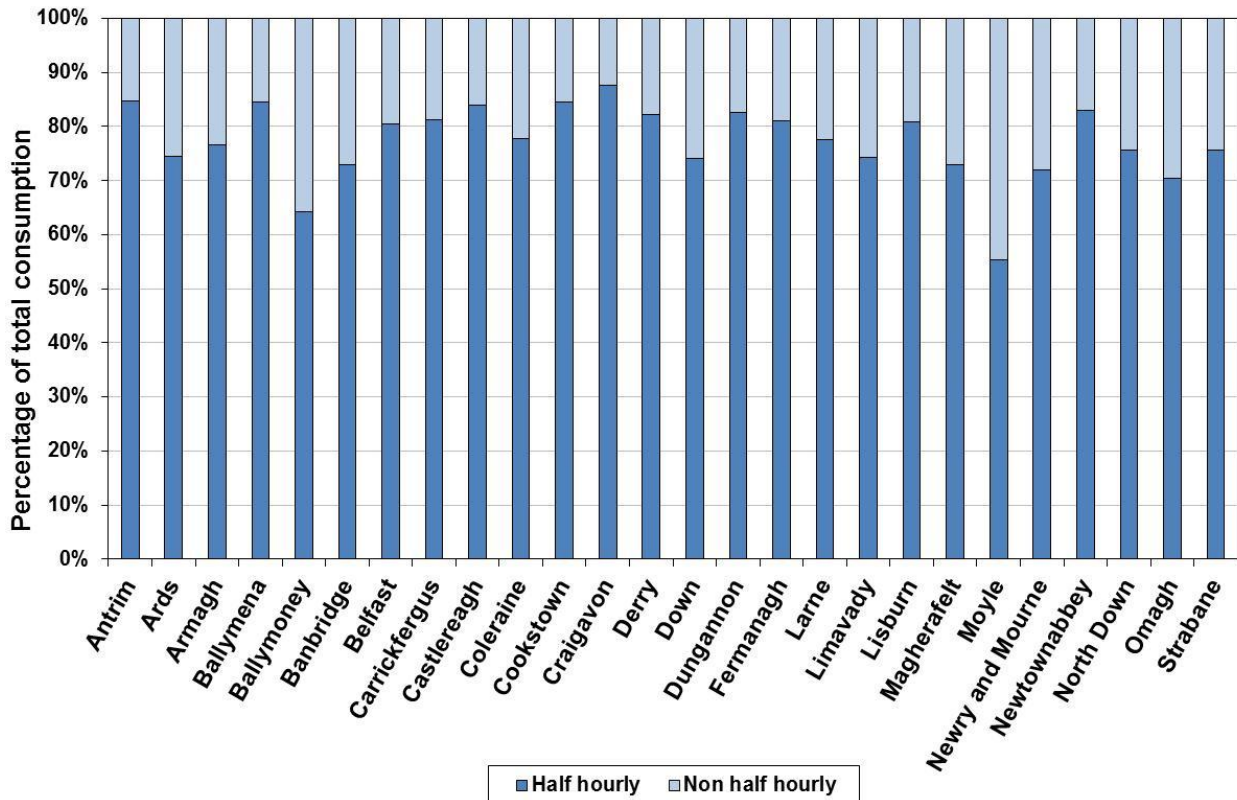


Chart 4 Half-hourly and non-half hourly non-domestic consumption by district, 2011

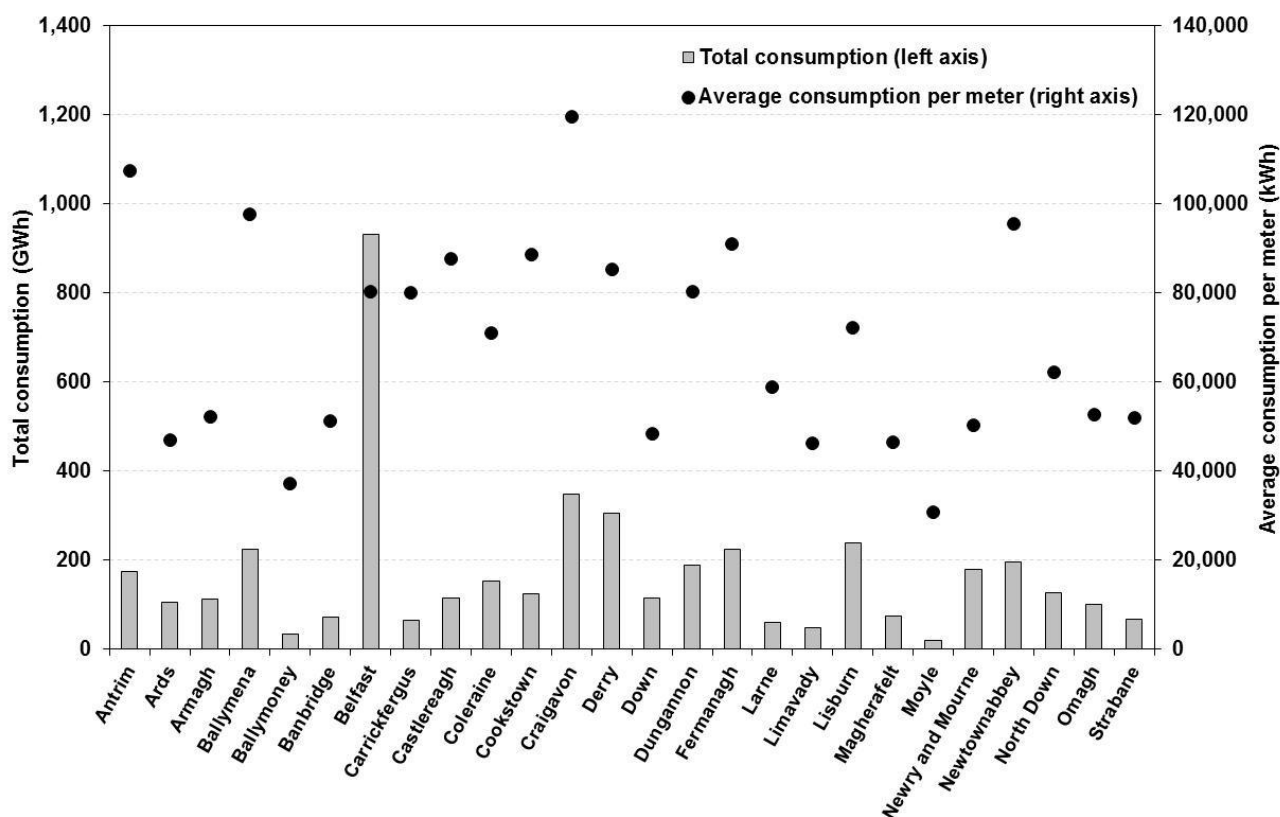




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Chart 5 shows total consumption for each of the 26 districts. The chart also displays average non-domestic consumption per meter. Similar to average non-domestic electricity consumption, the variation of total consumption between regions reflects the differing levels of dependence on different economic sectors and their respective levels of energy intensity. Energy consumption is also influenced by installed energy efficient measures, technology and differing fuel mix breakdowns.

Chart 5 Total and average non-domestic consumption by district, 2011



The mean value of a dataset can be affected by extreme values of particular points within the dataset. For example, one energy intensive site could increase the mean value of a particular district. The median (the middle consumption value when the data are arranged in increasing size), provides another measure of location but are impacted less by the extreme values. Both mean and median values at Council District level are available in the table at the end of this factsheet.

When all half hourly meter point consumption values for Northern Ireland are listed in order of magnitude the middle value is 74,976 kWh, compared to 8,098 kWh for non-half hourly meters. These are lower than the mean values highlighting the impact of high consuming meter points on each of the districts.



Northern Ireland sub-national consumption data on road transport fuels for the years 2005 to 2011 can be accessed here: <https://www.gov.uk/government/organisations/department-of-energy-climate-change/series/road-transport-consumption-at-regional-and-local-level>.

Consumption data relating to residual (i.e. non-electricity, non-gas and non-road transport) fuels for the years 2005 to 2010 can be found on the DECC website here: <https://www.gov.uk/government/organisations/department-of-energy-climate-change/series/sub-national-consumption-of-other-fuels>.

Sub-national non-domestic electricity consumption in Northern Ireland (2011)
(Experimental statistics)

Table **Sub-national non-domestic electricity consumption statistics 2011 (Experimental Statistics)**

District Council	Half hourly				Non Half hourly				All non-domestic		
	Total consumption (GWh)	Total number of meters	Mean consumption per meter (kWh)	Median consumption per meter (kWh)	Total consumption (GWh)	Total number of meters	Mean consumption per meter (kWh)	Median consumption per meter (kWh)	Total consumption (GWh)	Total number of meters	Mean consumption per meter (kWh)
Antrim	148	276	537,719	89,382	27	1,355	19,758	40,080	175	1,631	107,408
Ards	79	417	188,410	46,204	27	1,833	14,649	6,761	105	2,250	46,853
Armagh	86	397	217,319	55,232	26	1,764	14,956	6,041	113	2,161	52,132
Ballymena	191	348	547,835	94,325	35	1,959	17,673	8,452	225	2,307	97,645
Ballymoney	22	147	150,396	24,817	12	778	15,828	7,171	34	925	37,214
Banbridge	54	219	244,794	53,852	20	1,219	16,340	7,714	74	1,438	51,132
Belfast	749	1,712	437,591	112,558	302	9,955	30,314	9,296	1,051	11,667	90,077
Carrickfergus	53	111	476,675	96,990	12	703	17,423	7,712	65	814	80,048
Castlereagh	97	279	346,769	112,356	19	1,036	17,944	9,122	115	1,315	87,710
Coleraine	120	347	345,638	74,548	34	1,826	18,873	9,706	154	2,173	71,053
Cookstown	106	269	392,307	57,878	19	1,139	17,008	7,638	125	1,408	88,709
Craigavon	306	466	656,766	100,249	43	2,459	17,641	8,263	349	2,925	119,464
Derry	251	526	476,872	87,152	54	3,048	17,721	8,140	305	3,574	85,296
Down	85	465	182,447	39,451	30	1,899	15,596	7,723	114	2,364	48,416
Dungannon	156	399	391,667	51,402	33	1,962	16,883	7,656	189	2,361	80,220
Fermanagh	182	428	425,578	53,017	43	2,045	20,926	7,078	225	2,473	90,959
Larne	47	154	303,682	38,953	14	869	15,579	6,964	60	1,023	58,950
Limavady	36	187	194,252	30,909	13	869	14,412	6,656	49	1,056	46,259
Lisburn	193	559	344,884	88,548	45	2,744	16,553	7,566	238	3,303	72,120
Magherafelt	54	246	221,220	72,276	20	1,363	14,834	6,908	75	1,609	46,388
Moyle	12	115	100,193	12,540	9	559	16,608	6,792	21	674	30,869
Newry and Mourne	130	583	222,936	55,390	50	3,010	16,777	7,204	180	3,593	50,228
Newtownabbey	164	337	485,333	128,526	33	1,728	19,320	10,520	197	2,065	95,372
North Down	97	345	280,507	94,908	31	1,713	18,140	9,145	128	2,058	62,123
Omagh	70	302	233,340	63,954	30	1,594	18,631	8,512	100	1,896	52,830
Strabane	51	221	229,806	43,016	16	1,069	15,308	7,240	67	1,290	52,055
Unallocated	16	34	458,567	88,575	9	197	46,515	4,536	25	231	107,164
Grand Total	3,553	9,889	359,290	74,976	1,007	50,695	19,872	8,098	4,560	60,584	75,274