

# NORTHERN IRELAND HOUSEHOLD DOMESTIC ENERGY EXPENDITURE 2013-15 to 2018-20

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## Summary

The latest data indicate that 11% of all weekly household expenditure, transfer and savings in Northern Ireland is on energy (electricity, gas, other fuels/home heating oil) and transport fuel (petrol and diesel). There has been no statistically significant change in this proportion over time

- Households in Northern Ireland have the lowest level of overall weekly household expenditure compared to households in England, Scotland and Wales
- Households in Northern Ireland direct a higher share of their household expenditure to energy and spend more on energy compared to households in England, Scotland and Wales
- Around half of all types of household energy expenditure is on petrol and diesel which contributes, along with expenditure on home heating oil, to higher energy expenditure in Northern Ireland households:
  - Around half of weekly household expenditure on energy is on petrol and diesel
  - Higher total expenditure on energy, and a higher share of all expenditure on energy, by Northern Ireland households, is explained largely by the levels of expenditure on petrol and diesel and on home heating oil
  - The quantum and pattern of energy expenditure for any region will vary due to a range of factors. For example, whilst households in Northern Ireland spend more on energy related to private transport through expenditure on petrol and diesel, they spend respectively less on transport services such as rail and bus travel

## Introduction

The Living Costs and Food survey (LCF) <sup>i</sup> conducted by the Office for National Statistics collects information on spending patterns and the cost of living that reflect household budgets. It is conducted throughout the year, across the whole of the UK, and is the most significant survey on household spending in the UK. The survey provides essential information for key social and economic measures, such as household spending patterns for the consumer prices index (CPI) and for Gross Domestic Product figures. Detailed analysis of household expenditure including regional breakdowns are reported on in the Family Spending in the UK reports<sup>ii</sup> derived from the data collected in the LCF survey.

The LCF survey collects information on weekly expenditure by households on different forms of energy as one component of a comprehensive range of items of all household expenditure. Within the Family Spending in the UK reports, and for country and regional analyses within the UK, the data for analyses is aggregated over three financial years given the smaller samples sizes at these geographic levels. So, for example, the most recent regional annual estimates for 2020 aggregates the financial years ending 2018, 2019 and 2020. Aggregating annual estimates over three years and using overlapping periods in this way also acts to smooth year-on-year changes for trends over time.

Including all the expenditure items recorded and including weekly financial transfers and savings by households, it was possible to place energy expenditure by households within the context of all household expenditure and to examine both the quantum, pattern and context of household energy expenditure in Northern Ireland and to compare that regionally within the UK.

It was on this basis that a measure was proposed for use in the developing Energy Strategy to monitor changes to domestic energy expenditure pressures on households over time given the policy imperative of meeting the 2050 net zero emissions target. That measure proposed was Northern Ireland average weekly household energy expenditure as a proportion of all average weekly household expenditure, transfers and savings. Energy expenditure by households includes expenditure on electricity, gas, other fuels which in the main is home heating oil, and petrol, diesel and other motor fuels.

The household energy expenditure data from the Family Spending in the UK report used and reported here, reflects the average weekly household expenditure on energy but not the unit cost of that energy nor the level of consumption. The data therefore reflects expenditure and not specifically prices. Levels of expenditure on energy by a household will reflect the combination of the energy mix, energy price and pattern of consumption which can also be shaped by weather variation.

Monitoring this annual data over time will not only enable a perspective to be taken on the extent to which energy purchases by households in Northern Ireland change over time, but will also enable a perspective to be taken on the mix of energy purchased and how households may adapt or change their energy expenditure.

## **Method**

The LCF sample for Great Britain is drawn as a multi-stage stratified random sample with clustering using addresses on the Postcode Address File with 'small user' postcodes used as the sample frame. The GB LCF employs a two-stage sample design. Postcode sectors are used as the Primary Sampling Units (PSUs), with 18 addresses selected from each PSU to form the monthly interviewer quota.

Sampling and fieldwork in Northern Ireland are carried out by the Central Survey Unit (CSU) of the Northern Ireland Statistics and Research Agency (NISRA). In Northern Ireland the annual sample of addresses is drawn from the

NISRA Address Register (NAR). The NAR is developed within NISRA and is primarily based on the Land and Property Services (LPS) POINTER database. NISRA (CSU) select a systematic random sample of 1,000 addresses each year from the NISRA Address Register (NAR) to be representative of the private household population in Northern Ireland. The sample is stratified geographically by District Council to ensure the number of addresses drawn from each region is proportional to the number of addresses in the region. Data are collected from households via two main formats, a Computer Assisted Interview with the household and an expenditure diary provided to each individual to record details of their expenditure.

In the analysis below, energy expenditure by households includes expenditure on electricity, gas, other fuels (which is mainly home heating oil in Northern Ireland), and petrol, diesel and other motor fuels. All household expenditure includes all expenditure on commodities and services and includes life assurance, other insurance, purchase or alteration of dwellings, savings and investments, and the repayment of loans or debts.

Figures and analyses below are included for the periods 2013-15 to 2018-20 with additional analysis for the latest period. For indicative purposes, Confidence Intervals are calculated and reported here for the household energy expenditure central estimate consistent with the systematic random sampling approach in Northern Ireland.

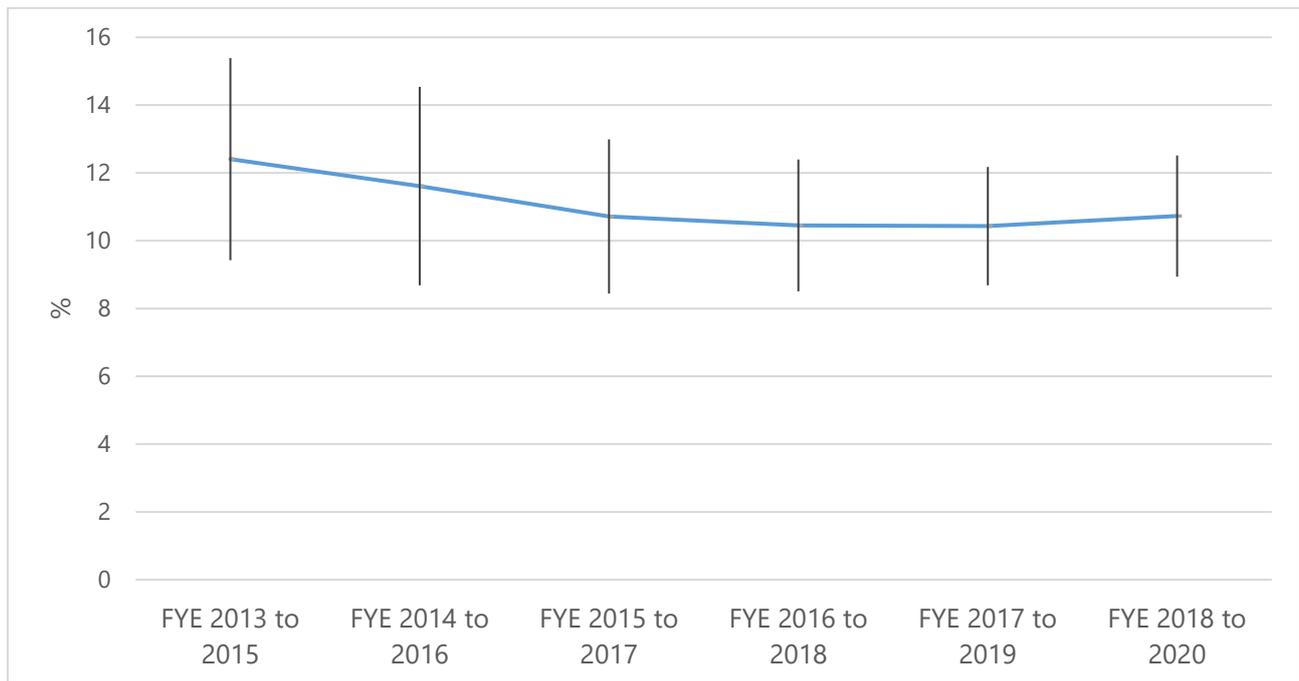
## Results

Headline results for the average weekly household energy expenditure as a proportion of all average weekly household expenditure, transfers and savings are shown in Table 1 and Figure 1.

**Table 1: Average weekly household energy expenditure as a proportion of all average weekly household expenditure, transfers and savings in Northern Ireland**

Financial Years Ending	Average weekly household energy expenditure as a proportion of all average weekly household expenditure, transfers and savings	Confidence Intervals (95%)
<b>2013 to 2015</b>	12%	+/- 3%
<b>2014 to 2016</b>	12%	+/- 3%
<b>2015 to 2017</b>	11%	+/- 2%
<b>2016 to 2018</b>	10%	+/- 2%
<b>2017 to 2019</b>	10%	+/- 2%
<b>2018 to 2020</b>	11%	+/- 2%

**Figure 1: Average weekly household energy expenditure as a proportion of all average weekly household expenditure, transfers and savings in Northern Ireland**



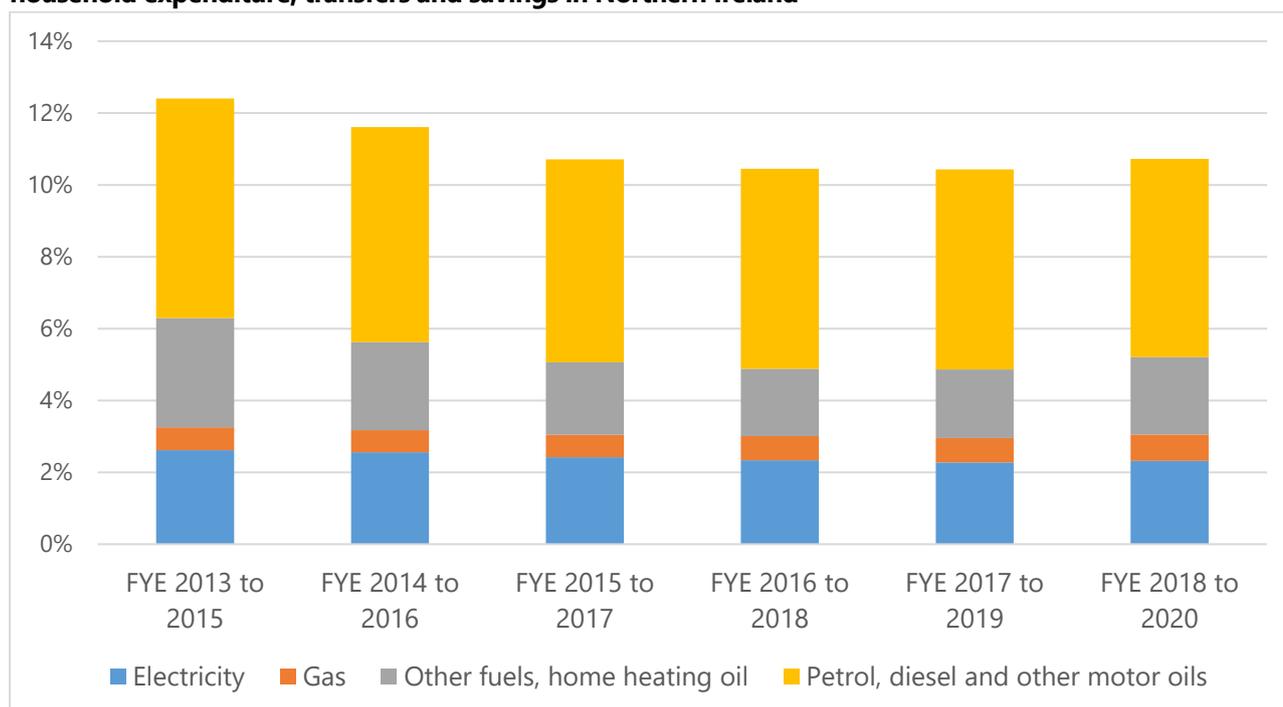
As Table 1 and Figure 1 show, over time, the proportion of all average weekly household expenditure in Northern Ireland directed towards energy expenditure has varied little at around 11%. Given these estimates are sourced from a household sample survey, they have associated Confidence Intervals within which the 'true' estimate would be expected to lie. On that basis, there has been no statistically significant change to the overall share of total household expenditure devoted to energy over time.

It is possible that the estimate for overall expenditure on energy could hide changes over time to the mix of household expenditure on different types of energy. Figure 2 below illustrates the composition of the share of all Northern Ireland household energy expenditure on different forms of energy over time.

Around 6% of all average weekly household energy expenditure in Northern Ireland is on petrol, diesel and other motor fuels. Expenditure on electricity and on other fuels (which comprises home heating oil in the main) each account for 2% of all weekly household expenditure. Average weekly household expenditure on gas accounts for a further 1% of all household outgoings.

On that basis, the relative mix of the type of energy purchased and its share of all household outgoings in Northern Ireland has remained relatively stable over time.

**Figure 2: Average weekly household expenditure on energy type as a proportion of all average weekly household expenditure, transfers and savings in Northern Ireland**



**Table 2: Average weekly household energy expenditure as a proportion of all average weekly household expenditure, transfers and savings – Regional comparisons (2018 to 2020)**

	UK	England	Wales	Scotland	Northern Ireland
<b>Average weekly household energy expenditure as a proportion of all average weekly household expenditure, transfers and savings</b>	7%	6%	8%	8%	11%
<b>Of which...</b>					
<b>Electricity</b>	2%	2%	2%	2%	2%
<b>Gas</b>	1%	1%	2%	2%	1%
<b>Other fuels, home heating oil</b>	0%	0%	0%	0%	2%
<b>Petrol, diesel and other motor oils</b>	3%	3%	4%	3%	6%
<b>Average weekly household energy expenditure</b>	£46	£46	£48	£44	£58
<b>Average weekly total household expenditure, transfers and savings</b>	£697	£718	£614	£590	£544

Table 2 provides regional comparisons for the latest 2018 to 2020 period on the share of type of energy purchased of all household outgoings in addition to the average weekly expenditure amount on all energy and for all household outgoings.

At 11% of all household expenditure, Northern Ireland's share of weekly expenditure on energy is the highest of all four Nations within the UK. Compared to the other three nations, Northern Ireland's households, on average, spend

a higher share of all weekly expenditure on petrol, diesel and other motor fuels, and a higher share on other fuels which mainly comprises home heating oil. No differences between regions were apparent on electricity purchases as a share of all outgoings nor on gas when rounded to whole percentages.

It is notable that the average weekly outgoings of Northern Ireland’s households in 2018 to 2020 at £544 was the lowest of all four nations (and some 22% below the UK average), with the value of average weekly household expenditure on all energy at £58, the highest (and some 26% above the UK average).

**Figure 3: Average weekly household energy expenditure by energy type – Regional comparisons (2018 to 2020)**

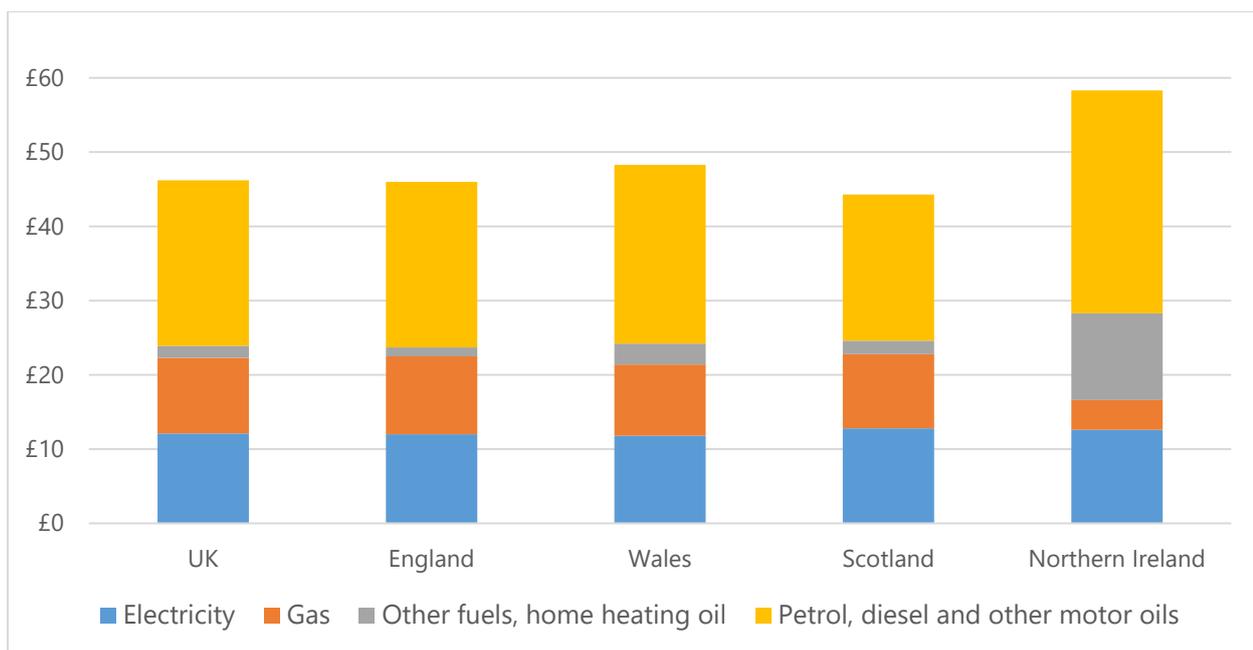


Figure 3 compares the average weekly amount of household spend on different types of energy across the four nations of the UK in the 2018 to 2020 period. The level of spend on electricity across the four nations is very similar. As would be expected given the relatively new status of the natural gas market in Northern Ireland, the value of household expenditure across England, Scotland and Wales on gas is very similar, with Northern Ireland household expenditure the lowest.

The level of reliance on home heating oil in Northern Ireland is reflected in the value of weekly household expenditure on other fuels which is not replicated in the other three nations. Northern Ireland households have the highest amount of weekly expenditure on petrol, diesel and other motor oils compared to the three other nation accounting for just over half of average weekly household energy expenditure in Northern Ireland.

The comparatively higher levels of weekly expenditure by Northern Ireland households on petrol and diesel is accounted for by a range of factors. One of these factors is the availability and use of other forms of transport which

would represent an indirect form of energy consumption and a displacement of direct energy consumption through private vehicle use.

Table 3 shows the average weekly household expenditure value on different forms of transport services across the four nations. Households in Wales and Northern Ireland have the lowest levels of expenditure on transport services. Households in Northern Ireland spend the least on rail and bus services. Expenditure on 'other travel and transport' which includes international air fares, car leasing, and taxis, is the highest transport service expenditure across all four nations.

**Table 3: Average weekly household transport services expenditure (2018 to 2020)**

	UK	England	Wales	Scotland	Northern Ireland
<b>Transport services</b>	£21	£22	£13	£20	£14
<b>Of which...</b>					
<b>Rail and tube fares</b>	£5	£5	£2	£3	£1
<b>Bus and coach fares</b>	£2	£2	£1	£2	£1
<b>Combined fares</b>	£1	£1	*	*	*
<b>Other travel and transport</b>	£14	£14	£10	£15	£12
<b>Average weekly household energy expenditure</b>	£46	£46	£48	£44	£58
<b>Average weekly household energy and transport services expenditure</b>	£67	£68	£61	£64	£72

Combining household expenditure on both energy and transport services reduces the gap between Northern Ireland and UK expenditure, from Northern Ireland households spending £12 more than UK households as a whole on energy, to Northern Ireland households spending £5 more on energy and transport services combined than UK households as a whole.

## Conclusions

For Northern Ireland households, the share of total weekly expenditure accounted for by energy has, over recent times, remained relatively stable at around 11%. That share of all expenditure accounted for by energy is, however, higher in Northern Ireland for the 2018 to 2020 period than in the other three nations of the UK.

The mix of energy purchases (electricity, gas, other fuel/home heating oil, and petrol and diesel) and its share of all household outgoings in Northern Ireland has remained relatively stable over time.

The higher level and share of energy expenditure by households in Northern Ireland can be explained both by higher overall expenditure on energy, particularly other fuel/home heating oil and petrol and diesel, in addition to a lower overall level of household expenditure transfers and savings.

The quantum and pattern of energy expenditure for any region will vary due to a range of factors. For example, whilst households in Northern Ireland spend more on private transport through expenditure on petrol and diesel, they spend respectively less on transport services such as rail and bus travel.

Development work is ongoing in relation to these estimates, a component of which, will be further methodological discussions with the Office for National Statistics.

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<sup>i</sup> For further information on the Living Costs and Food survey see: [Living costs and food survey - Office for National Statistics \(ons.gov.uk\)](https://www.ons.gov.uk/living-costs-and-food)

<sup>ii</sup> For further information on the Family Spending in the UK Reports see: [Family spending in the UK - Office for National Statistics \(ons.gov.uk\)](https://www.ons.gov.uk/family-spending)