

The logo for CER (Commission for Energy Regulation) features the letters 'CER' in a bold, blue, sans-serif font. To the right of the letters are three horizontal lines of varying lengths, with the top line being the longest and the bottom line being the shortest, all in a lighter blue color.

Commission for Energy Regulation
An Coimisiún um Rialáil Fuinnimh

Review of Typical Domestic Consumption Values for Electricity and Gas Customers

Decision Paper

Reference:

CER/17042

Regulating Water, Energy and Energy Safety in the Public Interest

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Executive Summary

Overview of typical consumption figures

This decision paper follows on from the consultation paper on typical domestic consumption values for electricity and gas customers (CER17003) published on the 11th of January 2017. The consultation period ended on the 13th of February 2017 with 9 responses received. This paper outlines the CER's decision with respect to revised typical consumption values for electricity and gas retail customers which are more reflective of consumption data seen from Irish energy customers.

The CER requires price comparison websites and suppliers to use a common industry figure for annual average consumption values for gas and electricity. These figures can be used to calculate the estimated annual average bill of a gas or electricity customer. The estimated annual average bill from such a calculation can be used by customers, price comparison websites or suppliers to compare tariff offers or other marketing comparisons across different suppliers. The current figures of 5,300 kWh for electricity and 13,800 kWh for gas have not been revised in several years and required revision.

The CER conducted a review of these figures with the assistance of the Meter Registration System Operator (MRSO), the Meter Data Services (MDS) department within GNI and the Gas Point Registration Operator (GPRO) who have access to actual metered data for the networks.

The consultation paper presented an outline of the methodologies applied to calculate the average consumption figures, and the CER's minded to position on mean and median typical consumption figures and a proposed breakdown into low, medium and high figures.

Consultation Proposals

The consultation paper indicated that the CER was minded to implement a median value to calculate the typical annual consumption figures, with figures of 3,500kWh for electricity and 11,150kWh for gas respectively; both significantly lower than the current figures.

A number of responses received identified the potential difficulty in communicating the use of the median instead of the mean to customers, and the subsequent change from the current value for electricity in particular. Respondents also indicated that the mean figure would not present the same level of change and may be less confusing to customers in terms of the changes to typical annual bills and the level of savings that can be made. The CER has considered this feedback and decided to use the mean figure for both gas and electricity for this review period as they are the clearest and least confusing for end customers, in particular taking into account the large step change that is occurring in typical consumption figures.

The consultation paper also recommended that price comparison web sites provide a low, medium and high consumption value for customers, in order to enable ranking of tariffs for customers across various consumption bands. Responses received from price comparison websites in particular highlighted the difficulty customers may face in identifying whether their own individual consumption falls into a low, medium or high consumption band without linking these to more tangible factors such as dwelling size or the type of meter installed in their dwelling.

Based on this feedback the CER has decided to use a single revised mean value for gas and electricity for price comparison websites. Nonetheless, this paper details additional analysis undertaken across the different electricity and gas consumption bands. The CER will be engaging with the accredited price comparison websites to see how best such information can be utilised for energy offering purposes.

CER Decision

Based on the range of feedback received through the consultation, from price comparison websites, Non-Governmental Organisations, suppliers and ESBN, the CER has reviewed the options presented in its consultation paper and has decided to use a single revised average value for typical consumption for both electricity and gas. These figures are **4,200 kWh** for electricity **and 11,000 kWh** for gas¹.

As part of this decision paper an obligation is now being placed on CER accredited price comparison web sites and relevant industry stakeholders, to update the common industry figures to the revised figures by **1st of August 2017**. The estimated annual bill must be calculated using these numbers from this date.

The CER will begin using this revised figure in its reports from the publication of this decision paper. Suppliers and price comparison websites can begin to use the revised figures as soon as is practical in all case where consumption is assumed.

The implementation deadline of the 1st of August is to give time for stakeholders to implement these figures. In addition, given that the CER will update these figures every two years going forward, implementation of these revised figures in August matches GNI and ESBN's ability to provide information on consumption data for the preceding year.

¹ All figures in this decision paper have been rounded for ease of reference

Public/ Customer Impact Statement

As part of its retail function the CER provides typical annual consumption values which can be used on price comparison websites and to compare tariff offers across different suppliers. These figures are currently 5,300 kWh for electricity customers and 13,800 kWh for gas customers. These figures have not been updated for a significant period of time, and the CER undertook a review of the figures in 2016, with a view to updating the average consumption figures to a more up to date figure. Following consultation, the CER has now revised these figures to **4,200 kWh** for electricity and **11,000 kWh** for gas. This represents a decrease of 21% for the electricity average consumption figure and a decrease of 20% for average gas consumption.

The CER also uses these values for internal market monitoring of prices and in its retail market reports. The lower typical consumption figures will mean that lower annual average bills will be presented, in turn changing the figures for the savings that can be made from switching between the most expensive standard tariff and least expensive discount tariff.

The use of a common energy consumption figure that is uniformly used by all suppliers and (accredited) price comparison websites can assist customers to display offers compare the supplier's tariff offers and in turn select a supplier tariff offer that best meets their preference in the event that a customer does not know their actual consumption details. The annual consumption value is used by accredited price comparison web sites and must be used to display offers and will be used by suppliers to calculate the estimated annual bill or the saving a customer can make on a particular tariff offer.

As part of this decision paper, the CER has published an accompanying infographic to help customers understand electricity and gas consumption values better, and the impact of the changes presented in this decision paper.

It is important to note that these changes are separate to any price changes in electricity and gas tariffs which remain unaffected by this decision.

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Glossary of Terms and Abbreviations

Abbreviation	Meaning
MRSO	Meter Registration System Operator
FAR	Forecasting, Allocation and Reconciliation; the process to determine gas demand requirements for the gas network
GPRO	Gas Point Registration Operator
MDS	Meter Data Services Department
Mean	The average value of a set of numbers
Median	The value separating the higher half of a data sample, a population, or a probability distribution, from the lower half

1. Introduction

1.1 Background

1.1.1 Introduction

The Commission for Energy Regulation (CER) is Ireland's independent energy and water regulator. The CER was established in 1999 and now has a wide range of economic, customer protection and safety responsibilities in energy. The CER is also the regulator of Ireland's public water and wastewater system. At a high-level, the CER's overall mission is to act in the interests of consumers is to ensure that:

- energy and gas are supplied safely
- the lights stay on,
- the gas continues to flow,
- there is a reliable supply of clean water and efficient treatment of wastewater
- the prices charged are fair and reasonable,
- the environment is protected, and,
- regulation is best international practice

Further information on the CER's role and relevant legislation can be found on the CER's website at www.cer.ie.

The purpose of this paper is to present a decision on the CER's review of typical annual domestic consumption values for electricity and gas customers. The CER uses typical consumption figures to compare standard and discounted plans across suppliers for its quarterly and annual retail market reports. Typical consumption values are used by accredited price comparison websites to compare typical annual average bills where customers are not aware of their own annual consumption values.

The annual average consumption figure is also a commonly used industry figure to assist with various customer engagement and retail issues, and will be used for the calculation of an estimated annual average bill, and to compare and rank tariff plans offered by suppliers.

This would include, for example advertising from suppliers of the financial benefits of their tariff offers vis-à-vis competitors.

Currently, the value for estimate annual average consumption for electricity is 5,300 kWh and for gas the value is 13,800kWh. The CER has decided to implement revised average figures from 1st August 2017 .These figures are **4,200 kWh** for electricity and **11,000 kWh** for gas.

Typical consumption values can serve to promote transparency by ensuring that customers have a common reference point when engaging with suppliers and price comparison websites. It should be noted that these figures represent the “typical” consumption profile of a domestic customer. The best way for a customer to compare offers and potential savings is to use actual consumption related to their property

Information on the CER’s role and relevant legislation can be found on the CER’s website at www.cer.ie

1.1.2 Related Documents

- Decision on CER Accreditation Framework for Price Comparison Websites CER 11/144
- Consultation on Accreditation Process for Price Comparison Websites CER11/085
- Consultation Paper Review of the Supplier’s Handbook CER 16/031b
- Consultation Paper Review of Typical Domestic Consumption Values for Electricity and Gas Customers CER17003

2. Typical Consumption Figures

Typical annual consumption values are required to enable customers to compare prices between suppliers more accurately. This is governed by Section 2.4 of the CER's Decision Paper on the Accreditation Process for Price Comparison Websites ([CER 11/144](#)). This Decision Paper states that '*Where a consumer is unable to provide their annual consumption figure the website provider must use an average annual figure of 5,300kWhs for electricity and 13,800kWhs for gas.*'

The CER uses typical consumption figures to compare standard and discounted plans across suppliers for its quarterly and annual retail market reports. It also uses typical consumption figures as part of its reviews of debt flagging thresholds for domestic customers. Examples of this include the CER's Debt Flagging Review from 2013 [CER/13/135](#) and recent Debt Management Decision Paper [CER/16/014](#).

The sections below address the use of mean vs. median values in the first instance, alongside a summary of responses received, and the CER's decision on the matter.

This is then followed by a review of the low, medium and high consumption values proposed in the consultation and the CER's next steps on this.

2.1 Consultation on use of mean vs median values

CER Proposals

In the consultation paper on typical consumption values, the CER considered the merits of using a mean figure for typical consumption in comparison to a median figure.

To recap on the consultation paper, the mean value is the average consumption of all customers in the domestic market. The median value is the level of consumption of most customers in the market. The advantage of using a median value is that it represents the consumption value of the majority of customers in the market, and is not skewed by high consumption customers who may be in the minority.

Both the mean and median values were calculated for the consultation paper. The figures that were presented for electricity and gas are shown below.

	Electricity	% change	Gas	% change
Current Figure	5,300kWh		13,800kWh	
Option 1: Median Figure	3,500kWh	-34%	11,150kWh	-19%
Option 2: Mean Figure	4,200kWh ²	-21%	11,000kWh	-20%

Table 1

For Options 1 and 2 in Table 1, the choice presented was between the use of median figures for both electricity and gas, or mean figures for both electricity and gas. The CER concluded that it would consider it confusing to use the mean for one value and the median for the other.

Table 1 shows that under Option 1, there is a large change (34%) between the current and revised electricity figure. A number of responses to the consultation focused on the scale of this change in comparison to Option 2 where the magnitude of the change was much smaller.

Responses received

1. In ESNB's response to the consultation, it was suggested that segmentation by tariff class would be a more efficient grouping for electricity with a minimum spread around the typical consumption value, if the mean were to be used as opposed to

² The figure presented in this decision paper is slightly different as it is based on an average over 5 years.

the median. This is discussed further in section 2.2.

2. Bonkers.ie suggested that the average electricity figure, which still represents a substantial 22% drop in consumption figures, would be easier for customers to understand and identify with.
3. Electric Ireland supported the introduction of a median value for electricity and gas in their response, acknowledging that significant changes have occurred in energy usage patterns in the period since the previous typical consumption values were set.
4. Energia highlighted the fact that the mean analysis, which is broken down by tariff type, suggests that there is a significant difference between 24-hour and day/night meter types and urban and rural tariff types. It also highlighted the fact that this breakdown isn't provided for the median figures. This is due to the large dataset that had to be queried by ESBN to estimate the median values.
5. Bord Gáis Energy noted that the figures represent a significant drop in typical consumption figures, particularly for the median value for electricity. BGE are of the view that this will lead to customer confusion and questioned the robustness of the methodology used for the estimation of median figures for electricity and whether the CER can stand over these figures.
6. In St Vincent De Paul's response, SVP stated that according to a 2013 SEAI (Sustainable Energy Authority of Ireland) report, in 2011 an 'average' dwelling consumed 5,016 kWh of electricity, compared to the CER's average of 4,100 kWh for 2015.

CER Decision

Based on the CER's market monitoring and MPRN level data both the mean *and* median values for typical consumption have fallen since the current 5,300 kWh figure for electricity and 13,800 kWh figure for gas were initially approved. These figures are based on data from the MRSO for electricity and the GPRO and MDS for gas; entities within the network utilities who are responsible for metering data and forecasting. As such, the CER is

confident that the both mean and median figures are representative of the metered population.

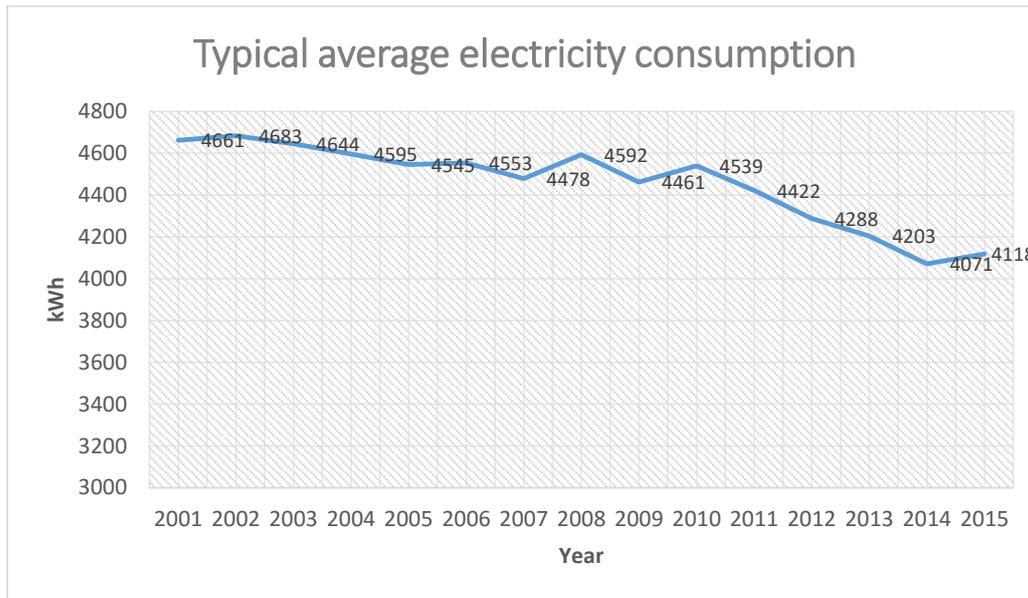
Electricity

As outlined in the consultation paper for the revised typical median value for electricity, due to the large volume of data to be processed, which comprised of information for each domestic electricity customer in Ireland (>2 million MPRNS), MRSO grouped consumption information for each MPRN into smaller bands based on Eurostat consumption bands.

Estimated values for low, medium and high consumption were then calculated based on 2015 consumption data for all customers. The CER has taken note of the concerns expressed by a number of stakeholders concerning customer's understanding of the median values and the methodology to calculate these, especially for electricity. We have also considered whether the data set of only using one year of actual metered data is sufficiently robust for the purposes of providing an average consumption. The CER is also cognisant of the fact that there is a large (34%) difference between the current and median value for electricity³.

As a result the CER has cross-referenced this figure with a five year average consumption profile. This illustrates that the average consumption for electricity has been reducing over time. The average of the most recent five years is 4,220.4 kWh, which the CER has rounded to 4,200 kWh for the purposes of this paper on the basis, that these figures are more representative of average consumption over a longer period of time. As such, the CER has decided that the mean average consumption over the five year period represents a statistically more robust average.

³ The previous figure of 5,300 kWh was used for a typical household rather than an average household and therefore would have not included all connected dwellings in the calculation.



The five year analysis also indicates that in general, average domestic electricity consumption has been decreasing over time.

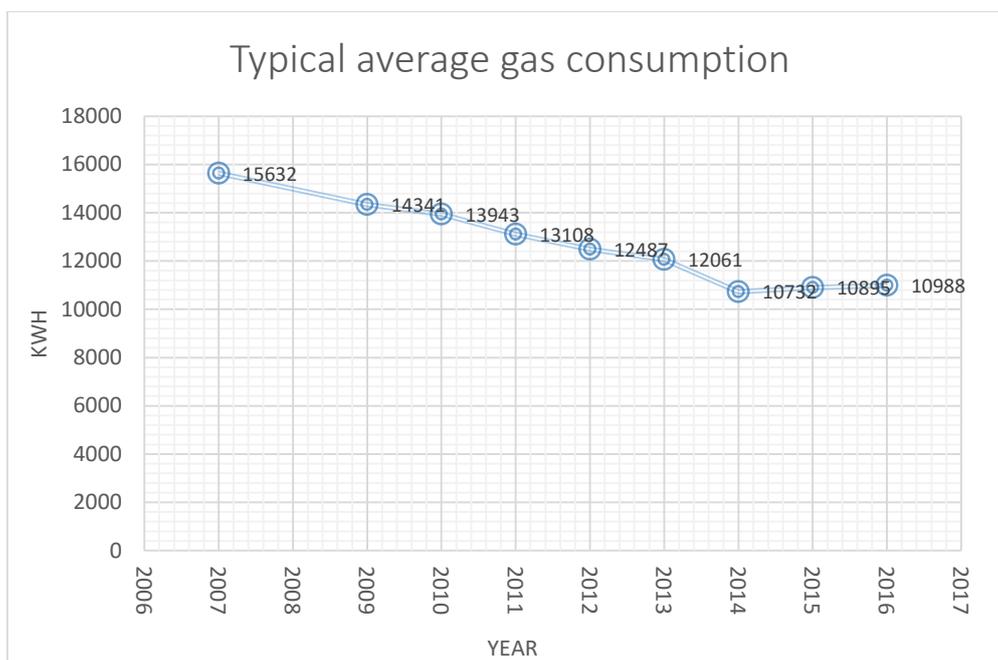
Gas

For gas, the CER notes that Gas Networks Ireland have an established methodology to prepare customer profiles for domestic customers. Each year, data is downloaded from their FAR database, which includes a list of all active gas points. Active gas points are defined as having an active shipper on the date data is downloaded. For 2015 this was approximately 670,800 gas points, of which approximately 645,200 were residential customers. The gas points are identified as domestic based on their Annual Quantities (AQ)⁴ and based on their registration as either Domestic or Industrial & Commercial customers. The mean value for gas is based on this calculation and is updated by GNI on an annual basis.

Given that established methodology is in place for the calculation of annual mean consumption figures for gas, and the concerns raised regarding the changes in the median value for electricity, the CER has decided to implement mean values. The revised typical consumption values will be 4,100kWh for electricity and 11,000kWh for gas. As with

⁴ Which is the actual metered consumption of gas over a 12 month period

electricity, the average consumption over a five year period is indicated below.



Domestic gas consumption is more temperature sensitive, as it is primarily used for space and water heating. In addition, ongoing energy efficiency targets have had an impact on the level of domestic gas consumption.

CER Decision 1: The CER will implement the mean typical consumption values outlined in its consultation paper. These will be 4,200kWh for electricity and 11,000kWh for gas.

2.2 Consultation on use of low, medium and high typical consumption figures on Price Comparison Websites

CER Proposals

As part of this review, further different categories of consumption figures were also considered. The purpose of considering these was to assist customers to self-identify their own consumption level and lead to more accurate typical consumption values given the customers' categorisation. An example of the potential usefulness of this approach would be where a customer uses a price comparison website where they did not have information available at the time concerning their actual consumption.

The CER proposed a breakdown of the median value into low, medium and high typical consumption figures.

The final values which were considered for this breakdown in electricity and gas are shown in Table 2.

Median Values	Electricity	Gas
Low	2,100kWh	3,630kWh
Medium	3,500kWh	11,150kWh
High	5,200kWh	62,250kWh

Table 2

In its consultation, the CER proposed that price comparison websites introduce this breakdown of low, medium and high consumption figures (based on the median values) following the introduction of the single revised value for electricity and gas outlined in section 2.1.

This section focuses on responses received in relation to this proposal.

Section 2.3 details further breakdowns for electricity (between different meter types) and gas (between different house types) that may be included in future consumption reviews by the CER.

Responses received

1. While both Price Comparison Websites, Bonkers.ie and Switcher.ie, did not highlight any technical issues with the implementation of this proposal, both conveyed a concern about this suggested breakdown and how it would be understood by customers. In their response, Bonkers.ie identified the difficulty customers may have in identifying the consumption band that they fall into, and stated that this proposal may cause confusion for customers and lead to incorrect self-identification as a low, medium or high user. In particular, they questioned the usefulness of the high consumption band for gas as this represents a very limited number of gas consumers. Bonkers.ie further suggested that actual annual consumption figures should be displayed on customer bills to further assist customers to compare offers.
2. Switcher.ie highlighted that customers would need help to understand what low, medium and high groupings mean and suggested that efforts should be made to identify typical consumption values by household size and type.
3. Energia considered that the presentation of different information on Price Comparison Websites from that which is proposed in the revised Supplier Handbook would lead to customer confusion, customer queries and customer frustration with suppliers and the energy market and complicate consumer choice.
4. Electric Ireland and SSE Airtricity also disagreed with this proposal in their responses and stated that the creation of classes of customers would only confuse people using Price Comparison Tools and would be difficult to implement.
5. Bord Gáis Energy's response discussed the difficulties suppliers would face placing low, medium and high consumption figures on their advertising material.

The CER would like to clarify that this proposed breakdown was only intended for use by Price Comparison Websites.

CER Decision

The CER notes the unanimous feedback received on the proposal to use low, medium and high consumption values and the issues highlighted regarding potential customer confusion in particular in terms of self-identification by category. Based on the responses received and feedback from Price Comparison Websites the CER will not be progressing with the introduction of low, medium and high typical consumption figures on Price Comparison Websites at this time, particularly because a balance between usefulness and simplicity for customers has not been established.

However, the CER considers that further information for different types of consumers would be useful if it could be better linked to specific house types, meter types and geographic areas; aspects with which energy customers can readily identify. In particular, we note St Vincent De Paul's response welcoming the future inclusion of PAYG specific consumption figures and have included information about this for gas customers in the next section of this paper.

Although, the CER is not progressing with implementing changes to the low, medium and high consumption bands, in the next section we have provided details of the analysis undertaken in this regard for information. For clarity, the CER is not directing that this information is to be implemented by price comparison websites at this time.

In addition, the CER intends to progress more regular reviews of typical consumption figures in the future, and will update the mean consumption figures every two years.

CER Decision 2: The CER will not introduce a breakdown of low, medium and high consumption values on Price Comparison Websites for use by customers who do not know their actual consumption

3. Further consumption breakdown options

For the purpose of this review, customer consumption figures based on meter types and house types broken down into mean and median values were limited by data availability from the MRSO, GPRO and MDS.

There are also differences in the type of information available for electricity and gas. For electricity information was available by meter type, whereas for gas more detailed information was available for dwelling type as well as by meter type (PAYG or credit meters).

This is detailed below with breakdowns for electricity by meter type and for gas by house type and by credit and prepayment meters provided for information.

3.1 Electricity

A mean breakdown can be provided based on tariff types for electricity. The tariff breakdown for electricity shows the large differences in consumption between 24 hour and day/night tariffs, along with the differences between rural and urban consumption.

The CER will be engaging with Price Comparison Websites to see how a breakdown based on meter type can be incorporated into their websites for the purposes of comparing electricity offers in the market.

	Average annual consumption per site (kWh) for domestic customers ⁵
URBAN DOMESTIC 24HR	3,600kWh
URBAN DOMESTIC DAY/NIGHT TARIFF	6,200kWh
RURAL DOMESTIC 24HR	3,900kWh
RURAL DOMESTIC DAY/Night TARIFF	12,000kWh

Table 3

Average consumption figures across a range of customer profiles show that rural day/night

⁵ These figures have been rounded for ease of reference.

tariffs have a considerably higher average consumption figure (12,000 kWh per annum). Customers on day/night tariffs may include high consumption customers such as farms with a maximum import capacity of up to 29kVA⁶. In comparison, the average annual consumption figure for a 24 hour urban profile was 3,600 kWh per annum.

3.2 Gas

Gas Networks Ireland have an established methodology to derive customer profiles for domestic customers. Each year, data is downloaded from their FAR database, which includes a list of all active gas points. Active gas points are defined as having an active shipper on the date data is downloaded; for 2015 this was approximately 670,800 gas points, of which approximately 645,200 were residential customers. The gas points are identified as domestic based on their Annual Quantities (AQ) and based on their registration as either Domestic or Industrial & Commercial customers.

As part of GNI's FAR procedure, detailed [here](#), default house information is published within their FAR procedures document. The Annual Quantities which are calculated by GNI using this methodology are updated each Gas Year (October to October).

The default values for different property types are reviewed annually after the NDM Annual Quantity and Supply Point Capacity setting process (see the GNI FAR procedure documents for further detail) and if new values are determined, these are approved by the CER and updated. The current values were updated as of the 1st of October 2015.

A breakdown is presented in Table 3 for average consumption by property type, for both credit and prepayment customers. This breakdown is updated on a yearly basis by GNI.

⁶ Maximum Import Capacity (MIC) is the maximum electricity demand level that can be catered for by a connection to the ESB Network.

Current Default House Profile values Property/Premises Type	Annual Quantity (kWh) Residential credit customers	Annual Quantity (kWh) Residential prepayment customers
Apartment (1-3 bedrooms)	7,000kWh	7,000kWh
Standard House (1-3 bedrooms)	10,500kWh	8,800kWh
Large House (4-6 bedrooms)	13,000kWh	10,000kWh
One-off Residential Customer (standalone houses) ⁷	15,000kWh	11,000kWh

Table 4

The CER notes Switcher.ie’s suggestion in their response to the consultation paper to use household size and type as an additional identifier for customers who do not know their consumption value. The table above indicates that such analysis is readily available for gas and therefore this may prove useful to customers. The meter type comparison for electricity may be useful for electricity comparisons as both these factors are known to customers.

Although the CER is not directing that these meter/dwelling type averages are used at this time the CER will be engaging with Price Comparison Websites to see how a breakdown based on house type and size can be incorporated into their website for gas and electricity.

⁷ Houses which are not adjoining any other properties.

4. Future refinements

The CER would like to move to reviewing these figures for both electricity and gas every two years, and is engaging with ESNB and GNI on the timing of this new process. This aligns with Ofgem's methodology for reviewing typical annual consumption figures.

The CER will time this process according to ESNB and GNI's review timelines for consumption figures, taking into account practical considerations from other stakeholders.

A balance will need to be made between moving to more accurate figures and promoting understanding of how the figures are calculated and how customers can identify their appropriate consumption level.

5. Conclusions and Proposals

The CER has reviewed the options presented in its consultation paper and has decided to use a single revised average value for typical consumption for both electricity and gas.

These figures are 4,200 kWh for electricity and 11,000 kWh for gas.

The CER will begin to use these figures in all of its materials from the publication date of this paper. An obligation is now being placed on CER accredited price comparison web sites and relevant industry stakeholders including suppliers, to update the common industry figures to the revised figures by 1st of August 2017, however stakeholders may implement these figures at an earlier date if possible. The CER will engage with Price Comparison Websites regarding further work to make information about consumption values for different meter types in electricity and different house types in gas available to consumers.