

ISLE OF MAN DOMESTIC HEATING COMPARISON

COST PER USEFUL kWh

Prices Collected.

12 March 2019

FUEL TYPE	APPLICATION	COST PER kWh (pence)	COST PER USEFUL kWh (pence)	ASSUMED THERMAL EFFICIENCY OF APPLIANCE	AVERAGE ANNUAL CONSUMPTION (kWh)
Electricity (COST INCLUDES STANDING CHARGES WHERE APPLICABLE)					
Standard or Prepayment Comfy Heat (Composite)	Radiator/Electric Storage Heater	18.98 11.61	18.98 13.47	100% 95%	4,000 6,000
Gas (COST INCLUDES STANDING CHARGES WHERE APPLICABLE)					
Natural Gas Band A	Gas Boiler	10.24	11.38	90%	2,500
Natural Gas Band C	Gas Boiler	8.54	9.49	90%	8,751
Cylinder Central Heating Gas	Gas Boiler	8.66	9.62	90%	10,000
Mini Bulk Gas	Gas Boiler	8.60	9.56	90%	10,000
LPG Gas Fire (BK & CB Tariff)	Gas Fire	13.15	23.08	57%	2,500
Natural Gas Fire (NB Tariff)	Gas Fire	10.13	17.77	57%	2,500
Heating Oil (28 Sec)					
900 Litre Quantity	Oil Boiler	5.68	6.31	90%	10,000
450 Litre Quantity	Oil Boiler	6.09	6.77	90%	10,000
Air Source Heat Pump					
Heat Pump (Composite)	Heat Pump	14.67	5.35	300%	10,000
Solid Fuels					
House Coal	Modern Stove	5.89	7.85	75%	10,000
Anthracite	Room Heater	5.73	7.64	75%	10,000
Phurnacite	Room Heater	6.91	9.21	75%	10,000
Taybrite	Multi-Fuel Stove	5.81	7.26	80%	10,000
Wood					
Woodchip (Moisture Content < 30%)	Woodchip Boiler	3.60	4.00	90%	10,000
Manufactured Heat Logs	Wood Burning Stove	9.85	12.31	80%	10,000

Cost Per kWh: Expresses cost in relation to the total energy within a fuel. It is a theoretical comparator which assumes 100% efficiency with no wastage. $\text{Cost Per kWh} = \text{Cost Per Unit Sold [including standing charge]} / \text{Heat Content (kWh) Per Unit Sold}$.

Cost Per Useful kWh: Expresses cost in relation to the useable energy within a fuel, or in other words the heat energy that is likely to be extracted. It is intended to be a more realistic comparator which takes into account the efficiency of the appliance burning the fuel. $\text{Cost Per Useful kWh} = (\text{Cost Per Unit Sold} / \text{Thermal Efficiency of Appliance}) / \text{Heat Content (kWh) Per Unit Sold}$.

kWh: The kilowatt-hour is a unit of energy equivalent to one kilowatt (1 kW) of power expended for one hour (1 h) of time.

Heat Content: The kWh of energy contained within a fuel. Heat contents quoted are taken from the 'Sutherland Tables':

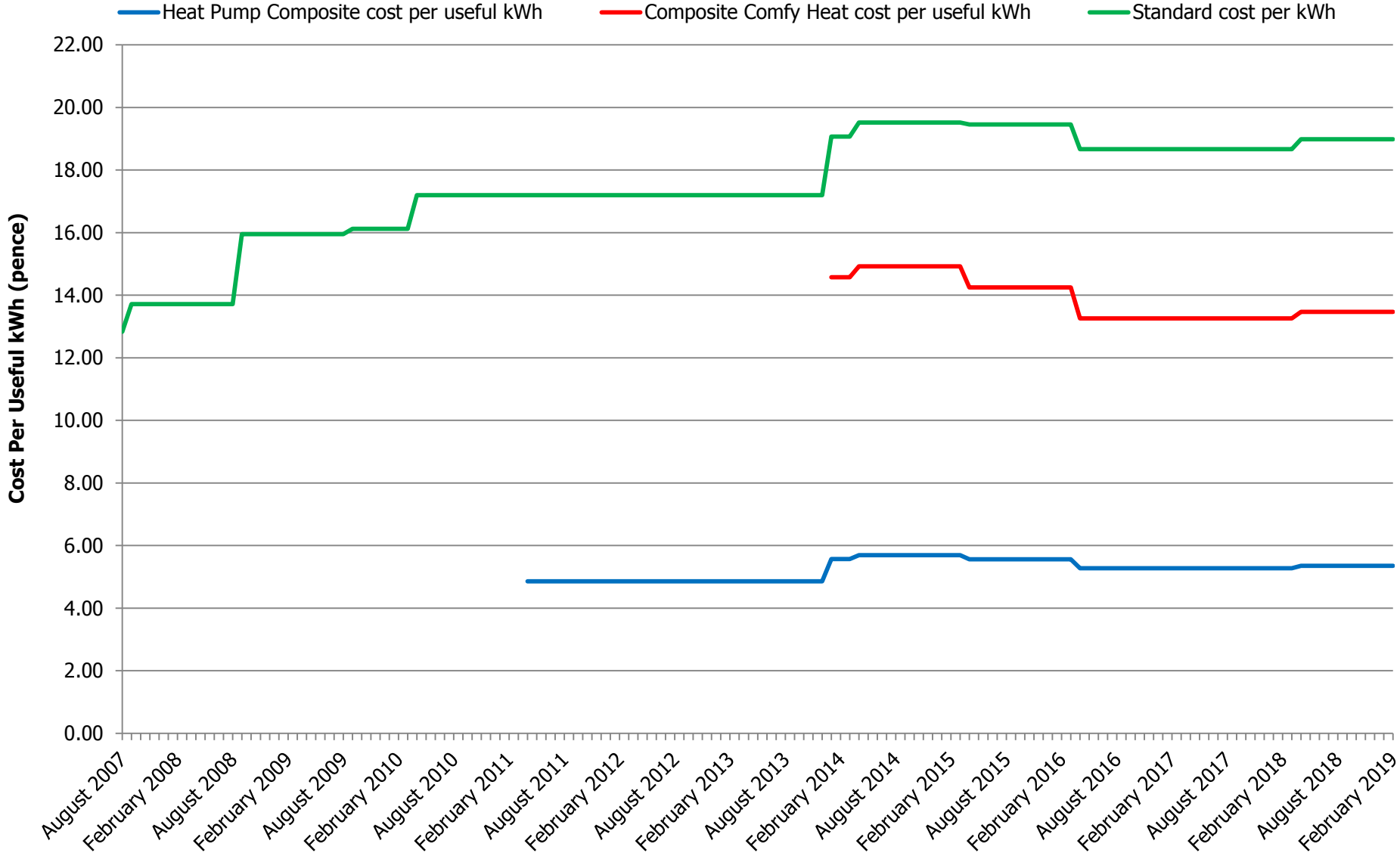
Thermal Efficiency: The percentage of energy contained with a fuel, which the appliance can successfully extract and convert into useful heat. E.g. a 90% efficient boiler will extract 90% of energy within a fuel and convert this into useful heat. The remaining 10% is wasted. Efficiencies of individual appliances may vary substantially from the examples provided. In particular, the 90% efficiency for gas and oil boilers is based on a modern condensing boiler, in conditions where the return temperature is low enough to allow condensing to take place.

ISLE OF MAN DOMESTIC HEATING COMPARISON COST PER UNIT SOLD

Prices Collected: 12 March 2019

FUEL TYPE	SOLD IN UNITS OF	AVERAGE HEAT CONTENT PER UNIT SOLD (kWh)	ASSUMED THERMAL EFFICIENCY OF APPLIANCE	AVERAGE COST PER UNIT SOLD (PENNY)
Electricity (COST INCLUDES STANDING CHARGES WHERE APPLICABLE)				
Standard or Prepayment	1 kWh	1	100%	18.98
Comfy Heat (Composite)	1 kWh	1	95%	11.61
Gas (COST INCLUDES STANDING CHARGES WHERE APPLICABLE)				
Natural Gas Band A	1 kWh	1	90%	10.24
Natural Gas Band C	1 kWh	1	90%	8.54
Cylinder Central Heating Gas	1 kWh	1	90%	8.66
Mini Bulk Gas	1 kWh	1	90%	8.60
LPG Gas Fire (BK & CB Tariff)	1 kWh	1	57%	13.15
Natural Gas Fire (NB Tariff)	1 kWh	1	57%	10.13
Heating Oil (28 Sec)				
900 Litre Quantity	1 Litre	10.18	90%	57.79
450 Litre Quantity	1 Litre	10.18	90%	61.99
Air Source Heat Pump				
Heat Pump (Composite)	1 kWh	1	300%	14.67
Solid Fuels				
House Coal - Modern Stove	50 kg	423.5	75%	2493.33
Anthracite - Room Heater	50 kg	452.3	75%	2590.00
Phurnacite - Room Heater	50 kg	435.7	75%	3010.00
Taybrite - Multi-Fuel Stove	50 kg	460	80%	2673.33
Wood				
Woodchip (Moisture Content < 30%)	1 tonne	3500	90%	12600.00
Heat Logs	10 kg	55	80%	541.67

Electricity Cost Per Useful kWh



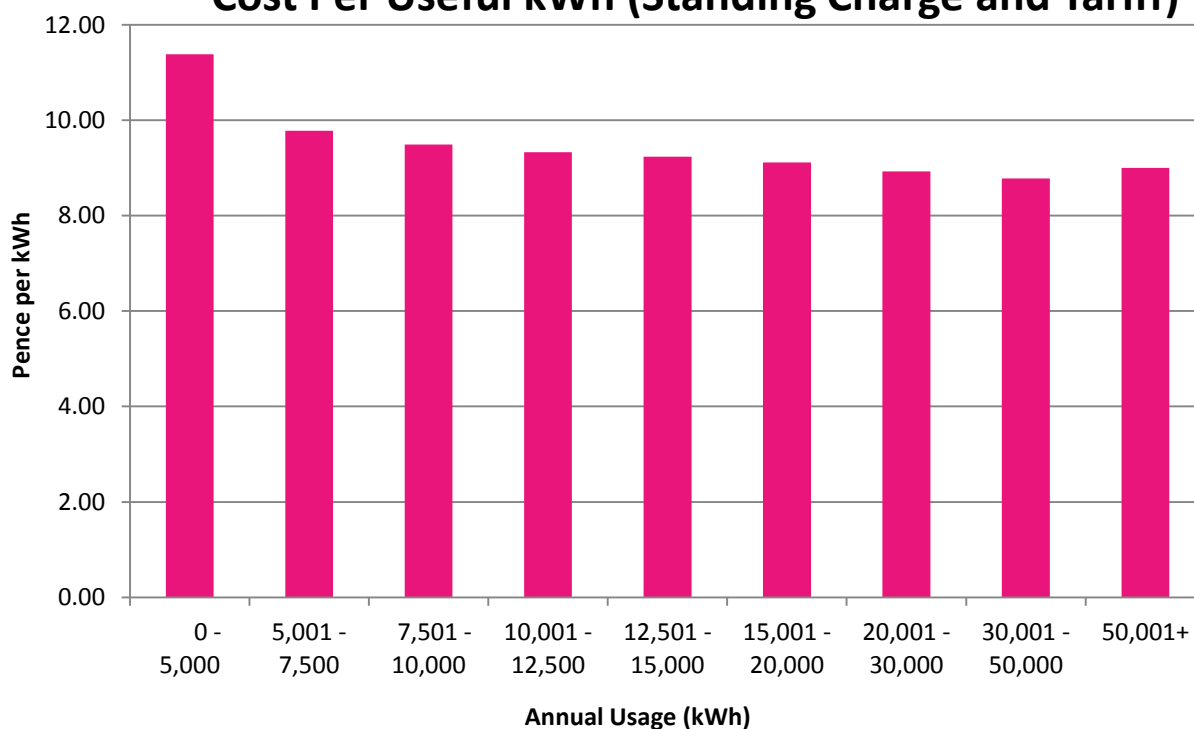
MANX GAS - COST PER USEFUL KWH

Prices Collected: 12 March 2019

The below table has taken the midpoint of each of the bands according to the tariff structure and calculated the cost per useful kWh based on that volume of consumption. The cost per useful kWh is calculated by taking into account both the standing charge and the tariff. It is important to note, that due to the nature of the tariff structure introduced 1 January 2016, every customer will experience slightly different costs per useful kWh according to their total consumption. All prices include VAT at 5%.

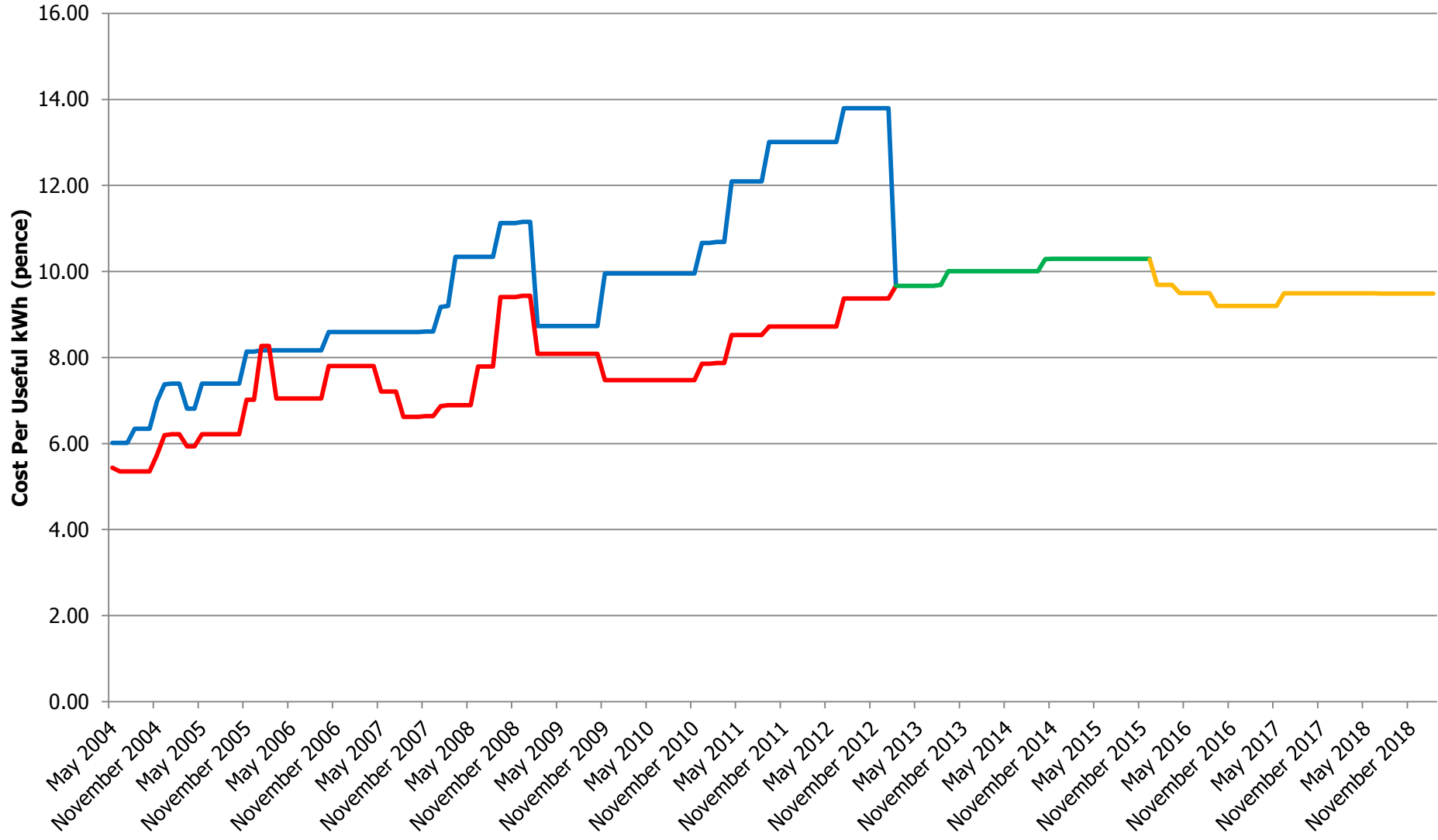
Bands	Band - Annual Usage (kWh)	Mid-Point Usage	Current Daily Standing Charge (pence)	Tariff Per kWh (pence)	Cost Per Useful kWh Including Standing Charge
A	0 - 5,000	2,500	16.90	7.64	11.38
B	5,001 - 7,500	6,251	51.21	5.82	9.78
C	7,501 - 10,000	8,751	64.73	5.82	9.49
D	10,001 - 12,500	11,251	78.26	5.82	9.33
E	12,501 - 15,000	13,751	91.97	5.82	9.23
F	15,001 - 20,000	17,501	111.58	5.82	9.12
G	20,001 - 30,000	25,001	146.37	5.82	8.93
H	30,001 - 50,000	40,001	218.27	5.82	8.78
I	50,001+	55,000	16.90	7.64	9.00

Cost Per Useful kWh (Standing Charge and Tariff)



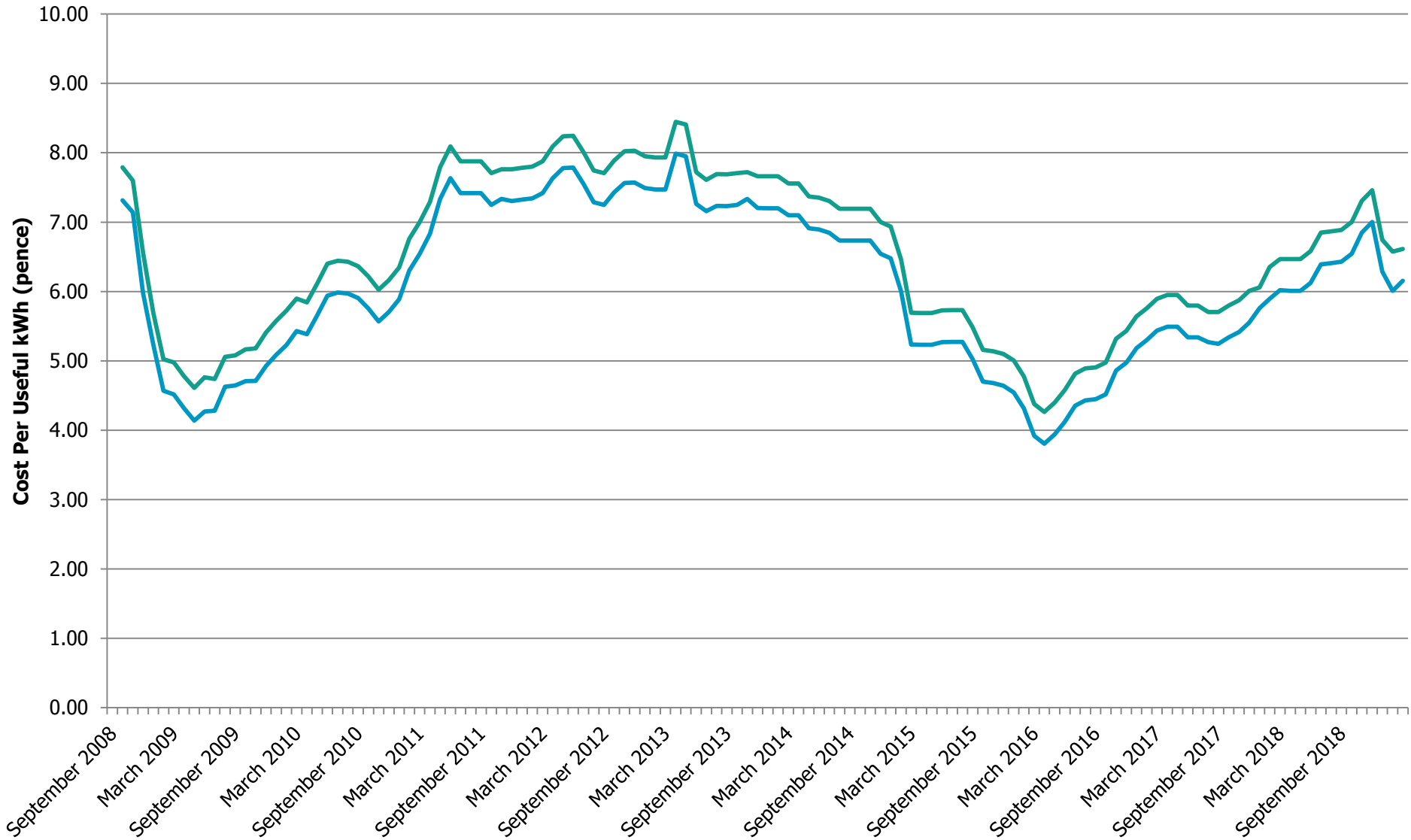
Gas Cost Per Useful kWh

- LPG Towns Gas - cost per useful kWh
- Natural Gas - cost per useful kWh
- All Island - cost per useful kWh
- Band C - Cost per useful kWh (mid-point value of 8750kWh)



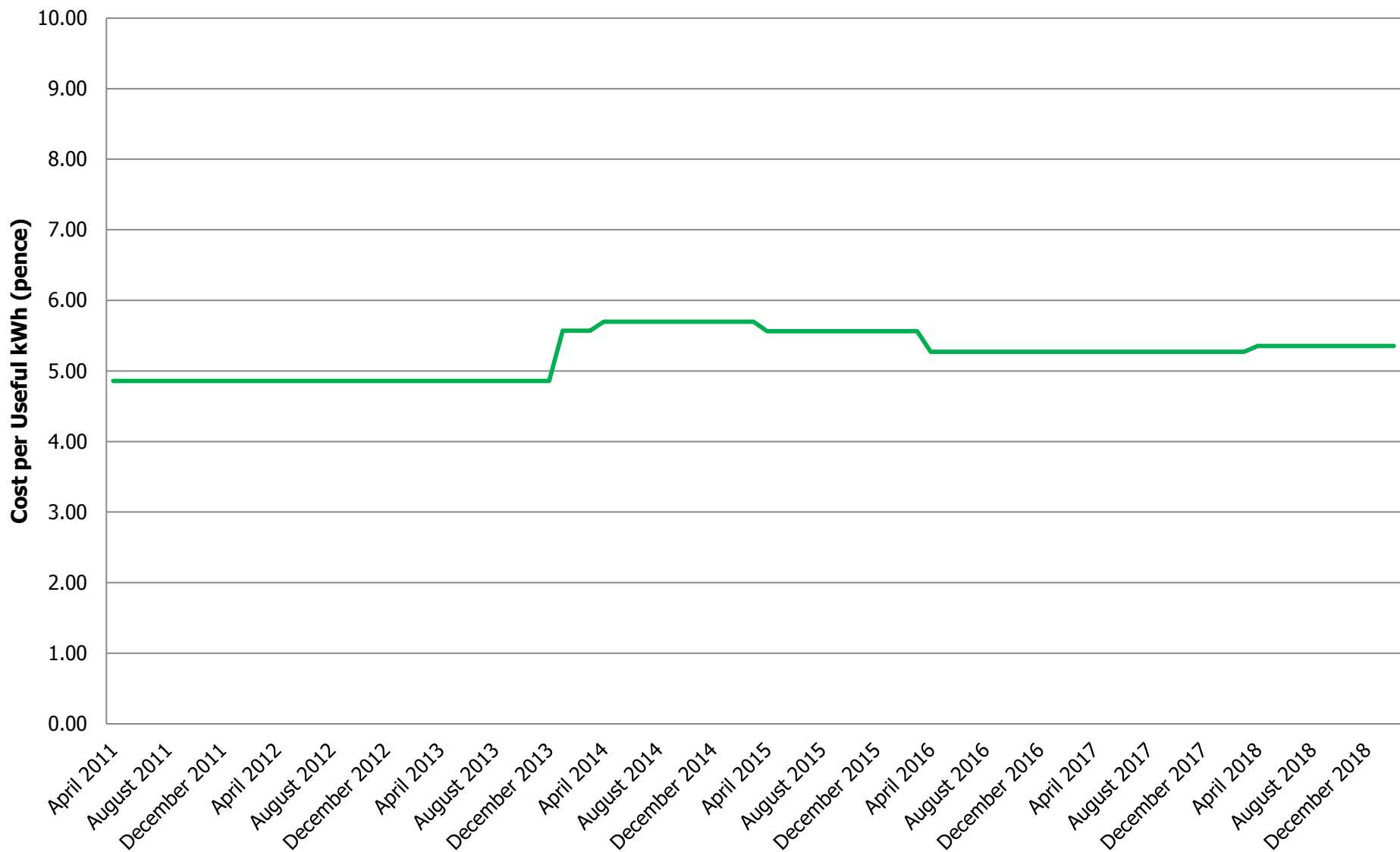
Heating Oil Cost Per Useful kWh

900 Litres 450 Litres

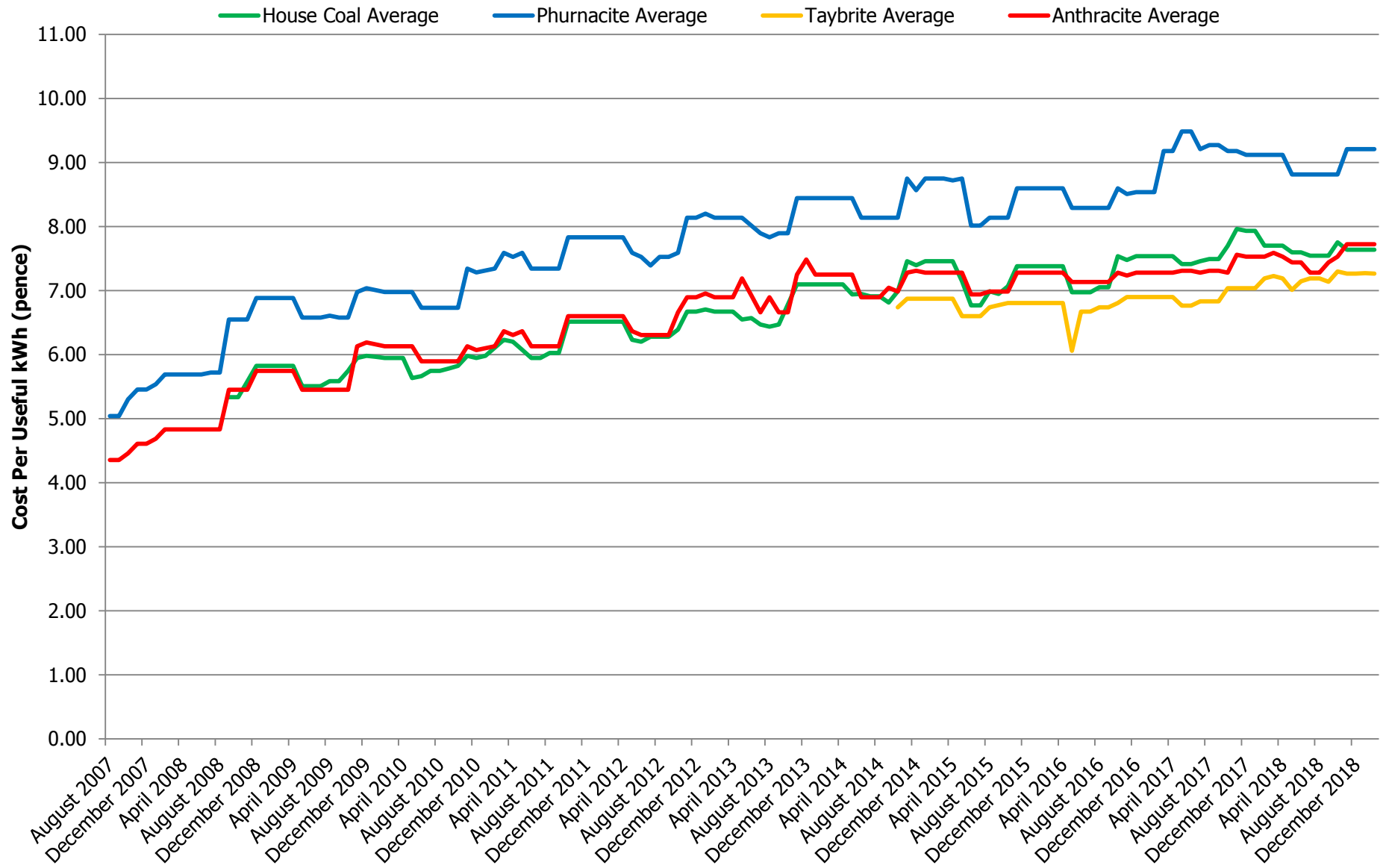


Air Source Heat Pump Cost Per Useful kWh

Heat Pump Composite cost per useful kWh

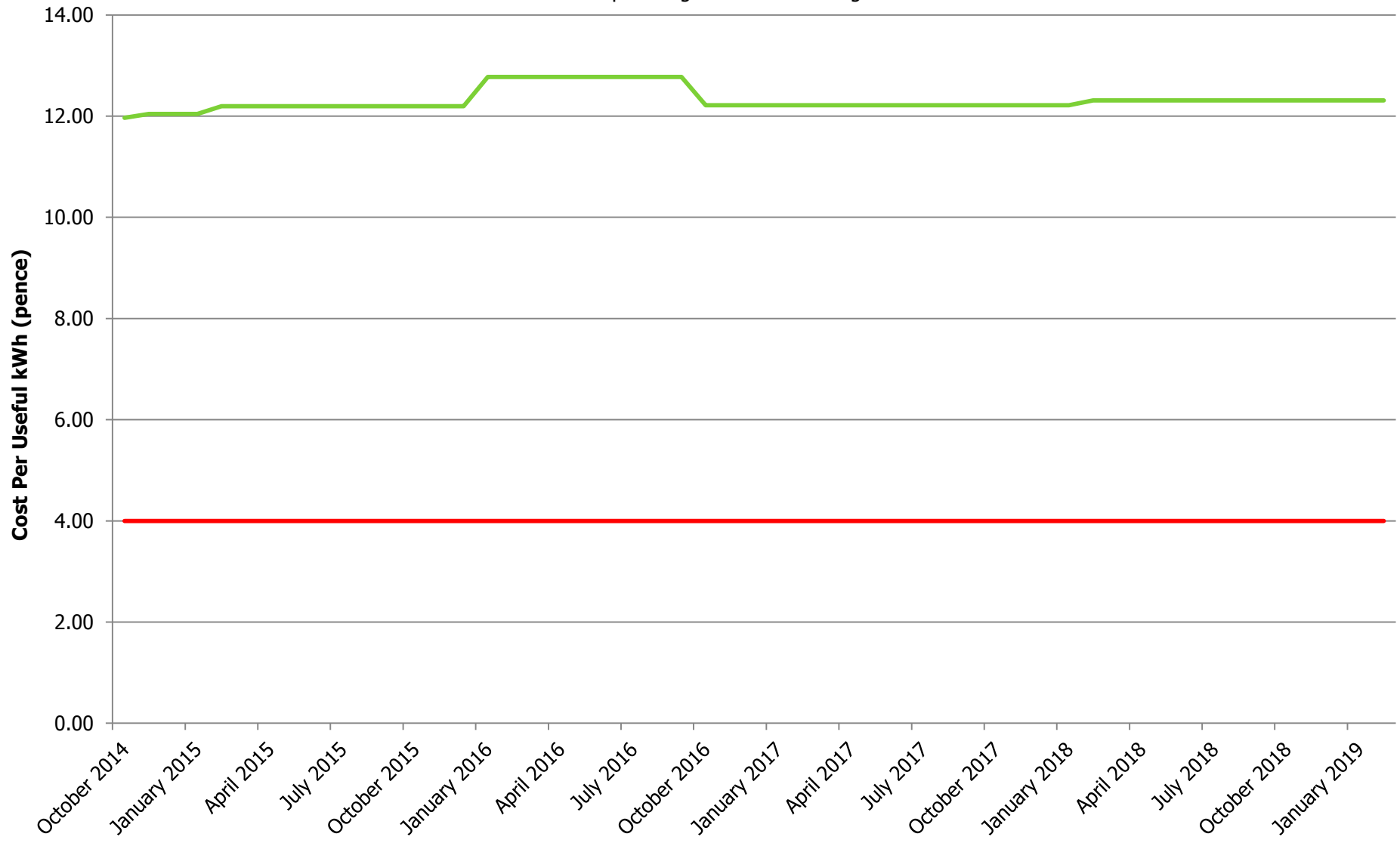


Solid Fuels Cost Per Useful kWh



Wood Cost Per Useful kWh

Woodchip Average Heat Logs kWh



DOMESTIC FUEL NOTES:

General

- 1 The prices and figures provided are based on domestic heating fuel only and includes standing charges. Discounts for bulk purchases (with the exception of oil for bulk purchase), discount for early settlement, maintenance or purchase of appliances, size of properties and the energy efficiency of homes etc, are not taken into account.
- 2 All prices include V.A.T at 5%.
- 3 Standing charges are added to average consumption to generate the costs where standing charges are applicable.
- 4 This information may not be used for advertising purposes without prior agreement from the Isle of Man Office of Fair Trading (OFT).

Gas

- 5 The Star Saver tariff applies to those using gas for central heating. Liquefied Petroleum Gas (LPG) BK and CB tariffs and the Natural Gas NB tariff apply to those using gas only for a gas fire and not as central heating.
- 6 LPG is supplied in the following areas: Foxdale, Laxey, Lonan, Andreas, Santon, St Johns, Jurby and Ballabeg.
- 7 Natural Gas is supplied within the following areas: Douglas, Onchan, Braddan, Glen Vine, Crosby, Union Mills, Ramsey, Port St Mary, Port Erin, Castletown, Ballasalla, Kirk Michael, Peel and Ballaugh.

Electricity

- 8 The Manx Utilities Authority currently offers a "Comfy Heat" tariff, which allows consumers to benefit from a cheaper tariff rate, if consuming electricity in the lower demand (off peak) hours. The thermal efficiency of "comfy heat" electricity is 5% lower than standard, as the tariff is generally used by consumers with storage heaters for hot water. A small amount of useful heat is lost in the storing process and hence the lower efficiency rating.

Air Source Heat Pumps

- 9 Air source heat pumps extract heat from the outside air, which can then be used to heat properties. Heat pumps require electricity to work, but they are very efficient (300%). For every 1 kWh of electricity used, 3 kWh's are produced to heat the home.

Solid Fuel - Coal, Taybrite, Anthracite & Phurnacite

- 10 Taybrite, Anthracite and Phurnacite are solid smokeless fuels which are used for heating.

Biomass - Wood Fuel

- 11** Prices are only collected for manufactured wood products, as the heat content is relatively consistent for these products.
- 12** Prices are collected for heat logs sold in 10kg and 20kg. The weights, heat contents and prices are simple averages of the price for 10kg.

Additional

- 13** The OFT has altered the way cost per useful kWh is calculated for electricity, heat, heat pumps and all forms of gas. Up to December 2018, the efficiency percentage of the boiler was applied to the whole charge for both forms of fuel; going forward this will only be applied to the usage charge and not the standing charge.
- 14** The graphs shown in this publication have been revised in order to show the new calculation method. Previous versions of this publication (showing the earlier calculation method) are available upon request.

CONTACT DETAILS

Data is obtained directly from suppliers on the date of publication. Please contact suppliers directly to obtain current prices. The following suppliers are thanked for providing information contained within this publication:

Brabbag Fuels
Castletown Fuels
CPL
Department of Environment, Food & Agriculture (DEFA)
Ellan Vannin Fuels
Fairy Cottage Filling Station
Farmers' Combine
Manx Gas
Manx Petroleums
Manx Utilities Authority

This list does not represent an exhaustive list of all local suppliers.

OFT Debt Counselling / Money Management Service	http://www.gov.im/oft/money/
Energy Saving Tips From Members of the Community	https://www.gov.im/brightideas/
Interactive Advice on Building Control Regulations	http://www.myhouse.im/
Advice Regarding Renewable Energy	http://www.energysavingtrust.org.uk/renewableselector/star
Advice Regarding Installation of Wood Burning Stoves	http://www.gov.im/categories/home-and-neighbourhood/emergency-services/fire-and-rescue-
UK Government Advice Regarding Burning Wood	http://www.forestry.gov.uk/pdf/eng-woodfuel-woodasfuelguide.pdf/\$FILE/eng-woodfuel-
Identifying a Specific Boiler's Efficiency Rating	http://www.ncm-pcdb.org.uk/sap/pcdbsearch.jsp?pid=26
UK Government Publication Regarding Average Domestic Heating Consumption December 2018	https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/770773/Energy Trends December 2018.pdf

Please Contact the Competition & Markets Section of the Office of Fair Trading with any queries regarding this publication.

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