OSS Home Energy Upgrade – Assessing pre-works energy usage

Pre works: Estimate of annual energy usage in kWh

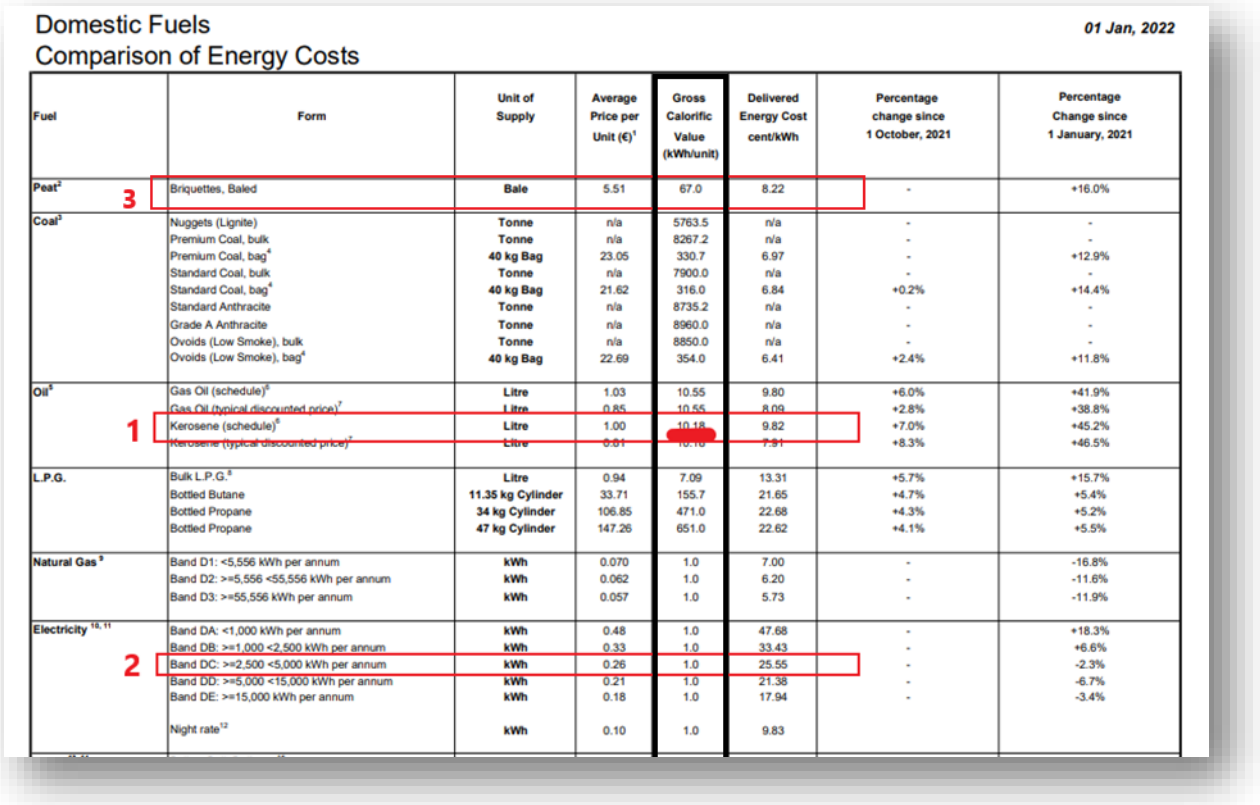
As part of the home energy upgrade works, each One Stop Shop to collect the pre works estimate of the annual energy usage in kilowatt hours (kWh). Below is a sample calculation from a notional home;

Example:

- Homeowner uses 800L/year of Kerosene for Heating oil boiler – ascertained from Homeowner and oil supplier.
- 4500kWh/ year of electricity – ascertained from the Utility provider
- 15 Bales Briquettes – OSS to get a sense of the volume of solid fuel consumed.

Comparison of Energy Cost table should be accessed via the following link:
https://www.seai.ie/publications/Domestic-Fuel-Cost-Comparison.pdf

This is partially illustrated in Fig.1 below and is used to calculate the energy usage of this home example.



Domestic Fuels
Comparison of Energy Costs

01 Jan, 2022

Fuel	Form	Unit of Supply	Average Price per Unit (€)[1]	Gross Calorific Value (kWh/unit)	Delivered Energy Cost cent/kWh	Percentage change since 1 October, 2021	Percentage Change since 1 January, 2021
Peat[2]	Briquettes, Baled	Bale	5.51	67.0	8.22	-	+16.0%
Coal[3]	Nuggets (Lignite)	Tonne	n/a	5763.5	n/a	-	-
	Premium Coal, bulk	Tonne	n/a	8267.2	n/a	-	-
	Premium Coal, bag[4]	40 kg Bag	23.05	330.7	6.97	-	+12.9%
	Standard Coal, bulk	Tonne	n/a	7900.0	n/a	-	-
	Standard Coal, bag[4]	40 kg Bag	21.62	316.0	6.84	+0.2%	+14.4%
	Standard Anthracite	Tonne	n/a	8735.2	n/a	-	-
	Grade A Anthracite	Tonne	n/a	8960.0	n/a	-	-
	Ovoids (Low Smoke), bulk	Tonne	n/a	8850.0	n/a	-	-
	Ovoids (Low Smoke), bag[4]	40 kg Bag	22.69	354.0	6.41	+2.4%	+11.8%
Oil[5]	Gas Oil (schedule)[6]	Litre	1.03	10.55	9.80	+6.0%	+41.9%
	Gas Oil (typical discounted price)[7]	Litre	0.85	10.55	8.09	+2.8%	+38.8%
	Kerosene (schedule)[6]	Litre	1.00	10.18	9.82	+7.0%	+45.2%
	Kerosene (typical discounted price)[7]	Litre	0.81	10.18	7.91	+8.3%	+46.5%
L.P.G.	Bulk L.P.G.[8]	Litre	0.94	7.09	13.31	+5.7%	+15.7%
	Bottled Butane	11.35 kg Cylinder	33.71	155.7	21.65	+4.7%	+5.4%
	Bottled Propane	34 kg Cylinder	106.85	471.0	22.68	+4.3%	+5.2%
	Bottled Propane	47 kg Cylinder	147.26	651.0	22.62	+4.1%	+5.5%
Natural Gas[9]	Band D1: <5,556 kWh per annum	kWh	0.070	1.0	7.00	-	-16.8%
	Band D2: >=5,556 <55,556 kWh per annum	kWh	0.062	1.0	6.20	-	-11.6%
	Band D3: >=55,556 kWh per annum	kWh	0.057	1.0	5.73	-	-11.9%
Electricity[10,11]	Band DA: <1,000 kWh per annum	kWh	0.48	1.0	47.68	-	+18.3%
	Band DB: >=1,000 <2,500 kWh per annum	kWh	0.33	1.0	33.43	-	+6.6%
	Band DC: >=2,500 <5,000 kWh per annum	kWh	0.26	1.0	25.55	-	-2.3%
	Band DD: >=5,000 <15,000 kWh per annum	kWh	0.21	1.0	21.38	-	-6.7%
	Band DE: >=15,000 kWh per annum	kWh	0.18	1.0	17.94	-	-3.4%
	Night rate[12]	kWh	0.10	1.0	9.83		

1
2
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Fig.1

Fuel	No of Units	Gross Calorific Value	kWh usage
Oil	800 *Litres*	10.18	8,144
Electricity	4,500 *kWh*	1	4,500
Solid fuel	15 *Bales Briquettes*	67	1,005
		Total Energy Consumption kWh	**13,649 kWh**

(800 x 10.18) + (4,500 x 1) = (15 x 67) = 13,649 kWh

Note: from this example 13,649kWh should be noted in Section 2 of the One Stop Shop Declaration of Work (DoW) form.