

1. All prices are inclusive of 13.5% VAT

Commercial / Industrial Fuels **Comparison of Energy Costs**

| 2. Ex-works price. Add delivery costs as appropriate. | |
|-------------------------------------------------------------------------------|--|
| Actual prices also depend on quality purchased. Carbon tax included. | |
| 3. Prices used are an average of wholesale scheduled prices, | |
| exclusive of any rebates that may apply. Rebate may reduce | |
| fuel cost in the region of 20-25% depending on various | |
| market conditions. Please contact your petroleum supplier | |
| for current prices. | |
| Prices available on request from suppliers for L.P.G. | |
| quantities over three tonnes. | |
| 5. Gas prices are VAT Incl prices from the EU Price Directive Survey, | |
| & represent prices for 01/07/2016 to 31/12/2016 (Prices updated every 6 mths) | |
| For methodology and more details please see the following report : | |
| http://www.seai.ie/Publications/Statistics_Publications/ | |
| EPSSU_Publications/Electricity_and_Gas_Prices/ | |
| Electricity_Gas_Prices_in_Ireland.pdf | |

6. Electricity prices are VAT Incl prices from the EU Price Directive Survey, & represent prices for 01/01/2016 to 30/06/2016 (Prices updated every 6 mths) For methodology and more details please see the following report : http://www.seai.ie/Publications/Statistics_Publications/ EPSSU_Publications/Electricity_and_Gas_Prices/

Electricity_Gas_Prices_in_Ireland.pdf See Special Note below on the Public Service Obligation (PSO) levy.

7. To avail of lower night rate electricity a second meter is required. The rate quoted is estimated for unit consumption costs only. Actual costs may be higher due to higher standing charges for

night rate electricity. 8. Wood fuel prices may vary from the average, given the fragmented supplier network at present.

9. Minimum delivery conditions may apply. Discounts may apply for larger quantities.

DISCLAIMER:

While every effort has been made to ensure the accuracy of these statistical publications and/or reports, they are subject to revisions and changes from time to time. The Sustainable Energy Authority of Ireland is not liable for losses suffered, whether direct or consequential, arising out of any reliance on these data. It is the responsibility of each individual or entity to independently verify such information if the intention is to use such information in any form for personal or commercial purposes. The Sustainable Energy Authority of Ireland reserves the right to change the methodology in collecting, presenting and publishing these statistics and/or report.

| | | 11 | | | Ball and I | B | Demonstration |
|--------------------------|------------------------------------------------------------------------------------|-------------------|-----------------------|--------------------|--------------------------|----------------------------|----------------------------|
| Fuel | Form | Unit of Supply | Average Price per | Gross Calorific | Delivered Energy Cost | Percentage change since | Percentage change since |
| | | | Unit (€) ¹ | Value (kWh/unit) | cent/kWh | 1 April, 2017 | 1 July, 2016 |
| 2 | | | | | | | |
| Coal ² | Industrial Fines | Tonne | 123.34 | 7759.2 | 1.59 | - | - |
| Oil ³ | | | | 10.55 | | 1.00/ | 0.5% |
| OII - | Gas Oil | Litre | 0.790 | 10.55 | 7.49 | -4.8% | +3.5% |
| | Light Fuel Oil Medium Fuel Oil | Litre Litre | 0.780 0.746 | 11.21 11.32 | 6.96 6.59 | -3.5% -3.1% | +9.2% +10.8% |
| | | Litre | 0.748 | 11.32 | 6.22 | -3.1% | +12.6% |
| | Heavy Fuel Oil | Litte | 0.713 | 11.45 | 0.22 | -2.1% | +12.0% |
| | | • | 4 000 | 10.00 | 10.10 | | 5.40/ |
| L.P.G. | Commercial Cylinders Bulk L.P.G. (0-3 tonnes) ⁴ | kg | 1.829 0.566 | 13.96 | 13.10 7.98 | - | +5.1% +2.6% |
| L.P.G. | | Litre Litre | 0.566 | 7.09 7.09 | 7.98 6.97 | - | +2.6% |
| | Bulk L.P.G. (3.1-40 tonnes) | Litre | 0.494 | 7.09 | 6.97 | - | +6.8% |
| Natural Gas ⁵ | | | | | | | |
| Natural Gas | Band I1: <278 MWh per annum | kWh | 0.0591 | 1.0 | 5.91 | - | +1.8% |
| | Band I2: >=278 <2,778 MWh per annum | kWh kWh | 0.0494 | 1.0 | 4.94 | - | +9.7% |
| | Band I3: >=2,778 <27,778 MWh per annum | kwn kWh | 0.0408 | 1.0 | 4.08 2.75 | - | +12.9% |
| | Band I4: >=27,778 <277,778 MWh per annum | KWN | 0.0275 | 1.0 | 2.75 | - | +6.5% |
| Electricity ⁶ | | 1.34/1- | 0.0000 | 10 | 00.00 | | .4.00/ |
| Electricity | Band IA: <20MWh per annum Band IB: >=20 < 500 MWh per annum | kWh kWh | 0.2232 0.1753 | 1.0 1.0 | 22.32 17.53 | - | +1.6% -2.9% |
| | Band IC: >=500 < 2000 MWh per annum | kWh | 0.1404 | 1.0 | 14.04 | - | -2.9% |
| | Band ID: >=2000 < 20,000 MWh per annum | kWh | 0.1404 | 1.0 | 11.29 | _ | +0.2% |
| | Band ID: >=2000 < 20,000 MWh per annum Band IE: >=20,000 < 70,000 MWh per annum | kWh | 0.0948 | 1.0 | 9.48 | _ | -2.8% |
| | Band IE: >=70,000 < 150,000 MWh per annum | kWh | 0.0866 | 1.0 | 8.66 | _ | -3.2% |
| | | | 0.0000 | 1.0 | 0.00 | | 0.2 /0 |
| | Night rate ⁷ | kWh | 0.0720 | 1.0 | 7.20 | | |
| | | | | | | | |
| Wood ⁸ | Fuel Chips (35% moisture) | kg wet | 0.127 | 3.2 | 3.97 | - | |
| | Pellets bulk delivery 9 | kg | 0.273 | 4.8 | 5.69 | - | - |
| | Pellets bagged | kg | 0.322 | 4.8 | 6.71 | - | -1.0% |

Special Notes:

Note: New source for Electricity and Gas Prices from October 2010 : Due to full deregulation of the market, prices are now sourced from the prices gathered for the EU Gas & Electricity Price Transparency Directive. Prices are updated 6 monthly. See notes 5 & 6 and www.seai.ie/Publications/Statistics Publications/EPSSU Publications/ for the latest report.

Electricity - from 1/10/2016 the Public Service Obligation (PSO) levy was increased as follows: From €17.88 to €20.73 per customer per month for small commercial customers (max import capacity < 30kVA) and from €2.76 to €3.33 per kVa for medium and large customers (max import capacity >= 30kVA). See www.cer.ie for more details

Carbon Tax was introduced for Oil, L.P.G and Natural Gas on 1st May 2010. The Carbon Tax was extended to Coal and Peat on 1 May 2013. See www.revenue.ie for more details.



Commercial / Industrial Fuels Comparison of Useful Energy Costs for Space Heating

Notes:

 $\label{eq:commended} \textbf{10.} Use \ \textbf{manufacturers} \ \textbf{recommended} \ \textbf{fuel for each appliance}.$

11. Delivered energy costs quoted are for the

conditions stated overleaf.

Efficiencies quoted are bands of typical seasonal heating efficiencies
 If a night rate electricity meter is installed and if the heat

pumps are run during the night, a unit cost of approximately

half that specified can be assumed in the calculations for heat pump running costs.

14. Seasonal Performance Factor is defined as the ratio of heat output from the heat pump and the electricity supplied to the heat pump over the heating season. SPFs quoted assume heat pumps are used in conjunction with low temperature systems such as

underfloor heating. 15. The Home Heating Appliance Register of Performance

(HARP) database contains exact performance specifications of the proposed/installed appliances. www.seai.ie/harp While HARP is not used in non-domestic Building Energy Rating (BER) it still gives a useful indicator of appliance efficiency/SPF for the purpose of

commercial fuel cost comparisons.

| Fuel ¹⁰ | Form | Delivered Cost ¹¹ | | | Se | asonal | Efficien | cy Ratin | Typical Seasonal Efficiencies ¹⁵ | | | |
|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|----------------------------------------------------------|-----------------------------------------------------------|------------------------------|-------------------------------|----------------------------------|----------------------------------|---------------------------------------------|-------|-------|-----------------------------------------------------------------------------------|
| | | (c/kWh) | 100% | 90% | 80% | 70% | 60% | 50% | 40% | 30% | 20% | |
| Coal | Industrial Fines | 1.59 | | | 1.99 | 2.27 | 2.65 | 3.18 | 3.97 | 5.30 | 7.95 | Solid Fuel Boiler 65% - 75% |
| Oil | Gas Oil Light Fuel Oil Medium Fuel Oil Heavy Fuel Oil | 7.49 6.96 6.59 6.22 | | 8.32 7.73 7.32 6.92 | 9.36 8.70 8.23 7.78 | 10.70 9.94 9.41 8.89 | 12.48 11.60 10.98 10.37 | 14.97 13.92 13.17 12.45 | | | | Gas or Oil Fired Boiler or Air Heater 65% - 75% Condensing Boiler 85-97% |
| L.P.G. | Commercial Cylinders Bulk L.P.G. (0-3 tonnes) Bulk L.P.G. (3.1-40 tonnes) | 13.10 7.98 6.97 | | 14.56 8.86 7.75 | 16.38 9.97 8.72 | 18.72 11.40 9.96 | 21.84 13.30 11.62 | 26.21 15.96 13.95 | | | | Electric Storage Heater 90% Direct Gas Fired Heater |
| Natural Gas | Band I1: <278 MWh per annum Band I2: ==278 <2,778 MWh per annum Band I3: >=2,778 <27,778 MWh per annum Band I4: >=27,778 <277,778 MWh per annum | 5.91 4.94 4.08 2.75 | | 6.57 5.48 4.53 3.05 | 7.39 6.17 5.10 3.43 | 8.44 7.05 5.83 3.92 | 9.85 8.23 6.80 4.58 | 11.82 9.87 8.16 5.49 | | | | 90% Direct Electric Heater 100% |
| Electricity | Band IA: <20MWh per annum Band IB: >=20 < 500 MWh per annum Band IC: >=500 < 2000 MWh per annum Band ID: >=2000 < 20,000 MWh per annum Band IE: >=20,000 < 70,000 MWh per annum Band IF: >=70,000 < 150,000 MWh per annum Night rate | 22.32 17.53 14.04 11.29 9.48 8.66 7.20 | 22.32 17.53 14.04 11.29 9.48 8.66 7.20 | 24.80 19.48 15.60 12.54 10.53 9.62 8.00 | | | | | | | | |
| Wood | Fuel Chips Pellets bulk delivery Pellets bagged | 3.97 5.69 6.71 | | 4.41 6.32 7.46 | 4.97 7.11 8.39 | 5.67 8.13 9.59 | 6.62 9.48 11.19 | 7.94 11.38 13.43 | 9.93 14.22 16.78 | 22.38 | 33.57 | |

| | Electricity used for Heat pumps ¹³ | Seasonal Performance Factor (SPF) ¹⁴ for heat pumps | | | | | | | | | Typical SPFs for Heat Pump Types ¹⁵ | | |
|-------------|------------------------------------------------------------------------------------|----------------------------------------------------------------|--|--------------|--------------|--------------|--------------|--------------|--------------|--------------|------------------------------------------------|----------------------------|------------------------|
| | | (c/kWh) | | 2.5 | 3 | 3.5 | 4 | 4.5 | 5 | 5.5 | 6 | | |
| | | | | | | | | | | | | Ground source (horizontal) | 2.7 - 4.5 |
| Electricity | Band IA: <20MWh per annum | 22.32 | | 8.93 | 7.44 | 6.38 | 5.58 | 4.96 | 4.46 | 4.06 | 3.72 | Ground source (vertical) | 2.7 - 4.5 |
| | Band IB: >=20 < 500 MWh per annum | 17.53 | | 7.01 | 5.84 | 5.01 | 4.38 | 3.90 | 3.51 | 3.19 | 2.92 | Air/Air | 2.5 - 4.2 |
| | Band IC: >=500 < 2000 MWh per annum | 14.04 | | 5.62 | 4.68 | 4.01 | 3.51 | 3.12 | 2.81 | 2.55 | 2.34 | Air/Water | 2.5 - 4.0 |
| | Band ID: >=2000 < 20,000 MWh per annum Band IE: >=20,000 < 70,000 MWh per annum | 11.29 9.48 | | 4.51 3.79 | 3.76 3.16 | 3.22 2.71 | 2.82 2.37 | 2.51 2.11 | 2.26 1.90 | 2.05 1.72 | 1.88 1.58 | Water/Water Exhaust Air | 3.0 - 5.6 2.5 - 4.2 |
| | Band IF: >=70,000 < 150,000 MWh per annum Night rate | 8.66 7.20 | | 2.88 | 2.40 | 2.06 | 1.80 | 1.60 | 1.44 | 1.31 | 1.20 | | |

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