





Is a Heat Pump cheaper and cleaner than my oil fired central heating?



Imagine this is your home

- Let's assume it needs 15,000 kWh of heat per year to heat your home
- Let's also assume you currently heat your home with heating oil
- 1 Litre of heating oil has 10.35 kWhrs of heat so for simplicity we will say 1L of heating oil = 10 kWhr of heat.
- So 15,000 kWh of heat requires 1,500L of heating oil and at 60c/L = €900 for your annual heating.

Now let's change your heating to a Heat Pump

- We will not make any other changes, so we get a direct like for like comparison
- We also will use the SPF (average annual COP) data from the largest official study of heat pump performance carried out by B.R.E on behalf of the UK Government
- This states average SPF to be 2.65
- So 15,000 kwh (divided by 2.65) = 5,660 kWhrs required @ average price currently of 20c/kWh = €1,132
- So switching from heating oil to Heat Pump will be 25% more expensive and of course electricity is set to get more expensive as grid infrastructure is upgraded for EV's.
- NOTE: we haven't mentioned the auxiliary heater in the heat pump which will need to be added to this figure.
- In a cold snap, when your heat pump needs its auxiliary heater on to stop the heat pump from freezing
 up, you will be drawing large amounts of power from the grid as both your heat pump compressor AND
 your backup emission inside the heat pump will be running at full power
- Example: if you have an 11KW heat pump and a 6KW backup immersion inside the heat pump (they all
 have one), in cold weather if your heat pump is on 24/7, you will be drawing 17KW from the grid each
 hour, 17 x 24 hours x 1 week = €571 euros for 1 weeks heating in this example.



Now lets look at the emissions of both

Source: SEAI DEAP data

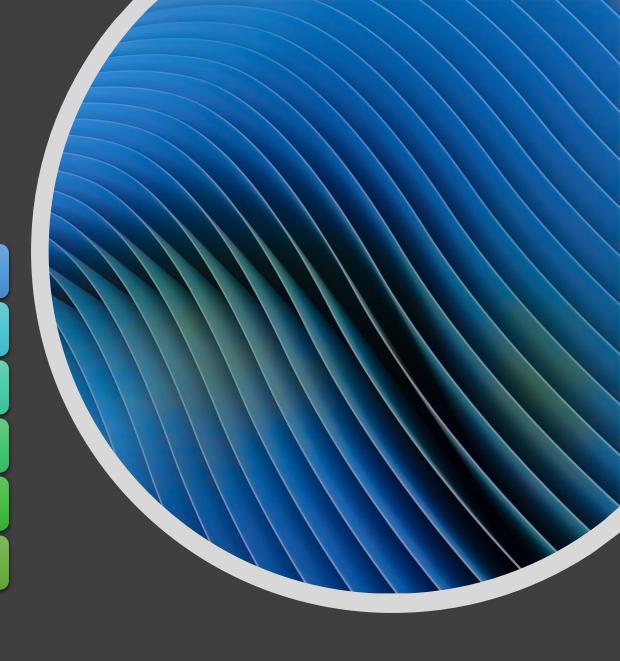
The primary energy emissions of heating oil are 299 grams/CO2/kWh at the point of use

The primary energy emissions of electricity are 850 grams/CO2/kWh at the point of use

Your total emissions with heating oil are 15,000 x 299 = 4.485 Tonnes of CO2

Your total emissions with the heat pump are $5,660 \times 850 = 4.811$ Tonnes of CO2

Your Heat Pump will produce more emissions and cost you more to run





So whats all this Heat Pump stuff about then

Simple, its all about taxation

- The Irish Government collects between 20 and 25 Billion euros in hidden energy duties and taxes each year.
- As the European commission has effectively banned fossil fuel by 2050, not far away, some governments are electrifying everything to get that taxation moved across onto the grid which will be powered by big wind farms and you will keep buying all your energy.
- Status Quo restored and you keep buying all your energy and don't get caught up in this nonsense of "actually" making your own renewable energy.
- So don't be surprised that a Heat Pump won't save you any money or even CO2 emissions right now.





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