www.robert-twentyman.co.uk

12 years of heating data in the same house (7 years oil, 5 years heat pump)

Summary

- Over 7 years, our boiler used 5.02 litres of oil per day
- Over 5 years, our heat pump used 13.01 kilowatt hours of electricity per day
- Both systems delivered broadly the same amount of heat into the house (around 43–47 kWh per day)
- We made no major changes to radiators, plumbing or insulation in this time period
- To compare costs, just take your preferred £ per litre or per kWh of electricity and multiply by the daily use - I've set out three scenarios in the coloured boxes.
- Real-world, same-house comparison using measured data (not manufacturer estimates)

Oil History		
Date	**Litres**	
6 March 2014	907	
23 September 2014	650	
6 February 2015	700	
6 May 2015	900	
12 January 2016	970	
29 April 2016	900	
26 January 2017	960	
9 September 2017	700	
31 January 2018	1000	
22 May 2018	540	
1 September 2018	501	
26 January 2019	900	
31 August 2019	960	
10 January 2020	860	
29 March 2020	800	
4 January 2021	500	
17 February 2021	500	
(29 May 2021	**Tank emptied)**	
Total	**13,248**	Litres over 7 years
2,641 days in total	**5.02**	Litres per day

Heat Pump History		
29 May 2021	0	(Dedicated meter reading from outdoor unit)
3 May 2026	23,409	
Total	23,409	kWh over 5 years
1800 days in total;	**13.01**	kWh per day

Cost comparison - when prices are High (red), Medium (yellow) and Cheap (green)				
	£ per Litre or kWh	**Per day**	**Per year**	
Oil (high price)	£1.00	£5.02	£1,832	Heat pump cheaper by
Heat Pump (high price)	£0.35	£4.55	£1663	£170
Oil (medium price)	£0.70	£3.51	£1,283	Heat pump cheaper by
Heat Pump (medium price)	£0.21	£2.73	£998	£285
Oil (low price)	£0.40	£2.01	£733	Heat pump cheaper by
Heat Pump (low price)	£0.13	£1.69	£618	£115

Check current prices yourself: Price × 13.01 (heat pump kWh/day) and Price × 5.02 (oil litres/day)

Heat Power Comparison				
Oil		**Heat Pump**		
Standard efficiency assumptions are applied (shown in grey)				
Kerosene contains 10.35 kWh per litre		HP assumed to deliver 3.3 kWh of heat per kWh of electricity		
Oil boiler assumed 90% efficient				
Oil heat kWh per day (5.02 x 10.35 x 0.9)	46.8	HP heat kWh per day (13.01 x 3.3)	42.9	
Oil heat kWh per year	17,080	HP heat kWh per year	15,675	

Testing conducted by Robert Twentyman
Full review: www.robert-twentyman.co.uk

Both systems delivered broadly the same amount of heat into the house when standard efficiency assumptions are applied