

## National Home Energy Rating (NHER)

**Definition:** NHER (National Home Energy Rating) is a number between 1 and 20 (it used to be between 1 and 10) based on the annual fuel running costs per square metre for the property, calculated using standard occupancy conditions and deflated three year average fuel prices.

The NHER scale has been extended to be a 0-20 scale to take account of the fact that modern houses often reached 10 on the old scale. NHER 20 represents zero total fuel costs.

NHER 20 is a highly ambitious target. It can only be achieved in a dwelling which generates sufficient income from generated energy to offset unavoidable fuel costs and standing charges. To reach NHER 20 in a dwelling that meets the Energy Saving Trust Advanced Standard Fabric Measures, with 4 square metres of solar thermal panels supplying hot water, would require the generation of around 30GJ of electricity, This is equivalent to 10kWp of PV (around 90m<sup>2</sup>) or a 6kW wind turbine on a fairly windy site. It would not be possible to even contemplate this without first taking steps to reduce electricity consumption through low energy appliances.

The UK government recently announced its goal that all new homes will be 'zero carbon' by 2016. Use of the NHER scale is the perfect tool for pursuing this goal, given that the NHER and associated CO<sub>2</sub> emissions are based upon the total energy consumption of a dwelling.

The NHER rating has a key role to play in providing a way of communicating the financial benefits to the householder arising from living in a low carbon house. The NHER Cost Table provides a way of providing prospective house owner with an estimate of the running cost of any home issued with an NHER rating.

Floor area:	40	60	90	100	120	150	180	220
<b>NHER</b>								
<b>0</b>	1710	2400	3090	3780	4450	5500	6500	8000
<b>1</b>	1290	1780	2250	2730	3200	4000	4500	5500
<b>2</b>	1060	1420	1790	2150	2500	3000	3500	4300
<b>3</b>	910	1200	1490	1780	2070	2500	3000	3500
<b>4</b>	810	1050	1280	1520	1750	2100	2500	2900
<b>5</b>	750	930	1130	1320	1520	1820	2100	2500
<b>6</b>	700	840	1010	1170	1340	1590	1840	2180
<b>7</b>	650	760	910	1050	1190	1410	1610	1900
<b>8</b>	600	685	820	930	1060	1240	1390	1660
<b>9</b>	550	615	730	810	920	1070	1190	1410
<b>10</b>	500	550	650	700	800	900	1000	1200
<b>11</b>	450	495	585	630	720	810	900	1080
<b>12</b>	400	440	520	560	640	720	800	960
<b>13</b>	350	385	455	490	560	630	700	840
<b>14</b>	300	330	390	420	480	540	600	720
<b>15</b>	250	275	325	350	400	450	500	600
<b>16</b>	200	220	260	280	320	360	400	480
<b>17</b>	150	165	195	210	240	270	300	360
<b>18</b>	100	110	130	140	160	180	200	240
<b>19</b>	50	55	65	70	80	90	100	120
<b>20</b>	0	0	0	0	0	0	0	0

**Table of total annual fuel running costs by NHER and floor area**

The estimation of running costs uses a government developed calculation procedure called **BREDEM** (Building Research Establishment Domestic Energy Model).



Appendix Q eligible HR units such as the MVHR.90 will improve SAP and NHER ratings.

Contact us for further advice on how to improve the SAP and NHER ratings of your project.

**Starkey Systems have accredited assessors qualified to carry out SAP calculations, for submission to building control, NHER ratings and Energy Performance Certificates.**