



How to calculate your kWh/m²/year number

With a calculator and a measuring tape, you will soon know more about the electricity consumption of your home

How does your home compare with others? Is it an energy hog or a lean machine? Just knowing your monthly kWh total does not answer the question. It wouldn't be fair to compare the electricity consumption of a one-bedroom bachelor flat with a 5-bedroom family home. So there is a practical international standard for energy rating that looks at energy consumption per square meter. It's easy to figure out, and once you know your home's "number", you can compare with others on the [My Green Home website](#) and set your goal to bring it down in time.

Step 1 – Add up your electricity kWh consumption for the past year

Determine the total number of kWh your household has used in the past year. If you have filed away a complete set of past monthly utility bills or pre-paid receipts, record the kWh units for the past 12 months and total them. Otherwise, phone your electricity supplier. They should be able to tell you how many kWh – also known as 'units' – you used in the past 12 months. Customers who always buy pre-paid vouchers online can usually generate a record of past purchases.

Step 2 - Work out the usable space of your home

Once you know your total annual kWh, the next step is to find the size of your home's usable floor space. (Exclude outside areas, storage areas and garage space – unless significant appliances are being used there.) Get out the measuring tape and calculator. If your house is rectangular, measure it inside from end to end and side to side and multiply width x length. If your house has an irregular shape, a second floor or a cottage that is metered with the house, divide the space into rooms or rectangles that you can measure, calculate the m² for each, and add them together.

Step 3 – Divide you past year's electricity use by your m² space

The final calculation is nothing more than kWh divided by m². As an example, the Ngewana family's electricity use for the past year was 8880 kWh, which they divided by 218 m² to get their number which is 41 (rounded up). If they add the gas which they use for cooking and heating, then this number goes up to 48.

How did you do? Go to My Green Home and compare with the Ngewana family, share your number and see how you line up with other South Africans. Then set your goal. You could even win a green prize for sharing your number!

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In the future you may find that this number has another purpose. Internationally, many countries calculate this kWh/m²/year number and require it as a certificate for energy rating to all potential home buyers or residents. Note that energy from other sources like gas are likely to be included in such a tool, and there will be formula provided for how to convert other energy carriers, such as gas into kWh to add to this number.

There are other ways to quantify the energy rating of your home too. One is to divide the annual kWh by the number of people in the household. Your raw annual kWh number is important too, especially because it highlights the efficiency benefits of a small house. Living in a home no bigger than you need is a first step in having a green home.

Finally, if you want to monitor your daily consumption, first divide your annual kWh by 365 so you have a benchmark for comparison.