

ECO LIFESTYLE PROJECT

CASE STUDY: STAND-BY SAVINGS

BACKGROUND

Local residents had heard that switching off appliances at the wall overnight instead of leaving them on stand-by could save significant energy and reduce their bills. However, reaching sockets is often awkward and impractical. They were interested to know how much money could actually be saved.

SOLUTION

Smart meter readings were taken in a resident's home in various states. The figures were compared and calculations done to work out how many units of energy could potentially be saved.

Some devices must be kept on overnight, such as fridges and freezers. Others are deliberately kept on for convenience, such as night lights and phones that are charged overnight. Readings were taken as the house is usually left at night, then with everything off, and then with only selected devices on. Each time, the smart meter was watched for several minutes to see where it settled as the draw can fluctuate.

As usual: 64w

With everything off: 5w

With selected devices on: 43w

If everything is switched off, there is a potential saving of 60w. For an average of 8 hours a night, this would be around 175 units over a year. On an average tariff, this would save around £49 a year. This is around £4 per month. This is not a feasible real-world saving as it would require even fridges and freezers to be switched off, leading to a surge when powering back on in the morning and potentially spoiled food. Keeping other useful devices off, such as night lights, might also lead to increased risk of trips and falls. Avoiding charging phones overnight would move the power draw to the day without necessarily reducing it significantly.

With only necessary or immediately useful sockets on, the possible difference is around 22w. Assuming 8 hours a night, this is a potential saving of 65 units or around £18 a year. This is a feasible and practical real-world saving. This is equivalent to £1.50 per month.

It is always sensible to check the house for fire risks and security before going to bed. Switching off easily accessed sockets is a sensible addition to this. However, making efforts to reach awkward sockets is unlikely to make notable savings, but may increase the chance of accident and injury. Remote power-down plugs may be worth fitting in some cases, where the socket is definitely not needed overnight but it may be difficult to access.

Generally, there are more effective and worth-while lifestyle changes that can be made. Ensuring heating and drafts are well controlled, switching to low-energy bulbs, and adopting energy-efficient habits around cooking and travel are likely to save more energy and money.

OUTCOME

Residents have more information on which to make choices on their own habits. Understanding that switching off everything will have a limited impact on their energy use and bills eases their anxiety over this and enables them to focus better on other lifestyle changes that are likely to have a more significant impact on both the climate and their household budget.

BENEFICIARY QUOTES

“Brings the reality of the ‘switch everything off’ mentality down to earth a bit”

“Insulation is definitely where the savings are at”

IMAGES

As the house was habitually left:



With only selected devices on:

