Time for crackdown on energy slavery

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OPINION

A proposed ESB 'smart meter' is likely to provide some shocks on our level of electicity consumption

IMAGINE HAVING squads of servants to provide for your every whim. If this sounds like something only the Beckhams could aspire to, you might be surprised. Each of us has, in fact, the equivalent of about 20 "energy slaves" working around the clock for us.

Though it sounds like an arcane notion, an energy slave is a way of measuring how much effort the services we all take for granted would actually require if we depended on muscle power alone.

Energy-wise, we humans are pretty puny. In a burst of effort, such as a short sprint, a fit human can muster about 100 watts of power. That's only as much as is needed to illuminate a solitary light bulb.

Modern electrical networks have given us power, convenience and comfort that even our recent ancestors would have found unfathomable. Electricity is the perfect energy slave – silent, invisible, powerful and obedient.

It's also incredibly cheap. If you had to employ actual humans to replace your electrical energy with manual labour (at the minimum wage), the average family's ESB bill would come to nearly a million euro a year!

All this comes, however, at a hefty environmental price. The ESB on our behalf burns millions of tonnes of coal, oil, gas and peat to keep the lights on. Its coal-fired plant at Moneypoint in Clare alone produces 5 million tons of CO_2 per annum. Each Irish household accounts for an average of 3.3 tonnes of CO_2 just to generate its electricity.

Earlier this year the ESB announced a long-term plan to cut its emissions to zero in less than 30 years. By 2020, one-third of all ESB production will be from renewables, mostly wind power.

The move away from our craven dependence on imported fossil fuels can hardly come a moment too soon. In two weeks' time, the ESB will be implementing an interim 17.5 per cent price hike, with more likely next January. Next month's increases will see the average annual domestic ESB bill rise from €736 to €864.

That may sound like a lot but, in terms of the growing fossil fuel crisis, it's probably just for openers. As outlined earlier, electricity is still extraordinarily inexpensive. A typical family's entire electricity usage costs around €2 a day, or barely the price of a newspaper.

> "A standard electric shower uses the power of over 100 'energy slaves'. Maybe that's why Cleopatra preferred to take a bath?

While the cost is going up, so too is consumption. Each Irish household now uses 62 per cent more electricity than in 1990. The proliferation of household electronics, from huge TVs to home computers, games consoles, phone chargers and elaborate home lighting has fuelled this huge increase.

Ultra-cheap fossil energy is fast becoming a memory; oil prices have risen by 85 per cent in the last 12 months, while gas and coal are both up by over 100 per cent in the same period.

While most people could make a fair stab at the cost of a pint of milk or a litre of petrol, few have a clue how much electricity costs, or how much we actually use; the meters are usually tucked away in some awkward spot under the stairs, and the reading is all but meaningless. Checking your actual ESB bill isn't much help either. You can see how much you have to pay in total, but little else.

This situation should begin to change towards the end of this year, as the board begins an 18-month pilot of a "smart meter" scheme in 25,000 homes. Minister for Energy Eamon Ryan has promised a full national roll-out of smart meters within five years, at a likely cost of around €600 million.

Smart metering should allow us to improve our "energy literacy" by giving direct feedback on just how much power we are using at a given time, and also identifying which household devices are the worst energy hogs. It will also allow for electricity pricing to be varied to incentivise customers to avoid using expensive peak electricity.

Smart metering may, for instance, be capable of remotely switching heavy domestic devices, such as washing machines, on and off to avail of off-peak rates. This in turn makes much better use of variable electricity sources, such as wind power.

Smart metering also enables people who generate more electricity than they need to easily sell this "surplus" electricity back to the grid. This in turn will encourage more people to invest in micro-generators, such as domestic wind turbines.

Rather than waiting months or years, you can now buy your own smart meter (Cultivate, in Dublin's Temple Bar sells an "Electrisave" unit for €95). It will show exactly how much electricity you are using, what it costs, and how much CO_2 it's generating. Prepare to be surprised. Flick on the electric kettle, and watch your domestic electricity usage treble.

Hop into a standard electric shower and your entire domestic electricity usage increases 12-fold – that one device alone uses the power of over 100 "energy slaves". Maybe that's why Cleopatra preferred to take a bath?

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