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## UK's power switch-off shows future for cleaner energy grid

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**LONDON:** For a few hours last week, British consumers were asked to make a choice: keep consuming power as normal or just turn the lights off.

Hundreds of thousands of households took part in the effort to reduce electricity demand during a couple of hours when energy supplies were forecast to be particularly tight.

There was a financial incentive offered, but there's more to the emergency measures.

They're a preview of the choices and behaviour that will have to become commonplace as the world transitions its energy supply to depend overwhelmingly on intermittent renewable sources.

Public expectations about the cost and availability of gas and electricity have been upended by the global energy crunch following Russia's invasion of Ukraine.

Where people once took supplies for granted, the crisis in Europe has exposed a far more fragile system.

In response, countries are trying to speed up deployment of renewable power capacity to better guarantee sources of energy and cut down on greenhouse gas emissions.

But this will also require a big shift in deeply embedded habits about how and when people consume power.

"Demand-side response needs to become part of the everyday, part of business as usual," Sarah Honan, flexibility policy manager at the Association for Decentralised Energy, told a committee in the UK Parliament last week.

Every second of every day, technicians keep the world's electricity grids in a delicate balance between supply and demand.

They keep an eye out for potential spikes, like when everyone has the television on to watch the World Cup or the more regular evening surge when people are cooking dinner.

But rather than just ramping up supply, the UK is trying to shift some demand instead.

Residential electricity suppliers asked eligible customers to use less power than normal for an hour on average last week. Participants were rewarded with cash for every unit they cut, compared with their typical use.

One major supplier, Octopus Energy, reported that 400,000 customers took part in each session. Last Monday, they cut usage by about 200 megawatt-hours of electricity, as if all power was shut off in Bristol, among the 10 biggest cities in England.

The following day, the drop in demand from customers was nearly equivalent to the city of Liverpool turning off the lights for an hour. It's a little less than 1% of total power generation during that period, but enough to make a difference to the slim margins on the grid.

If supplies were really unavailable, then this kind of programme could help prevent a calamity. But it's also a dress rehearsal for a future where wind power plays a bigger role in the grid.

When the wind dips, something else has to fill the void. For the short term, that's mostly natural gas.

But every unit of demand that people can cut is a bit of gas that doesn't need to be burned and a little less greenhouse gas entering the atmosphere.

Even as countries find low-carbon alternatives to current gas plants, those fossil-based options will be much more expensive. That makes shifts in demand even more attractive.

"It's a step in the right direction in unlocking cost efficient and clean demand flexibility," said Kesavarthinjy Savarimuthu, analyst at BloombergNEF. "It's way cheaper and cleaner." — Bloomberg