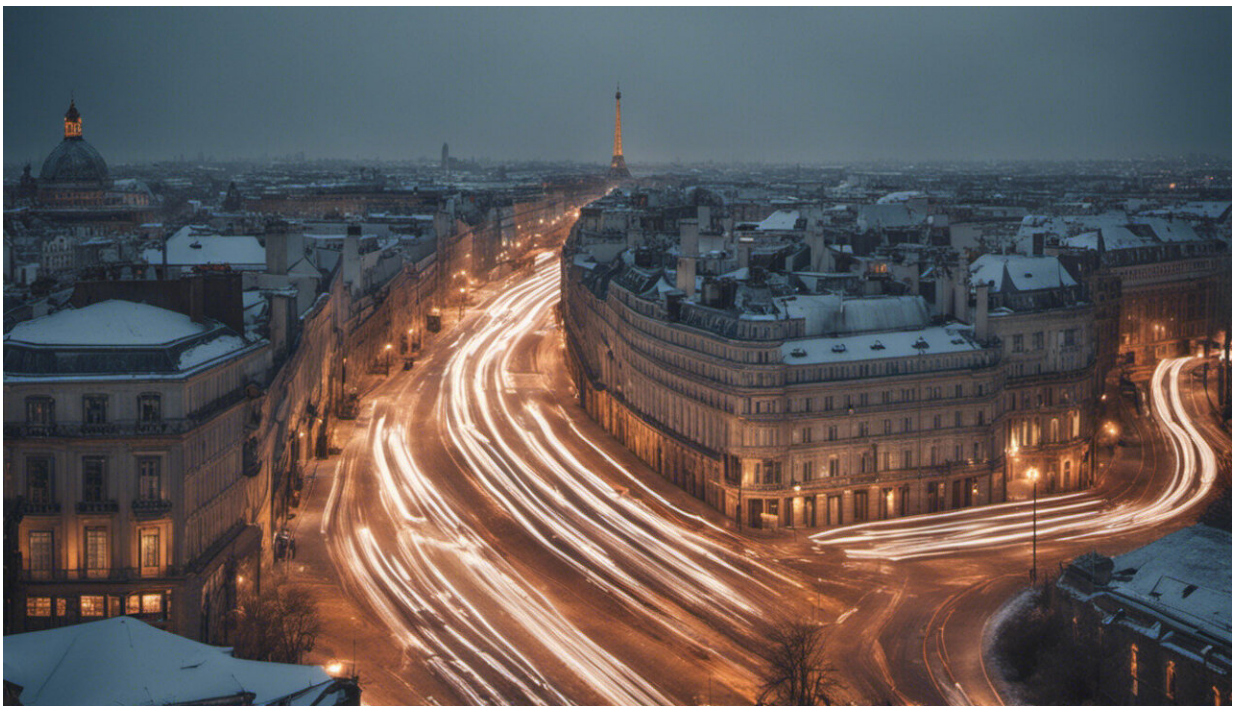


France used 10% less electricity last winter—three valuable lessons in fighting climate change

September 19 2023, by Ariane Millot and Steve Pye



Credit: AI-generated image ([disclaimer](#))

Measures which help people use less energy at home, while traveling or at work could [significantly cut greenhouse gas emissions](#) according to the UN's Intergovernmental Panel on Climate Change. When there is less demand for energy, that means less low-carbon electricity needs to

be generated to replace fossil fuels and reach net zero.

Making do with less energy was important last winter when Russia's war in Ukraine caused energy prices to soar and restricted gas supplies. To avoid shortages, France implemented a "sobriety plan" with the aim of lowering total [energy consumption](#) by 10% within two years.

France's experience is instructive for other countries considering how to manage high energy prices and reach net zero with another winter energy crunch possibly looming. It showed that sufficiency measures can slash energy consumption and so cut the emissions driving climate change [quickly](#). But deeper changes to how society is organized are necessary to maximize the potential contribution of these measures to decarbonization.

A 15-point 'energy sobriety' plan

Energy sufficiency measures aim to limit how much energy is consumed to meet public need. They can involve people lowering the thermostat on their heating or switching to foot, bike or wheelchair instead of driving.

France's [plan de sobriété énergétique](#) in October 2022 contained 15 measures, including a maximum temperature of 19°C in public buildings, support for teleworking and car-sharing and dimming or turning off public lights at certain hours. The plan also included subsidies for installing more efficient heating systems, like heat pumps.

To reduce the risk of power cuts, the plan sent an alert via an app called Ecowatt three days before energy supply was forecast to fall below demand. This worked by asking households to lower their electricity consumption by switching off appliances or avoiding using them during peak times like the early evening.

Combined with people using less energy anyway due to higher prices, the sobriety plan cut [electricity consumption](#) in December by almost 10% compared with previous years. This varied by sector and ranged from 12% in industry to 7% in homes, cafés, shops and restaurants. Meanwhile, when adjusted for temperature differences, natural gas consumption was 17% lower than the previous winter.

Given fossil fuel use must fall to tackle climate change, what has France's experiment revealed about the necessary effort to decarbonize?

Lesson 1: Sufficiency measures can cut emissions quickly

During winter 2022, France's emissions [fell by around 8%](#) compared with pre-pandemic levels. In a [survey](#) of 12,000 people by the French transmission system operator, a majority indicated that they might be willing to continue actions taken during winter 2022-2023.

This is encouraging. The sufficiency measures not only lowered emissions within a few months; the lack of any [significant](#) backlash also suggested that people may be receptive to similar measures to rein in [fossil fuel use](#).

Lesson 2: Economics a bigger motivator than environment

In December 2022, gas prices [increased](#) by almost 130% compared with 2021, while [electricity prices in 2022](#) more than doubled.

Lower-income households are less able to reduce their typically low levels of energy use during shortages and are less capable of investing in more energy-efficient systems. Higher-income households can cut their

consumption more easily, but their usage is less sensitive to increases in energy costs.

The survey revealed that the cheapest heating systems were invariably the most sought after. But many people were reluctant or unable to switch to such energy-efficient alternatives without a guarantee of the same level of service and without the cost of installation being subsidized. The French sobriety plan did include financial support for households to replace oil heating systems. The subsidy was offered based on income and could reach up to €15,500 (£13,350).

While higher prices can induce small cuts to energy demand, bigger changes which could permanently lower emissions will need further [incentives](#) or regulation.

Lesson 3: Research can take time to be endorsed by policymakers

Negawatt, an association that models France's energy transition scenarios, first introduced the concept of "sobriety" in a public debate ten years ago. This led to France adopting a goal of reducing total energy consumption by 50% by 2050 compared with 2012. Very few policies have been enacted since to support this target.

In the last few years total energy consumption fell [mainly due to COVID restrictions](#). In that regard, the energy sobriety plan marks a shift in the government's attitude, though its embracing of sufficiency measures was triggered by concerns around energy security and costs—not carbon neutrality.

To fully capture the climate benefits of energy sufficiency measures, France must go further than the current plan. Lowering energy use in

line with the national target requires integrating energy sufficiency into a broader transformation of society.

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