

ENERGY DISRUPTION AND SHORTAGES

The Energy Disruption research strand has explored energy supply interruptions, blackouts, shortages and crises in the twentieth century. Although the 1970s international oil crises feature prominently in public memory, energy shortages and blackouts have a longer history and also plagued modern societies like Britain and Japan in the years after the Second World War. Disruptions of energy supply prompted sensitive distributional politics. Burdens were distributed unevenly between different groups of consumers. Political regimes shaped who got more or less energy at a time of shortage as did cultural norms about “normal” practices and hours. When and where the lights went out was determined by culture and politics as well as nature and technology. Understanding how past shortages were overcome provides vital knowledge for considering how societies might deal with such situations in the future.

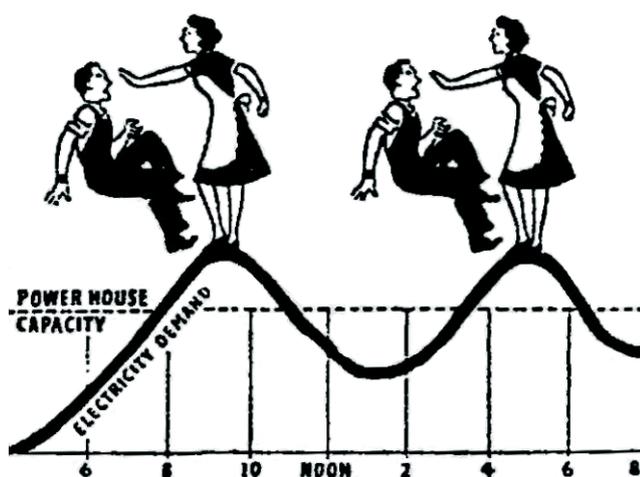
Today, energy disruption is chiefly associated with poor developing countries. However, rich developed countries have had their share of disruptions and shortages, too. In Britain, energy shortages after the Second World War continued from 1947 to 1952. In February 1947, the government discussed a plan to evacuate London when it was feared that an electricity supply shortage would lead to a public health hazard as sewage and water supply systems would not be able to operate without electric power. In 1951 alone, there were 204 instances of electricity supply interruptions caused by excessive peak demand. Technical failures, insufficient generation capacity, strikes, adverse weather conditions and growing user demand contributed to energy disruptions.



KEY FINDINGS

- Energy disruption has occurred in periods of growth and affluence as well as during stagnation and poverty. Economic development and technological advancement have not eradicated the risk of blackouts and shortages.
- Energy disruption entails a distributional problem. The allocation of a limited amount of energy among users has been determined by politics, culture and social values. What is regarded as an “essential” energy service has differed across time and space. Different groups of users have had their own ideas about what constitutes an “indispensable” energy service.
- Energy consumption has a distinctive temporal pattern that is closely connected with users’ daily routines. The public has been less willing to cooperate and adapt their consumption patterns when their perceived “normality” was disturbed by official interventions
- Examples of people learning to live with less energy can be found throughout modern history.

NO ROOM FOR HOMES AND INDUSTRY ON THE PEAK



'The housewife pushing off the worker'

The Times, 11 November 1947. © The Times Digital Archive

Energy disruptions brought to the fore **distributional politics**. Supply shortages rarely affected everyone equally. When there was a limited amount of available energy, securing a supply for one section of society meant curtailing the supply for others. Governments and providers prioritised the diversion of energy to specific groups of users to maintain the “essential” workings of society. What was regarded as a necessary energy service differed across time and space. A nation’s political regime influenced how scarce energy resources were allocated. Britain under a democratic regime protected household consumers at the expense of industrial production. In East Germany, the socialist regime changed its approach after the uprising of 17 June 1953 from targeting households to pressing industries to run more night shifts. By contrast, in Japan after the Second World War, household electricity was frequently cut to send energy to factories.

Users had their own ideas of what was necessary and indispensable. Electric heating was widely regarded as a luxury in 1920s Britain. By 1950, and despite the official condemnation of the electric fire as the ‘most serious contributor to the winter peak problem’, housewives argued that it was an “essential” appliance for heating their homes and drying clothes.

Energy users were often divided. Domestic, commercial and industrial consumers each claimed that they deserve a greater allocation of energy in times of shortage. Competition for scarce energy brought to light prevalent norms and conventions about what aspects of daily life were more or less “essential”. In public debates about restriction of energy use, one can observe a moral language of

justice and fairness. During the Second World War, the British government’s attempts to introduce energy rationing for households (a scheme prepared by William Beveridge) failed because the public feared that it would lead to an inequitable distribution of resources—68% of people who responded to a Mass-Observation survey in April 1942 opposed domestic fuel rationing. Britain’s response to disruption continued to focus on controlling industrial demand, which created a conflict between industrial users and domestic consumers. In the late 1940s, industrialists criticised domestic consumers for not carrying their “fair share” at a time when policies imposed a consumption ceiling on factories and forced them to spread the load.

“The [fuel restriction] scheme must be seen to aim at justice: fair shares between neighbours using different fuels, fair shares between rich and poor.”

G. L. Watkinson of the Ministry of Fuel and Power on energy restriction policy, 13 February 1947. TNA, T 273/305.

The Temporal Nature of Disruption and Resilience

Energy use has a temporal pattern that is rooted in the rhythm of daily life. Home chores, daily meals and wage labour are examples of routinised activities with associated energy consumption. Their overlap at certain times of the day, especially in the morning and evening, creates peak energy demand. Electricity supply in the late twentieth century faced the enormous task of the temporal management of supply and demand because it was practically impossible to store electricity. The growth in demand tended to exacerbate peak consumption. When the supply system could not satisfy demand, the load had to be shed by reducing supply voltage or by disconnecting users.

Because energy supply problems tend to occur at peak hours, energy supply tends to be interrupted when users want it most. **To prevent shortages and to cope with disruptions, daily routines had to change.** Moral suasion was the primary tool of intervention at the household level. Technical (e.g. central remote switching devices) and economic solutions (e.g. time differential pricing) were discussed as early as 1948 but abandoned in the face of opposition from industry and the public.

In the past, British people showed remarkable resilience when their daily lives were interrupted by supply cuts. In February 1947, people were told to refrain from using electricity during peak hours (9 am – 12 noon and 2 pm – 4 pm). Many people responded by getting up earlier to prepare hot

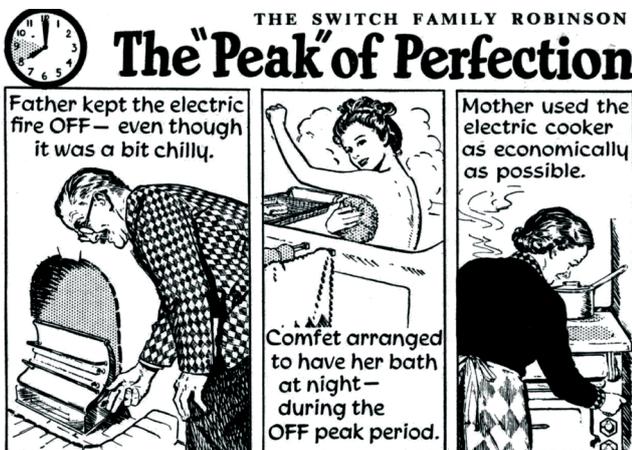


'Having a meal by candle-light at a Clapham Restaurant' Illustrated London News, 24 December 1949.

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drinks and cook their breakfast. They shifted their times for washing, ironing and hoovering. During electricity cuts, clerks in business offices worked by candlelight and devised ways of maximising the use of sunlight from the windows. New working shifts were introduced in factories. But it proved difficult to change daily routines in the long run. After the disruption had passed, mealtimes reverted to earlier hours, and workers refused to work at night or on weekends.

When policymakers tried to alleviate the impact of resource shortages, they faced the significant challenge of changing people's routines. In the late 1940s, electricity restrictions in the late afternoon was criticised for making it difficult for housewives to cook evening meals. Consumers were less willing to cooperate when they perceived that the "normal" temporal pattern of their lives was being disturbed. Night work to shift peak hours was regarded as "unnatural". Social learning to cope with disruptions was hard to perpetuate in the long term, but some people during the energy shortage after the Second World War did learn to live with less energy. At the time of energy crises in the 1960s and 1970s, those with wartime experiences of blackouts and shortages reminded fellow citizens of the benefits of going to bed early and using energy-saving cooking methods. **Memories and techniques of coping with disruption were retained and often revived during later energy disruptions.**



'Changing routines' Illustrated London News, 25 December 1948.

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"The worst prognostications of what power cuts could do to London are nothing to what really happened in 'Shinwell's Winter' of early 1947. We were not then so softened by affluence and memories of what the war did to London were still fresh."

The Guardian, 10 January 1963.

FURTHER DISCUSSION

H. Chappells, and F. Trentmann, 'Disruption in and across Time' in Elizabeth Shove and Frank Trentmann (eds.), *Infrastructures in Practice: the Evolution of Demand in Networked Societies* (2018).

H. Shin and F. Trentmann, 'Energy Shortages and the Politics of Time: Resilience, Redistribution and "Normality" in Japan and East Germany, 1940s–70s', in J. Brewer, N. Fromer, F. Albritton Jonsson and F. Trentmann (eds.), *Coping with Scarcity: Energy Shortages, Food Crises, Drought and Critical Materials in the Modern World* (Bloomsbury, forthcoming).

H. Shin and F. Trentmann, 'The Material Politics of Energy Disruption: Managing Shortages Amidst Rising Expectations, Britain 1930s–60s', in D. C. Needham (ed.), *Money and Markets: Essays in Honour of Martin Daunton* (Boydell and Brewer, forthcoming).

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MATERIAL CULTURES OF ENERGY

Material Cultures of Energy has investigated energy transitions in daily life in the twentieth century. Our research seeks to understand better the roles played by people, households and communities in transformations in the past and the light they shed on the challenging task of transitions in the future. Research has investigated case studies in the United Kingdom, North America, Germany, Japan and India.

Material Cultures of Energy explores how:

- Networks and grids changed communities and their sense of space
- Transitions worked themselves out in people's homes
- Societies managed at times of shortages and disruption
- Energy futures were imagined and contested

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For further details take a look at our website <http://www.bbk.ac.uk/mce>

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