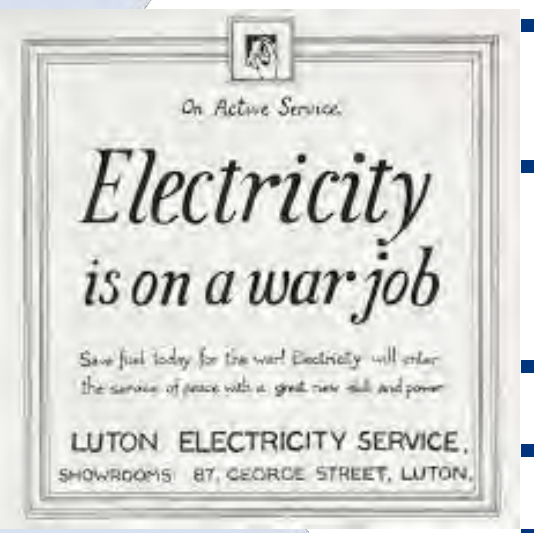
cerre Centre on Regulation in Europe

UK Energy Policy in Time of War

Michael G. Pollitt
Energy Policy Research Group
Judge Business School
University of Cambridge

9 December 2022
EPRG Winter Seminar
Cambridge

WARTIME POLICY 1
GENERAL ENERGY DEMAND REDUCTION



- The problem is lack of supply of gas for heating and electricity.
- We need a significant programme of demand reduction with monitoring and incentives to comply.
- This should take the form of limiting the use of electricity and gas for non-essential services.
- Commercial buildings and government offices should have maximum winter temperatures and minimum air conditioning temperatures which are significantly lower than last year.
- There should be bans on open doors to commercial buildings in winter.
- Buildings should be encouraged to go dark at night.
- The target should be to reduce weather corrected demand by at least 15%.
- Demand is already falling due to high prices: Industrial electricity demand down 8.2% in Q2 2022 relative Q2 2019 (real price rise 45%); Residential gas demand down 18.0% Q2 2022 vs Q2 2019 (real price rise 43%). Source: Tables 3.3.1, ET 5.5, ET 4.1, RPI DOBY, RPI All Items

WARTIME POLICY 2
GAS DEMAND REDUCTION SPECIFICALLY

Nord Stream Pipeline
26 September 2022

- The problem is gas, gas demand needs to be targeted specifically.
- Energy intensive industrial output should not be protected where such goods can be imported cheaply from countries with much cheaper energy prices.
- We need to encourage energy use when wind and sun are available and should move to a system where we discourage energy use specifically on low wind (and low sun) days.
- We should encourage use or charging of household devices and appliances during these times.

WARTIME POLICY 3
'DIG FOR VICTORY' IN ENERGY

- We need a collective 'dig for victory' with accelerated investment in energy.
- Home production is possible for those with roofs and the government must encourage the installation of PV on private homes and commercial buildings. Peak monthly installs: 57k (Nov 2011); latest 14k (Sept 2022). Peak total annual solar install 4000 MW in 2014-15. PV Installation Stats
- We need an active programme of energy efficiency advice and interventions. Peak installations of EE measures 825k a year (to Sept 2014), latest 367k (to March 22), HEE Release Tables
- We should be encouraged to switch off devices where possible at home and at work; turn down or off radiators in rooms we are not in.
- We should reward and encourage efficient use of public spaces to keep warm.
- We can switch off clock changes to save daylight across Europe! (Chong et al, 2011).
- Local authorities should also be encouraged to unblock planning permissions for local energy schemes.
- We should call out inefficient use of energy in workplaces and public buildings and bureaucratic objections to energy production, such as to installation of solar panels on buildings historic buildings with no visual impact.

WARTIME POLICY 4
FAIR PRICING IS ESSENTIAL IN WARTIME

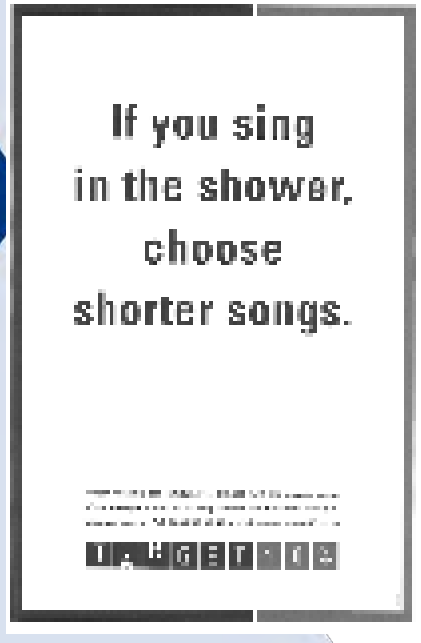
- We need a fair pricing scheme for energy, which also encourages energy saving.
- This means we should implement a rising block tariff, with a rebate, for all household and business energy consumers. This is a way of effectively rationing energy while maintaining affordability.
- Under the rising block tariff scheme, each household could be given a lower price energy allocation which could be determined by the measurable household characteristics at a low price and then face sharply rising prices for using more than their allocation.
- This could. combined with a reward for reducing energy consumption relative to last year's measured consumption.
- The low price allocation would incorporate a significant assumed reduction, except for certain protected vulnerable customers, in demand relative to last year. It would apply to all energy consumers including businesses.

WARTIME POLICY 5
WARTIME PROFITS MUST BE REGULATED

- We need to regulate returns across the entire electricity and gas supply chain.
- This can be done by using the audited asset values of licensed electricity and gas companies and only allowing regulated rates of return across all assets.
- The overall budget envelope should be set for the entire onshore electricity and gas sectors, on the assets dedicated to the satisfaction of UK demand.
- There will then be some detailed accounting to be done to distribute this across generation assets, network assets and retail supply businesses.
- These values will be used to set average prices for all consumers, including businesses.
- Short term markets should continue to operate to maintain the real time efficiency of matching supply to demand, but all current long term contracts should be temporarily suspended (or subject to high taxation).

IS A LARGE, RELATIVELY PAINLESS, RAPID REDUCTION IN ENERGY DEMAND POSSIBLE?

- The answer is yes.
- In 1939, the UK began rationing household coal (the primary source of heating fuel) within days of its entry into World War Two. This successfully reduced household consumption of coal during WW2 (Shin and Trentmann, 2019). However electricity was not rationed and domestic and farm consumption rose 10% p.a. between 1939 and 1946 (Fouquet, 2020).
- In 2003, New Zealand ran a 'Target 10' public advertising campaign to reduce electricity use by 10% weeks due to the need to meet a shortage of water in its hydro dams (the target was achieved in a month) (IEA, 2005).
- In summer 2011, Tokyo reduced electricity demand by 18%, following the Fukushima Crisis in March 2011 (Kimura and Nishio, 2016).
- From April 2011 to March 2012, the UK installed 270,000 PV systems on roof tops (1% of all households), following the implementation of Feed-in-Tariff. (See https://www.gov.uk/government/statistics/solar-photovoltaics-deployment).



NZ 'Target 10' campaign
IEA, 2005, p.100.

PRECEDENTS FOR TIMELY INTERVENTION

Joe Stiglitz

- *'Wars Aren't Won with Peacetime Economies' - Joe Stiglitz, 2022, (2001 Nobel Laureate in Economic Sciences)*
- The economic response to the COVID-19 pandemic reminded everyone of the power of pragmatic economics and reminded us of the necessity and power of democratic government in market economy faced with an existential crisis.
- The British wartime economists who worked tirelessly to set wartime prices and rations in World War Two, helped produce and allocate scarce resources, maintained the morale of the population and, in turn, helped win the war (see Cairncross, 1995).
- Failure to properly manage fuel shortages is costly for governments. The 1947 fuel crisis contributed to a reputation for economic incompetence for The Labour Party which kept them out of power from 1951 to 1964, though they did win a slim majority in 1950 (Robertson, 1987).

Courtesy of Bristol Rerence Library: Citizen Party, 'Bristol Election Special', October 1947 (Ref: B18598)

See: https://gcgosling.wordpress.com/2021/05/10/labour-and-its-rivals-in-bristol-some-historical-perspective/

REFERENCES

- Cairncross, A.(1995), 'Economists in Wartime', *Contemporary European History*, 4(1):19-36.
- Chong, Y., Garnsey, E., Hill, S., & Desobry, F. (2011). Daylight saving, electricity demand and emissions: The British case. In T. Jamasb & M. Pollitt (Eds.), *The Future of Electricity Demand: Customers, Citizens and Loads* (Department of Applied Economics Occasional Papers, pp. 445-463). Cambridge: Cambridge University Press. doi:10.1017/CBO9780511996191.025
- Fouquet, R. (2020), *Historical Energy Dataset.* National Infrastructure Commission https://nic.org.uk/data/all-data/historic-energy/
- IEA (2005), *Saving Electricity in a Hurry: Dealing with Temporary Falls in Electricity Supplies*, Paris: OECD,
- Kimura, O. and Nishio, K-I. (2016), 'Responding to electricity shortfalls: Electricity-saving activities of households and firms in Japan after Fukushima', *Economics of Energy and Environmental Policy*, Vol.5 (1): 51-72.
- Ozawa, M., Chaplin, J., Pollitt, M., Reiner, D., Warde, P. (eds.) (2019a), *In Search of Good Energy Policy*, Cambridge: Cambridge University Press.
- Ozawa, M., Chyong, C., Lin, K., Reilly, T., Humphrey, C., & Wood-Donnelly, C. (2019b), 'The Power of Siberia: A Eurasian Pipeline Policy 'Good' for Whom?', In M. Ozawa, J. Chaplin, M. Pollitt, D. Reiner, & P. Warde (Eds.), *In Search of Good Energy Policy* (Cambridge Studies on Environment, Energy and Natural Resources Governance, pp. 305-335). Cambridge: Cambridge University Press. doi:10.1017/9781108639439.021
- Pollitt, M.G. (2022), *The Energy Market in Time of War*, September 7, 2022, Centre on Regulation in Europe. https://cerre.eu/wp-content/uploads/2022/09/The-War-Economy-and-Energy-CERRE_edited-TC_2AM-PDF.pdf
- Robertson, A.J. (1987), *The bleak midwinter 1947*, Manchester: Manchester University Press.
- Shin, H. and Trentmann, F. (2019), '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.
- Stiglitz, J. (2022), *Wars Aren't Won with Peacetime Economies*, Project Syndicate, October 17, 2022, https://www.project-syndicate.org/commentary/west-needs-war-economics-energy-food-supply-shortages-by-joseph-e-stiglitz-2022-10