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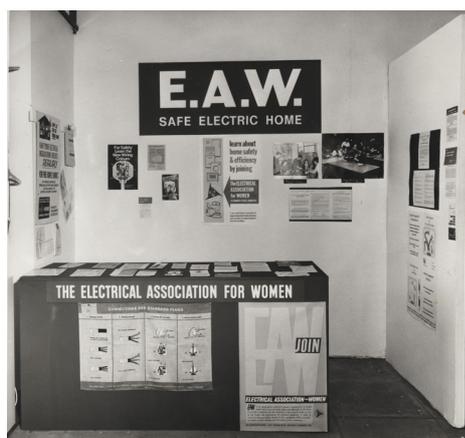
Graeme Gooday

## **Rethinking the Agency of Women in Energy Management: Early British Debates on Electrification**

Our historical understanding of past energy transitions has not paid sufficient attention to women's voices and perspectives. Although evidence of their roles has typically been harder to trace and recover than men's more fully documented participation in energy management, it is incontestably the case that—in the early phases of electrification at least—women were often presumed by electricity suppliers (among others) to be the primary arbiters of domestic energy consumption. And indeed we know from studies of contemporary energy activism around the world that women are often responsible for enacting sustainable energy management and thus also agents of resistance to unsustainable practices. Yet, as a range of feminist critics have pointed out, there is a danger that associated research on anthropogenic climate change will turn the phenomenon of study into a “Manthropocene.” This is because at all levels the expertise of male writers on energy management has occluded women's agency both in explaining how energy scenarios have been arrived at and how they have then been managed. Where then to look for alternative stories from which to highlight more explicitly and subtly the various roles that women have undertaken in key debates on energy transitions?

In this paper, I will study the introduction of electricity into the homes of interwar Britain. To do this, I will draw upon my recent research on two interrelated women's organisations in early twentieth-century Britain: the Women's Engineering Society (WES), founded in 1919 and now celebrating its centenary, and the Electrical Association for Women (EAW), founded in 1924 but closed down in 1986. As Suzanne Worden has noted, these two organisations had significantly different feminist agendas: WES's aim was to promote careers for women in engineering, and to enable women in such careers to share ideas and practices in a safe supportive environment, whereas the EAW sought to use electricity to rationalise domestic labour for women so that, with the main drudgery removed, they could (theoretically at least) seek independent careers for themselves outside the home. Looking further at their respective activities enables one to compare the different forms of agency that the women involved could exercise in debates about the technologisation of everyday life in general, and specifically in response to the introduction of electrical infrastructures, especially national power grids.

To complement previous studies of WES, I would emphasise how its membership and the contents of its institutional journal, *The Woman Engineer*, reveal how women were much more involved in the early supply of electric power than has hitherto been noted. Basically, although opportunities for peacetime engineering employment took a long time to reach the levels they first attained in World War I (during which many male engineers were typically serving in battle), some women were able to maintain employment not only in family firms as previously, but were also able to start up their own engineering companies, for example, consultancies for power station development. Although facing extremely challenging circumstances again after World War II, it was through such roles that WES maintained its membership, surviving up to the current day. Indeed it has been the model for similar groups in other nations, such as the Society of Women Engineers, which was set up in the United States in 1950. Looking at the membership of such organisations reveals how at least a handful of women have been involved in shaping national energy supply from the consultancy office, power station, or factory management system.



The Electrical Association for Women (EAW) stand at the Royal Highland Show, 1971, NAEST 093/08/25/10, IET Archives. Image is reproduced here with permission of the Institution of Engineering and Technology Archives.

By contrast, the EAW flourished early with the support of the electricity manufacturing and supply industry, which eventually paid for much of the EAW's operations. These blossomed particularly from the mid-1930s, when EAW training and education schemes generated cohorts of hundreds of teachers and demonstrators in technical electricity all across the UK, and many times more women trained in the arts and sciences of electrical usage. EAW training qualifications usefully opened

up careers for women working in mainstream industry because the availability of accredited saleswomen and advisers in energy supply was clearly crucial for an industry that needed women's expertise and authority in persuading others to drop older forms of energy supply and adopt electricity instead. However, this mediating strategy of the EAW was not sustainable in the long term, with resistance to complete electrification being too great given the highly effective operations of the rival Women's Gas Federation. And once market saturation had been reached in the mid-1980s there were clearly no more households left needing persuasion to adopt electrification.

Ironically perhaps, given its mission of enabling “housewives” to escape housework into careers of their own, it is hard to see any evidence that such emancipation occurred except for the EAW demonstrators and lecturers themselves, whose careers were made by the very operations of the EAW. In fact, I suggest that the central educational prerogative of the EAW was largely about creating technical career structures for women at a time when careers in engineering were much more challenging to secure—as the leaders of WES had so obviously found. While previous historians, notably Carroll Pursell, have assumed that some degree of EAW education was *necessary* for women to become consumers of electricity, I argue that the deficit model on which this move is based is untenable. After all, there is much evidence to show that while some women did not need such an education to become consumers of electricity, for others the provision of education was simply not relevant to their decisions to either decline electrification or to pursue only partial electrification. Indeed, many embraced instead a mixed domestic economy of both electricity and gas supply, with coal usage lingering for decades.

To understand this point more deeply, it is important first to interrogate the very limited terms in which women’s agency has been construed in many stories about electrification—insofar as it is investigated at all. Engineering accounts of electrification such as Thomas Hughes’ *Networks of Power* (1983) have presumed that the adoption of electricity was so obviously a desirable option when it was available that there was simply no need to address women’s agency. In Hughes’ account, women’s interest in and demand for electrical energy supply was taken for granted. In other more culturally sensitive accounts, most commonly based on the stories of the EAW themselves, women working at home were assumed rather crudely to be either compliant (potential or actual) consumers of electricity who embraced the efficiency agenda of electricity, or “irrationally” resistive non-consumers who preferred traditional fuel usage, despite the greater labour costs involved and (supposedly) lower efficiencies of fossil fuel techniques.

It is important to challenge and nuance that very simplistic view: it stems from the modernist technocratic agenda of presuming the only rational path to be acquiescence in the high-efficiency consumption of the utility of electricity, and leads to the EAW corollary that it was utterly irrational—i.e., inconvenient for supply companies—for consumers to do anything else. And in that regard, we learn much by comparing the situation in Britain with the much less technocratic approach in twentieth-century Canada, as documented in Ruth Sandwell’s recent edited collection *Powering Up Canada*. This latter work makes

clear that the rationales for choosing energy supply forms cannot universally be seen as a matter of efficiency. Instead, Sandwell's collection shows that (amongst others) concerns about availability, sustainability, self-sufficiency, and localised convenience mattered greatly, far more than technocratic efficiency. We must thus include these factors in mapping energy supply debates in the UK's transition to electrification via the new National Grid launched in 1926.

Importantly, the imperative to adopt electricity on the ground that it was (theoretically) more efficient as an energy medium came from a supply industry that needed new consumers to be profitable. To be more precise, it needed domestic users of electricity to regulate consumption of electrical energy in a way that made daily cycles of electricity supply more profitable for the industry's owners (be they private or governmental). Attempts, however, to equate this pursuit of efficiency with a concern for prudent domestic economy underwent something of a mishap in translation. For householders who had experienced the rapacious greed of water supply companies, there were also issues of trust—becoming embedded in a monolithic technocratic supply system necessarily entailed acceptance of the suppliers' terms, such as quality, cost, and reliability. From the perspective of women as managers of household energy, we might ask the following question: Why would the familiar routines of securing coal or paraffin from a range of different suppliers somehow be less prudent than trusting an unknown faceless technocracy, or a vulnerable system that required repair or maintenance by technicians at unpredictable junctures?

It would have made much more sense to many householders to invest in more than one externally supplied energy utility—and indeed, many elected to adopt both electricity and gas supply, the latter most obviously for cooking. This enabled householders to maintain some discretion, as supply companies were forced to compete against each other for custom and maintain levels of value for money and reliability that were not characteristic of supply monopolies. Moreover, the traditional household deployment of different fuels that were optimised for different purposes could be maintained. In an era in which modernisation by means of mass electricity supply or gas network sought to play down the specificities of fuel types, this more delocalised and abstract notion of consumption was alien to many. It was for this reason and others that the all-electric house was hardly a universal success, and the all-gas house never even suggested!

Any attempt to persuade women at home to change their behaviour in order to adopt electricity entailed a changing of core values, not (just) education. This is why advertising mattered—it had to persuade consumers that they should change their priorities and embrace a different kind of energy consumption in the future. To the extent that advertising was successful is a moot point. Gerrylyn Roberts points out that in the 1920s, amongst most British households that adopted electricity for lighting, the only significant change in energy consumption was in the adoption of electric irons. These devices warmed up quickly and cleanly when plugged into light sockets, unlike the slow-heating and smoky irons that traditionally gained their operative warmth from the fireplace. This sort of discretionary choice shows how householders who did not adopt electricity *tout court* were not ignorant of the opportunities afforded by electricity. Instead, they had weighed up the alleged benefits of electricity and found almost all of them wanting.

In conclusion, when we look over the unsuccessful educational campaigns to encourage women to embrace an all-electricity solution for the home, we see the difficulties raised by the presumptive use of a deficit model to account for the “slow” take up of electricity. For many women, their non-engagement with electricity was not simply a matter of not knowing enough. Even sustained training in EAW courses did not necessarily transform them into compliant consumers of electricity as a utility. What we learn from this instead is that the agency of women to critically evaluate and then resist various “modernising” modes of electrical technocracy deserves much more detailed research by historians. By investigating the archival records and publications of the EAW and its counterparts in other countries we can discern a little more clearly the otherwise understated agency in many female roles in managing energy usage by both electrical and non-electrical means.

**Further Reading**

- Canel, Annie, Ruth Oldenziel, and Karin Zachmann. *Crossing Boundaries, Building Bridges: Comparing the History of Women Engineers, 1870s–1990s*. Amsterdam: Harwood Academic, 2000.
- Gooday, Graeme. *Domesticating Electricity: Gender, Technology, and Uncertainty 1880–1914*. London: Pickering & Chatto, 2008.
- Pursell, Carroll. “Domesticating modernity: the Electrical Association for Women, 1924–86.” *The British Journal for the History of Science* 32, no. 1. (1999): 47–67. <https://doi.org/10.1017/S0007087498003483>.
- Roberts, Gerrylyn. “Electrification.” In *Science, Technology, and Everyday Life*, edited by Colin Chant, 68–112. London: Routledge/Open University Press, 1989.
- Sandwell, Ruth, ed. *Powering Up Canada: The History of Power, Fuel, and Energy from 1600*. Montreal: McGill University Press, 2017.
- Worden, Suzette. “Powerful Women: Electricity in the Home, 1919–40.” In *View From the Interior: Feminism, Women, and Design*, edited by Judy Attfield and Pat Kirkham, 131–40. London: Women’s Press, 1989.