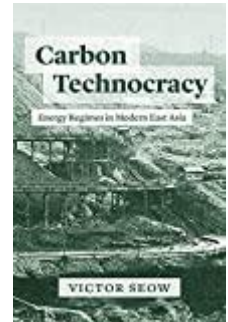


**Victor Seow.** *Carbon Technocracy: Energy Regimes in Modern East Asia.* Studies of the Weatherhead East Asian Institute. Chicago: University of Chicago Press, 2021. 376 pp. \$40.00, cloth, ISBN 978-0-226-72199-6.



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Writing in 1940 about Japan's energy security, German economist Kurt Bloch referred to coal as "the lifeblood of modern industry."<sup>[1]</sup> As Victor Seow makes abundantly clear, this somewhat understated coal's importance. With extraordinary detail, Seow unpacks the relationship between the development of fossil fuel resources, specifically coal, and the structure of the modern state in Japan and China during the first two-thirds of the twentieth century. Indeed, Seow frames state formation as an extension of fossil fuel resource development. Regardless of the ideology used to justify its form and function, successive Imperial, Nationalist, and Communist governments relied on people with scientific, engineering, and managerial expertise to extract sufficient quantities of carbon energy to fuel industrialization, transportation infrastructure, and urbanization. In the process, these technocrats attempted to impose a level of rationalized control over resource exploitation that privileged ambitious statist goals at the expense of people's lives and the places where they

lived. The result was a distinctive type of governance which Seow terms "carbon technocracy."

By revealing that technocracy often bridged ideological or political divides, Seow contributes to a growing body of work challenging the primacy of political ideology as the key framing to explain histories of the twentieth century.<sup>[2]</sup> Seow investigates how and where carbon technocracy took hold in many places, but focuses his attention mainly on the coal-mining region of Fushun in northeast China, which "exemplifies several key features of the wider industrial modern world: hubristic attempts to tame and transform nature through technology; mechanization and the disciplining and degradation of labor; and, perhaps above all, the tenacious privileging and pursuit of production" (p. 9). This focus enables Seow to demonstrate the continuity of carbon technocracy across ideologies over time. When the Chinese Nationalist government took control of Fushun at the end of WWII, officials relied on the expertise of Japanese engineers and specialists to resume operations. And when the Chinese Communists cap-

tured the mines less than a decade later, they adopted the same fixation on increased coal production as a measure of economic growth and national strength as had previous governments. In each case, the modern, technocratic state imagined developing Fushun's coal resources as a means to development, security, and prosperity.

Defined as “a technopolitical system grounded in the idealization of extensive fossil fuel exploitation through mechanical and managerial means” (p. 8), Seow employs the concept of carbon technocracy to help historians rethink technocracy “less in terms of the number of engineering experts holding high office and more in terms of the extent to which a narrowly defined technoscientific rationality wedded to a proclivity for planning directed the practice of statecraft, regardless of who filled the upper echelons of government” (p. 254). The book includes plenty of details about specific individuals and organizations, such as the Japanese railway company Mantetsu and the Communist government's Mining Affairs Bureau, but the efforts to connect so many actors often obscures the distinction between the industry leaders, businessmen, engineers and professionals, and actual government bureaucrats and politicians. In some cases, Seow places the focus on those with technical expertise, in others on the executive officers of large corporations, and then also on both military leaders and civilian officials who together, but at different times, in different places, in different ways, comprised the “technocracy.” Creating such a broad umbrella term helps conceptualize the abstract relationship between material energy resources and attempts to plan or control their use while at the same time conflating important distinctions between the shifting power among these various actors. It is never entirely clear who is being implicated when the carbon technocracy is invoked. We know that workers have little agency, but it is not always clear who wields power.

Seow's prompts to evaluate the prevalence of technocracy across ideologies and over time

should be a welcome invitation to historians of science and technology, energy, and environment to draw out comparisons with other modern, centralized, and industrialized states during the twentieth century. Seow acknowledges that many of the technoscientific approaches taken by engineers and officials in Japan and China were imported from, or at least informed by, technocratic knowledge and attitudes from Europe and North America, but he does not confront the question of whether these connections represent simply an extension or application of ideas and practices from the West, or whether we should understand carbon technocracy in China and Japan as in some significant ways distinct from what unfolded in the West. Similarly, Seow frames coal extraction as an outgrowth of technocratic expertise and power, but what distinguishes this story from other examples of state formation in the context of natural resource development elsewhere in the world? Is this always a story of state formation, or one of resource colonialism? What happens when the story of Fushun is placed into a wider global context of modern states using technocracy to exert colonial control over resource hinterlands? Seow has provided a compelling framework, which other historians will pick up on to explore some of these questions.

Perhaps what is most compelling about Seow's work is his caution to historians not to succumb to the explanatory allure of “carbon technocracy's vision of such extractive enterprises as defined more by the working of machines rather than the labor of humans” (p. 71). Understanding the obsession with control and rationality that informed technocratic governance must attend to their limits and the “new kinds of dependencies and, correspondingly, vulnerabilities” (p. 195) and “the fissures in the workings of carbon technocracy” (p. 164). The technocratic form of governance had immense consequences for the people who worked in the mines and the places that were transformed in name of statist goals. The ultimate contradiction of carbon technocracy, Seow points out, is that

“the costs were arguably greater than the benefits” (p. 289).

The beauty in his crafting of the story, the weaving together of various conceptual threads, and the blending of different source material is in how Seow both recreates the physical and mental worlds of industrial northeast China and frames up a compelling argument that helps us better understand their fabric. The work that Seow has done to pull together research from government and company records, a variety of gray literature, travel diaries, oral histories, and private collections of mining engineers from China, Japan, Taiwan, and the United States is staggering. But the most impressive, in this reviewer’s reading, is his integration of literary works. Perhaps the best example of this is a book written by former Fushun coal miner Xiao Jun called *Coal Mines in May* (1954). Seow uses an excerpt from the book to open chapter 6 on the Chinese Communist efforts to expand coal production in the years before the Great Leap Forward. But Seow does not simply use the novel to provide insight into how people imagined coal mining during this period. Instead, Seow returns to it several times in the chapter to demonstrate not only how Xiao’s experiences in the mines inspired his interpretations of the socialist project in Fushun, but also how government officials responded to the book and its interpretations within the shifting context of ideological change that swept through, but left largely unchanged, the vast carbon technocracy that had existed for decades.

Seow prompts us to consider “the central premise (and problem) of technocracy” that “underscore[s] the limits to the idea that questions of society can and should be identified, delineated, and solved solely through the mobilization of science and technology” (p. 319). It is important not to mistake Seow’s work as simply a critique of science and experts. Rather, Seow demonstrates that blind faith in science and experts led to unintended consequences and often failures that dispro-

portionately damaged the people and places that technocracy laid claim to in an effort to achieve “development,” “progress,” “prosperity,” and “growth.” If science and experts are to be trusted, we need to understand that “in the most nefarious cases, technocratic plans are willfully engineered to benefit the few at the expense of the many,” and “in more benign instances, plans are frequently directed toward abstracted targets that do not actually align with the goals they were designed to meet” (p. 321). These are vital lessons at a time when citizens and technocrats alike seem empowered by the notion that science and experts are a threat to freedom and welfare.

#### Notes

[1]. Kurt Bloch, “Coal and Power Shortage in Japan,” *Far East Survey* 9, no.4 (February 1940): 39-45; quotation on 39.

[2]. Kate Brown, *Plutopia: Nuclear Families, Atomic Cities, and the Great Soviet and American Plutonium Disasters* (New York: Oxford University Press, 2013); Bathsheba Demuth, *Floating Coast: An Environmental History of the Bering Strait* (New York: W. W. Norton, 2019).

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