

HISTORY AND ECONOMICS SEMINAR

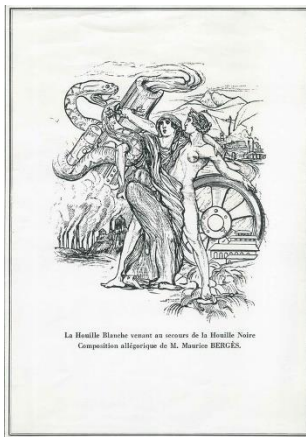
Tuesday 6 February 2024, 5.00pm GMT

Seminar Room 3, Cripps Court, Magdalene College



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'Black Coal is Capital, White Coal is Revenue': French Hydropower and the Idea of Renewable Energy, 1889-1919



The transition from an energy system based on fossil fuels to one based on renewable energy has become an important notion in current debates on tackling anthropogenic climate change. This image of a fossil-fuelled past and a future of renewables does not only go back to the 1970s, when the term 'renewable energy' came into widespread use. In fact, the hope of a future energy economy based on electricity generated from renewables already existed in the late 1800s. One of the key niches for articulating this hope was the group of French engineers and businessmen that developed and promoted hydroelectric power, often referred to as 'white coal'. Through journals like *La Houille blanche*, they emphasised that white coal was renewed over time while black coal was depleted, and they argued this point by applying economic

categories like capital, revenue, inheritance, and amortisation to emerging technical systems.

Using economic categories to conceptualise different energy sources, French hydropower proponents were extending the work of earlier pioneers in thermodynamics. The application of such categories was therefore transnational and interdisciplinary. In the context of French hydropower development, however, such terms took on a new importance before the First World War. Advocates of hydroelectric power associated the new energy source with good economic management. With the new imperatives introduced by the war, the argument that white coal might replace black coal gave way to a vision that emphasised the need for both energy sources. French hydropower boosters went from arguing that white coal might lead to a renewable energy future to arguing that coal and hydropower were both necessary for a sound energy economy. This shift in strategy shows both that, through economic categories, there was a clear distinction between renewable and non-renewable energy sources, and that the vision of an accelerating shift to renewable energy before the First World War in most cases did not survive the exigencies of global conflict.

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