

Carbon continuity

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Impact Paragraph

This dissertation begins as a case study of Taiwan's energy history, but as the story unfolds, it becomes clear that Taiwan's energy transitions over time also offer scholars a glimpse at the complicated energy practices in post-war East Asia. Such a perspective is substantial as the current transition studies and energy history research focus on areas such as Europe, the Americas, or the emerging economies in the Global South. Yet, how to sell a study of Taiwan's energy pasts to different researchers remains a major task. Moreover, in terms of public relevance, how does studying the global island's energy pasts generate innovative discussions or even interventions on energy issues in reality?

During the PhD, I found my research interest in carbon-intensive infrasystems not only shared common interests with the researchers working on Taiwanese history in the Cold War era or transition studies in general but also echoed the concerns of people outside the academic circle, such as renewable energy developers, government officials, and NGOs. I pitched my ideas and exchanged them through presenting at academic conferences, such as the annual conferences of the Taiwan STS Association, the European Association of Taiwan Studies, the European Sociology Association, the Taiwan Society for Anthropology and Ethnology, the Powering East Asia conference, the Development and Interaction of Modern and Contemporary Humanities Network in Northeast Asian Sea Region conference, and the International Conference on the History of Science in East Asia. Additionally, I attended the Doing Energy History in Times of Transition workshop and the summer school held by the Électricité de France. In so doing, I was able to share the historical insights from my studies with a broader audience of researchers from different disciplines for further collaboration.

Another important opportunity that helps to expand my research network and the public relevance of my PhD study is through scholarship applications. For example, I was granted the Green Energy Scholarship by Ørsted in 2019. The program's establishment is to exhibit the foreign OWE developers' long-term commitment to the local society, and Ørsted managed to launch several social engagement projects. This gesture was also for exchanging trust and enhancing communication with the communities near the coast of Changhua County. The Green Energy Scholarship Program aims to stimulate more undergraduate or graduate students into the field of OWE technologies while showing its priorities for enrolling students originally from Changhua County. With this scholarship, I got opportunities to interview important stakeholders through their channels and build up research networks with early career researchers sharing the same research interests but across engineering and social sciences disciplines.

As for collaboration, since my study highlights the materiality of energy carriers/technologies and the circulation of knowledge within the engineering community, such an analytical approach allows me to join the collaborative project "The Taiwanese-Dutch

Connection in Historical Perspective." The project explores the connections between various Taiwanese and Dutch actors and their related cooperation and knowledge exchange in fields such as the semiconductor industry and harbor engineering. Within this project, my understanding of Taiwan's energy history and infrastructural system based on Chapter 2 offers a different perspective on the development of Taiwan's Kaohsiung port. My subsequent contribution was accepted in the forthcoming book *Since 1624*. Moreover, as I started to work with the Centre of Innovative Democracy in Taiwan while finishing up my dissertation, my idea of carbon-intensive infrasystems was further visualized in maps through their project "Kaohsiung Archive."²³⁸ The archive will be a collective work based on the research method of collaborative ethnography. Various actors are invited to add materials and speak about their own experiences with the air pollutants and other environmental hazards caused by Kaohsiung's petrochemical industries over the years. My contribution is mainly the historical setting that denotes the importance of understanding history as the starting point of further social communication.

Overviewing the discussions I have had during the PhD, the most challenging part was not about convincing others of the importance of a historical understanding of the energy past to better grasp the complicated power relationships among various stakeholders in today's energy disputes. Instead, the question is: what is next? The "Theater of Negotiations" project held in Taiwan by STSers, sociologists, and anthropologists allows me to utilize my understanding based on Chapter 4 in actual social practices. The general idea of "theater of negotiations" is an educational experiment that combines the techniques of art, drama, and performance and brings students together to play and act as different stakeholders such as lobbyists, judges, NGOs, local politicians, residents, and non-human actors, etc., and debate specific controversial issues in a public space.²³⁹ The offshore wind power construction dispute was one of the issues in the 2020 Theater of Negotiations, held at the Taipei Fine Arts Museum. Such an experiment carries both educational purposes and the possibility of generating new ways of thinking and dealing with controversies. In November 2023, the original organizers set the stage again with offshore wind energy as the major theme. I joined their fieldwork in advance and documented their performance (Figure 22). In so doing, I experienced and learned from such an innovative experiment; on the other, I was able to contribute my observation of the OWE controversies and to further stimulate more discussions regarding the uncertainty of scientific standards and perceptions of underwater noise, fishing stocks, impacted species, and human-non-human relationships through writing their press releases.

²³⁸ For more information, please see the ASTHMA FILES website, <https://theasthmafiles.org/content/kaohsiung/essay>

²³⁹ Bruno Latour was invited to co-curate the Taipei Biennale in 2020. As in terms of on "another planet," the Taiwanese STS association managed to bring the project "theater of negotiations," which has been carried out in Paris once to Taiwan. See discussion in Paul Jobin and Tzung-Wen Chen, "Toward an Upgrade of Gaia-politics: A View from the East Asian Critical Zone," *Science, Technology, & Human Values* (2023).



Figure 22 A scene from the Theater of Negotiation in November 2023.

Students acted as a chairman of the local fishermen association (on the left) and a representative of OWE developer (on the right) in a staged public meeting. The umbrella symbolized the fishermen's association's welcome for sharing the profits in the future together.

Sources: Photographed by the author.