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Meeting report: "Problems and solutions for decarbonisation and energy transition". Conference, 2021 (online)

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From 7th to 9th December 2021 a 'cross-national dialogue' on energy transition was hosted by four international research centers, the Australia-based Climate Society and Environmental Research Centre, the Institute for Advanced Sustainability Studies in Potsdam in Germany, the Climate and Energy Policy Research Lab at Kanpur in India, and the Global Institute of Sustainability and Innovation in Phoenix Arizona. The conference was designed to run over three days across four time zones, using a shared online platform. The aim was to experiment with the format to share perspectives across institutes, researchers and participants involved in observing and helping the process of energy transition, to learn from experiences and to reflect on obstacles and possibilities across national contexts. The conference was funded by Australian Research Council.

The key conference rationale was that decarbonization and energy transition pose among the most important social challenges for societies across the globe. The technical challenges of transition exist in a social context and the difficulties of transition are dramatically magnified by social factors and processes. 'Modern' industrial/post-industrial society has been supported by cheap easily available fossil fuel energy. The social system has encouraged the dumping of pollution, including greenhouse gases, without much care for the ecological consequences. Patterns of economic power have grown together with the social formations fashioned around this organization, and use, of fossil fuel technology. Most importantly, those patterns now appear to resist substantive change even when the problems of fossil fuel energy are recognized.

Some decarbonization is happening, but not fast enough. Minimal change protects vested interests, slows real solutions and hampers the development and use of new technologies. Similarly, old social habits may remain, as when corporations install renewable energy with harmful consequences, even if those consequences are less deleterious than for fossil fuels. Different narratives about energy transition compete for local, national and international recognition. Technocratic narratives assume transitions can be managed by inevitable 'innovation' and 'green alternatives', while behavioral narratives assume lifestyle is central and needs to be drastically changed to reduce energy and material consumption. Other narratives emphasize the need for decentralized locally adapted solutions, while others attempt to design centralized, global solutions. There is a debate whether adequate changes can result from market incentives or need direct policy interventions such as deadlines for phasing-out coal or promotion of state-run renewable energy.

Conference sessions and workshops

The conference aimed to explore and specify these varied problems of transition, and how they can be overcome. It aimed to investigate how choices for energy transition are embedded in different narratives, and how they concurrently affect social justice, fairness, and legitimacy. It investigated changes underway, alternative approaches, from community energy to degrowth, and the barriers encountered. It attempted to understand failed transitions as well as successful ones, while being attentive to unintended consequences as well as planned outcomes.

There were ten sessions and a conference workshop, summarized in the following:

Global and national agendas

The conference opened with a discussion of the Glasgow COP led by Patrick Bond (University of Johannesburg), which helped pose the key questions of equity and urgency in energy transitions, as a reflection on the 26 years of COP narratives, and apparent lack of progress. The resulting debate clearly defined the issues for the conference. The second session centered on India and COP26. It discussed how energy transition links with livelihood demands and land justice, and with women's mobilizations to overcome household-level energy poverty through renewables. The disconnection between climate concerns and renewable energy as the province of elites on the one hand, with the deeply-embedded livelihood and environmental struggles for poorer people on the other, was a major concern. Session three took these issues to the US, addressing energy and the social benefits of transition. Presenters highlighted the need to redesign energy systems as social equalizers rather than as poverty-creators. There were appeals for de-colonial approaches, just transitions programs and examples of how artists and architects are imagining and building inspiring forms of renewable energy.

Comparisons

Several sessions used comparison to highlight possibilities and common tendencies. Session four compared community-based renewables in India, Australia, and the UK, highlighting gov-

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ernmental failure to adequately support the sector, and conflicts between centralization and decentralization, especially in India. Presenters compared aspects of community empowerment across community energy projects in Australia and Scotland, the possibilities for Indigenous communities to benefit from renewables, and models of gift-based transition to renewable energy outside the State. Session five also developed comparative perspectives, centering on the process of just energy transitions for coal communities. Presenters compared experiences in Australia and India, with extensive data on the employment impacts and prospects in coal regions. Analysis stressed the need for planning to realize social benefits. Session six focused on the political backlash against energy transitions, through pro-coal movements, and their interconnection with the emergence of populist and far right political forces in Germany, Poland and Australia, and debated how these may be addressed through region-based initiatives.

Principles for transition

With energy transitions underway across the globe, the wide range of experiences can be used to generate underlying principles and lessons. In session seven a keynote presentation from Ortwin Renn (IASS) explored these lessons, developing a model for grounding energy transitions in coal-dependent regions. He emphasized the importance of recognizing social constructions of meaning and identity for transition. Discussants elaborated on the principles and frameworks, and their potential application. The following session continued this discussion, addressing the parallel question of grounding legitimacy for renewable energy, with case studies from Germany and Mexico. Analysis ranged across the impact of land use changes, how communities collaborate to manage access to wind power, and the experience of mobilization against large-scale corporate wind power.

Communities and energy

A four and a half-hour workshop on community energy discussed a range of issues faced by participants in community based renewable energy projects in Australia. The workshop included speakers from grassroots community renewable organizations, the community-energy industry and from advocacy organizations. There was extensive discussion about how to enable knowledge sharing, build new networks and develop a repository of 'problems and solutions' to advance the knowledge base. One major problem appeared to be that, so far, government policy has been more helpful to large scale commercial energy than to community energy. Continuing this discussion about communities and renewable energy, session nine addressed Indigenous Peoples' engagement with energy transition as a way of advancing livelihood, and underpinning culture and sovereignty. Discussion centered on cases in the US and the Caribbean, including Hawai'i and Guyana. There was extensive documentation of Indigenous energy poverty in the US, and the current choice that people face between 'heat or eat'. With the rapid closure of coal-fired power on Indian Reservations, there was analysis of the extensive benefits of renewable energy, owned and controlled locally by First Nations.

Decarbonization and energy transition pose among the most important social challenges for societies across the globe.

Planning

The closing session for the conference focused on planning and policy for energy transitions and the role of the public as participants in the transition process, and as beneficiaries from it, focusing on a series of cases in India, Germany, and Australia. From large-scale solar plants in India, to Germany's wind power sector, and to wind power in South Australia, cases highlighted the impacts for local people and for local economies. Debate centered on how best to advance decarbonization as a social process. The session returned to the debate between equity and urgency that opened the conference as participants reflected on research agendas across the sessions. As was clear across the conference, urgently-needed decarbonization requires equity in the transition. Likewise, with advancing climate change there is no equity without decarbonization. Setting urgency against equity, or vice versa, creates a false opposition.

Summary

The conference emphasized that energy transitions are not purely technical concerns, and are embedded in political and social issues, including poverty, distribution of power, class, gender, Indigenous ways of life, and different forms of identification. Transitions need to align with community life to improve it. Clearly social contexts differ and there is no uniform solution to the problems of energy transition. There are common lessons, but there is also the need to experiment and to express social differences.

Further Information

A full list of presenters, abstracts and session recordings can be found at the conference website: https://decarbenergy.net/conference-december-2021

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