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ENERGY TRANSITION

BUILDING JUSTICE INTO THE CLEAN ENERGY REVOLUTION

PROF. SARAH BURCH

As climate change intensifies, the world needs to transition to clean energy. However, the pathways chosen to make that transition happen aren't always equitable.

For example, subsidies for rooftop solar panels systematically exclude non-homeowners. Poorly planned renewable energy projects infringe on Indigenous land rights. Lower-income neighbourhoods receive less investment for things like EV charging infrastructure.

To help ensure justice is baked into the design and deployment of energy transition innovations (ETIs), WISE researcher (and Waterloo Climate Institute Executive Director) Sarah Burch and an international group of colleagues developed a comprehensive framework incorporating three key tenets. The procedural tenet analyzes issues like how underserved stakeholders are involved in decisions about energy transitions. The distributional tenet considers the potential benefits and negative impacts of the ETI, and how these are unevenly spread amongst various groups in society. And the recognitional tenet ensures transitions are designed in way that both understands and addresses the root causes of inequities.

The framework also takes a multi-level perspective, considering the R&D stage; the existing socio-technical systems the ETI will operate within; and the implications of broader trends and events like wars and market dynamics.

To show how their framework can help reveal inequities undermining just energy transitions, the researchers applied it to two case studies. The first was a wind farm project in Mexico, where failing to meaningfully involve local Indigenous groups fomented strong opposition. The second looked how historically underserved neighbourhoods in L.A. face barriers to accessing renewable energy programs.

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By creating a structured approach to investigating the social impact of ETIs, Burch and her team are helping create a just transition where everyone can share in the benefits of clean energy.

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Partners: National Renewable Energy Laboratory, US Department of Energy

Source: Romero-Lankao, P., Rosner, N., Brandtner, C., Rea, C., Mejia-Montero, A., Pilo, F., Dokshin, F., Castan-Broto, V., Burch, S., & Schnur, S. (2023). A framework to centre justice in energy transition innovations. *Nature Energy*, 8, 1192-1198.

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