Beyond the Hype: Are Hydrogen Strategies Democratic?

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Abstract Because of its versatility and low-carbon potential, hydrogen has been dubbed the 'rockstar' of the energy transition. Most international organisations and governments recognise that clean hydrogen, produced through renewable energy, plays a key role in achieving net-zero economies. As of 2025, almost all OECD members have published a hydrogen national strategy that outlines ambitious energy goals, complex policy plans, and short timeframes to implement them. Many governments have also committed substantial public funding to develop the hydrogen infrastructure and de-risk private investment. However, the social and cultural impacts of hydrogen are often ignored by policymakers. Top-down energy polices have led to highly mediatised protests, such as the 'hydrogen villages' in the UK, that increase social resistance towards renewable energies. Participatory processes like co-planning and citizen assemblies may offer a way to avoid the unintended social and cultural impacts of energy transition by including citizens' views in the policymaking process. Yet, the literature on energy democracy and just transition has not considered whether the democratic values of participation, inclusion, voice, and equity are being incorporated in national hydrogen strategies.

The paper attempts to fill this gap by comparing the current national hydrogen strategies of the four countries that are part of the HyPT project: the UK, Australia, Canada, and the USA. Utilising a theoretical framework based upon the tenets of participatory democracy, this study provides insights into the role of citizens and communities in shaping the transition towards clean hydrogen. Despite mentions of bottom-up policies and community inclusion in all four strategies, the results suggest a tokenisation of participatory processes and an enduring imbalance in decision-making power between strong economic interests and underprivileged social and economic groups.