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Australia European Union Green Hydrogen Dialogue #4: Summary Paper

Social License, Community Acceptance, and Environmental Impacts

The fourth Dialogue in the series involved presentations from both EU and Australian participants, highlighting the importance of gaining social license for renewable energy and hydrogen projects, elaborating on international methodologies and processes involved in gaining community acceptance, and sharing their insights and perspectives on the themes of environmental and social dimensions of the energy transition. Discussion amongst participants included sharing their own experiences and drawing on lessons in gaining social license in other sectors such as in renewable energy and the manufacturing sector for the scaling up of the green hydrogen economy.

The discussions primarily focused on the topics:

1. Social license and community acceptance for new technologies and the need for a just transition
2. The drivers and barriers of social acceptance of the hydrogen economy
3. The role of standards, certification, and subsidies in social licence and community acceptance
4. The role of the state in facilitating collaboration and engagement across multiple levels of government, private actors and local and regional communities.

The online Dialogue with a small expert group of participants Australia and the EU, commenced with initial presentations on the Australian and European Union policy and industry context as a lead-in to wider discussion of the key issues.

Presentations on the EU and Australian context were provided by:

- Dr. Antti Arasto, Vice President, Industrial Energy and Hydrogen, VTT Technical Research Centre of Finland
- Dr. Stefanie Baasch, Senior Researcher, artec Research Center for Sustainability, University of Bremen
- Professor Roberta Ryan, Executive Director, Institute for Regional Futures, University of Newcastle
- Bridget Ryan, Director Policy and Industry Engagement, RE-Alliance

This summary paper provides an overview of the key discussion outcomes with details of participant organisations for dissemination to wider audiences through project partner channels.

Discussion Topics

Social license and community acceptance for new technologies and the need for a just transition

Historically, energy transitions have not been implemented fairly or equitably, fostering new inequalities amid emerging changes. Mere labelling of initiatives as "clean" or "green" does not inherently ensure fairness or justness. This is evidenced by ongoing conflicts over land and natural resources in Northern Europe related to solar, wind, and green steel projects, which raise concerns about biodiversity, noise, and visual disturbance. Within the same communities, in many regions there can be both supporters and opposition, as illustrated by the case of a wind farm development in Finland.

A significant issue is the geographical disparity in the distribution of benefits and burdens; while coastal regions may benefit from renewable hydrogen projects, other areas may suffer from the closure of fossil fuel plants. Thus, the imperative lies in achieving a just transition, sharing both benefits and burdens equitably. Central to this are considerations of social acceptance, understanding the drivers and barriers, and prioritizing Diversity Equity and Inclusion (DEI) concepts to address all relevant needs and perspectives.

Urgent reskilling initiatives are also needed to prepare the workforce for evolving demands, especially in regions facing disruption from new technologies. Furthermore, workforce shortages in Europe, exacerbated by an aging population, present challenges for clean energy integration.

Stringent project financing processes are needed which incorporate considerations of First Nations' interests, social license, and thorough risk assessments and evolving financing strategies that emphasize the importance of national guidelines - such as those being developed in Australia for transmission projects - to streamline social license procedures. An industry-led and community-informed framework has the potential for balanced decision-making and the fostering of trust among stakeholders.

The drivers and barriers of social acceptance of the hydrogen economy

To attain social license for renewable energy projects, a sophisticated and evidence-based approach is essential to ensure future-proof decisions. This involves systematically identifying social license through co-creation with customers, municipalities, and government ministries. Benefit sharing and community participation in decision-making are crucial, drawing lessons from successful models in Germany where co-operation with municipalities has led to high public approval rates (rated to be above 80%) for renewable projects. Texas also stands out for its leadership in renewable projects, promoting the use of benefit sharing and prioritizing economic benefits over philosophical issues. A key lesson learned is the positive impact of awareness and knowledge sharing by communities and project developers.

In Australia, an educational, communicative, and coordinated approach is advocated, focusing on place rather than specific activity or infrastructure. Challenges include governmental understanding of overlapping agency efforts (specifically at state government level) and community concerns and aspirations for the energy transition, which necessitates deep engagement and project-based benefit sharing.

Co-investment and co-ownership models, though challenging, have proven successful in various Australian projects. Further, federal government investment in regional hydrogen hubs and clear communication about energy transition projects are vital for fostering long-term perspectives and strategic benefit sharing.

Community concerns about safety are increasingly significant, especially regarding the production, use, and transportation of hydrogen and its derivatives. Regulations governing these aspects are vital for ensuring the safe implementation and operation of such facilities. For instance, Orica's investment in the development of the Hunter Valley hydrogen hub has sparked community concerns about the use of ammonia and ammonium nitrate. To address these concerns, initiatives such as site tours, community education programs, and collaborations with local universities are crucial for demystifying safety issues and building trust in safety measures. These efforts aim to foster transparency and open communication can enhance safety perceptions and interactions between the community and project proponents.

Water

Additionally, water plays a critical role in hydrogen production, with its importance varying depending on the area. Water security is an increasing concern, due to population pressures and climate change. As one of the key inputs, the water requirements of any region will dramatically change where hydrogen is produced and can lead to community water restrictions. Community perceptions can impact social licence which affects whether projects proceed, with hydrogen perceived as exporting water for others use. For example, there has been strong community engagement as part of developing a plan around water security in the Hunter Valley, with several options for hydrogen use including desalination, recycling, surface and groundwater. Different communities will have different options, with early engagement and partnering with the water utility as a trusted partner in the region a key part of developing positive and sustainable water solutions for hydrogen production.

The role of standards, certification, and subsidies in social licensing

National standards and certification in obtaining social license for renewable energy and hydrogen projects is crucial. Communities are particularly concerned about the fate of projects after their operational lifetime in terms of end-of-life waste and recycling, expecting developers to maintain visibility and engagement over project lifecycles. Having relevant standards and certification processes in place could ensure these requirements are met and adhered to.

Hydrogen subsidies and the reliability of the legal and regulatory frameworks are also significant concerns, not only at the community level but also for project funding and access to long-term capital. These factors affect the financial viability and stability of hydrogen projects, impacting their attractiveness to investors and the overall feasibility of implementation.

The role of the state in facilitating collaboration and engagement across multiple levels of government, private actors, and local and regional communities

The role of local and state governments is critical for facilitating the social license for energy projects. Local government is a key stakeholder providing public infrastructure and services. They can provide local knowledge and access to community networks. However, councils are usually not the consent authority and local impacts may not be addressed sufficiently through the approval process.

Given hydrogen projects will develop across state and local government areas, collaboration is essential for success. Queensland's establishment of a Gas Commission suggests potential for similar initiatives to be undertaken for hydrogen projects, emphasizing the importance of government action in fostering social acceptance and co-operation within communities.

Key discussion outcomes

Energy transitions historically have lacked fairness, necessitating a just transition for equitable distribution of benefits and burdens. A systematic and comprehensive approach to value creation is required to assess the social, environmental and economic impacts on diverse groups impacted by energy innovations and industries.

Social license for renewable energy projects requires an evidence-based understanding of the social context, with lessons to be learned from successful models in Germany and Texas that emphasise community participation in the development of longer-term visions and an understanding of future needs to inform proactive policy design.

Hydrogen production raises specific community concerns around safety and water security, highlighting the importance of regulations and early community education and engagement to build trust and transparency around hydrogen production and place-based sustainable water solutions.

Standards and certification are vital to ensure there are clear conditions around engagement and planning consents applied to renewable energy projects so communities can see tangible social benefits for their region. Project proponents can demonstrate their recognition of and commitment to the critical role of First Nations Project peoples and indigenous traditional owners of land and waters through, for example, Reconciliation Action Plans.

Co-ordination and collaboration across multiple levels of government – federal, state and local - which takes a community and place-based rather than a project focussed perspective is essential to overcome organisational silos and cumulative project impacts and to foster local and regional community social acceptance.

Presenter bios

Dr. Antti Arasto,
Vice President, Industrial Energy and Hydrogen,
VTT Technical Research Centre of Finland

With over two decades of experience in the energy sector and innovation leadership, Dr Antti Arasto brings a deep understanding on systemic aspects of energy transition, related policy and novel technology implementation. He has a wide knowledge on energy and technology; systems, evaluation, feasibility and concepts with know-how and experience in extending from research to power plant construction and commissioning. As an expert on renewable fuels (H, CCU and biofuels), CCS and decarbonisation of industry, especially iron and steel sector, he has had extensive involvement in national and European innovation agenda. Antti is a member of the Finnish Climate Change Panel and the European Commission Innovation Fund expert group.

Dr. Stefanie Baasch
Senior Researcher, artec Research Center for Sustainability,
University of Bremen

Dr. Stefanie Baasch is a human geographer and environmental psychologist. Her research and teaching over the over the last 20 years has been on issues of energy transition, adaptation to climate change, sustainable urban and regional development, and participation of stakeholders and citizens. Her national and international research has a strong inter- and transdisciplinary focus. It is characterized by extensive cooperation with stakeholders from civil society, private and public sectors.

Since 2018, she has held the role of senior researcher at the artec Research Center for Sustainability at the University of Bremen, where she leads the research group "Social-Ecological Governance and Justice". She is a member of several working groups of scientific associations, including the Energy Geography Working Group of the German Association for Geography and the Environmental Psychology Section of the German Psychological Society, and is a co-founder of the Hydrogen Geography Network, an informal platform for networking research in the field of hydrogen transition.

Professor Roberta Ryan
Executive Director,
Institute for Regional Futures, University of Newcastle

Professor Roberta Ryan is the founding Executive Director of the Institute for Regional Futures and the University's inaugural Professor of Local Government. She has worked in leading private and public enterprises and as an advisor to all spheres of government, nationally and internationally, to help them meet the challenges and realise the opportunities in economic, social and spatial planning and development. An expert in social planning, social research and evaluation, and strategic planning, she is also recognised nationally and internationally for her leadership in the design and delivery of innovative stakeholder engagement, particularly between governments and the community on contested and sensitive matters.

With her unique expertise, Professor Ryan is a trusted advisor to federal, state and local governments and major public and private enterprises on the development and delivery of strategy, policy and reform. This includes her Ministerial appointment as the Independent Community Commissioner for Sydney's new third city: the Western Sydney Aerotropolis. Professor Ryan holds further ministerial appointments as a state and local member of NSW Regional Planning Panels.

Bridget Ryan
Director Policy and Industry Engagement,
RE-Alliance

Bridget Ryan joined RE-Alliance in 2023 as the Director Policy and Industry Engagement and leads their work to raise the voices of communities to build stakeholder alliances and to influence the renewables and grid industries and government across eastern Australia. Bridget has two decades of stakeholder engagement and advocacy experience on renewable energy policy issues from roles in the private sector, government and peak bodies including ARENA, the Clean Energy Council, Pacific Hydro, RACV and GreenSync. Bridget is passionate about accelerating the renewable energy transition to address climate change and about the need for this to occur in partnership with people and communities. Bridget has a Graduate Certificate in Engineering (Utilities Management) from the University of Melbourne and University and a Bachelor of Arts/Asian Studies from the ANU.

Dialogue participant organisations

ACCIONA Energia
ACEN
AEMC
ALGA
ATSE
CEFC
ORICA
Queensland Farmers Federation
Regional Area Planning and Development (RAPAD) Queensland
RES Group
Hunter Water
University of Newcastle
University of Queensland
Ministry of Economic Affairs, Ports and Transformation, Bremen, Germany
Australian Local Government Association
Iberdrola Australia
Beyond Zero Emissions
University of Bremen
RE-Alliance
University of New South Wales
Climate KIC Australia

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