



LEGISLATIVE ASSEMBLY
FOR THE AUSTRALIAN CAPITAL TERRITORY

STANDING COMMITTEE ON ENVIRONMENT, CLIMATE CHANGE AND BIODIVERSITY
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Submission Cover Sheet

Inquiry into Renewable Energy Innovation in the Australian Capital Territory

Submission Number: 5

Date Authorised for Publication: 4 May 2021



SMART ENERGY
COUNCIL

Submission to the Inquiry into Renewable Energy Innovation in the Australian Capital Territory

29 April 2021





Acknowledgement of Country

The Smart Energy Council acknowledges First Nations People as the original inhabitants of Australia and recognises that sovereignty was never ceded. The cultural distinctions of First Nations People are celebrated and their rich and positive contribution to Australian society is valued by the Council. The Smart Energy Council would like to pay its respects to all of the First Nations across Australia on whose Country we enjoy. The authors of this submission would particularly like to recognise the Ngunnawal, and Ngambri Peoples on whose lands we live and work. Finally, the Smart Energy Council would like to acknowledge all elder's past, present, and emerging.





The Smart Energy Council

The Smart Energy Council is the largest independent peak body for solar, storage and smart energy in Australia. We are a not-for-profit membership organisation committed to clean, efficient, cheap, and smart energy solutions for all Australians. Tracing its history back to 1954, The Smart Energy Council now has around 1000 members. We are proud to be actively involved in all matters related to smart energy and renewable hydrogen in the ACT and nationally, including advocacy and lobbying, training and technical advice, industry events, market intelligence, and research.

The Smart Energy Council is governed by a volunteer board elected by its members. Our members represent every aspect of smart energy at all scales. Specifically, installers, salespeople, engineers, scientists, recruiters, project developers, managers and financiers. Having a close relationship with our members is essential to our work. The vibrant community of members and delegates that surround the Smart Energy Council is evident from the great anticipation of our upcoming Smart Energy Conference and Exhibition. Currently registrations sit at around 3000 individuals. This represents a huge portion of Australia's smart energy industry and grows in eminence when one considers the pandemic, travel limitations, and associated financial hardship that could be a deterrent to attending such an event.

The Smart Energy Council has a significant presence in the ACT through our management of the ACT Renewables Hub in partnership with the ACT Government. Funded via the Renewable Energy Innovation Fund, the Hub has been in operation since 2016 and has helped to accelerate several innovative start-ups across the Territory. In this capacity we organise events for the region, work closely with local business, provide training, and engage in advocacy. Harnessing the support of the ACT Government and the expertise of the Smart Energy Council, the mission of the Hub is to position the ACT as a leader in renewable energy in the national and international arenas.

In addition to the ACT Renewables Hub, The Smart Energy Council is becoming increasingly influential in the Territory as we partner with Evo Energy, the ACT Government, and the Australian National University to develop the ACT Renewable Hydrogen Cluster with funding from NERA. Launched in 2021, the cluster has already begun revolutionising smart energy with the development and promotion of Australia's first hydrogen refuelling station in Fyshwick. Furthermore, under the ACT Renewable Hydrogen cluster, we have also launched the operation of Australia's first renewable hydrogen certification scheme. In addition to



these revolutionary initiatives, there are many other innovative programs soon to be announced under the ACT Renewable Hydrogen Cluster.

It is evident from our capacity as the largest independent peak body for smart energy in Australia, and from our work with the ACT Renewables Hub and ACT Renewable Hydrogen Cluster that the Smart Energy Council is in an auspicious position to contribute to this inquiry. As such, in addition to our submission below we would like to offer our disposal in presenting to the inquiry at a later date.

For further comments please contact [REDACTED].





Executive Summary

The Smart Energy Council is pleased to provide the following submission to the Standing Committee on Environment, Climate Change and Biodiversity in response to their Inquiry into Renewable Energy Innovation in the ACT. Our submission specifically focuses on the ACT's significant opportunities for innovation in renewable hydrogen (Term B and Term G) and in the region's capacity as a knowledge economy (Term A). Challenges have also been identified in reference to electric vehicle uptake (Term B and Term C) and the relationship between industry and government (Term D). Our submission also finds that in order to realise the full extent of the ACT's potential in renewable energy innovation it is essential that a plan is coordinated between Government, industry, and the community.

Summary of Recommendations

- 1. Invest in the ACT as a knowledge-based economy by increasing opportunities for practical training and creating partnerships with businesses.*
- 2. Continue to innovate in revolutionary technologies associated with renewable hydrogen by investing in research, technology development, co-ordinated education and training, and business development.*
- 3. Instigate a formal review of current policy infrastructure surrounding electric vehicle incentives.*
- 4. Cultivate a strong industry and Government relationship by increasing networking opportunities, forums, and public consultation.*
- 5. Invest in the development of a comprehensive and coordinated strategy for the ACT's renewable energy future.*



Opportunities for Renewable Energy Innovation in the ACT

The ACT: A Renewable Energy Knowledge Hub for Australia and the World

The ACT is renowned domestically and internationally for its innovative implementation of renewable energy technologies. The ACT is currently powered by 100% renewable energy and has been for over 18 months (Evans, 2019). This is a feat that has not been achieved by any other city outside of Europe. Additionally, the ACT has a progressive net zero emissions target of 2045 (ACT Government, 2019). The ACT's reverse auction program was a saviour for Australia's large-scale renewable energy industry as investment dried up nationwide following the Abbott Government's campaign to axe the Renewable Energy Target. These developments highlight the reality that the future of smart energy is being realised in the ACT far before the rest of the nation or the world. As such, the ACT has positioned itself with a primary opportunity to become Australia's renewable energy knowledge hub and potentially a renewable energy knowledge hub for the world.

Conversations surrounding the ACT's status as a "knowledge economy" has been alive for several years (Canberra Innovation Network, 2019). The concept of the knowledge economy itself is not new, having emerged as early as the 1950s (Powell and Snellman, 2004). However, it has not been embraced yet by Australian policies. In essence, a knowledge economy is defined as the, "production and services based on knowledge-intensive activities that contribute to an accelerated pace of technical and scientific advance, as well as rapid obsolescence" (Powell and Snellman, 2004). Our submission finds that given the ACT's strong history of association between industry and academia, as well as its world-class renewable energy infrastructures, the Territory is in a very strong position to become a renewable energy knowledge economy. By doing so, the Territory will become the renewable energy knowledge hub of the nation and potentially of the world.

In order for the ACT to realise this opportunity the ACT Government must invest in the development of specialist skills and knowledge. Our submission finds that the current infrastructure that is in place through the Australian National University, Canberra Institute of Technology and the ACT Renewables Hub is sufficient to promote such developments. Furthermore, the ACT Government should initiate partnerships with larger businesses in the renewable energy field, such as Evo Energy and Actew AGL, in order to increase opportunities for practical training, as well as the advancement of technical skills. This unique model of linking theory and practical training would give the ACT a niche in renewable energy knowledge cultivation. This in turn would drive student enrolments, alleviating pressures



incurred from the pandemic, as well as generating further revenue and human resources for the Territory.

The economic benefits of the ACT being powered by 100% renewable energy have been extensive. Through the Territory's switch to renewable energy many jobs have been created and over \$400 million in local investment has been realised (Corbell, 2016). This illustration is representative of the economic benefits that can be realised from positioning the ACT as a renewable energy knowledge economy. The recommendations proposed will increase investment in the Territory and reinvigorate its jobs market. As the knowledge economy grows, the positive effects will flow onto other industries in the Territory such as hospitality and tourism. Furthermore, given the relatively small size of the ACT and as such its limited ability to operate as an industrial economy, the vision of a knowledge economy provides maximum opportunity for the Territory in comparison to alternatives.

Recommendation 1

Invest in the ACTs as a knowledge-based economy by increasing opportunities for practical training and creating partnerships with larger renewable energy businesses.





Embracing Renewable Energy's New Frontier: Hydrogen

Hydrogen has been hailed in recent times as the saviour to many renewable energy problems (Fahenstock, 2020). Our submission finds that the ACT Government has successfully embraced the first stages of Hydrogen development in the Territory as a partner in the ACT Hydrogen Cluster. The ACT Government is also a Founding Partner in the Smart Energy Council's Zero Carbon Certification Scheme, which will certify renewable hydrogen, renewable ammonia and renewable metals projects across Australia.

To further advance the ACT's strengths in renewable hydrogen, additional developments are necessary, specifically in relation to research, technology development, co-ordinated education and training, and business development.

The ACT is a budding centre for the advancement of renewable hydrogen. This is due to the Territory's long history of collaboration between industry and academia which positions it strongly to take advantage of the new technology. This is exemplified in the development of Australia's first renewable hydrogen charging station in Fyshwick and the hydrogen testing facility, also in Fyshwick. Our submission finds that renewable hydrogen should be central to the development of the ACT as a knowledge economy, as discussed above.

The ACT's current frameworks, specifically the Australian National University, Canberra Institute of Technology, ACT Renewables Hub, and the ACT Hydrogen Cluster are sufficient to facilitate such advancements. The ACT Government should consider bolstering the ACT Hydrogen Cluster by at least matching NERA funding and innovating technology through research, development, co-ordinated education and training, and business development.

The ACT Government should also explore other opportunities, such as being a partner in developing a Renewable Hydrogen Hume Highway between Canberra and Sydney and a Hydrogen Highway between Mildura and Canberra, thus encouraging the use of renewable hydrogen heavy vehicles.

Recommendation 2

Continue to innovate in revolutionary technologies associated with renewable hydrogen by investing in research, technology development, co-ordinated education and training, and business development.



Challenges to Renewable Energy Innovation in the ACT

Electric Vehicle (EV) Uptake

Electric Vehicles are already being embraced in the ACT with the *Transition to Zero Emissions Vehicles Action Plan 2018 – 2021*. Through our position in the industry, however, it has become apparent that this policy infrastructure is insufficient and overly complicated to the point of inefficacy. It is essential that the ACT pursues the quick roll out of EVs as to neglect the frontier would undermine the Territories position as a renewable energy pioneer. Furthermore, it may also jeopardise the viability of EV infrastructure in the ACT. As such our submission finds that the ACT Government ought to launch an independent and in-depth review of the policy before drafting its replacement.

A primary challenge that our submission finds in preparation of such a review is the financial accessibility of EVs for residents of the ACT. The current financial incentives in operation for EVs are insufficient at lowering their cost. For example, Australia's cheapest EV on the market is the Hyundai's Ioniq Elite PHEV. Even with registration waived, and a stamp duty exemption this vehicle would still cost over AUD\$46,000. Additionally, there is no appropriate market for second hand EVs in the Territory. Our submission also finds that the no interest loans program that was designed to combat these problems is unproductive due to the stress associated with loans. Consumers in the ACT are already facing hardships associated with the current recession and are unlikely to pursue further loans, even if interest is waived. As such, EV's remain out of reach for most of the community.

The Smart Energy Council welcomes the ACT Government's strong opposition to proposals to tax electric vehicles, a policy proposal that would destroy the electric vehicle industry in Australia before it has even been established.

The Smart Energy Council would like to extend its disposal for involvement in a review such as that proposed above. For further comment please contact ████████████████████ .

Recommendation 3

Instigate a formal review of current policy infrastructure surrounding electric vehicle incentives.



The Relationship Between Government and Industry

Through our work via the ACT Renewables Hub, it has come to our attention that the relationship between Government and renewable energy industries in the ACT can be improved further. Ensuring that Government and industry have a cohesive relationship is essential to the effective implementation of renewable energy across the ACT. It is commonly understood that cooperation and a united effort is more effective than independent campaigns (Mendonça, Lacey, and Hvelplund, 2009). As such, this submission finds that the ACT Government must cultivate its industry relationship. Such developments could be made by increasing networking opportunities for industry and Government representatives. Forums should also be held more frequently in order to enhance collaboration and the sharing of ideas. Finally, increased public consultation is also necessary for the development of future policy. Due to the nature of renewable energy technology changing rapidly, public consultation is the only way to make effective policy decisions.

The ACT Renewables Hub is an appropriate mechanism to use in this endeavour. The Hub has good standing amongst both industry and Government and as such can operate to lubricate relations. Furthermore, the extensive networks of the Hub would also allow for effective implementation of strategies, minimising a latency period that would otherwise be associated with such developments.

Our submission also finds that as an extension of this reinvigorated relationship between the ACT Government and renewable energy industry the development of a coordinated plan is necessary. Such a plan would have to include strategies and frameworks for the effective implementation of Renewable Energy agendas across the ACT. This plan would be an incredible innovation of smart energy diplomacy. The ACT is in an auspicious position to advance this framework due to the comparatively strong relationships amongst industry and academic organisations.

Recommendation 4

Cultivate a strong industry and Government relationship by increasing networking opportunities and forums, and public consultation.

Recommendation 5

Invest in the development of a comprehensive and coordinated strategy for the ACT's renewable energy future.



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