



# LEGISLATIVE ASSEMBLY

FOR THE AUSTRALIAN CAPITAL TERRITORY

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STANDING COMMITTEE ON ENVIRONMENT, CLIMATE CHANGE AND BIODIVERSITY

Dr Marisa Paterson MLA (Chair), Mr Andrew Braddock MLA (Deputy Chair),

Ms Leanne Castley MLA

## Submission Cover Sheet

Inquiry into Renewable Energy Innovation  
in the Australian Capital Territory

**Submission Number: 11**

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**The Committee Secretary**  
**Standing Committee on Environment, Climate Change and Biodiversity**  
**GPO Box 1020 Canberra ACT 2601**  
**Email: [LAcommitteeECCB@parliament.act.gov.au](mailto:LAcommitteeECCB@parliament.act.gov.au)**


Dear Committee Secretary

Canberra Institute of Technology (CIT) welcomes the opportunity to contribute to the Inquiry into Renewable Energy Innovation in the ACT.

CIT's letter provided at Attachment A, outlines the collaborative approach CIT has taken to build Canberra's capacity as a national tertiary education and trades skills hub to support the ACT Government and industry to be a world-class leader in renewable energy innovation.

Thank you for the opportunity to contribute to the Inquiry into Renewable Energy Innovation in the ACT. Please contact my office on the below details should you require any further details.

Yours sincerely



Paul Ryan  
CIT Executive Director, Industry Engagement and Strategic Relations  
14 May 2021



## ATTACHMENT A

### **Inquiry into Renewable Energy Innovation in the ACT**

CIT is the ACT and surrounding region's largest registered Vocational Education and Training (VET) provider. CIT provides training from certificate level to advanced diploma and postgraduate studies in over 200 diverse courses.

CIT's Renewable Energy Skills Centre of Excellence (The Centre) was formed in 2015 through the establishment of the CIT Renewables Board as a joint initiative of CIT, Neoen and Hornsdale Wind Farm Stage 1. Its purpose is to provide outstanding, practical training to prepare students for a career in the renewable energy sector.

CIT is an enabling arm to industry, supporting the renewable energy and sustainability workforce by leading the development and teaching of practical, technical skills required across the ACT Region, Australia and the Asia-Pacific.

#### **Global Wind Organisation (GWO) training**

CIT is an exclusive provider of Global Wind Organisation (GWO) certified training in the ACT and surrounding regional NSW. Our state-of-the-art high-risk facility in conjunction with our Centre of Excellence positions CIT as a national leader in wind safety training, upholding the GWO mission to support injury-free work environments.

Within CIT's simulated training environment, students develop theoretical understanding and practical skills to demonstrate their 'duty of care' and best practise safety measures in accordance with GWO requirements. CIT's facility is a life-like worksite that can safely accommodate different student groups simultaneously as they undertake a range of training activities.

The recent addition of a Tower Crane and the showcasing of innovative technology such as battery ascenders has further expanded the scope and experience of CIT's offerings. First Aid medics with rescue backgrounds have also joined the CIT team to enhance the depth of knowledge and student experience.

#### **Preparing the next generation**

CIT has significant experience in community engagement and fostering career pathways in the renewable energy sector to successfully deliver courses which have a lasting impact. An example is the week-long training course delivered in the remote town of Coleambally, NSW—where Neoen owns and operates Australia's largest fully operational 189MW Solar Farm. This course, in collaboration with the local high school and Tirkandi Inaburra (a local indigenous residential, cultural and development

centre), delivered a range of work competencies and White Card accreditation to students to assist their entry into the renewable energy workforce.

These competencies also included Asbestos Awareness and a basic technical training workshop on wind turbine generator engineering systems. The training partnership delivered new skills and education, enabling local students and residents to gain future employment in the renewable energy sector. This collaboration is achieving positive results and further builds Canberra's capacity as a national tertiary education and trades skills hub.

CIT participated in the Australian Agriculture Centre's virtual STEMConnect 2020 program. The event promotes science, technology, engineering and maths and engaged regional primary students in discovering renewable energy. Linking these critical skills to ACT school students is providing pathways for their future learning and sparking early interest in this critical sector.

### **Cyber Security Skills Training**

CIT strives to support industry with contemporary training and leverages strong industry connections to better understand changing technology. The knowledge is woven back into our training, so students have the right technical and safety skills to work on site. One of the requirements of the Australian Energy Sector Cyber Security Framework is that all personnel with access to generation assets have undergone some form of cyber security training. CIT has developed significant expertise in cyber security and in a national first, launched a collaborative training solution in 2018 with a new Training Security Operations Centre (TSOC) and tech-collab space at CIT Reid.

The \$1.1 million project includes a virtual classroom with a cloud-based security operations centre simulating real cyber threats, giving students the chance to work through real scenarios to gain nationally accredited qualifications. Similar to renewables, the cyber security industry has been critical since the inception of the TSOC to ensure the right skills are being taught to fuel the demand in this fast-growing sector.

### **Zero CO2 Renewable Energy and Sustainability Hackathon**

CIT's renewable energy industry collaboration has resulted in successful hackathon events, which is now in its third year. The Zero CO2 Renewable Energy and Sustainability Hackathon event was hosted by CIT, along with partners the Canberra Innovation Network (CBRIN), Neoen and ActewAGL.

The aim of the event was to foster innovative and collaborative solutions to support the ACT Government's goal to reduce total carbon emissions to net zero by 2045.

The 2020 ZeroCO2 Hackathon Event pivoted to an online model to allow teams to still participate in this great event during the COVID-19 pandemic. The Hackathon was very well attended, especially given it was held online, with 18 teams and 71 participants. Many teams from different organisations participated including CIT, ANU, UNSW, Monash University and Melbourne University, University of

Sydney as well as private companies from across Australia. 20 teams from CIT's Indian institution partner Saintgits also expressed interest, taking the event to a new, international level of exposure.

A Speaker Series complemented the hackathon with thought provoking presentations by industry leaders and academics on climate change and the environment. These presentations were woven through the program to inform Hackathon contestants and to also provide valuable industry insights.

Team Zuko presented 'Mosssol'—a moss panel system that combines green walls and solar panels to offset carbon and generate electricity. The louvre window design can be adapted into portable, free standing partition walls in both residential and commercial sectors to help regulate air quality and climate control.

The judging panel from CIT, Neoen, the ACT Government Environment, Planning and Sustainable Development Directorate and CBRIN had the difficult task of choosing a winner from the very competitive and innovative field. In the end Zuko came out on top, winning \$5,000 in prize money. The judges were impressed by all the teams and felt that Zuko had the passion to take their idea further.

The hackathon events have fostered collaboration between CIT and industry and are an opportunity to further raise awareness about career opportunities within the renewable energy workforce. Plans are currently underway for the 2021 Zero CO2 Hackathon event.

### **Electric Vehicle (EV) skills development**

CIT formed an EV working group in April 2021 to enable strategic input into courses ensuring the courses are contemporary, relevant and produce work-ready graduates to strengthen our economy. As skills demand increases and technologies change, we consider a collaborative approach critical to this success.

### **Grid Connected PV (GCPV) and Battery Storage Systems training**

Grid Connected PV (GCPV) systems and home battery storage are rapidly expanding fields of interest for homeowners wanting to lower the cost of energy prices. At CIT's fully equipped solar and battery storage training facility, current qualified electricians learn from expert industry current teachers who care about their professional development and business planning to upskill the industry.

CIT's training is customised in a 'hands-on' environment where students can practice the skills required to be a compliant GCPV designer and installer. CIT uses online and practical project-based learning to ensure they have all the theoretical learning and hands-on training to build on their experience.



## VET Mobility Excursion

A transformative program that was developed through industry collaboration, is the 2019 VET Mobility trip. 10 lucky CIT students embarked on an innovative renewable technology-learning journey to Singapore, France and Spain as part of their studies. This academic and cultural immersive experience included exposure to global renewable energy industry leaders thanks to funding from the Australian Government's Endeavour Mobility Grants.

The two-week learning experience took students to the Institute of Technical Education in Singapore and the Solar Energy Research Institute of Singapore at the National University of Singapore, where the students seen the world's largest testbed for floating solar photovoltaic systems. The students also visited Schneider Electric (SE), Neoen's Paris headquarters and Cestas Solar Park—Europe's largest solar photovoltaic plant.

The trip helped students expand their perspectives and consider the range of possibilities available in the renewable energy sector. It also gave them the opportunity to complement hands-on, practical and technical training with international exposure to industry-relevant capabilities.

As you can see from the above examples, CIT is leading the nation in supporting the renewable energy sector. The success of CIT's Renewable Energy Industry projects has positively informed the CIT Board's future direction and priorities in a range of areas. A key focus for CIT will include building additional capacity and industry partnerships in emerging industries and areas of government demand (this includes renewable technologies, cyber security, health, education and apprenticeships/traineeships).

