

## Net Zero Initiative - Contribution to USyd submission to University Accord

28<sup>th</sup> March 2023

### **Background**

Launched in March 2022, the Net Zero Initiative (NZI) is a flagship program of the Faculty of Engineering aimed at helping Australian industry gain first mover advantage globally by understanding, developing and adopting innovative and commercially viable emissions reduction technologies. The NZI brings together over 130 of the University's top researchers across engineering, science, urban planning, renewables, policy, carbon accounting, and behavioural science. This interdisciplinary platform offers an enormous opportunity for the NZI to solve industry's biggest challenges by contributing to the recruitment, education and the launching of graduates into careers.

The educational mission of the NZI is strongly aligned with the University of Sydney's decadal strategy.<sup>1</sup> The University has pledged to deliver a transformational experience for students that leverages academic research and partnerships for dynamic lifelong learning. This student-focused education 'responds to society's changing needs' and is driven by the 'why' in helping to 'deliver a highly educated workforce, upon which national wellbeing depends.' This strategy also aligns with the University's Sustainability Strategy in the specific areas of 'Increasing our capacity for sustainability education' (Strategy 4) and 'Enhancing the student experience of sustainability' (Strategy 5).<sup>2</sup> The University itself released a Climate Action Statement and has actively begun its transition to reach Net Zero emissions by 2030.<sup>3</sup>

An acceleration in the demand for more highly skilled workers is highlighted in a recent opinion article from Prof. Mary O'Kane, former NSW Chief Scientist & Engineer, and Chairperson of the panel advising the Education Minister on the Australian Universities Accord Review. She notes that 'the government has committed to establish an Australian Universities Accord ... to deliver a higher education system that meets the current and future needs of the nation, and targets to achieve this.'<sup>4</sup> Alongside educating more school leavers, particularly those from under-represented groups, she notes the need for Universities to contribute to retraining more mature people.

### **Net Zero Initiative and the University Accord**

The Net Zero Initiative can contribute to helping enact the goals of the University Accord with respect to:

- enabling opportunities to build a more diverse and resilient talent pipeline to meet the needs of the Australian workforce, including in regional areas.
- recruiting and educating a diverse talent pool of students who will be launched in climate-related careers.

---

<sup>1</sup> Sydney in 2032 Strategy, The University of Sydney, 2022. [2032 Strategy - The University of Sydney](https://www.sydney.edu.au/about-us/vision-and-values/sustainability/sustainability-strategy.html)

<sup>2</sup> University of Sydney Sustainability Strategy, 2020. <https://www.sydney.edu.au/about-us/vision-and-values/sustainability/sustainability-strategy.html>

<sup>3</sup> University of Sydney Climate Action Progress Report 2022. <https://www.sydney.edu.au/about-us/vision-and-values/sustainability/sustainability-strategy.html>

<sup>4</sup> O'Kane, M. *Big Ideas to deliver needed skills for a prosperous nation*, The Australian, 6 January 2023.

- enabling industry training for all engineering students to gain first-hand experience with stakeholders who are solving challenges in decarbonisation, e.g., the Engineering Student Industry Placement Program (ESIPS), Jacaranda Flame Consulting, and PhD Industry Scholarships.
- deeply integrating concepts and experiences relating to careers of the future within its undergraduate and masters coursework, and graduate level PhD qualifications.
- delivering Microcredentials which are targeted at professionals wishing to reskill, upskill, or pivot in their careers.
- helping students successfully attain professional graduate attributes that enable them to become global leaders in Net Zero e.g. engaging in industry placements.
- enabling an interdisciplinary educational experience where students gain deep STEM experience and knowledge, while also gaining experience in solving complex interdisciplinary problems.

Ultimately, the Net Zero Initiative can help address:

- the skills shortage
- the need to reskill, retrain and educate the current workforce in Net Zero e.g. older and generally time-poor people
- Australia's position as a leader in global decarbonisation efforts.

---

*Contributed by Prof Deanna D'Alessandro*

*Director, Net Zero Initiative*

*On behalf of the Net Zero Initiative team, Faculty of Engineering*

*Email: [deanna.dalessandro@sydney.edu.au](mailto:deanna.dalessandro@sydney.edu.au)*

*Phone:* [REDACTED]