

Building the new energy workforce

Explore programs, research and
partnership opportunities



Our region

Victoria → Australia → Asia-Pacific



Acknowledgement of Country

Federation University Australia acknowledges the Custodians of the lands and waters where our campuses are located and recognises their continuing responsibilities to care for Country at these sites of teaching and learning. We pay our respects to Elders past and present and extend our respects to all Aboriginal and Torres Strait Islander First Nations peoples.



The Aboriginal Traditional Custodians of the lands and waters where our campuses, centres and field stations are located include:

Ballarat:	Wadawurrung
Berwick:	Boon Wurrung
Gippsland:	Gunaikurnai Nations
Melbourne:	Wurundjeri
Nanya Station:	Mutthi Mutthi and Barkindji
Wimmera:	Wotjobaluk, Jaadwa, Jadawadjali, Wergaia, Jupagulk

Welcome to APRETC

Australia is reshaping how it generates, stores and delivers energy. As regional communities build on decades of expertise in traditional industry, we're transitioning to new technologies creating opportunities including in offshore wind, onshore renewables, transmission and hydrogen.

The Asia Pacific Renewable Energy Training Centre (APRETC) brings together education, research and industry partnerships to ensure regional communities have the skills, knowledge and opportunities needed to thrive. Working alongside First Peoples, regional communities, employers and government, we're helping build a workforce that is ready for the future while supporting a transition that's fair for all.

As Australia's only regional university with an integrated TAFE, Federation connects vocational training, higher education and research through strong industry partnerships. From regional campuses with global reach, we're developing workforce capability, supporting innovation and creating pathways that contribute to Australia's energy future while strengthening collaboration across the Asia-Pacific.



APRETC reflects Federation University's Strategy 2040 by connecting education, industry and applied research to build the workforce and innovation our regions need to thrive.

Australia's energy future



OFFSHORE WIND



ONSHORE WIND



TRANSMISSION



SOLAR FARMS



BATTERY STORAGE



HYDROGEN



DISTRIBUTED ENERGY
(Rooftop solar, home batteries, EVs)



DIGITAL TECHNOLOGIES
(Digital twins, artificial intelligence)

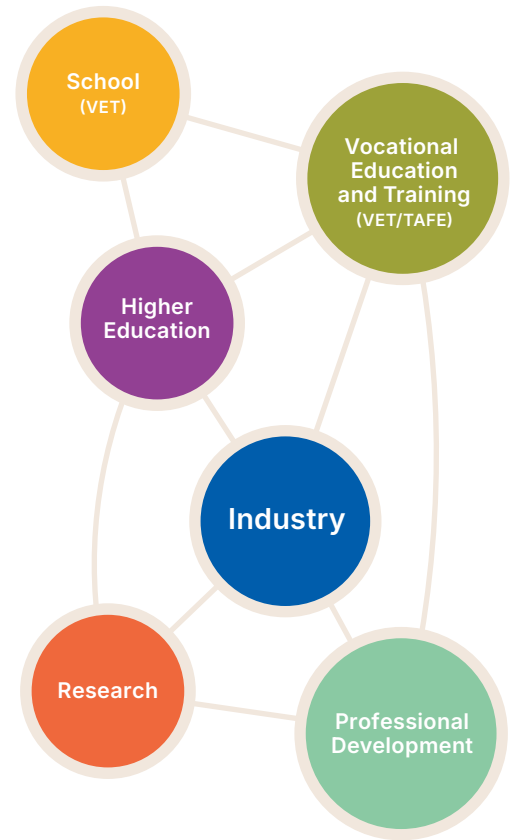


Pathways into the energy workforce

Everyone's journey is different

There is no single pathway into the energy sector. Some people discover their passion at school, others begin with a trade, complete a university degree, return later to upskill or transition from another industry.

Federation University offers flexible pathways that connect school programs, vocational education and training, higher education, professional development and research. Combined with co-operative education and strong industry partnerships, our programs support lifelong learning and help people build rewarding careers across Australia's evolving energy sector.



Explore

Discover future careers

- Tech Schools
- Girls in STEM
- Boys in STEM
- Try-a-Trade
- Taster Days
- First Peoples' camps

Build

Develop practical skills

- VCE Vocational Major pathways
- Vocational Education and Training
- School partnerships
- Pre-apprenticeships
- Apprenticeships
- Certificates and diplomas

Experience

Learn alongside industry

- Co-operative education
- Cadetships
- Guest lectures
- Site visits
- Industry projects

Stepping into renewables

Federation TAFE electrotechnology graduate Mia Danko joined an Australian industry delegation to Ørsted's offshore wind operations in Taiwan, gaining first-hand insight into one of the world's leading offshore wind industries. Mia has since started an apprenticeship and hopes to build a career in renewable energy while encouraging more women to consider careers in trades.

"If you're excited about renewable energy like I am, I'd encourage anyone to explore how they can be part of it."

Mia Danko



Grow

Continue learning throughout your career

- Higher education
- Professional development
- Honours
- Masters
- PhD
- Applied research

Belong

Creating opportunities for everyone

Federation University is committed to building a workforce that reflects the communities it serves by creating opportunities for people who have traditionally been underrepresented.

We're committed to a just energy transition which includes opportunities for First Peoples, women and regional communities.



Federation's Early Offer Program, backed by our First Peoples' student support would be an ideal pathway into university.

Learn for a changing energy future

Australia's energy future depends on people with a diverse range of skills, from skilled trades and engineering through to business, information technology, environmental science and research.

Whether you're exploring career options, entering the workforce, changing industries or building specialist expertise, Federation University offers flexible learning opportunities that connect education with industry.

Programs are delivered through TAFE, higher education, professional development and research, with delivery modes varying by program, including on-campus and online options.

There are many ways to build a career in energy. APRETC can help you find yours.

#1 in Australia for VET-to-higher education enrolments.

#1 in Australia for first-generation student enrolments

#1 in Victoria for undergraduate teaching quality

#1 in Victoria for undergraduate student support

(Sources: QILT Graduate Outcomes Survey and Student Experience Survey (latest available results); Universities Australia analysis of the 2024 Department of Education Higher Education Statistics Collection; FUA)

Vocational Education & Training

Learn by doing

APRETC delivers vocational education and training alongside internationally recognised Global Wind Organisation (GWO) safety and technical training, preparing learners for careers across Australia's renewable energy sector.

Students develop practical skills in purpose-built facilities, learning alongside experienced trainers and industry partners while preparing for careers across renewable energy, electrical trades, engineering, manufacturing, industrial maintenance and wind turbine technologies.

Examples include

- Global Wind Organisation (GWO) training
- Wind turbine technician training
- Electrotechnology
- Engineering trades
- Blade repair and composites
- Engineering drafting



Explore vocational
education and training



Higher education

Solve tomorrow's challenges

The future energy sector depends on people from many disciplines working together. Engineers design infrastructure, environmental scientists protect and monitor natural systems, business graduates lead organisations and digital specialists develop smarter technologies.

Federation University's higher education programs combine academic learning with co-operative education, industry engagement and applied projects, enabling graduates to develop both technical capability and practical experience. Selected programs are available online.

Study areas include

- Engineering
- Environmental Science
- Business
- Information Technology



Explore
higher education



Building a career in energy

Engineering student Ben Hagley is combining university study with hands-on experience through an engineering cadetship at Alinta Energy's Loy Yang B Power Station. By alternating between study and work, Ben is developing practical skills while building a strong foundation for a career in the energy industry.

"Having four years of workplace experience will be really valuable. It's a great opportunity for the future."

Ben Hagley



Professional development

Keep pace with change

As technology evolves, so do workforce needs. APRETC delivers professional development opportunities that help individuals and organisations build capability, respond to emerging technologies and support lifelong learning.

Offerings could include renewable energy, power systems, microgrids, maintenance and reliability engineering, community energy and industry-specific certifications, with flexible study options designed around working professionals.



Explore professional development



Research and innovation

Solving real-world challenges

Great research happens through collaboration. APRETC brings together researchers, industry, government, First Peoples and regional communities to address Australia's changing energy landscape.

Our research spans offshore and onshore wind, hydrogen, future fuels, circular economy, energy systems, environmental sustainability, digital technologies and community resilience. Through Honours, Masters, PhD and industry-led research, we're translating knowledge into practical outcomes for regional communities, Australia's energy future and the Asia-Pacific.



Explore research



Flexible study pathways

Recognition of prior learning and multiple entry and exit points enable students to build qualifications that align with their goals.



Try our free, interactive Career Quiz to guide your study path

Experience

Where learning meets industry

Learning extends well beyond the classroom.

Students gain real-world experience through co-operative education, cadetships, industry placements, site visits, guest lectures and applied research. Employers play an active role in shaping curriculum, mentoring students and creating pathways into employment.

#1 in Victoria for undergraduate median salary

#1 in Victoria for postgraduate full-time employment

80% of undergraduate students were in full-time employment 4–6 months after course completion

(Sources: QILT Graduate Outcomes Survey and Student Experience Survey (latest available results); Universities Australia analysis of the 2024 Department of Education Higher Education Statistics Collection; FUA)



Going above and beyond

Vestas blade technician Will Ruggles is among the first in Australia to be locally trained, completing the Certificate III in Engineering (Composites Trade) at APRETC Ballarat. His specialist skills are supporting the growing wind industry while creating career opportunities across renewable energy, advanced manufacturing, maritime and aerospace.



“The variety of the work stood out straight away. The travel, working on different sites and meeting different people is all really appealing.”

Will Ruggles

Experiencing the wind industry

Engineering graduate Jacob Politakis completed more than 800 hours of industry experience with Star of the South Offshore Wind Farm while studying at Federation University. Today, he is building his career as a Graduate Electrical Engineer with EnergyAustralia, helping deliver Australia’s evolving energy system.



“Projects depend on more than engineering. Community engagement and social licence play a crucial role in their success.”

Jacob Politakis



Co-op cadetships

Work and build your career while studying

Federation's Co-operative Education Model brings study and work together, helping students gain relevant industry experience while completing their degree.

Our courses are shaped with industry, so what students learn, how they learn and how they are assessed reflect real roles, emerging skills needs and workplace expectations.

As Australia's first co-operative university, Federation is embedding Co-op across its courses and working with employers to create industry placements, cadetships and research internships.

Co-op cadetships are longer-term employment opportunities that enable students to build skills, experience and professional capability while they study.



Find out more about
Federation Co-op cadetships

How it works

A student is employed in a paid role with an industry partner while studying a relevant Federation University degree.

Federation and the employer identify a course that supports the role and the capability the organisation needs.

The employer recruits and employs the cadet, clearly setting out the position requirements, including work arrangements, location and remuneration.

Depending on the role and course, the cadetship may combine full-time work with part-time study, or part-time work with full-time study.

Federation and the employer support the student as they apply their learning in the workplace and develop their career over time.

Partner with us

The future energy workforce will be built through collaboration

APRETC brings together industry, government and communities to support a just and inclusive energy future through workforce development, education, research and innovation.



Workforce development

- Co-designed education
- Skills planning
- Future workforce capability



Research and innovation

- Applied research
- Industry collaboration
- Demonstration projects



Student pathways

- Co-op and cadetships
- Graduate recruitment
- Scholarships



Professional development

- Industry training
- Upskilling
- Short courses

Interested in partnering with APRETC?

Email apretc@federation.edu.au

Leading a just energy transition

Director of APRETC and Professor of Energy Reihana Mohideen is leading the centre's work to help ensure the transition to renewable energy is fair, inclusive and benefits communities.

An electrical engineer, researcher and leader, Professor Mohideen works across education, research and industry partnerships to build the workforce needed for the renewable energy future. Her work focuses on the human aspects of the energy transition, ensuring technology, policy and investment create opportunities for people and the communities they live in across Australia and the Asia-Pacific.



“The transition to renewable energy presents a once-in-a-generation opportunity to place people at the centre of the energy transition, building a workforce that is more diverse, inclusive and reflective of the communities it serves.”

Professor Reihana Mohideen



Planning the future with digital twins

Professor Nima Amjady is leading research to develop a digital twin that supports energy investment planning.

Working with Associate Professor Rakibuzzaman Shah and industry partners, the project enables governments, investors and industry to test different investment scenarios before making major decisions. By improving planning, reducing uncertainty and helping quantify investment risk, the technology has the potential to support faster energy deployment.

The research demonstrates how advanced digital technologies can support better decision-making across the energy transition.



“Digital twins are emerging as an essential tool for energy planning. By combining artificial intelligence with uncertainty modelling, they help decision-makers better understand risk and make more confident investment decisions.”

Professor Nima Amjady

Advancing hydrogen in regional Australia

Associate Professor Surbhi Sharma is leading internationally recognised hydrogen research through collaborations with research organisations in India and South Korea.

Her work is helping develop next-generation hydrogen technologies while strengthening research, education and industry partnerships across regional Australia and the Asia-Pacific.



“This was an opportunity to expand research, education and training in hydrogen technologies while building strong global collaborations.”

Associate Professor Surbhi Sharma



GLaWAC Elders Council Chair Auntie Lena Morris and Federation University Aboriginal Student Success Team Leader Nicholas Johnson at the Gippsland Campus.

Supporting First Peoples' student success

The Aboriginal Education Centre (AEC) provides culturally safe, personalised support to First Peoples students throughout their learning journey at Federation University.

From mentoring and wellbeing support to community connections and academic guidance, the AEC helps students build confidence, achieve their goals and prepare for future careers.

Ensuring inclusive pathways into training, education and employment is essential to ensuring participation in the growing renewable energy sector.

“Creating opportunities begins with ensuring students feel culturally safe, supported and empowered to succeed.”

Nicholas Johnson



apretc

Build your future in energy

Whether you're starting your career, growing your workforce, advancing research or looking to partner with us, APRETC can help you shape the future of energy.



Discover more

APRETC is backed by major renewable energy companies

Vestas

acciona

GPG
Naturgy Group

Ørsted

Iberdrola
Australia

origin × **res**

OW
OCEAN WINDS

tilt
renewables

VOYAGER
RENEWABLES

STAR OF THE SOUTH

BlueMACKEREL

SQUADRON ENERGY

MOORABOOL
Wind Farm

VICTORIA
State Government

Federation
University

Federation.edu.au
1800 333 864 (1800 FED UNI)
International phone: +61 3 5327 9018

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