

API Bursary Students at EECON 2022

Supported by the TJ Effeney Scholarship
for Professional Development



Reflections on taking 16 students to the EESA EECON2022 conference

We had 16 students from all over Australia attend the EESA EECON2022 Conference on 11 & 12 October in Brisbane. The 2-day conference provided the students with a broader understanding of the challenges faced by the power industry in "Unlocking Net Zero". They also got the opportunity to connect and network with professionals.

We are proud of our students for the way they conducted themselves in a professional manner – even taking on the responsibility of being 'microphone runners' throughout the conference. They have provided positive feedback on their experience as you can read in their feedback below.

We would like to thank the Effeney Family, Ergon Energy & Energex once again for supporting professional development of the API bursary students and also a big thank you to the EESA team who provided discounted tickets for the students.



Michelle Murray (Program and Operations Manager) + David Pointing (CEO)

Thank you to our Members

Governor members:



Principal members:



Industry members:



**DEVELOPING THE POWER SECTOR
WORKFORCE FOR OUR FUTURE**



About the API's T.J. Effeney Award



In honour of the late Terry Effeney, one of the Australian energy industry's greatest contributors, the API created the T.J Effeney Award in collaboration with the Effeney Family, Ergon Energy & Energex (part of the Energy Queensland Group). This Award supports the Australian power next generation to undertake a project or program of study (domestic or international) in the energy sector to further their professional career development.

**Empowering the
next generation
with knowledge,
connections and
supporting others.**

The award's selection criteria are based on the values and strengths displayed by Terry Effeney during his career:

- Knowledge: how the proposal will broaden the students knowledge and skills in the energy sector
- Connections: how the proposal will increase the personal network of contacts for the student
- Supporting others: how the student plans to share the knowledge gained from the award with other students and the broader API Bursary cohort.

The TJ Effeney Award is available on a yearly basis, and only open to Australian university students who have been selected for an API Bursary Scholarship and are in their final 2 years of study of an engineering degree.

Usually this scholarship is awarded to support 1 or 2 students to undertake a substantial international trip but due to COVID-19 we adapted the award in 2022 to support 16 API bursary students to attend the EESA EECON2022 conference in Brisbane. This report includes the feedback on their experience attending the conference.

Find further information at: www.API.edu.au



Part of Energy Queensland

Tracey Nguyen

**Bachelor of Engineering (Honours)
Mechanical Engineering, University
of New South Wales, NSW**

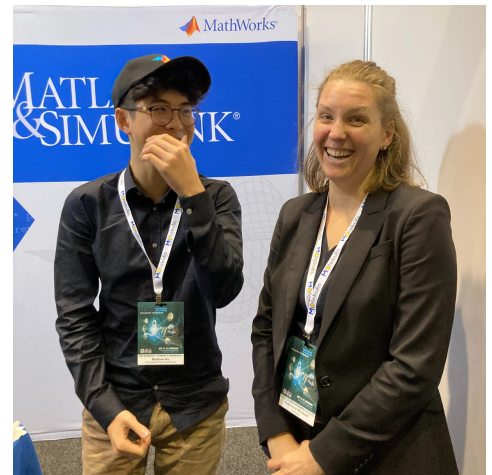
It was a very rewarding experience as I was able to meet so many people in the field and was able to ask them what their respective jobs involve and what their company's goals are. The conference, although a little hard to follow due to some concepts being quite difficult, taught me a lot about our values as engineers and our journey towards using clean energy with the various marketing, technological, etc. methods.



Matthew Ku

**Bachelor of Engineering (Honours)
Mechanical Engineering, University
of New South Wales, NSW**

There were so many things at EECON 2022 that made my experience memorable and rewarding. In my opinion, one of the best parts of these conferences is the opportunity to talk to the company showcases and stalls. I made friends at Wagner Composites and I



**"It's great to see
how content
that I've learnt
at uni is applied
to real
engineering
jobs."**

visited the Mathworks stall, which was particularly exciting for me as I have thoroughly enjoyed using their MATLAB software in my uni courses. It's great to see how content that I've learnt at uni is applied to real engineering jobs. I also thought that the new developments that were on display were amazing. Keynotes that stood out to me was using machine learning to simulate network data, and the recycling of used solar panels. However, I'm always a firm believer that the best part of going to these conferences as an API student is being able to meet similar minded students who share the same passions and experiences. There were many familiar faces from the API as well as a lot of new people for me to meet.

Melissa Chen

Bachelor of Environmental Engineering (Ecology), University of New South Wales, NSW

The 2022 EECON conference was such a rewarding opportunity that allowed me to hear about the wide range of technical challenges that the electrical energy sector is facing in order to try to reach net zero.

I got to hear about challenges regarding:

- Grid stability and reliability
- Storage
- Location
- Capacity and capability
- Skill shortages

Some of the key takeaways/challenges I took away are:

- Use the power of storytelling to get communities on board
- How do we encourage people to be energy-efficient?
- Regulation - how do we speed up regulatory reform to help support the transition that we need for a net zero future?
- How do we make the transition fair, affordable and accessible for everyone?
- Do we have enough skilled people in the energy sector to implement the changes that we need? If not, do we need to encourage those in senior management to invest in the younger generation?

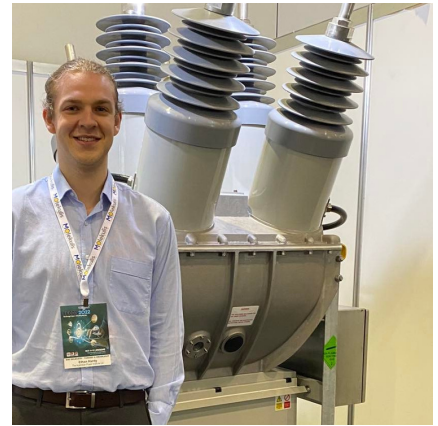
I definitely recommend this opportunity to anyone who would like to learn more about the power sector and the challenges and opportunities within. An experience like this is something you won't get in university. Getting involved with the API has been such a rewarding and valuable experience that allowed me to meet like-minded people, build my network and learn more about the power industry! I am extremely grateful to the API and the Effeney family for this wonderful opportunity.



Ethan Hardy

**Bachelor of Engineering (Honours)/
Bachelor of Mathematics, Electrical
Engineering, University of
Queensland, QLD**

I had an excellent time at EECON 2022. It was my first professional conference and what an exciting time it is to be stepping into the energy industry. Every day felt action packed with keynote speakers, panels discussions, and a range of different presentations from industry. The topics discussed touched on all things energy with the consistent theme of net zero driving the conversation forward. The most valuable takeaway for me as a student however was the networking. Being able to have genuine, one-on-one discussions with industry professionals really provided me with that next-level insight that I was after. Simply asking "What was your takeaway from that" opened up perspectives and details that I otherwise would have completely missed. A massive thank you to the API, TJ-Effeney Scholarship, and EESA for making this experience possible. This has given me a huge amount of momentum towards my career and I am looking forward to starting it next year.



Olive Anderson

**Bachelor of Engineering & Science -
BSc/BE, Power Engineering &
Statistics, University of Tasmania, TAS**

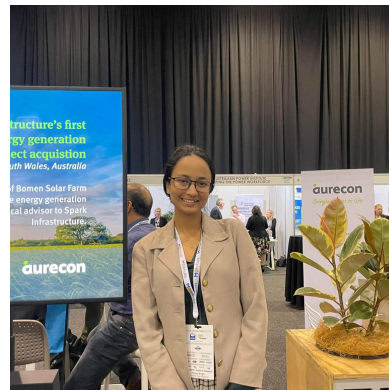
Attending EECON2022 a fantastic experience. Some key takeaways for me were the role data analysis has to play in the transition, and how a 100% renewable network might look.



Pallavi Singh

Graduate at Aurecon,
Wollongong, NSW

This experience offered me amazing insight into the latest discussions and the thinking that's driving the future of the Australian power sector and the energy revolution.



"This experience offered me amazing insight into...what's driving the future of the Australian power sector and the energy revolution. "

Some of the key messages that were a common theme throughout the 2 days was that we need to use "simple solutions early" and do things for customers that "make life easy, not more complicated" (Peter Price, Energy Queensland). They are both a perfect summary of what our thinking needs to be as an industry, going forward into this fast-paced and often haphazard revolution. We also need to now shift our focus to dealing with sustainability issues surrounding "green" technologies, like the manufacturing policies and recycling of solar

panels (Megan Jones, Circular PV Alliance). I left Brisbane with unending food for thought and a Lego windmill prize from the lucky draw!!



Jaime Pryor

**Bachelor of Engineering (Honours)
Electrical Engineering, University
of Sydney, NSW**

Having the opportunity to attend EECON2022 as a TJ Effeney recipient was even more valuable than I had hoped. It was such a privilege to hear from a range of esteemed speakers about where the power industry is heading, what challenges it will face and what might be needed to overcome them. It was wonderful to be able to discuss many of the points raised with the industry members present, and to get a chance to meet my fellow API students as well. Thank you so much to the API for such an enriching experience!



Avisa Agustina

**Masters of Engineering Electrical
Engineering, University of
Queensland, QLD**

I attended the EECON 2022 conference in Brisbane which was focused on unlocking net zero by 2050. I admired the vastly different approaches taken to achieve this goal, whether it was by renewable generation, DER management, distribution level visibility, or evaluating our regulatory framework. I also enjoyed networking with industry professionals, academics, and fellow TJ Effeney students, and I found my overall experience with the TJ Effeney scholarship insightful and rewarding.



Stuart Purcival

**Bachelor of Engineering
(Honours) Electrical and
Electronic Engineering, Griffith
University, QLD**

"Our Energy Future – Unlocking Net Zero" That was the theme of #EECON2022 that I had the privilege of attending this week.



There is such a wide range of technical challenges that the electrical energy sector must address to unlock net zero carbon. Things like:

- Grid stability, reliability, and inertia
- Storage
- Safety and fault detection
- Reverse power flow
- Decarbonising isolated networks
- Harmonics

**"The biggest
takeaway for me
was considering
the challenges we
don't have
answers for"**

It was great to learn that the speakers at #EECON2022 have solutions to these technical challenges already. So job done! Net zero achieved! Right? Not quite... The biggest takeaway for me was considering the challenges we don't have answers for (and they are all non-technical).

- How do we keep the costs down? We have solutions, but they all cost money.
 - How do we make the transition fair for everyone? Are some people going to be left behind? Who's going to be left to pay the bill?
- Regulation. Do we need regulatory reform to enable the transition?
 - Do we have enough people working in the energy sector to implement the changes that are needed?

Great food for thought. Thank you to the Electric Energy Society of Australia for organising this great event (it was great to get to chat with Amy Phan and Han Yang Chiu about what it takes to put on an event like this). And a huge thank you to The Australian Power Institute, TJ Effeney Family, Ergon Energy, Energex for enabling me to have this great opportunity with the 2022/2023 TJ Effeney Award.

Liana Lidden-Verney

**Bachelor of Engineering (Honours)
Electrical and Mechanical,
Queensland University of
Technology, QLD**

EECON2022 was a beautifully intimate, informative, and thoroughly engaging event. Throughout the two-day event, I found myself in the presence of high-ranking role models within the power industry. I was

humbled by and put entirely at ease with these professionals. Moments before, they had been presenting on the central stage and were now chatting with me over refreshments. I was emboldened and encouraged to ask them my burning questions that I would otherwise not have asked a room full of experienced Engineers. It was remarkable, and I was humbled by their generosity and for taking the time to talk with me.



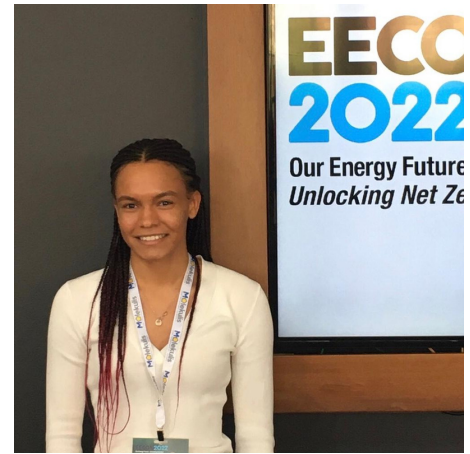
**"I found myself
in the presence
of high-ranking
role models
within the power
industry"**

The opportunity to contribute to the conference as a microphone runner was brilliant. The MC would repeatedly say the names of the mic-runners throughout the sessions (you can't buy that kind of PR!) It became quite a fun icebreaker, and conference attendees were keen to mention it and have a chat. It was wonderful to be introduced to discover new exciting businesses while reconnecting with others (both sponsors and other students) that I met at a previous TJ Effeney-sponsored event.

While some sessions were incredibly informative, others were, as you would expect, quite technical and a little above my pay grade. If I couldn't grasp the content, I would get busy creating my acronym dictionary to become fluent in the industry-specific lingo. There was an excellent mix of topics, and the breakout rooms catered for your personal and professional interests. The event organisers were very well-organised, caring and welcoming to all. I had a delightful time and walked away feeling more inspired about my future career than ever. I can't wait to join the ranks as a contributing member of the EESA.

Cameron Woodley

**Bachelor of Engineering
(Honours)/Bachelor of Computer
Science, Electrical
Engineering/Cyber Security,
University of Queensland, QLD**



Through the TJ Effeney Award program, I am grateful to have had the fantastic experience of attending the EECON2022 Conference held in Brisbane. This year's

topic, "Our Energy Future – Unlocking Net Zero", and the emphasis on renewable energies rung true in a time where the industry, technology, and infrastructure must undergo dramatic changes to reach net zero by 2050. Being my first ever conference, I was filled with nervous excitement and wasn't quite sure what to expect. The engaging talks, expert panels, and the marvel of new technologies and innovation went beyond what I could have hoped for. I was blown away by the experience! Even between talks, there was a showcase of cutting-edge advancements and progress from sponsor companies and the amazing opportunity to network with their industry representatives.

"I was gratified to learn of the commitment and dedication the industry has towards this goal, knowing I too could make a positive difference in this profession."

At the opening of the conference, the insights on the staggering amount of overhaul required on the grid and the resources, regulation, and technology still needed to achieve this seemed daunting. However, having met delegates and other members of the API, it was reassuring to know I am part of a talented network of people who can support the changes we need for the long journey ahead of us. The conference was an invaluable opportunity to hear from experts in the power industry about how they think the changing infrastructure

and regulations, particularly regarding the integration of renewable energy sources and EVs, will see us through to a more sustainable future.

I was gratified to learn of the commitment and dedication the industry has towards this goal, knowing I too could make a positive difference in this profession. The EECON2022 conference with its enlightening topics, passionate delegates, and smooth delivery was a beneficial experience from which I had much to learn. I am grateful to the API for having afforded me the opportunity to take part in this unforgettable experience.

Lucy Webster

**Bachelor of Engineering
(Honours)/Bachelor of Science,
Electrical Engineering/Chemical
Sciences, Queensland University
of Technology, QLD**

I found the TJ Effeney experience amazing and I am so beyond grateful. Hearing from individuals across the industry confirmed the passion I have for

contributing to the Net Zero transition, as well as helped me open my eyes to the various challenges and solutions across the industry. Although I have this passion, it made me question the intentions of those in the industry currently working towards a renewable-led power sector. I couldn't tell if they were working towards these goals to reach their KPIs and their bosses expectations, or if they actually are passionate about the cause. What really made me begin to think like this was the contradicting concept of the conference being centered around net-zero and achieving a better future, yet plastic water bottles were being handed out each day, single wrapped lollies were made available at each table and trivial 'gifts' were given in the complimentary bags. In know way am I ungrateful and I understand a certain standard needs to be maintained at events like these, but just food for thought. Thank you so much again for this opportunity. It has helped me consolidate the future I want and further ignited my passion for the industry.



Jim Coates

**Bachelor of Engineering (Honours),
Electrical Engineering,
Queensland University of
Technology, QLD**

EECON 2022 did not disappoint. Once again API and the TJ Effeney scholarship have come together to provide many students with the opportunity to hear about the latest in the power industry. The talks were insightful and thought-provoking. I certainly learned a lot but valued the networking sessions and discussions most.



Chetan Gautam

**Bachelor of Engineering - BE,
Electrical & Electronics Engineering,
University of South Australia, SA**

Attending the EN2022 conference as a TJ Effeney Scholarship recipient was an amazing experience that I will never forget. I would like to thank Australian Power Institute team for providing various opportunities such as networking with API peers and industry professionals as well as hearing from industry experts about opportunities and challenges as Australia heads toward 100% renewable and net-zero emission. EECON2022 - Our Energy Future – Unlocking Net Zero, was my first experience of attending industry conference. As world is shifting towards net zero emission, we have seen a lot of hype about renewable energy sources, rooftop solar power and electric vehicle but we never hear about the challenges it creates in power industry. EECON2022 has given me different perspective to power industry. It was invaluable to hear from the experts in the industry on the transformations our grid will face in order to accommodate renewable energy, V2G and G2V.



Bashir Bilal

**Bachelor of Engineering
(Honours), Electrical Engineering,
University of Adelaide, SA**

My experience being part of the TJ award 2022 was nothing but a wonderful experience. Being a first year at university I was hesitant to attend this year event because I had very limited knowledge to what to expected. However, it turned out that I wasn't the only one who felt that way and this gave me the courage to take the first step to mention it to anyone I have talked to in hopes to learn something new and opening a chance for me to network. Some of the things I learned was what means to be a power engineer and the responsibility they hold towards the community from providing power to every household to solving problems like reaching net zero. Moreover, I have become aware of the agreed visions between all power engineers within the next 5-10 years, opening new opportunities for the power field.



Vaughan Thomas

**Bachelor of Engineering (Honours),
Electrical Engineering, Deakin
University, SA**

Attending the EECON 2022 conference was a great experience which gave me a broad understanding of the challenges faced by the electric power industry in "Unlocking Net Zero". In addition to viewing some amazing presentations and discussions, there were countless opportunities to connect with professionals



**"There was an
incredibly
positive energy
throughout the
conference"**

already working in this field. Sharing this experience with the other API Bursary students was truly a privilege. There was an incredibly positive energy throughout the conference, and it was inspiring to see industry experts sharing their knowledge and grappling with the many difficult questions that exist in the transformation to a clean energy future. With topics ranging from HV transmission and big batteries to dynamic operating envelopes and climate justice, plus a lot in between, this was really an eye-opening experience. I felt very fortunate to have been

given this opportunity through the TJ Effeney Award. I learnt a lot and had a great time connecting with professionals and students alike along the way.

