

# THE AUSTRALIAN POWER INSTITUTE

JUNE 2015

Mid-Year is here already, and API is eager to announce exciting opportunities ahead. This June Newsletter will highlight the promotion for the 2015 Bursaries, the 2015 Solar Car Challenge Program, the international achievement of the STELR Renewable Energy Kit initiative, and lastly a positive report of a successful EWB workshop.

## API BURSARY AWARDS 2015

The Australian Power Institute (API) is working to support the education and professional development of power engineers across Australia. API is offering Power Engineering Bursaries to engineering students with an interest in areas of engineering relevant to the electric power industry. The majority of bursaries will be awarded to 1st year students with a proportion available to 2nd and 3rd years.

Extensive promotions of the 2015 API Bursary Program has commenced at universities with a commitment to power engineering across Australia. There are 20 bursaries available in 2015. Each bursary provides cash value of \$8,000 over 4 years and offers a support system to help students successfully complete their degree.

Applications are now being accepted until Saturday, 11 July 2015. API is looking forward to hosting and announcing the recipients of the bursary awards come mid-October.

This program also provides a platform for mentoring, vacation work opportunities, industry thesis topics, and networking events in order to help student's transition into the workforce more effectively.

\*For more information or to apply, please visit [www.api.edu.au/bursary](http://www.api.edu.au/bursary)



A special thank you to the 2015  
API Bursary Sponsors

## FEEDBACK FROM API BURSARY GRADUATES

*"I appreciate API providing a well coordinated program for connecting sponsor companies and bursary students together for an increased opportunity to secure vacation placement."*

*"Through API, I learnt an incredible amount about the workforce, the practicalities of engineering design/implementation and so much more. I also gained confidence and matured as an individual in the workforce by getting involved earlier."*

*"API provided framework to introduce students to the power industry, present them with opportunities to gain first hand experience and to help better inform future career decisions. I am thankful for my experience."*



## ATSE SOLAR CAR CHALLENGE 2015

API provides part funding for The Solar Car Challenge along with the Australian Academy of Technological Sciences and Engineering (ATSE). API supports this program by providing class sets of re-usable model solar car kits to 50 schools Australia wide using the Science and Technology Education Leveraging Relevance (STELR) Renewable Energy Module. Each class set makes 15 model solar cars comprising a chassis, two sets of wheels, a motor, a gearbox and two solar panels.

The solar car activity is the culminating activity of the STELR Renewable Energy module where students apply the knowledge they gained from the STELR unit. Students test their cars against each other.

The kits are provided free of charge to schools. API also provides certificates for schools to use as prizes for the best cars in a variety of categories.

API encourages involvement between university engineering students (who currently are apart of the bursary program) with participating high-schools by sending each school a university student to deliver a presentation on careers in the renewable energy industry. During the visit the young undergraduate engineers will also assist with solar car construction, judge the cars, and award prizes.

API Bursary Coordinators have been in touch with bursary students in organising the 2015 school visits to take place in mid August across QLD, VIC, NSW, TAS and SA. The responses from bursary students who volunteer their participation and support has been very positive. API looks forward to participating in this productive event each year.



## GRADUATE SUPPORT- A TRUE PASSION FOR INDUSTRY IMPROVEMENT

Jarman Stephens, an enthusiastic past API Bursary Student, has been working with Pennie Stoyles, STELR Program Manager, as he has offered to make a series of YouTube instruction/tutorial videos to assist with the solar car construction/events within the schools. Jarman is working with ABB (a leader in power and automation technologies).

The ABB mentors students from the Yiramalay Wesley Studio School in the Kimberley area and has since purchased 4 solar cars to use with the students as part of their mentoring program! The API is grateful for Jarman's passion and commitment in continuing to improve the pipeline of Australia's future engineers.

*"The API program provided me with a multitude of amazing opportunities including, but not limited to, vacation work at SP AusNet and a graduate role at ABB. I would love to continue my involvement in what I believe is an incredibly worthwhile program."*

- Jarman Stephens





## STELR PROGRAM WINS SUCCESS OVERSEAS

Through STELR's international engagement in emerging countries, STELR learned of the following deficits:

- A low proportion of students complete primary school
- Schools are poorly resourced
- Class sizes are much larger than in developed countries
- Teachers generally lack confidence in teaching science
- Teachers are poorly trained in running practical activities
- Teaching methods are out-dated

Therefore, the STELR demonstrations and workshops generated in the STELR equipment sets and curriculum materials, and the climate change and renewable energy topics, resonated with the attendees.



*Peter Pentland works with local teachers at a workshop in Bandung, Indonesia.*

As a result of the workshops, donations and direct sales to schools, STELR is now being used in schools or teacher training institutions in Timor Leste, Singapore, The Philippines, Indonesia, Fiji, Tonga, Afghanistan, Nepal and Sudan.

*"The API sponsorship of STELR has made a big contribution to this international expansion. Orica is keen to put STELR Renewable Energy kits and programs into international schools, but API support has enabled the kits and programs to be developed and it has also kept the program running"*

– Peter Pentland, Executive Manager Education program, ATSE

If any API member organisations want to get involved to support local schools around their operations in Asia and the Pacific, donations of class sets of the Renewable Energy equipment is a very effective way. Two class sets for two schools, along with books and training can be achieved for a one off cost of \$10,000. It would boost the science equipment of the schools and would run for very little extra cost for over 10 years.

## PES CAREERS

API is excited to announce that PES Database has been actively running again as of 5 May 2015. PES Careers is a free and easy way to recruit the best and brightest engineering students of today. This database is a free and uniquely designed tool to help connect Power and Energy Engineering students with major leading companies within the industry.

For students, PES Careers serves as a powerful platform to help seek out and secure career experiences, such as summer vacation work, upcoming key industry events and/or future employment. Students are able to create and maintain a professional profile, post updated CV/credentials, search for Employers and jobs that match criteria and ultimately maximise exposure by allowing employers easy access to their profile.

For employers, this database allows industry to connect to the Power Engineers of the future. Companies are able to efficiently promote and enhance recruiting efforts, post job openings/coops/internship opportunities, and browse through students/graduates based on desired attributes.

This system is now the primary database for current/past API Bursary holders who are looking to enhance their professional development (particularly through vacation employment opportunities) and enrich their practical experience/CV. Therefore, it is required that all API Bursary Holders actively maintain a profile.

For more information, visit the PES Career tab of API Website at: <http://api.edu.au/pes/>



## ENGINEERS WITHOUT BORDERS: WORKSHOP REPORT

### Workshop - Off the Grid: Power Generations for Remote Communities

This workshop discussed the innovative methods that power engineers use to provide electricity to remote communities in developing countries. Examples include the design of a Pico Hydro Power Plant used in conjunction with white LED lamps that consume less electricity for rural Nepal.

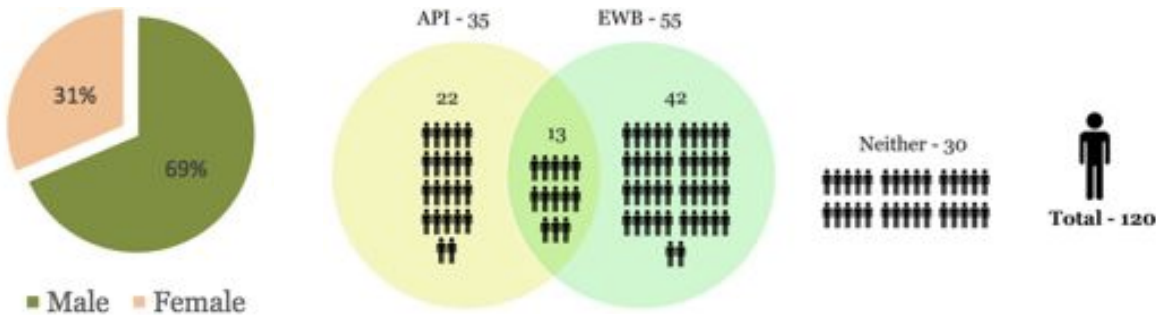
These interactive workshops provided an overview of EWB's work and explored the following:

- The role of engineering and technology in resource-poor areas
- How to design and build technologies for remote communities
- Understanding of the global context and issues of energy success
- The skills and expertise required to work effectively overseas.



### FEEDBACK DATA

One third of attendees were female. \*Non- API includes EWB members some professionals and EA members.



### KEY FEEDBACK FACTS

API bursary students responded by choosing, "agree to strongly agree" when asked if they:

- Found the workshops interesting;
- Would attend further sessions
- Would recommend to others

Non API\* members agreed that they learnt more about API as a result of the workshop.

The participants all learnt more about EWB, including EWB members indicating new in depth content

API bursary students found the workshops interesting, would try and attend future workshops and would recommend it to others. All content, topics and guest speakers operated very well, and therefore were all very well received.

CITY (attendance)	DATE	VENUE
Brisbane (16)	Mon 1 <sup>st</sup>	University of Queensland
Sydney (15)	Tues 2 <sup>nd</sup>	University of Technology, Sydney
Adelaide (8)	Wed 3 <sup>rd</sup>	University of Adelaide
Melbourne (28)	Thurs 4 <sup>th</sup>	Engineering House, North Melbourne
Perth (40)	Thurs 11 <sup>th</sup>	Curtin University

*The sessions were all run in December 2014*



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