API WOMEN IN ENGINEERING INITIATIVES

As the power industry is anxiously keen to increase female representation in engineering roles, The Australian Power Institute has part funded a number of women in power engineering university programs including the program at the University of New South Wales (UNSW) and also at the University of Queensland (UQ) to help promote this message. The API feels passionate about this issue, therefore has developed various strategies and initiatives to help promote and deliver this message. This newsletter highlights a few of the current API initiative projects that strive to increase the number of female students involved in engineering roles across Australia.

The API Key Initiatives:

1. The encouragement and distribution of bursaries specifically for female university students.
2. The development of power engineering career promotional material.
3. Coordinating the involvement of young female power engineers and bursary holders in school visit outreach programs such as the involvement between bursary holders and High Schools during The Solar Car Challenge.
4. Assisting with University funding to give priority to the appointment of female academics in power engineering from 2012/13
5. Providing industry mentoring and support for existing API women and bursary students.

MENTORING PROGRAM FOR FEMALE BURSARY STUDENTS

As the industry is keen to specifically increase female representation in engineering roles, API strongly encourages female university students to apply for academic bursaries. In addition, API also provides mentoring support for existing female Bursary holders. Mentors are comprised of experience female industry professionals that are a part of API member companies.

API has commenced the mentoring program in VIC and WA, and will be implementing the program in other states progressively over the next six months.

Key objectives of the mentoring program are to:

• Provide students with someone in the industry who can provide them some guidance of how the theory at university links to the application in industry for power engineering related subjects.

• Provide students with some guidance of final year thesis/project topics and if appropriate assist with industry input.

• Provide students with guidance and information about the support given to female engineers within the energy industry.
UNIVERSITY OF QUEENSLAND

The University of Queensland’s (UQ) Women in Engineering (WiE) program has cemented its leading position in Australia with female enrolments for the incoming undergraduate engineering student cohort rising to 24.4% in 2014.

API’s Chief Executive, Michael Griffin said the company was pleased with the program’s early success, acknowledging the fusion of industry and academic input, which has supported the process.

“API is committed to increasing the representation of women in power engineering. For this to be achieved Australia wide, we are supporting the Women in Engineering initiative to share their learning’s, experiences and approach with other universities across Australia,” Mr. Griffin said.

API participated in UQ’s “Engineering Futures Evening”, which was held on 26 June 2014. The event was well attended with approximately 150 guests, comprised of 60 high-school students, 50 parents/teachers, and over 40 representatives from industry. This event hosted several guest presentations from established and emerging industry professions and was followed by an “Industry & Student Expo”. The Expo encouraged prospective students to interact and network with leading female industry professionals.

UNIVERSITY OF NEW SOUTH WALES AWARDS

The UNSW Women in Engineering Awards, presented by the Faculty of Engineering, supports UNSW’s wider Women in Engineering campaign to attract more female high school graduates to consider engineering as their preferred career. These two major awards, each worth $5,000, recognize the achievements of female UNSW Engineering graduates. The awards help identify and recognize the inspiring female engineering role models within the industry today. The ceremony takes place in August, to coincide with National Engineering Week. Nominations open each May. The API along with one of its founding members in NSW, TransGrid, are proud to sponsor these awards.

The Australian Workforce and Productivity Agency Engineering recently conducted a case study highlighting the “successful Women in Engineering programs” at UNSW and The University of Queensland, both of which the API proudly supports.

A key recommendation of the Engineering Study relating to the attraction of women to engineering studies and careers, and the retention of women in engineering occupations, communicated that this can be enhanced by industry professionals working alongside education providers to increase and strengthen these programs by providing access to role models of women engineers and other means to mentor female engineering students along their way.

The API is committed to this course of action through its sponsorship of the UNSW awards, the API mentoring program and through various additional endeavors. The API is looking forward to continuously working with other industries in the professional engineering field in order to increase and sustain the proportion of women in engineering.
API FEMALE POWER ENGINEERING ACADEMICS

The API recognizes that just like industry, the representation of females in power engineering academic jobs is also very low. In response to this, API has approved part funding of early career power engineering academic positions across Australia. The inspiring women involved in this program part funded by API, are featured below.

**Sara Deilami**

Sara received her M.S. and PhD degrees in Electrical and Computer Engineering from Curtin University, WA, Australia in 2011 and 2014, respectively. She was awarded a Curtin University Postgraduate Scholarship (CUPS) and an Australian Postgraduate Award (APA) scholarship in 2010 and 2011, respectively. She has more than nine years of industry experience.

Currently, Sara Deilami is a Female Power Engineering academics Member (Associate Lecturer sponsored by API) at the Electrical and Computer Engineering Department, Curtin University, Perth, WA, Australia. She is a member of IEEE and the co-chair of the IEEE PES-PELS WA chapter. Her future research interests and challenges are artificial intelligence (AI) based optimization and control of smart grid (SG) with renewable distributed generations (DGs), plug-in electric vehicles (PEVs) and smart appliances.

**Sarah Lyden**

Sarah graduated from the University of Tasmania (UTAS) with a combined Bachelor of Science and Bachelor of Engineering (Honours) in the area of Mechatronics Engineering in 2011. Throughout her undergraduate studies, Sarah undertook work placements with the Network Performance and Strategies group at Transend Networks and with the Tasmanian ICT Centre at CSIRO. Currently, she is completing her PhD studies in Renewable Energy focusing on the challenges of operating Photovoltaic systems effectively.

Sarah is also involved as a STEM ambassador with the School of Engineering and ICT’s STEM Education and Outreach Team in engaging students in grades K-12 with Engineering and in encouraging the participation of women in the STEM fields. In 2015, Sarah will commence her appointment as the API Lecturer for a Woman specializing in Power Engineering and Renewable Energy with the School of Engineering and ICT at UTAS.

**Dr. Negareh Ghasemi**

Dr. Ghasemi has various industry experiences as she has held various positions including Technical Sales Engineer” at Pardazeshgaran Electronic Co., “Substation Design Engineer & Electronic Devices/Computer Hardware Expert” at Tadbir Niroo Co. and her latest role as a “Technical Engineer in Tendering Department” at Pars Sanat Parand Co. where she carried out projects such as switchboard design using (DAC’s) design and calculation software.

Currently, Dr. Ghasemi maintains a busy schedule as a Lecturer at the School of Electrical Engineering and Computer Science at Queensland University of Technology (QUT) where she has taught over 5 courses including tutoring and supervising Undergraduate final year projects. Dr. Ghasemi believes that acquiring external funding from industrial partners and building academic collaboration between Australian universities are the most challenging aspects of the industry.