



Australia Awards

Australia Awards in Indonesia – Short Term Award Renewable Energy Technologies in Eastern Indonesia



The participants of the Renewable Energy Technologies in Eastern Indonesia Short Term Award together with the Murdoch University and Australia Awards in Indonesia team at the closing of the post-course workshop in Surabaya, Indonesia

Course Highlights:

- Pre-course workshop held in Makassar on 16 – 18 July 2019
- Two-week short course held in Perth, Australia, on 19 – 30 August 2019
- Post-course workshop held in Surabaya on 14 – 16 January 2020

The Murdoch University (Engineering & Energy) team, A/Prof Tania Urmee, Dr Jonathan Whale, Dr Martin Anda and Mr David Shirley, successfully delivered the Australia Awards in Indonesia (AAI) Short Term Award (STA) “Renewable Energy Technologies in Eastern Indonesia” in 2019-20. The focus of this course was to share knowledge on Australia’s renewable energy technologies (RETs) and industry to support Australia-Indonesia cooperation in the energy sector, especially in eastern Indonesia. The course aimed to improve the participants’ knowledge of renewable energy technologies so they could develop electrification projects in eastern Indonesia that are suitable for community needs.

Twenty-five professionals from Indonesian State-Owned Corporations, private companies and NGOs attended the short course, which started with a pre-course workshop in Makassar in July 2019. In the three-day workshop, the awardees were divided into seven groups to start to conceptualise their Award Projects. After a two-week course with intensive industry participation held at Murdoch University in Perth in August 2019, the groups returned to Indonesia and started implementing their projects. Four months later the groups attended a three-day post-course workshop in Surabaya in January 2020 and presented their project achievements, lessons learnt and proposed future plans for the project. During this six month period the participants made impressive progress across all seven different projects.



Delivery of the Program

The course was delivered using a combination of lectures, practical workshops and site visits. Course materials were stored on an online learning management system (LMS) which is accessible until June 30, 2020. This means the course materials are available to participants everywhere they go, including presenting course achievements and materials to colleagues in Indonesia. Good study habits were encouraged with the use of learning journals. Projects were developed using the SMART goals framework.

"I love the course delivery from the professors where we can discuss everything." "Murdoch's online system (LMS) is top-notch!"

There was a deliberate focus on industry engagement in the course. During their time in Perth, the awardees met with over 35 industry professionals at networking events and industry visits. One innovative approach for an AAI STA was the allocation of awardees into groups. Each group had a mix of three to five people from different sectors – government, utility, community NGOs and private companies. The groups worked well overall but were not without challenges, particularly as the participants were from various organisations with different project plans.

"The group project was initially challenging yet rewarding considering the achievements the group could make."

There were many learning exchanges between the participants, who supported each other and benefited from their combined networks. Each group prepared a poster that presented their group project proposal. These served as an excellent icebreaker when meeting industry, both in Perth and in Surabaya, and created positive discussions and an opportunity for future collaboration. A supportive mentoring program was established and sustained through the duration of the course. Each group's mentor team consisted of one Murdoch academic plus one of the facilitators along with lead mentor David Shirley directing the process in each team. Fortnightly or monthly coaching calls allowed new ideas to be discussed, progress shared, industry support garnered, funding mechanisms arranged and problems solved.

"Very helpful hands-on theoretical and practical knowledge on RE technologies, insightful course from the facilitators, and a very interesting and impactful topic in the project."



The TOSS group demonstrated their prototype waste to energy system at the post-course workshop.

Achievements

The highlights of this course were the impressive achievements of the groups after only six months.

- The community-based waste to energy (TOSS) group constructed and demonstrated a prototype waste to energy system at the post-course workshop.
- The solar powered water pumping (Solar SWAG) group constructed and demonstrated a solar powered irrigation system for crop farmers in Lombok.
- The Tech2Mart (CombRO Seniors) team documented the process that Australian companies could take to get their products on the Indonesian government procurement system catalogue and showcased the Moerk Water Solutions solar desalination unit to the Governor of South Sulawesi.
- The waste for water (CombRO Juniors) group engaged local government, Moerk Water Solutions, a waste bank service provider and a local partner to install a portable solar PVRO water treatment kit in Bali.
- The Sumba Renewable Energy Group (SREG group) signed documents of support from government and local industry for a solar microgrid in Sumba and villagers have started to build the powerhouse.
- The Solarfish Maluku group carried out a proof of concept for a solar-powered ice flake-making machine and have sought funding from 12 institutions.
- The Solar Weavers team joined forces with a local NGO that will supply solar systems for electricity and water in Desa Nunleu, with 500M IDR (55,000 AUD) funding for the project allocated in the 2020 village budget.

"The course gave very good insight about RE implementation for the society/ community that was relevant to Indonesian issues."



The participants met with Australian Renewable Energy Industries during the course in Australia.

All seven groups initiated remarkably significant and innovative renewable energy projects in diverse locations across eastern Indonesia with wonderful teamwork. The achievements were above and beyond the expectations of the AAI team and made this Short Term Award a great success.

Networking Opportunities

Industry engagement highlights included the SWAG and Solar Weavers groups visiting Des Ingleton of BW Solar/Waterboy. The SWAG group acquired a solar pump at a discounted price from Des and demonstrated the pump at Murdoch University Chinese Gardens. The two CombRO groups visited Moerk Water Solutions and formed new links with Martin and Barbara Brezger. The TOSS group was invited to visit the Indonesian Consul General, Mrs Dewi Tobing, who endorsed their waste to energy project. Finally, the Solarfish Maluku group met with George Zombori of Unlimited Energy, who guided the design of their project.

"Industry people like Des from Waterboy [BW Solar] were very active and had a strong willingness to assist the project"

Testimonials from Participants

"The direct visits to industry locations were very good"

"Logistical arrangements were beyond expectations"

For further info, please contact:

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