

Regionally accredited sustainable energy courses in development

National and regionally accredited certificate courses in sustainable energy under the European Union Pacific Technical and Vocational Education and Training (EU PactVET) Project are currently being developed for certificate levels 3 and 4.

This was confirmed by the EU PactVET sustainable energy advisor, Nixon Kua during the European Union –Deutsche Gesellschaft für Internationale Zusammenarbeit Adapting to Climate Change and Sustainable Energy (EU-GIZ ACSE) Steering Committee Meeting on October 6th at the Holiday Inn Suva, Fiji. Mr. Kua said that the course contents are nearly complete.

The EU PactVET Project is a €6.1 Million (FJD \$14.06 Million) programme jointly implemented by The Pacific Community and The University of the South Pacific, with their development partners, The European Union.

"At this moment, the course contents for National Certificates 1 and 2 are complete, with level 3's content ready and level 4 in its final stages," Mr. Kua said.

Mr. Kua said that while the content for certificate levels 1 and 2 are basic knowledge in sustainable energy, levels 3 and 4 diverge into more specialised areas regarding the skills and knowledge of renewable energy technology.

"Levels 1 and 2 will have basic skills like what energy is, while levels 3 and 4 will have skills involving Biogas and Biomass, solar PV systems, micro hydro power, hybrid wind, and energy resource management," he said.

According to Mr. Kua, these qualifications are unique, having a specific TVET focus in addressing the needs of people and communities in the Pacific.

"Firstly, these qualifications are tailor-made for the Pacific region, as whichever country is implementing these courses can adjust them to meet their requirements in the work force. In addition, these are the first regional qualifications at the TVET level to have a pure renewable energy focus," he said.

By Emmanuel Duane Mar

Principal Curriculum officer of the Vanuatu Curriculum Development Charley Robert said that the regional component of the EU PactVET Project courses is vital for the job security of the Pacific people.

"It isn't just about having the local, rural people able to identify, analyze and install solar panels or work with hydro power, but it's also about labour mobility. It also allows us to potentially export our qualifications," he said.

Mr. Robert said that the RPL (Recognition of Prior Learning) component was a key factor in advancing the job and skills recognition that Pacific Islanders have learned through work experience.

"With the RPL being included into the courses, it ensures that those people, who are already in the workforce and learned through informal means, can have their skills recognised in a formal qualification," he said.

The EU PactVET Project is a project initiative that aims to create technical and vocational Certificate qualifications in 2 major fields; 'Resilience', which consists of climate change adaptation and disaster risk reduction, and 'Sustainable Energy'.

These qualifications will have both National and Regional recognition across 15 Pacific – African Caribbean Pacific: Cook Islands, Fiji, the Federated States of Micronesia, Kiribati, Papua New Guinea, Nauru, Niue, Palau, the Republic of the Marshall Islands, Samoa, Solomon Islands, Timor Leste (East Timor), Tonga, Tuvalu, and Vanuatu.

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Tonga Police Solar Goes Live

The Tonga Police solar was officially commissioned by the Deputy Prime Minister of Tonga, Hon. Siaosi Sovaleni at a ceremony held at the national police headquarters in Longolongo.

More than 30 delegates attended the celebration, including the New Zealand High Commissioner Her Excellency Mrs. Sarah Walsh and the Australian Acting High Commissioner Sophie Tempy, Minister of Police Hon. Dr. Pohiva Tu'ionetoa and distinguished guests.

The event marked the completion of the construction phase of the 225 kWh solar facility. The project was made possible by a funding grant from the New Zealand Aid Programme and the Government of Australia and the solar expertise of Reid Technology. Tonga Power Ltd's CEO Robert Matthews said that the pilot program hoped to set a benchmark for future expansion of a national solar photo-voltaic distributive energy program that aims to feed energy harvested from the sun into the power grid. "This program will see a dual tariff in

place with Tonga Police to encourage exporting of electricity from the 180kWh of battery storage onto the Tonga Power grid during peak demand."

"The program was designed in mind that it had to provide a sufficient solar energy to offset the energy needs to Tonga Police stations and that the facility was selectively oversized to provide excess capacity with battery storage, among other thing". He adds, "This is an exciting project and I believe sets an excellent example and a significant leap towards the development of renewable energy forms of electricity generation in Tonga, which will hopefully encourage others to consider a similar approach to develop renewable energy projects in the future." In his remarks to the gathering the Deputy Prime Minister of Tonga, Hon. Sovaleni explained that the Government of Tonga intended to lessen carbon emissions by increasing electricity generation from renewable energy. Hon. Sovaleni said, "To help fight climate change, Tonga intends to

reduce carbon emissions, as outlined in our National Determined Contribution, and we are committed to increasing our electricity generation from renewable energy to 50% by 2020 and 75% by 2030." "The solar project will enhance the operational capacity of Tonga Police through access to a reliable source of electricity, reduce operational costs, and contribute to Government's efforts to reach 50% renewable generation by 2020", he adds. Stephen Caldwell, Tonga Police Commissioner said the 225kWh system will not only enhance the operational capacity of Tonga Police through access to reliable source of electricity 24-hrs daily, seven-days a week but more importantly perhaps, it will also aid the Tongan Government's priority to reduce reliance on imported fossil fuel through the use of renewable energy. Under the same fund, solar projects have also been developed and implemented at police stations in Mu'a, Vaini, Nukunuku.

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Ha'apai Solar Farm to come on Grid in November

Australian Minister, Senator Concetta Fierravanti-Wells together with the Australian High Commissioner to Tonga, H.E. Ambassador Andrew Ford and delegates of Australian Department of Foreign Affairs yesterday visited the Ha'apai solar farm project. The on-grid project will become the first utility scale solar energy generation facility in Ha'apai.

Tonga Power staff and Governor Mo'ale Finau were pleased to welcome the Honorable Minister at Ha'apai during her visit to the solar facility which is located at the power station in Pangai. The senator is in Tonga on an official visit to strengthen Australia's bilateral relationships with its Pacific partner countries.

Honorable Concetta Fierravanti-Wells said, "The Government of Australia is proud to be supporting Tonga to reach its renewable energy goals and climate change targets through the Outer Islands Renewable Energy Project (OIREP).

Australia has contributed \$5.7 million AUD towards the project in co-financing with the Asian Development Bank and the European Union.

TPL Major Projects Manager, Simon Wilson said, "We are very thankful for the financial support that Development Partners have provided for this benchmark project. This project will bring Ha'apai up to approximately 50%

renewable electricity supply which will be a first for Tonga".

He adds, "This is an important stepping stone towards the Government of Tonga's goal of 50% renewable electricity generation for Tonga by 2020".

The OIREP project includes the construction of the 550 kWh solar plant in Ha'apai which also contains a 660 kW battery storage system. The Ha'apai solar farm is expected to be complete in November 2016. In addition, a 200 kWh solar farm in being constructed in 'Eua and is expected to be complete in October 2016. The overall cost for the solar facilities for both islands is approximately \$3 million USD dollars.

Fiji based company CBS is the lead contractor on the project, which is an alliance between Tonga Power Ltd and the Government of Tonga.

The OIREP project also includes the electricity network rehabilitation in 'Eua and Vava'u funded by the Asian Development Bank, European Union, Second Danish Cooperation Fund and the Australian Government at a cost of \$5 million USD. TPL is responsible for the construction and refurbishment of the electricity network in 'Eua up to 80 percent and up to 20 percent in Vava'u.

The OIREP project has been well underway since July in 'Eua and around 30% of the work has already been completed. Construction of the electrical network in Vava'u is expected to commence in May 2017.

Tonga Power Limited CEO said, "The OIREP project is yet another example of Tonga Power's ability to work in close collaboration with Government, the industry and our Development Partners to deliver safe, reliable and more affordable electricity to the outer Islands.

Tonga Power also provides equal employment opportunity for both women and men in the workforce and has successfully trained and employed four female staff in Ha'apai and three in 'Eua to join the OIREP network rehabilitation workforce in support of the Gender Action Plan.

Tonga Power's CEO, Robert Matthews said, "TPL remains committed to a balanced approach to gender equality as we continue to engage the very best people for the job regardless of their gender".

Mr. Matthew adds, "I sincerely thank all our Development Partners including Senator Concetta Fierravanti-Wells, H.E. Ambassador Andrew Ford and the people of Australia for their continued support".



Australia's Minister for International Development and the Pacific, Hon. Concetta Fierravanti-Wales, H.E. Andrew Ford and delegates at the Ha'apai Solar Farm. 22 September 2016.

OutBack Power Launches Energy Platform Breakthrough, SkyBox

SkyBox, FLEXmax Ultra 300V charge controller debut provides customers with a wider range of renewable energy system design tools.

OutBack Power Technologies, Inc., a designer and manufacturer of advanced power electronics for renewable energy, backup power and mobile applications, will launch new additions to its line of renewable energy products at All Energy 4-5 October at the Melbourne convention centre. The company's energy storage and management solutions—leading with the new SkyBox True Hybrid Energy System will help solar installers and users meet the challenge of integrating renewable energy generation with storage.

SkyBox makes smart solar simple with an advanced technology single-box design, and represents a breakthrough in the field of advanced power conversion, processing and control.

SkyBox gives users more value for their renewable energy investment—both up-front through simplified design and installation, and, over the long-term, through the ability to 'see' a

higher return on that investment through greater control over how they make, store and manage their energy," explained Ben Cameron, Regional Director of Alpha Technologies (OutBack's parent company). "Breakthroughs such as SkyBox truly demonstrate how our proven 'mastery of the off-grid' translates into not only being the 'first choice for the new grid' but in some cases the only choice—in our booth at All Energy we'll be exhibiting capabilities that no other single brand can currently offer.

For solar professionals, OutBack expects SkyBox to revolutionize the process of designing and installing PV/solar systems with energy storage. **"We asked leading solar installers to imagine their 'wish list' for the perfect power conversion platform ahead of developing SkyBox"** said Derick Martins, Regional Manager for OutBack Power. **"Based on their input, we re-invented the concept using all-new digital technology to create**

an all-in-one unit with superior efficiency and features for end-users, while reducing installation time, cost and complexity for installers—and in a compact form-factor engineered for quiet, trouble-free operation."

Continued Mr. Martins, **"Our unique SkyBox architecture will save installers time and increase system owner satisfaction. Most important, SkyBox provides system designers with unprecedented flexibility—they can literally install now, figure out energy storage later. SkyBox is flexible and intelligent enough to work with current and future energy storage technologies and configurations, and can even be commissioned and operated prior to battery installation."**

**PACIFIC POWER ASSOCIATION
SUSTAINABLE ENERGY INDUSTRY
DEVELOPMENT PROJECT
Renewable Energy and Energy
Efficiency Guidelines,
Competency Standards and Training**

As many long term SEIAPI members would know the committee has been working for over 4 years in an attempt to secure some funding to help the industry within the Pacific Islands. The implementation of the project to do this took one step close in September when the PPA called for Expressions of Interest for consultancy firms to provide a range of services.

The project will require the successful consultancy firm to be responsible for:

- The development of Sustainable Energy Technical Guidelines;
- To deliver workshops on the Technical Guidelines conducted within 11 Pacific Island Countries (Fiji, FSM, Kiribati, Marshall Islands, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu, Vanuatu)
- To review the Sustainable Energy Training Competency Standards developed jointly under the EU funded PacTVET Project;
- To develop training material and conduct training courses as required;
- To develop local technology and skills-based capacity;

The committee hopes that the Request for Proposal will be released soon and that the winning firm will commence the project in the coming months.

SEIAPI Involvement with EU-PacTVET Project

The SEIAPI Secretariat managed by GSES has been playing an active role providing advice in the development of the certificate courses. However since these courses will be courses in the 400 hour plus range SEIAPI/GSES has submitted an application for accreditation of the three Australian units of Competency that relate to the Design and Installation of grid connected PV systems on the Pacific Register of Qualifications.

The three units are:

- UEENEEK125A Solve Basic problems in photovoltaic energy apparatus

- UEENEEK135A Design grid connected power supply systems
- UEENEEK148A Configure grid connected photovoltaic power systems

The application is the final stages of approval with the only issue is the finalisation of the qualification levels for the units.

Once approved it will mean that training institutes in the Pacific can then offer these three units knowing that they are recognised under the Pacific Qualifications Framework.

Next year it is planned to submit the Units relating to off-grid (stand alone power) systems however the intention is the based them on the Units of competency that were developed for the Pacific in 2013-2014.

Registration of SEIAPI in Fiji

SEIAPI is currently registered as a not for profit organisation in The Solomon Islands, however with the intention of having an active office in Fiji the committee is working with Ms Sydel Whippy (SEIAPI Admin) to finalise registering SEIAPI in Fiji. This will allow SEIAPI to open up a bank account and all the administration of membership can then be taken over by Sydel.

AGM Delayed

Since it is anticipated that the existing Articles of Association will require changing to suit the requirements for registering in Fiji, the AGM has been delayed until all those requirements are known and the articles can be revised, distributed to the members and then voted upon at the AGM.



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