

Pelena Energy praised for Talise Hydro work

Compiled by Ines Culicchi

SENIOR REPRESENTATIVES OF THE Government of the Republic of Vanuatu applauded the work of Pelena Energy at a ceremony in Maewo last week.

The official delegation arrived at Talise Village on 10th July. It comprised thirteen members including elected MPs and agency representatives. The Acting President (Head of State) of the Republic of Vanuatu, Speaker of Parliament, and local MP for Maewo, Philip Boodon; Acting Deputy Prime Minister of the Republic of Vanuatu, Minister for Climate Change & Energy, and MP for Ambae James Bule, Minister for Infrastructure & Public Utilities, Eamon Salmon were accompanied by various political and agency representatives.

Pelena Energy was represented by Managing Director Mr Peter Lynch, Electrical Engineer Mr Jared Henley and Solomon Islands Technical Manager Mr Nison Silas.

The community – comprising almost 400 people on the day – welcomed the official delegation & Pelena Energy representatives with a customary greeting led by the village chief Swihin Ading.

Travelling the previous day by aeroplane from Port Vila to the nearest airport on Ambae Island, the delegation arrived at the Talise village beachfront by fibreglass canoes after travelling the 19km across open ocean from Ambae. The muddy track from the beachfront to the turbine house tested the trekking skills of the delegation until shoes and thongs



All hands to assemble before

Various speeches were held at the turbine house until a padlock key was handed, symbolically, from Pelena Energy's Peter Lynch to the Acting Deputy Prime Minister & Minister for Climate Change & Energy James Bule who represented the Government (being Pelena Energy's client in this project). The Minister then unlocked the door of the turbine house and formally handed the key to the Paramount Chief, representing the community.

The delegation was shown the operation of the (Durrigis built) Pelena Energy turbine and control system. Locally-trained technicians demonstrated a system shut-down and restart. Nerves were very high amongst the technicians as they demonstrated their ability to re-start the system and establish controlled power, frequency, and voltage outputs. Two out of the three technicians have

'educated' audience. Cheers erupted as the system was started and the electric lights of the turbine house shone brightly. Shortly after, there was a rush to the powerpoints to re-charge mobile phones!

The Acting Deputy Prime Minister Hon. James Bule praised the work of Pelena Energy and commented on the significant benefits & opportunities for development that come with electricity, and congratulated Pelena Energy, the Department of Energy and the people of Maewo tirelessly overcoming hardship to make this project a success. He also commented on the appropriateness of this technology in utilising Vanuatu's natural clean energy sources. He acknowledged that this project complemented the range of renewable energy technologies the Government was pursuing to reduce greenhouse gas emissions and

praise and thanks was also given to the donor agencies that financially supported this project including IUCN (International Union for Conservation of Nature), Governments of Italy and Austria (of Europe).

The Minister for Infrastructure & Public Utilities Hon. Eamon Salmon continually shook his head in surprise at how such a project could have been built by local people, without the need for bulldozers or the like which are notoriously unreliable in these remote places and extremely expensive to operate.

Peter Lynch said "It has been an absolute honour to work with the Vanuatu Department of Energy and the Ministry of Climate Change and Natural Disaster. There have been significant challenges faced, yet together these challenges have been overcome. I was particularly pleased with the attitude of searching for solutions, not searching for problems. In particular, I would like to thank the professionalism of Director of Energy Mr Jesse Benjamin and Program Manager Mr Leo Moli for their untiring efforts to see this project completed.

Mr. Lynch also acknowledged and thanked the "never give up" attitude of the people of Maewo to see this project through, especially given the horrendous weather events of cyclones, floods, and winds that hampered the construction. In particular, he would like to thank Mr Peter Salemalu whom he has been a driving force behind this project since 2001. Without Mr Salemalu's local dedication, the project would have struggled to materialize.

electricity because it operates twenty-four hours per day without the need for batteries. There are real kilowatts generated which allows people and entrepreneurs to go to local stores and buy common appliances and tools to improve their own lives. Solar and wind cannot provide this because it is intermittent and requires batteries for storage. Batteries are too expensive resulting in many failed solar and wind systems throughout the Pacific and elsewhere unless heavily subsidised from outside the villages."

This stage of the project is just the generation phase. The connection of the electricity to the villages has yet to be undertaken. This electrical reticulation will result in almost 340 houses, schools, clinics, businesses, and churches being connected to the system. The Ministry of Climate Change and Natural Disaster is actively negotiating extra funds with the Government and various donor agencies including private investors to invest in the electrical reticulation which would amount to not more than 100 million vatu.

The technical aspects of the Talise Micro-Hydroelectric system are:

Rated power: 75 kilowatts
 Frequency & Voltage: 50 Hertz, 240/415 Volts

Turbine: Pelena Pelton turbine with belt drive to 3-phase alternator
 Controls: Pelena PLC-based voltage & frequency with electronic load control

Head: 106 metres gross
 Penstock: 250mm uPVC for over 850 metres (fully buried)
 Intake: Tyrolese Weir with