



# Energy Focus Newsletter

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## Editorial

We are extremely excited to welcome you into our first Department of Energy Newsletter-Energy Focus!

The DoE's Mission is "Our mission is to create a sustainable energy future for Vanuatu by increasing electricity access, reducing our dependence on petroleum through the use of renewable energy and promoting energy efficiency and conservation" and its Vision is "Energizing Vanuatu's growth and development through the provision of secure, affordable, widely accessible, high quality, clean energy services for an Educated, Healthy, and Wealthy nation"

The DoE is the institution responsible and is the Government of Vanuatu's Technical arm of when it comes to Energy Sector Development.

The DoE has been working tirelessly together with its partners to develop Energy Policies and implementing them to ensure Vanuatu's ambitious Energy targets are met by 2030 as reiterated in the Vanuatu National Energy Road Map (NERM) 2016-2030. The targets includes; 100% Energy Access by 2030 for all citizens, 100% of Renewable Energy Generation by 2030.

There are projects under the DoE that are here to ensure the growth of 'sustainable energy-the game changer for sustainable growth and development of Vanuatu'.

So many activities have happened during the first quarter of this year,2019 and we are pleased to share with you some of these highlights.

DoE along with other departments under the Ministry of Climate Change and Adaptation farewelled the out-going DG Jesse Benjamin a few weeks ago. Mr Benjamin started his career in the energy department and became the director before his appointment to the DG role in 2016. Mr Benjamin has overseen many projects and achievements with DoE and with his positive attitude, he helped brought the ministry to the standard it's in today. The DoE has been very fortunate to have worked with Mr Benjamin and we wish him well in his new position at PCREEE.

The highlight for this month has been the recent signing of the Luganville Concession Deed between the Vanuatu government and the Vanuatu Utilities Infrastructure (VUI) for the generation, transmission, distribution and supply electricity be made serviceable in certain parts of the islands of Santo, Maewo, Vanua Lava and Ambae.

*Enjoy reading!*

**Antony Garae**  
Director of Energy



# BRANTV



*BRANTV Induction Training with stakeholders at the Melanesian Hotel*

Barrier Removal for Achieving National Energy Road Map Target for Vanuatu (BRANTV) project is managed by the Project Management Unit under the Department of Energy (DoE) with the objective to achieve targets stated in the National Energy Road Map 2016-2030.

The UNDP, being the implementing agency on behalf of the Global Environment Facility (GEF), is supporting the Government of Vanuatu through the DoE in implementing the BRANTV Project.

BRANTV has the objective of enabling the achievement of the energy access, sustainable energy, and green growth targets of Vanuatu, as represented in the country’s National Energy Road Map (NERM).

It takes a multi-pronged approach to removing the barriers that are resulting in unsustainable, unviable, or weakly disseminated Renewable Energy (RE) and Energy Efficient (EE) systems. It does so in the interrelated areas of capacity, policy and planning, institutional framework, financing, and technical and economic viability.

BRANTV has the following components:

- 1. Capacity and Awareness Enhancement on Sustainable Energy and Low Carbon Development
- 2. Improvement of Energy Policy and Planning Formulation and Implementation
- 3. Institutional Framework Enhancement for Sustainable Energy and Low Carbon Development
- 4. Sustainable Energy and Low Carbon Initiatives Financing
- 5. Sustainable Energy and Low Carbon (RE and EE) Technology Applications

In December 13th 2018, key stakeholders have gathered in Port Vila for the project inception workshop and induction training to discuss and agree to the project results framework, the project outputs and activities, the implementation arrangements, the co-financing sources, and the multi-year work plan that would contribute to the realization of the expected outcomes for the next four years.

# Newsflash: Island communities in Vanuatu receptive to renewable energy technology options

The Barrier Removal for Achieving the National Energy Roadmap (BRANTV) project has conducted a combined energy awareness and an environment and social impact survey covering 18 islands of Vanuatu.

The awareness wand survey were commissioned by the project, supported by the UN Development Program (UNDP) and the Global Environment Facility(GEF), in collaboration with the Department of Energy.

The BRANTV project plans to install renewable energy technology such as pico-/micro hydro mini grids in 20 sites, 8 family-compound nano Photovoltaic (PV) solar systems and 12 community-scale PV solar systems and energy-efficient cookstoves in 40 communities covering 18 islands. The renewable energy options will provide electricity to health care centers, schools, retail shops, youth centers, for copra and kava processing, fishing associations, and women associations. Almost 3000 people living in those communities will benefit from the project’s demonstration activities where forty percent are women.

The consultations began in March with communities, including landowners and custom chiefs, in Maewo, Santo, Pentecost and Malo.

In Loltong village, a potential site for a pico-hydro PV hybrid mini-grid, the women are using waste water from the tailrace to construct fish ponds and raise tilapia fish. The first sale of tilapia fish raised over USD\$200 (Vt20, 000). Their newfound source of electricity will ensure that the fish ponds are well-aerated and there is enough electricity to power their fridges for preserving fish.

The population of Utanlangi village on Nguna Island have agreed to install a community-scale PV solar system, while the villagers of Bwatnapne in Central Pentecost have agreed to install a family-compound nano PV system. Villagers of Aligu and Rangsuksuk on Pentecost and Betara in Maewo agreed with the installation of the pico-micro hydro mini grids, however, the water flow rate is not sufficient to generate power.

Consultations were also held in April and May on the islands of Erromango, Futuna, Aniwa, Aneityum, Tanna, Malekula, Ambrym, Paama and three islands of the Shepherd Group , Emae, Epi and Tongoa The team also visited Loh, Gaua and Mota Lava in the Torba province. The communities on these islands were very receptive and supportive of the renewable energy options provided by the BRANTV project team. For most of these sites, it will be the first for a community based project using renewable energy to improve their lives.

A prominent women representative at Dillons Bay in Erromango, Jocelyn Naupa, said that the pico/micro hydro project for their area will be of great advantage for the women and children in their village.

“This hydro project will be the first of its kind for our community, and especially for the mothers and children we very much anticipate the commencement of the project because it will provide lighting that we can use to sell food in the evenings and those involve in handicraft will be able to weave in the evenings,” she said. The Chairman of the Vinmavis village Council of Chief, Joel Moel at South West Bay, Malekula says the community is excited about the renewable energy options provided.

“We never have any support of this kind or trainings but we welcome this initiative by BRANTV and its funding partners, we are excited to see how a PV solar system will help our community even though we already have individual houses with their own solar systems,” Moel said.

“We have a very big community hall that is used daily by all churches in our village so does other community activities but we do not have power in the building that can power PA systems or lighting. I believe this project will bring about positive changes to our community and we are ready to support at village level.”

A total of sixteen (16) communities confirmed that they will use solar energy technology for lighting their homes, a total of 13 out 20 sites for pico/micro hydro mini-grids were technically feasible and family compound-scale nano grid has reduced from 10 to 4.

There is an increasing demand for electricity for construction work and income-generation activities such as producing virgin coconut oil and soap. All communities use open-earth fire for cooking and have expressed a genuine need to convert to energy efficient cookstoves. Public services such as schools, health centers and local banks are available in these villages and there is a need to be connected to energy efficient power supply.

While the project team will demonstrate certain technology, not all community needs will be met by the project. Communities will need to work with the Department of Energy to replicate and upscale some of the successes from the BRANTV project.



# BIOGAS

The Department of Energy under the Adaptation to Climate and Sustainable Energy (ACSE) Project has launch 2 biogas systems on the 4th and the 6th of March 2019. The two biogas system were installed in Onesua and Vanuatu Agriculture College. This biogas system uses kitchen organic waste and animal manure to produce biogas known as methane for cooking. These biogas systems is one of the first ever build in such scale in Vanuatu.



*Official Launching of the Onesua Biogas System*



*Official Launching of the Vanuatu Agriculture College Biogas System*

We would like to sincerely thank our donor partners for this project in particular the European Union (EU) and GIZ, and the Vanuatu Government for the successful implementation of the project.

## Biogas Training



After the launching the ACSE project through the Department of Energy has successfully conducted a Biogas Training at Onesua College for the beneficiaries of the installed systems. During the training each where given Biogas Manual. This enable them to feed, trouble shoot and maintain the biogas plant for its continuous operation.

# ENFORCEMENT OF THE EFFICIENCY OF ELECTRICAL APPLIANCES, EQUIPMENT & LIGHTING PRODUCTS ACT NO.24 OF 2016

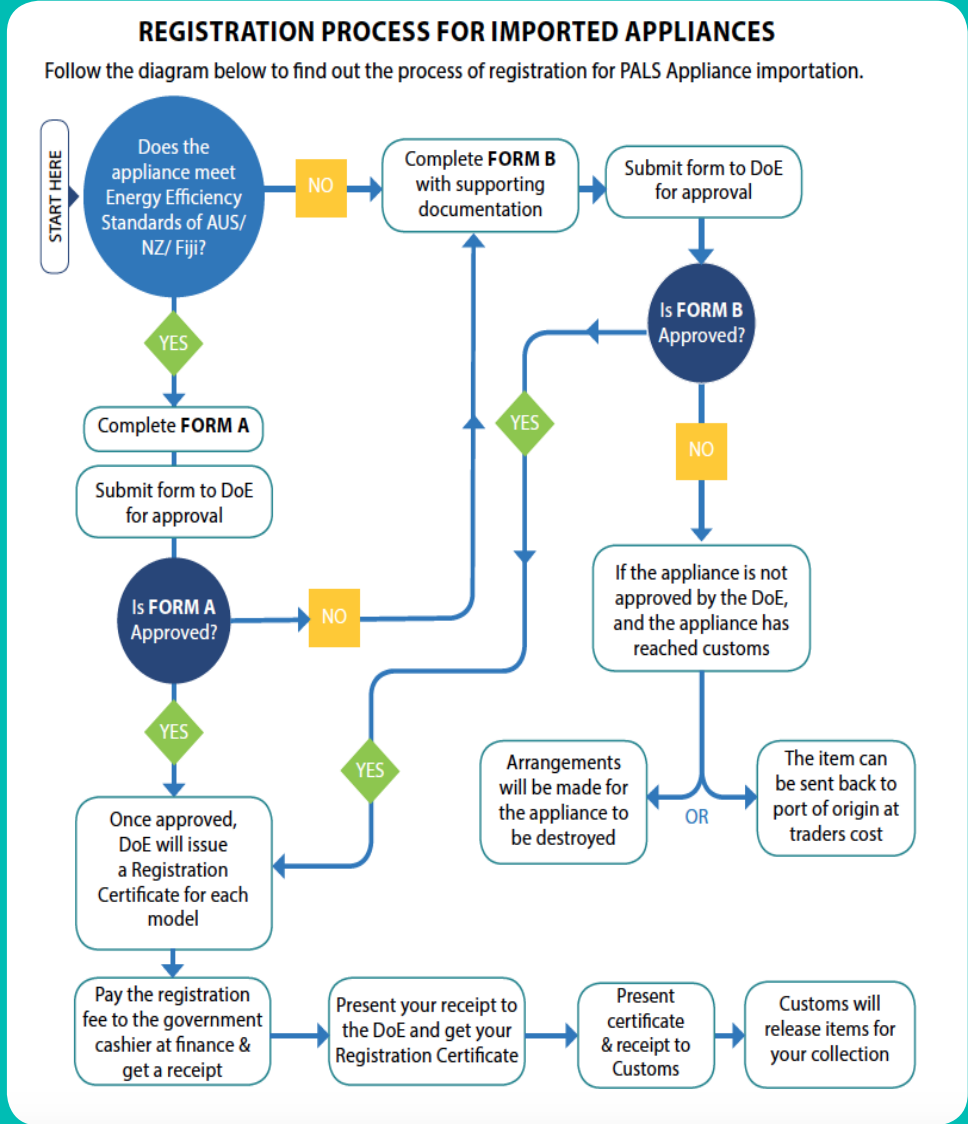
The minimum Energy performance standard and labelling (MELPS) project comes under the department of energy targeting the use of energy efficient electrical appliances, equipment's and lighting products in order to reduce the consumption of fossil fuels, save money and reduce products that would fill our dump sites.

Department of energy with the technical assistance from the Pacific Community (SPC) and funding from the department of foreign affairs and trade (DFAT) have developed the Energy Efficiency of electrical appliances, Equipment's and lighting product act no. 24 of 2016.

In December 2018, the Department of Energy confiscated or seized 48 units (1 container) of refrigerators for the **Vanuatu Kaitian Group INTL Company Ltd.** The refrigerators were imported for the newly built hotel at the Tebakor area, opposite the Vanuatu Agriculture Supplies and close to the Planet 107 (2 elephant statues standing at the entrance). The hotel is still under construction almost completed.

The company imported several types of electrical appliances such as refrigerator units, air conditioning units and lighting units that are regulated under the Act. However, the equipment and appliances were not initially registered especially the refrigerator units as required by the Act. The company was issued with a penalty notice that amounted up to **VT 96, 000** at which payment was done accordingly.

The refrigerators were imported directly from China and the models were not registered. Therefore, the company was required to provide a test report to prove that they comply with the AS/NZS minimum energy performance standards and labelling requirements. Until current date, the requested testing certificate of the refrigerator models were never received from the company.



As far as the Energy Efficiency Act (and Regulation) is concerned, it sets out the offences which a person (Private or Business) may commit, and the penalties that apply if the person is convicted. The offence incurred by this company includes failure to comply with the provisions of the Act or regulations made under the Act (Importing the refrigerators/ freezers without a valid registration certificate/ permit).

The Department of Energy was advised by the **State Law office** to dispose of the products in the following ways:

- arrange for them to be re-exported to the last port of origin; or
- arrange for them to be destroyed, in accordance with safety and other legal requirements. (A Certificate of Destruction will be issued to the company).

All importers of these regulated products (Refrigerators, Freezers, Air Conditioners and Lightings) are required to apply to the Department of Energy for a registration certificate/permit before placing an order to import them into Vanuatu. Failure to import these products without a registration certificate/permit is a criminal offence and will be dealt with by the court of Law.



# PETROLEUM

DoE's Petroleum Unit oversees that the fuel quality, fuel security and affordability, cost of contribution of fuel and the safety guidelines of retail outlets:

## Fuel Quality

- For land transport and maritime domestic transport, Vanuatu uses 10 ppm sulphur diesel fuel and RON 95 Unleaded petrol.
- 10 ppm sulphur content in diesel fuel imported by the SSP compared to 500 ppm sulphur content in diesel fuel imported up to December 2016. It is three years now since the transition to higher quality diesel fuel used in land transport, sea transport and electric power generation. The GHG emissions from these fuel type should therefore be less.
- Quality assurance measures are taken by the importer of fuel and monitored by DoE during tanker discharges (refer to images below) in compliance with best practices and international standards that there will be no contamination in ship tanks and during discharge operations.
- The IMO has adopted a global sulphur gap requiring all ships to use maximum 0.5% sulphur content Marine Fuel Oil or use scrubbing device capable of removing sulphur to an equivalent level of MFO emissions by 1st January 2020 (Source: Pacific Green Marine, IMO News, Summer 2019). Vanuatu may have to follow the same trend so that the GHG may be much lesser yet than now.



*SSP staff and DoE staff calculating fuel quality acceptance range in SSP Lab, Santo Terminal.*



*SSP staff and DoE staff boarding Medium Range Tanker in Luganville, Santo for ship/shore safety checklist and fuel sampling.*



*SSP staff taking readings for fuel quality parameters during fuel transfer from tanker to shore terminal storage tanks*

**Fuel Security and affordability**

- Since 2017, fuel price has dropped by 50% in Tanna and Malekula, the two biggest islands in Vanuatu with bulk storage and dispensing facilities.
- There are a total of 7 service stations altogether across these two islands representing a total investment of 50 Million vatu by the SSP
- In 2018, 1.6 M litres of fuel has been consumed in Tanna representing savings 160 Million Vatu. This is a minimum of 100 vatu/L price drop. Unelco, PWD projects, CCECC projects, MOH, GoV department/agencies and local industries/Tourism sector all benefited from price reduction. (Source: SSP Vanuatu)

**Cost of distribution of fuel**

- For Malekula and Tanna, consumers do not pay freights for their fuel which is covered by the SSP. Consumers who utilise the installed service stations for their needs are totally free of the cost of transport for drums of fuel from the main centres in Luganville or Port Vila.
- The retail prices in the two island service stations are exactly the same as the retail prices for Port Vila and Luganville consumers.

**Safety Guidelines at retail outlets**

- Brochure on safety guidelines at service stations have been printed in May 2019 and will be distributed to patrons of service stations in Lakatoro, Lenakel, Luganville and Port Vila.
- DoE staff carried out 1 trial exercise in Luganville to inspect the infrastructure and end use equipment for 4 service stations. Further inspections will be carried out for other service stations including in Luganville where reports will be shared with the owners/operators of the fuel retailing businesses. This is planned to take place before end of 2019 and follow-ups will in 2020 for compliance checks.

In total there are 11 service stations in Port Vila, 4 in Luganville, 4 in Tanna and 3 in Malakula. There are plans to have more service stations across the provinces in the near future. Agreements with land owners will be the most critical area to address in order to make this happen.



**SWITCH OFF  
MOBILE PHONES**

Turning off your cell phone will avoid sparks which can ignite fuel vapour & cause explosions.



**NO SMOKING**

Smoking is NOT permitted in service stations.



**THINK SAFE  
ACT SAFE  
BE SAFE**

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June 2019

**THINK SAFE  
ACT SAFE  
BE SAFE**

Petroleum Sector Advice

SAFETY GUIDELINES FOR PETROLEUM

DEPARTMENT OF ENERGY VANUATU

ENGLISH



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DEPARTMENT OF ENERGY VANUATU

ENGLISH

*Safety Guidelines brochure*

# Lighting Up Vanuatu with Vanuatu Rural Electrification Program

Access to affordable quality solar PV equipment is being provided through the Vanuatu Rural Electrification Program (VREP) to all people throughout Vanuatu living in off-grid/rural areas where access to the electricity grid is non-existent or not possible. There are two phases to VREP covering a wide range of solar PV products from small plug and play solar systems to larger solar home systems and microgrids. Mini-grids are also part of the phase II of VREP. In the table below are the details of the two phases of VREP.

Table 1: VREP I Project Details and Update

Project	Brief Info
VREP I	<ul style="list-style-type: none"><li>• Date launch – January 2016</li><li>• Closing date: 31st December 2019</li><li>• Target for VREP I<ul style="list-style-type: none"><li>o Aid Post – 230</li><li>o Community Hall – 2,000</li><li>o Households – 17,500</li></ul></li></ul>
Brief Description	Subsidizing of plug and play solar systems ranging from 5W – 200W for phone charging, lighting and for some products powering TV sets, radio and torches.
Benefits of VREP I	<ul style="list-style-type: none"><li>• 50% subsidy</li><li>• All products are certified by Lighting Global ensuring quality</li><li>• 2 years warranty</li><li>• Excellent after sales service</li></ul>
Approved solar vendors	<ul style="list-style-type: none"><li>• Computer World</li><li>• eTech Vanuatu Limited</li><li>• Power and Communications Solutions (PCS)</li><li>• Savvy Solar</li></ul>
Update of sales 2016 – June 2019	<ul style="list-style-type: none"><li>• Aid Post – 185</li><li>• Community Hall – 422</li><li>• Households – 17,442</li></ul>

Table 2: VREP II Project Details and Update

Project	Brief Info
VREP II	<ul style="list-style-type: none"><li>• Date launched – October 2018</li><li>• Closing date: June 2022</li><li>• Target for VREP II<ul style="list-style-type: none"><li>o Households – 8,400</li><li>o Public Institutions – 37</li><li>o Mini-Grids – 5</li></ul></li></ul>
Brief Description	Subsidize solar home systems and micro-grids ranging from 120W to 5.2kW to provide power for bigger household appliances such as freezers, electric tools etc.
Benefits of VREP I	<ul style="list-style-type: none"><li>• 33% subsidy</li><li>• All products meet IEC standards</li><li>• Quality design to ensure quality power provided to meet need of consumers</li><li>• 2 years warranty</li><li>• Excellent after sales service</li></ul>
Approved solar vendors	<ul style="list-style-type: none"><li>• eTech Vanuatu Limited</li><li>• Power and Communications Solutions (PCS)</li><li>• Savvy Solar</li><li>• Energy4All</li></ul>
Update of sales 2018 – June 2019	<ul style="list-style-type: none"><li>• Households – 34</li><li>• Public Institutions – 5</li><li>• Mini-Grid – 0</li></ul>

## Products

An example of a VREP I product approved an published on VREP Product Catalogue

### VREP I PRODUCT SPECIFICATIONS

#### Greenlight Planet SK60

2 MONTHS LAYBY AVAILABLE

25% DEPOSIT VT 1,875

30% DEPOSIT 2 MONTHS HIRE PURCHASE AVAILABLE

6.3 Watts

3 Lights, 5.6 hours of operation each at full brightness

1 Mobile charging point

Normal price VT 15,000

YOU PAY VT 7,500

PCS

Figure 1: Extract from VREP Product Catalogue Issue 7 December 2018

An example of a VREP II product approved an published on VREP Product Catalogue

### VREP II SOLAR HOME SYSTEM (SHS) PRODUCT SPECIFICATIONS

#### ETECH 600WH DC ONLY OR 540WH AC ONLY

270 Watts

Battery Voltage 12V  
Battery capacity 260Ah

600Wh / Day DC only or 540Wh / Day AC only

3.1 Days Autonomy @ 60%

1

NORMAL PRICE VT 314,650

YOU PAY VT 209,767

ETECH VANUATU

Figure 2: Extract from VREP Product Catalogue Issue 7 December 2018

ENERGY FOR SUSTAINABLE DEVELOPMENT



# MoCCA farewells outgoing DG Jesse Benjamin

The Ministry of Climate Change and Adaptation farewelled outgoing Director General, Mr Jesse Benjamin as he departs for his new posting at the Pacific Centre for Renewable Energy and Energy Efficiency.

Jesse has worn many hats during his time at the MoCCA, he was chairman of the National Advisory Board of the Climate Change and Disaster Risk Reduction (NAB) for a period of 4 years and under his guidance NAB became an example for the CCDRR Coordination both regionally and internationally.

He was also very instrumental in the approvals and implementations of many large scale climate change and disaster risk management projects, energy projects and environment projects.

Some of the projects are:

1. IRCCNH Project
2. MDRR Project
3. Vanuatu Coastal Adaptation Project (VCAP)
4. Vanuatu Klaemet Infomesen blong Redy, Adapt mo Protekt project (VAN-KIRAP)
5. BSRP and EDF10
6. Brenwei Hydro power projects
7. National Green Energy Fund
8. GEF 5 Integrated Sustainable land and Coastal Management (ISLCM)
9. GEF 6 Expanding Conservation Area Reach and Effectiveness
10. Ecosystem Restoration and Sustainable Land Management

The Minister of Climate Change and Adaptation, Ham Lini Vanuarora said in his official remarks that Jesse was a man of action during his tenure at the ministry.

“In 6 years since the establishment of the Ministry of Climate Change, it has grown not only in its human capacity but its reputation- a reputation that is recognised nationally, regionally and in the international arena too,” he said.

“We want to acknowledged the outgoing DG for the many initiatives achieved and set in motion for a new DG to continue with in the future.”

The role of a DG is not as easy as it seems and Jesse has contributed a lot to important events under his leadership that is realised by the government of the day and the MoCC:

1. Jesse assisted in the Recovery efforts post TC Pam
2. He contributed to the Meteorology, Geo-Hazards and Climate Change Act No.24 of 2016; This Act has established the National Advisory Board and its Secretariat, it also established the Department of Climate Change which today it is fully operational and recruitment of more staff is underway.
3. Another Milestone overseen by the outgoing DG was the completion of the new Department of Climate Change and Department of Energy office building.
4. State of Emergencies resulted from the Ambae Volcano and its subsequent evacuations. Jesse’s guidance in the management of the Ambae eruption was very much appreciated as he stepped in at times with patience to help fulfilled our roles and provided appropriate advice to the government and the people of Ambae.
5. Continued recovery efforts in the Ambrym Volcano eruption.
6. Jesse continued to help make sure that the Climate and Disaster Induced Displaced Policy was completed, approved by the COM and is currently at its early stage of implementation.
7. During Jesse’s tenure, he saw the ratification of the Paris Agreement took place and our role to successfully implement this mechanism, last but not least;
8. Jesse made sure every department under the Ministry were centralized to one place.

Mr Benjamin started his career at the Department of Energy and was a former director for DoE before his appointment as DG in 2016.

The Director of Energy, Antony Garae acknowledged Mr Benjamin for his leadership especially on behalf of DoE and mentioned that Benjamin was role model for many currently serving as directors at the MoCCA.

The DoE wishes Mr Jesse Benjamin all the best in his new career at PCREEE.

# Concession Deed



The Government of Vanuatu has signed a Concession Deed on June 12, 2019 with the Vanuatu Utilities Infrastructure Limited (VUI) for the supply of electricity to certain parts of the islands of Santo, Maewo, Vanua Lava and Ambae.

The Government represented by the Prime Minister, Charlot Salwai Tabimasmass and the Minister of Climate Change Adaption, Meteorology, Geo-hazards, Energy, Environment and National Disaster, Ham Lini Vanuroroa, will act as the Grantor whereas the CEO of VUI of Luganville, Espiritu Santo, Peter Allen as the Concessionaire.

The Concession Deed will ensure the generation, transmission, distribution and supply electricity be made serviceable in certain parts of the islands of Santo, Maewo, Vanua Lava and Ambae.

PM Salwai said during his address that this accomplishment is a great component towards the development of the country. "Where Electricity should be made affordable and accessible within other islands in Vanuatu."

He added that the primary focus should be fixated on the biggest island of Vanuatu, that is Espiritu, Santo.

"In order to attract and promote industries to invest in Santo which can also boost tourism growth."

The Prime Minister highlighted that the emphasis of this agreement is to improve and expand development within all six provinces.

VUI CEO Allen pledged his undying support to the Prime Minister, the Minister of Climate Change, to Luganville and the whole of Vanuatu to work together and accomplish the targets set out in the Government of Vanuatu's National Energy Road Map.

The CEO promised to take guidance from the Government and continue to work as partners in supplying electrical energy necessary to power the facilities indicated in the specific terms according to the conditions of the agreement.

The Government of Vanuatu also wishes to acknowledge the Department of Foreign Affairs and Trade (DFAT) of Australia through its Governance for Growth (GFG) in country program, for its unwavering financial support towards the tender processes of the Luganville electricity concession.



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