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Disclaimer: While all care and diligence has been used in extracting, analysing and compiling information for this publication, SPC gives no warranty that the information is without error.
Bula everyone,

Time certainly has wings and before we could notice, the first quarter of 2016 is gone.

The excitements with the outcomes of the Paris Agreement is now on a lower volume and the challenges of operationalising that Agreement is now upon us all. As has been said many times before “the time for talking and rhetoric is now over, the time for action is now.”

The Energiser would like to congratulate the government and people of Fiji for becoming the first country in the world to formally approve the Agreement when its Parliament agreed in February to ratify the Agreement. It is understood that Nauru, Palau and the Republic of the Marshall Islands are also following Fiji’s footsteps.

A recent High Level Support Mechanism Meeting for Pacific Small Island Developing States in Samoa was an effort to flesh out and unpack the decisions in the Agreement and map out the next steps for Pacific Island Countries. Among the outcomes of this meeting were the need for the collection of data and putting in systems that would facilitate the timely collection and sharing of data for the reporting obligations under the Agreement. There was also the reaffirmation of the need to remain ambitious in the effort to cut down on our GHG emissions.

The Energy sector is a key sector in the implementation of the Agreement and I am glad that our Regional Energy Programme at SPC has helped to create an enabling environment for the pursuit of the goals and purposes of the Agreement. On February 5, 2016, President Remengesau signed into law the Palau Energy Act – a partnership between the Palau government, EU and SPC through the North REP. This development not only reaffirms Palau’s commitment to meeting its renewable energy reliance and reduced emissions pledges but also provides means and directions for achieving those goals.

Tuvalu has become the first country besides Fiji, to have its Energy Labelling and Standards legislation approved by Parliament. This Australia and SPC supported legislation will stop the importation of non-compliant low quality and inefficient appliances to Tuvalu and will greatly assist in its progress towards the energy efficiency goal contained in its COP 21 Intended Nationally Determined Contributions.

On data, a Joint SPC-APEC Regional Workshop on Energy Statistics and Modelling was held at Nuku’alofa in March to strengthen the capacity of PICTs to effectively monitor and review their progress on SDG 7 and their respective INDC energy and mitigation targets. Post workshop in-country consultations and national workshops are now underway in Palau, RMI and FSM with the last one to be in PNG in June.

We continue to enjoy lower fuel prices though there are signs of a looming upward movement. Though the price of fossil fuel do have influence on renewable energy investments, it is so pleasing to see the determination to go renewables regardless. From the office of the UN Chief, to Samoa and Vanuatu, as you can read in this issue, the sounds are resonating loud and clear – green and clean energy is the way to go.

Finally, I have been asked on numerous occasions to write letters of reference for energy job applicants throughout the region. I have always made reference to people who joined the force straight after high school and through their dedication and commitments have made great and significant impacts on their people and communities. They are unsung heroes, green energy warriors and just down-to-earth civil servants who never asked what his/her country can do for them but rather what they can do for their country. They are solders inside-out who would rather do-and-die and never question why. It is therefore, with humility and respect that take my cap off to the one and only wantok, Leo Moli of the Vanuatu Energy Office. The Energiser, the Energy Team here at SPC and your friends and colleagues from throughout and outside the region salutes you Mr Leo Moli. Thirty-four (34) years of service is no small feat and we pray for more blessings and good health for you.

Malo ‘Aupito
Solomone
UN Chief Wants Clean Energy Investments Doubled by 2020

One of the pressing conclusions of the United Nations Conference on Climate Change (COP 21) that was held in Paris in December 2015 was the need to strengthen the global response to the threat of climate change.

World leaders pledged to work together towards achieving a low carbon future by resorting to clean energy and energy efficiency. Investing in and using renewable energy would keep the global temperature rise below 2 degrees1.

To translate the Paris Agreement into actions on the ground, an ‘Investor Summit on Climate Risk’ was convened on 27 January 2016 in New York, where the UN Secretary-General, Ban Ki-moon, urged the investors to double their investments in clean energy and energy efficiency by 2020. It was essentially a call for an urgent shift from fossil fuels.

While at the global scale, some USD 330 billion had been invested in clean energy in 2015, which was six times higher than in 2014, Ban Ki-moon reiterated that this amount was far from the target of the ‘clean trillion’ per year that is required if the Paris Agreement is to be met. In addition, Ban Ki-moon will host a signing ceremony for the Paris Climate Agreement on 22 April 2016, where at least 55 countries’ signatures are needed to bring the agreement into effect. This agreement will mark the beginning of the end of fossil fuel consumption.

At the World Economic Forum on 27 January 2016 in Davos, Switzerland, the Head of the International Energy Agency, Fatih Birol, told global leaders and business executives that reduced oil prices pose a threat to the use of renewable energy efforts. He stated that it must be understood that the move towards energy efficiency is not driven by environmental concerns but merely by the fact that it is cost-effective. The use of renewable energy may stop if fossil fuels continue to become cheaper.

To counter the threat highlighted by Birol, France’s environment Minister, Segolene Royal, gave a practicable solution. She said that ‘time is ripe to remove subsidies for fossil fuel and introduce a price on carbon dioxide pollution.’ As such, 60 countries are now paying taxes for emissions.

Here in the Pacific, SPC’s Energy Programme has been challenging its membership to create a level playing field for clean energy investment through carbon pricing, removing fossil fuel subsidies and strengthening stable investment environments.

With the price of fuel approaching the all-time low of USD 30 per barrel, the Economic Development Division of SPC is embarking on a study to identify and quantify the extent of fossil fuel subsidies (some of which include tax breaks and giveaways, loans at favourable rates, price controls, etc.) in order to guide governments to create a levelled playing field for both renewable energy and fossil fuel. The governments of Pacific Island countries and territories, in turn, could invest these subsidies on other priorities such as health and education.

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1. Global warming of more than 2 degrees Celsius would have serious consequences such as an increase in the number of extreme climate events. The Paris Agreement aims to curb greenhouse gas (GHG) emissions in order to limit the global rise in temperature well below 2 degrees Celsius. This is needed to safeguard our survival, food, critical industries such as tourism, infrastructure and promote renewable energy (Source: United Nations Conference on Climate Change: Why 2 Degrees Celsius).
Recognition of long service

Mr. Leo Moli has been a public servant for the Government of Vanuatu for thirty-four long years. He has been acknowledged for his long years of service during a Planning and Retreat function at Crystal Blue Resort.

The Director of the Department of Energy, at this time – Mr. Jesse Benjamin, expressed heart felt gratitude for Mr. Moli’s countless contributions towards the growth and development of the department. Mr. Moli was presented with a certificate of appreciation.

Mr. Moli began serving his nation at the Treasury Department in 1982 as a Senior Clerical Assistant. After two years of hard work, he was promoted as Senior Accountant of the Treasury Department. In 1985, Mr. Moli was appointed as Outstanding Officer of the department.

After four years with the Treasury Department, Mr. Moli continued his service with the government by working as a Petroleum Officer at the Ministry of Lands. Six years later, Mr. Moli became Senior Petroleum Officer. Mr. Moli became one of the two first public servants to be employed at the Energy Unit that was housed under the Ministry of Lands in 1993. At the time, Mr. Moli was appointed as the Principal Energy Officer.

In 2012, the Government of Vanuatu saw the necessity to expand the Energy Unit into a fully-fledged Department. His appointment as Principal Energy Officer lasted for 19 years before he was made Acting Director. In 2013, Mr. Moli served the Department of Energy as Programme Manager. His successor, Mr. Benjamin, resumed the role of Director on 16 September 2013.

During his 23 years of service with the Energy Unit, and now the Department of Energy, Mr. Moli has made significant contributions to the government. To name a few, Mr. Moli was instrumental in the drafting of the Petroleum Exploration & Production Act under Chapter 227 of the constitution, the Rural Electrification Policy in 2003, the National Energy Policy in 2007 and the National Energy Road Map (NERM) in 2010.

In the same period, Mr. Moli was heavily involved in various major energy related projects in Vanuatu – some of which include the Sarakata Hydro (by JICA from 1995–1997), which generates 1.2 MWs of power for more than 1000 households on Luganville, Santo; the JICA Solar Home System Project in 1999; the PREFACE project in 2001; and Lighting Vanuatu in 2009, which saw the distribution of 24,000 Pico Solar lanterns.

The department is privileged to have someone like Mr. Moli with such calibre and experience in the energy sector of Vanuatu; and for that reason, the staff within the Department of Energy salute you!

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Mr Leo Moli (right) being presented a certificate of appreciation.
Vanuatu’s First Power Purchasing Agreement (PPA) Signed with UNELCO Vanuatu

Vanuatu’s first ever Power Purchase Agreement (PPA) was signed between the Vanuatu Government, through the Department of Energy (DoE) under the Ministry of Climate Change, Union Electrique du Vanuatu Limited (UNELCO) as the utility company and a representative from the parliament on 12 January 2016. The signing occurred under the shade of the 330 kWp car park solar panels at the parliament premises.

The 767 kW grid-connected solar power plant installed at the Parliament Premises (645 kWp) and the Ministry of Climate Change Complex (122 kWp) were financed by the Government of the United Arab Emirates (UAE) Pacific Partnership Fund at a total cost of USD 5 million.

The Project contributes to two of the four key National Energy Road Maps (NERMs) and the priorities are namely energy security and climate change. Furthermore, the pinnacle objective of the project is to promote and provide renewable energy as a means to reducing dependency on fossil fuel and CO₂ emissions.

The Acting Director General of the Ministry of Climate Change, Mr. Jesse Benjamin, said that this agreement will help reduce the electricity bills of the Ministry of Climate Change and Parliament Complex, and enable savings that can be further spent on service delivery to the people of Vanuatu. He added that although the project experienced delays as a result of Tropical Cyclone Pam and negotiations with UNELCO, the signing of the PPA is the positive outcome. Mr. Benjamin concluded that this project is among many other investments that are contributing to Vanuatu achieving its NERM target of 65% use of renewable energy by 2020.

Mr. David Lefevre, the General Manager of UNELCO Vanuatu, said that the 767 kW solar plant will contribute to helping reduce the importation of fossil fuels to Vanuatu, as it will save around 250,000 litres of fuel per year. He further explained that in the month of August last year, 49% of the power generated to the grid came from bio-diesel, wind and solar systems. The addition of these solar systems through this signed PPA will further contribute to increasing Vanuatu’s power generation through renewable energy.

The contractors – Masdar (UAE) in partnership with Clay Energy (Fiji), Pacific Communications System (PCS-Vanuatu), IT Power and Going Off-Grid (Australia) are acknowledged for their hard work and successful installation.

The currently operating photovoltaic (PV) system produces 1296.5 MWh of clean energy per year, which means that 896 tons of CO₂ emissions are avoided every year. The direct spill-over benefit amounts to USD 378,000 per year in diesel fuel savings. The indirect spill-over benefit amounts to USD 495,000 and has provided a shaded parking area, which has the parking capacity of up to 112 vehicles.

The Department of Energy looks forward to the increased expansion of renewable energy throughout Vanuatu and will explore additional PPA investments using renewable energy in the forthcoming years.

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Seven American Samoa apprentices study in Manukau, New Zealand

One of the biggest problems that developing countries face is brain drain, where young people opt to pursue education and careers off island and end up staying away permanently.

American Samoa Power Authority’s (ASPA) CEO, Utu Abe Malae, has tried to address this problem by re-establishing the apprenticeship programme. The apprenticeship programme was cancelled in 2006 and remained dormant for seven years until Utu Abe Malae returned to ASPA two years ago and resurrected it.

Now, a total of seven young aspiring professionals are training in Manukau, New Zealand, where they are engaged in a rigorous two year programme that educates them in both practical hands-on work and theory.

The students receive an allowance from ASPA, which covers tuition and living expenses in New Zealand, where the pupils are housed in a student village.

The apprenticeship programme is a partnership between the United States Department of the Interior and ASPA, where each covers half of the expenses. The seven students are expected to perform well in the classroom, and if they fail or drop out of the programme, they are to pay back all expenses to ASPA.

Upon completion of the programme, the students are to return to American Samoa to serve what is essentially a bond or a non-compete contract, where they will work for ASPA for three years.

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Sene Muliagatele and Tuni Tauiliili, 2 of ASPA’s 7 apprentices who are schooling in Manukau New Zealand
Republic of Palau Signs Energy Act into Law

Palau has become the second Pacific Island country in over two decades to sign a National Energy Act into law that facilitates the establishment of an Energy Administration at the executive level in order to enforce a more effective coordination and management of the energy sector.

Representatives from Palau’s government ministries and departments as well as the European Union (EU) and Pacific Community (SPC), partnered North Pacific ACP Renewable Energy and the Energy Efficiency Project (North-REP). The United Nations Development Programme Global Environment Fund (UNDP-GEF) funded the Sustainable Economic Development through Renewable Energy Applications (SEDREA) project and worked together towards achieving this legislation, which was signed on 5 February 2016 by President Tommy Remengesau.

In its National Energy Policy 2010, Palau identified the need to have such a facility with dedicated resources at an appropriate level that would completely re-shape the energy sector in Palau.

"It was a comprehensive process of drafting, consulting and debate within the Senate and the House of Delegates including public hearings. This would not have become a reality without the support and persistence of Senate Vice President, Rukebai Inabo and Delegate, Lentcher Basilius," said Palau’s Director of Energy, Greg Decherong.

"Having such a law will further strengthen the energy sector through real commitments by means of budget allocation and coordinated national responsibilities." Decherong added.

SPC’s Deputy Director (Energy) of the Economic Development Division, Solomone Fifita said "Palau and Cook Islands have paved the way and it is our hope that such commitments will be replicated by others in the region."

The European Union Ambassador to Fiji and the Pacific, Andrew Jacobs, said the positive step taken by Palau was a great example to all Pacific Island countries.

He said "I commend all those involved in this undertaking for achieving such a great outcome for the people of Palau. Having a strong and fully resourced energy administration will mean better coordination between Palau and development partners in the energy sector which will in turn help Palau towards achieving its energy policy goals, particularly, with increasing the penetration of renewable energy sources."

While most Pacific Island countries and territories have developed and adopted national energy policies over the past decade, the ideas and proposed pathways in these documents have not been fully realised due to limited regulations and legislation that is required to support coordination and implementation of activities.

There have often been ad-hoc approaches to legislation and these have normally been enacted as a result of a state of emergency. As a result, only two Pacific Island countries and territories to date have developed National Energy Acts – the Cook Islands and the Republic of Palau.

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Fourth Quarter 2015 Oil Market Report (October–December)

During the fourth quarter of 2015, Dated Brent crude oil reached its cheapest level since 2008–2009, during the Global Financial Crisis. Crude oil tumbled approximately 60% compared with 2014, as the global supply outweighed demand. Oil production remained strong in regions such as the Middle East and in the United States, while worldwide demand had weakened due to slower than projected growth in the global economy – particularly in China.

In comparison with the third quarter of 2015, the price of Dated Brent crude oil in the fourth quarter 2015 decreased by USD 6.56/bbl from USD 51.42/bbl to USD 44.86/bbl. However, Dated Brent crude oil edged up slightly in October by USD 1.51/bbl to an average of USD 49.28/bbl. Rise in oil prices was a result of renewed geopolitical tensions in the Middle East and threats to supply in the United States due to Hurricane Joaquin.

Asian petroleum product prices in October fell mainly due to an oversupplied market. Asian gasoline prices fell from previous months due to weakening in regional demand. This was mainly attributed to a fall in demand from Indonesia, which is a key importer, as a result of the start-up of new refineries. High gasoil inventories in the market resulted in a fall of prices to fall. The Asia–Pacific jet/kerosene market also continued to weaken with buying demand remaining weak in Southeast Asia. In addition, Asian refinery margins also weakened due to a peak in the refinery maintenance season.

*Note: Platts lowered the sulfur specification of its flagship Singapore Gasoil assessment to Gasoil 500 ppm (from Gasoil 5000 ppm) on 2 January 2013, which explains why gasoil 500 ppm and gasoil prices are the same from 2 January 2013.

A bearish sentiment for global petroleum prices prevailed in November, as global supply continued to outweigh demand and pressure was exerted on the market following terrorist attacks in France. The price of Dated Brent crude oil declined by almost 6% in November to its lowest level in almost seven years as lower refinery crude intake amid planned and unplanned outages added to persistent oversupply in the market. Asian petroleum product markets continued to weaken due to a surplus supply hitting the market from refineries that have restarted. Meanwhile, Asian margins strengthened as a result of a higher seasonal winter demand for heating fuels.
The price of Dated Brent crude oil plunged by almost 14% in December to an average of USD 39.25/bbl due to a persistent over supply in the oil market coupled with increasing signs of a slowdown in the Chinese economy. The Asian petroleum market showed mixed performances during December, with stronger regional gasoline demand while oversupply and weaker demand caused gasoil prices to fall. The Asia-Pacific jet/kerosene market remained weak due to unchanged weak regional demand, while a mild winter in North Asia reduced potential increases in kerosene demands. Asian margins remained healthy on the back of stronger regional demand for gasoline for transportation purposes.

**Freight rates**

The Clean Tanker spot freight rates weakened in the fourth quarter in comparison with the previous quarter. The average rate for the quarter stood at around WST 155.91, a decrease of close to 24.65% compared with the previous quarter. Freight rates declined as a result of surplus vessel availability amid a weak market activity that was unable to absorb the available vessels.
While the Australian and New Zealand dollar appreciated against the US dollar during the fourth quarter, all other major PICT currencies depreciated with the Samoan Tala remaining relatively stable.

Source:
- The report has been generated using data and information from PLATTS Asia-Pacific/Arab Gulf Marketscan and PLATTS Clean Tankerwire.
- Organisation of the Petroleum Exporting Countries (OPEC) monthly reports were also sourced for information.
Regional Petroleum Fuel and Gas Price Review

Covering 4-Quarter 2015 (October–December)

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1. Pacific Fuel Prices at a glance
2. Key Observations – Pacific Fuel Prices
3. Unleaded motor gasoline (mogas) prices (excluding taxes and duty)
4. Automotive diesel oil (ADO) prices (excluding taxes and duty)
5. Kerosene prices (including and excluding taxes and duty)
6. Liquefied petroleum gas (LPG)
7. International market pricing trends
8. Exchange Rates
9. PICT Fuel Pricing Methodologies
10. Glossary and conversions

1. PACIFIC FUEL PRICES AT A GLANCE

Figure 1: Regional retail prices including duty and taxes
ENERGY PRODUCTION AND SUPPLY | PETROLEUM

Overview
Overall, PICT retail mogas, diesel, kerosene and LPG prices fell in the fourth quarter 2015 (4Q-2015) compared with the previous quarter average. Underlying international oil prices in 4Q-2015 dropped by US4.12 cents per litre (cpl) to average at US28.22cpl. This decrease will be reflected at pumps in all PICTs in the order of US4cpl. Notably pricing in Cook Is has slightly reduced following their work on redesigning their fuel pricing templates with assistance from SPC’s petroleum advisory services.

Mogas
American Samoa had the lowest tax inclusive retail price followed closely by Hawaii and Kiribati (Gilbert). Pre-tax lowest was Sydney (50.75 UScpl), Darwin (51.05 UScpl), American Samoa (56.40UScpl) and Hawaii (57.01 UScpl). Highest pre-tax costs were Niue (142.05 UScpl), Cook Islands (131.93 UScpl) and Tuvalu (130.94 UScpl). American Samoa had the lowest PICT wholesale price followed by PNG, Kiribati (Gilbert) and Fiji. The PICT retail pre-tax ‘low-to-high’ price gap (American Samoa compared with Wallis & Futuna) for mogas was 84.15 UScpl. Volume weighted, the best performing mogas markets were Fiji, American Samoa, Samoa and Tonga.

ADO
American Samoa and PNG had the lowest tax inclusive retail price followed by Fiji and New Zealand. Pre-tax lowest was Fiji (47.80 UScpl), Sydney (53.21 UScpl), Darwin (55.73 UScpl) and American Samoa (57.14 UScpl). Highest pre-tax costs were RMI (132.89 UScpl) and Niue (130.62 UScpl). PNG had the lowest PICT wholesale price comparable with that of NZ and AUS, followed by NZ, Fiji and American Samoa. The PICT retail pre-tax ‘low-to-high’ price gap (Fiji compared with RMI) for ADO was 74.18 UScpl. Volume weighted, the best performing ADO markets were Fiji, American Samoa, Samoa and Tonga.

Kerosene
Fiji had the lowest tax inclusive retail kerosene prices followed by American Samoa and Kiribati (Gilbert). Pre-tax lowest was Fiji (58.28pl), American Samoa (59.94) and French Polynesia (60.47 UScpl). PNG had the lowest wholesale kerosene price (48.19 UScpl) followed by Fiji and American Samoa. The highest kerosene prices were in Palau, Niue and Wallis & Futuna. The PICT retail pre-tax ‘low-to-high’ price gap (Fiji compared with Palau) for kerosene was 170.69 UScpl.

LPG
The lowest retail LPG prices were in Fiji (USD1.34 per kg), closely followed by Tonga and New Caledonia. Palau had the highest LPG price (USD5.51 per kg), a gross margin of USD5.10 per kg over the Saudi Aramco LPG Contract Price. The PICT pre-tax ‘low-to-high’ price gap (Fiji compared with Palau) for LPG was USD 4.17 per kg.

Crude oil
Average Dated Brent crude oil prices decreased by USD6.58bbl or 4.12 UScpl for 4Q-2015 compared with 3Q-2015.

General
- On a volume weighted comparison, American Samoa, Fiji, Samoa and Tonga continue to achieve the best prices for Mogas and ADO.
- The major PICT markets of Papua New Guinea, New Caledonia and French Polynesia all have potential to achieve lower fuel costs based on their market economies of scale.
3. MOGAS (UNLEADED PETROL) PRICES

Figure 2: Retail tax inclusive mogas price

Figure 3: Retail mogas prices sorted by pre-tax cost
**Figure 4: Wholesale mogas prices sorted by pre-tax cost**

**Figure 5: Wholesale and retail Mogas prices (including tax and duty)**
Most PICTs import 92 RON mogas, however Niue, Cook Islands, New Caledonia, Vanuatu and Wallis and Futuna import 95 RON, which has a higher cost than 92 RON. This goes some way to explain variations between PICTs.

Regulated PICT markets tend to have lower retail prices than non-regulated markets.

The Pacific-wide retail average pre and after tax retail price for mogas was USD 0.93/litre and USD 1.19/litre respectively.

Average pre and after tax wholesale price for mogas was USD 0.79/litre and USD 1.05/litre.

Pre-tax wholesale price was lowest in Sydney (UScpl 39.75), Darwin (UScpl 41.92), Papua New Guinea (UScpl 43.21), New Zealand (UScpl 44.86) and American Samoa (UScpl 53.0).

The PICT pre-tax low to high wholesale price gap (PNG compared with Wallis & Futuna) for mogas was 84.63 UScpl.

Average MOPS for mogas 92 and 95 RON during the October-December period was USD0.36/l and USD 0.37/l respectively.

Pre-tax wholesale margins above the Platts average mogas MOPS price (USD 0.36/l) for the period fell in the range of USD/l 0.08 (American Samoa) to USD 0.92 USD/l (Wallis & Futuna).

Mogas related retail tax rates between PICTs range from 1.32UScpl (Palau) to 68.62 UScpl (French Polynesia).

Mogas related wholesale tax rates between PICTs range from 5.04UScpl (Kiribati) to 68.62 UScpl (French Polynesia).

*Note: For figure 6.0 total and mogas volume for New Caledonia is projected over 1995 data and it’s an SPC estimate. The centre of the bubble represents the price.
4. AUTOMOTIVE DIESEL PRICES

Figure 7: Retail tax inclusive diesel prices

![Retail diesel Tax-inclusive Price](image1)

Figure 8: Retail diesel prices sorted by pre-tax cost

![Retail Diesel Tax-inclusive Price](image2)
Figure 9: Wholesale diesel prices sorted by pre-tax cost

Figure 10: Regional prices of diesel (including tax and duty)
Pre-tax and duty, Fiji, Sydney & Darwin (Australia) has the lowest retail ADO costs and prices, closely followed by American Samoa and Tongatapu. Palau imposes the lowest amount of tax and duty however is mid-ranking in terms of comparative retail sales price.

The majority of PICTs import 500ppm Sulphur (S) ADO for land transport. Cook Islands and Palau have specifications of 50 ppmS. American Samoa, New Caledonia, Niue, Wallis and Futuna and Vanuatu import 10ppm diesel for automotive use, factors that contribute to price variations between PICTs.

The Pacific-wide average pre and after tax retail price for ADO was USD 0.93/litre and USD 1.16/litre.

Papua New Guinea had the lowest tax inclusive wholesale prices followed by New Zealand and Fiji. Pre-tax wholesale price was lowest in Sydney (UScpl 38.45), Darwin (UScpl 39.75), PNG (UScpl 42.14) and New Zealand (UScpl 42.29).

The PICT pre-tax low to high wholesale price gap (PNG compared with Wallis & Futuna) for ADO was 78.73UScpl.

The Pacific-wide average pre and post-tax wholesale price for ADO was USD0.78/litre and USD 1.02/litre.

Average MOPS for gasoil 10ppm and 500ppm during the October-December period was USD 0.35/l and USD 0.34/l respectively.

Pre-tax retail margins above the Platts average ADO MOPS price (USD0.34) for the period fell in the range of USD 0.24 (Fiji) to USD 0.98 (RMI).

ADO retail tax rates between PICTs range from 1.32 UScpl (Palau) to 67.32 UScpl (French Polynesia).

ADO related wholesale tax rates between PICTs range from 1.99UScpl (Papua New Guinea) to 67.32UScpl (French Polynesia).

*Note: For figure 11, total and diesel volume for New Caledonia is projected forward based on 1995 data and is an SPC estimate. The centre of the bubble represents the price.
5. KEROSENE PRICES

Figure 12: Retail tax-inclusive kerosene prices

Figure 13: Retail kerosene prices sorted by underlying pre-tax cost
Figure 14: Wholesale kerosene prices sorted by underlying pre-tax cost

Figure 15: Wholesale and retail prices of kerosene (including tax and duty)
Fiji has the lowest retail kerosene prices while Papua New Guinea had the lowest wholesale prices. Highest prices are found in Palau and Niue.

The Pacific-wide average pre and after tax retail price for kerosene was USD 0.99/litre and USD 1.16/litre respectively.

Average MOPS for Asian jet fuel (the main end-use for kerosene) during the October-December period was USD 0.34/litre.

Papua New Guinea had the lowest tax inclusive wholesale prices followed by Fiji and American Samoa.

Pre-tax wholesale price was lowest in Papua New Guinea (UScpl 48.19), Samoa (UScpl 48.81) and French Polynesia (UScpl 54.29).

The PICT pre-tax low to high wholesale price gap (Papua New Guinea compared with Niue) for kerosene was 80.36 UScpl.

Kerosene related retail tax rates between PICTs range from zero (Kiribati and Fiji) to 45.81 UScpl (French Polynesia).

Kerosene related wholesale tax rates between PICTs range from zero (Kiribati, Papua New Guinea and Fiji) to 45.81 UScpl (French Polynesia).

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6. LIQUEFIED PETROLEUM GAS (LPG) PRICES

The international benchmark for the cost of LPG in the Asia Pacific region is the Saudi Aramco Contract Price, also known as the ‘Saudi CP’ increased in the fourth quarter. Saudi CP for butane and propane for the quarter averaged at USD425 and USD405 per Metric Tonne respectively. The price increase was due to draw down of inventories due to increase in consumption during winter months.
5.511585352
4.521621622
3.131892063
1.955113333
1.657166333
1.343529056
1.081661333
0
USD per Kg

Regional Retail and Wholesale LPG price

Retail Price
Average Price
Average Saudi Aramco Butane
Pacific Average Retail price
Pacific Average Wholesale price

Key observations – LPG

- Between October-December 2015 Fiji has the lowest LPG retail and wholesale prices at USD 1.45Kg and USD 1.17/Kg respectively.
- Palau, Papua New Guinea, Samoa, Niue and RMI had the highest retail LPG prices which are all more than double that of Fiji.
- There is significant potential to reduce regional LPG prices.

7. INTERNATIONAL MARKET TRENDS
Oil price fell to its lowest levels since 2008 in 4Q15.

Dated Brent reached its cheapest level since the 2008-2009 Great Recession during the fourth quarter of 2015. Crude oil tumbled approximately 60% compared to 2014 as global supply outpaced demand.

In comparison to the third quarter of 2015, the price of Dated Brent in the fourth quarter 2015 decreased by USD 6.56/bbl from USD 51.42/bbl to USD 44.86/bbl.

Singapore Fuel Prices

In 4Q-2015, Singapore free on board (FOB) prices for Mogas 92 decreased by 13.77%, Kerosene prices by 10.09% and 10ppm and 500ppm Diesel by 12.01 and 10.49 percent respectively. FOB fuel price comparison for 3Q15 vs 4Q15 is as follows:

<table>
<thead>
<tr>
<th></th>
<th>3Q15 Average (UScpl)</th>
<th>4Q15 Average (UScpl)</th>
<th>Difference (UScpl)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gasoline 92</td>
<td>65.65</td>
<td>56.61</td>
<td>-9.04</td>
</tr>
<tr>
<td>Diesel 500ppm</td>
<td>60.76</td>
<td>54.39</td>
<td>-6.37</td>
</tr>
<tr>
<td>Kerosene</td>
<td>60.85</td>
<td>54.72</td>
<td>-6.14</td>
</tr>
<tr>
<td>Dated Brent</td>
<td>51.42</td>
<td>44.86</td>
<td>-6.56</td>
</tr>
</tbody>
</table>

In comparison to third quarter of 2015, the price of Dated Brent crude in the fourth quarter decreased (in USD/bbl terms) by 6.56 from 51.42 to 44.86. PICTs are part of the Asia Pacific fuel market with Singapore the recognised regional trading market as well as a petroleum refining and distribution centre. The pricing benchmarks for PICT fuel markets are traded Singapore prices for diesel (gasoil) with maximum 10, 50 and 500 ppm Sulphur, gasoline (92 and 95 RON) and jet/kerosene.

Figure 19: Difference between market prices
Observations – refiners margin

- Observed refining margins indicate that regional Asian margins remained healthy on back of stronger regional demand for gasoline for transportation.
- Asian refining margins during the period October –December strengthened on the back of result of higher winter seasonal demand for heating fuels.

8. EXCHANGE RATES

The PICT currency- USD exchange rate is an important factor directly influencing retail fuel prices because the international benchmark prices of refined petroleum products are quoted in US dollars.

Figure 20: Pacific Currencies against USD exchange rate

While the Australian and New Zealand dollar appreciated against the US dollar during the fourth quarter all other major PICT currencies depreciated with the Samoan tala remaining relatively stable. This was one of the factors that resulted in PICT retail fuel prices to increase.

- Samoa, Tonga, Papua New Guinea, Wallis and Futuna, New Caledonia, Vanuatu and Solomon Islands carry out price reviews on a monthly basis.
- Fiji reviews petroleum product price on a quarterly basis. Price change is based on MOPS prices of previous quarter.
- American Samoa reviews prices on a fortnightly basis.
- Niue and Cook Islands price changes are carried out on an ad hoc basis. Price change is mostly influenced by either a major surge or fall in international market prices.
- Kiribati has held its fuel prices constant since 2012.
Price data sources

- NZ data is sourced from http://www.med.govt.nz/
- Hawaii prices are calculated using US average refiners wholesale prices sourced from http://www.eia.gov/plus Hawaii taxes for diesel and Mogas which was sourced from http://www.api.org/
- Singapore data is sourced from www.facebook.com/PetrolWatchSingapore
- Data for Saudi Aramco LPG prices was adapted from http://gasenergyaustralia.asn.au/
- Figures 14 & 15 are generated using daily MOPS data sourced from Platts Asia-Pacific/Arab Gulf Marketscan.
- Prices for diesel, gasoline and jet/kerosene prices are provided by Platts (The McGraw-Hill Companies, Inc.) under subscription.

Fuel volumes

- Graphs referring to fuel volumes plot the Quarter average prices against the annual volume demand for mogas and diesel of each PICT.
- Annual volumes used in this report are based on 2009 annual market volumes as collected and published by SPC Economic Development Division unless otherwise indicated.
- For American Samoa, French Polynesia, Palau and Wallis and Futuna, 2012 volume is used. For Guam, 2013 volume as published by the Guam Department of Energy was used but does not include volumes allocated for military use.
- New Caledonia fuel volume is projected using 1995 data and is an SPC estimate.
- The size of the ball in the volume weighted price graphs (figures 6 and 11) represents the annual total volume of all fuels within the PICT, which is an indicator of the import economies of scale available. (NB. PNG total volume includes refinery production).

Abbreviations and definition of key terms

<table>
<thead>
<tr>
<th>ADO</th>
<th>automotive diesel oil or diesel fuel</th>
<th>Pacific-wide</th>
<th>All surveyed Pacific Island countries (excluding Australia and New Zealand)</th>
</tr>
</thead>
<tbody>
<tr>
<td>After-tax price</td>
<td>prices including tax and duty</td>
<td>ppm</td>
<td>parts per million</td>
</tr>
<tr>
<td>bbl</td>
<td>barrel (of oil), approximately 159 litres</td>
<td>Retail price</td>
<td>fuel price at retail/service stations, also called pump price</td>
</tr>
<tr>
<td>Cpl</td>
<td>cents per litre</td>
<td>Pre-Tax price</td>
<td>price excluding tax and duty</td>
</tr>
<tr>
<td>DPK</td>
<td>dual purpose kerosene (i.e. jet fuel and domestic use)</td>
<td>Pump price</td>
<td>refer to retail price</td>
</tr>
<tr>
<td>FOB</td>
<td>free on board</td>
<td>RON</td>
<td>research octane number</td>
</tr>
<tr>
<td>Gasoil</td>
<td>refinery designation of diesel fuel</td>
<td>$</td>
<td>Sulfur content (usually in diesel fuel)</td>
</tr>
<tr>
<td>kl</td>
<td>kilolitres (thousand litres)</td>
<td>ULP</td>
<td>unleaded petrol</td>
</tr>
<tr>
<td>Mogas</td>
<td>motor gasoline – normally unleaded</td>
<td>USD/bbl</td>
<td>US dollars per barrel</td>
</tr>
<tr>
<td>MOPS</td>
<td>Mean of Platts Singapore</td>
<td>USD/l</td>
<td>US dollars per litre</td>
</tr>
<tr>
<td>MR</td>
<td>Medium Range tankers, generally 20-30,000 metric tonnes</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Conversions

| Litres/USG | 3.785 |
| Litres/BBL | 159 |
| USG/BBL | 42 |

Note: A more detailed petroleum glossary can be accessed from the PRDR website: http://prdrse4all.spc.int/production/node/1523

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Pacific SIDS Continue to Focus on Renewable Energy Despite Fall in Oil Prices

Many of the Pacific’s Small Island Developing States (SIDS) are benefiting from the declining global oil prices; however, their governments’ commitment to becoming energy independent by using renewables remains intact.

Renewable energy has already been a priority in the Pacific Island countries and territories (PICTs) and this has been further strengthened through the Paris climate agreement in December 2015. Renewables help address issues regarding rising sea levels, loss of biodiversity, employment, clean water and more effective health, education and communication services.

The investment in renewable energy by SIDS is in order to: a) diversify their energy sources and improve energy security; b) generate clean and affordable electricity for all; and c) shield fragile economies from the impacts of volatile oil prices.

Grant assistance on energy to PICTs is given in order to substitute fossil fuels that are used in power generation with renewables. Given that about 75% of fuel imports are used by the transport sector – which is completely dependent on petroleum products – investors are trying to bring in alternatives such as liquid biofuels, natural gas fuelled cars and electric and hybrid cars.

The number of hybrid cars is rapidly increasing on the roads of Fiji. The government promotes improvements in the fuel efficiency of land vehicles, such as subsidies and duty concessions on low emission vehicles (hybrid/electric vehicles) and has further supported the use of hybrid cars through its National Energy Policy 2013 (Source: Fiji National Energy Policy 2013–2020).

The obvious fact that oil prices are volatile makes long-term pricing an uncertain and risky exercise. On the other hand, costs such as up front capital costs and low operating costs are known for renewable energy, which makes it a more stable commodity to use.

Renewables also enhance diversity in the Pacific Islands’ energy mix, which helps build up the region’s energy security. ‘In 2012, 17 of the 22 power utilities in Pacific states relied on fossil fuel to meet 98 per cent of their electricity demand,’ said Solomone Fifita, the Deputy Director (Energy) at the Economic Development Division of the Pacific Community.

‘A lot has been done, some progress made and there is a lot of interest from many partners, but there is still a long way to go,’ he said.

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Vanuatu to reach the 90 per cent target of electricity access by 2020

Almost 75 per cent of households in Vanuatu do not have electricity. This is because it is an expensive commodity and due to the geographical isolation of Vanuatu. Vanuatu has 260,000 people living across 64 inhabited islands, which makes it difficult for all households to get electricity connected.

The ‘Improved Electricity Access Project’ – which is partially funded by the Australian Government through the Global Partnership for Output-Based Aid and assisted by the World Bank – will enable low-income households in grid areas to connect to electricity have safe household wiring installed. Vanuatu residents will no longer have to rely on dangerous kerosene lamps and candles for light.

The World Bank is working with the Government of Vanuatu and local energy providers by giving a one-off subsidy of up to 80 per cent for the cost of household connection and up to VUV 40,000 for household wiring. This will be a relief to more than 4000 low-income earning families.

It is said that homes will be wired in accordance with Australian and New Zealand or French standards, including the laying of an underground cable from the utility meter box to a ‘ready board’ (a type of fuse box) in the home. Home owners will receive a ready board with the necessary safety switch (for protection against injuries and death), two light sockets with switches, two power outlets and two energy-efficient light bulbs.

Additionally, with the help of the above partners, Vanuatu has established the Utilities Regulatory Authority to protect consumers and provide the legal framework for pricing and service standards.

The completion of the Vanuatu National Energy Roadmap, which outlines the overall strategy to ensure Vanuatu can achieve its goal of 90 per cent electricity access by 2020, is further strengthened by the existence of such projects. Hence, Vanuatu is well on track.

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A customer in Vanuatu buys goods from a canteen that has benefitted from the “Improved Electricity Access Project”
Hulavu Conference Centre’s Solar Energy Project

Energy plays a significant role in the enhancement of economic growth and improvement of the living standards of the people of the Pacific Islands.

Access to modern energy sources is essential for human development and the provision of social services such as education, health, economic production and for improving livelihoods. The more usable energy can be accessed and the more efficient energy converting technologies are available, the better the conditions are for development of individuals, households, communities, society and its economy. Thus, improving access to energy is a continuous challenge for governments and development organisations.

The Solomon Islands population is about 525,870 of which 80% of the households are estimated to be living in rural and remote areas. The estimated national rate of electrification, where households are connected to the grid, stands at 14%, and it is estimated that only 3% of the Solomon Islands’ rural population have access to electricity.

In supporting the three partnerships launched by SPC at the third International Small Island Developing States (SIDS) conference in Samoa1. The SPC Economic Development Division (EDD) thereby provided a small discretionary support for the Small Energy Projects Programme (SEPP). Five projects2 were approved for SEPP funding for 2015/2016.

The Honiara Based West Guadalcanal Constituency Association Trust (HBWGCA)3, in partnership with the Hulavu Women’s group, has already commenced work on their approved project, which is entitled ‘Hulavu Conference Centre Energy Project’. The centre has basic equipment (projector, laptop, etc.) and is managed by the Hulavu Women’s group. The centre also has four bungalows for accommodation.

Hulavu Village is geographically located in the West of Guadalcanal and has a population of approximately 400 people (70 households). Their main source of income is agricultural products like virgin coconut oil, cocoa, vegetables and fishing. Most of these are sold in Honiara, the capital of the Solomon Islands. Hulavu is about 75 km from Honiara.

It is business as usual for the women in Hulavu village while they wait for the arrival of solar energy systems and installations at the Centre. They hosted meetings in December 2015 for the Ministry of Fisheries, police, Kokonut Pacific in Australia and Japanese chocolate manufacturer. In the past, the Hulavu women’s group spend quite a substantial amount of their income that is earned from the hire of the Centre on genset fuel and its maintenance. With the solar energy system installed for the centre will no doubt reduce operating costs and the women will be able to save a proportion of this income, which can be directed into their children’s education or other investment activities such as a purchase of a freezer for the storage of fish.

"I anticipated that it will be an exciting 2016 and it will be good to have solar installed as it may be a good model for income generation. We are expanding and there are plans for building more bungalows this year and it is all exciting. We have customers lined up for the year," said the Chairman of HBWGCA, Fred Conning.

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1 Three Partnerships: 1) Melanesia Million Miracle Programme; 2) Cooking for Life; 3) Bicycle for Capitals


3 HBWGCA is a body formed by the elite members of the West Guadalcanal Community residing in Honiara with the main objective of assisting development of the West Guadalcanal Constituency through education and research.
Launch of the Vanuatu Rural Electrification Project

Households, aid posts and community halls throughout rural Vanuatu will now be able to purchase ‘plug and play’ solar home systems through Phase One of the Vanuatu Rural Electrification Project (VREP), which is a New Zealand Government funded initiative managed by Vanuatu’s Department of Energy and is supported by the World Bank.

Approved vendors and products under VREP were launched on 29 January 2016 at Lenakel Town, and witnessed by Tafea Provincial Government Officers, Lenakel Municipality Mayor, Chairman of the Nikolatan Council of Chiefs, Area Secretaries of Tafea Province, Department of Energy staff, the staff of PCS Limited and eTech, community leaders, businesses and women representatives.

Access to affordable, safe and reliable electricity is a major development need for Vanuatu. Currently there are over 20,000 households, 200 aid posts and 2000 community halls that are located in areas where access to grid electricity is uneconomical. The opportunities for households to have longer period of lighting for children to study, aid posts to open for services past daylight and community halls to become more productively used, are limited by the lack of electricity.

Acting Director of Energy, Mr Chris Simelum spoke at the launch and commended the people of the Tafea Province for co-hosting and being the first province in Vanuatu to be chosen for the inauguration of the vendors and products of VREP.

In response, Mr Reynolds Surmat, Secretary General of Tafea Province, thanked the Vanuatu Government through the Department of Energy for choosing Tafea Province as the first to launch the approved vendors and products. He expressed his gratitude to the Department and the Government of New Zealand for funding this project and appealed to over 5,000 households in Tafea to capitalise on these products that are promoted under VREP.

‘We need these types of projects that target the hearts of our people and VREP is one which targets rural people who are in desperate need of clean, healthy lighting and some system to charge their mobile phones. Unlike other small solar systems that are purchased in most retail shops throughout Vanuatu, VREP products have warranty which is valuable in times of any system failures. I am also excited that the two approved vendors, PCS Limited and eTech, will sell the approved products for half the price of the normal retail price. The people of Tafea Province looks forward to seeing the approved vendors establish their network throughout the Province to support their sales.’

The launch also saw Mr Wilson Iata from a nearby village that is outside of the concession boundary on Tanna Island, being the first person to purchase a VREP product under the 50% subsidy. The Department of Energy would like to congratulate Mr Iata for being the first recipient of VREP and wishes him all the best in using this system. Mr Wilson Iata (left) with the Acting Director of the Department of Energy, Mr Chris Simelum (right), displaying the first product bought under VREP.

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Samoa on the Way to Being 100 per cent Renewable by the End of 2017

In 2011, Tokelau became the first country in the world to produce 100 per cent of its electricity needs from renewable energy. Just a few months from the completion of COP 21 and the adoption of the Paris agreement, Samoa is on its way to being on the list of countries that use 100 per cent renewable energy. This was the sentiment relayed by the Prime Minister of Samoa, Honourable Tuilaepa Sa’ilele Malielegaoi, at the launch of a USD 250 million renewable energy project on 20 January 2016.

The aim of the project is to set up a ‘stable and renewable energy supply’ through the use of wind turbines, solar panels and hydro power. The sustainable development effort of Pacific Island countries (PICs) has been hampered by heavy reliance on fossil fuel, and its detrimental economic and environment impacts that come with it, as well as the high costs of production and services due to the price of electricity. It is for these reasons that PICs have adopted ambitious renewable energy targets as a key strategy in their sustainable development effort and in their commitments in order to join the global effort of reducing greenhouse gas emissions.

This renewable energy investment in Samoa would significantly reduce Samoa’s reliance on fossil fuel. Samoan consumers will also be able to enjoy low electricity costs (an approximate drop of 27% – i.e. from 55 sene per unit to 40 sene per unit).

SPC’s Energy Programme has worked closely with development partners, regional agencies and island members to create the enabling milieu for increased investments in renewable energy in the region. It has assisted the drafting of national energy roadmaps and the associated national energy policies; this includes the drafting of energy legislation and regulations that would give confidence to investors, governments and the power utilities. It is also working together with regional agencies and development partners to establish a Pacific Centre for Renewable Energy and Energy Efficiency, which would assist with accelerating the deployment of feasible renewable energy and energy efficient technologies throughout the Pacific via investment and business promotion.

The key players in the project are I.E.S Lab and the Z.T.P.C Shanghai Energy Group (which is one of the two major power companies in China). The project also includes a local counterpart – Pacific Renewable Energy Company (PREC), which was launched alongside the project.

These stakeholders will work together with Samoa’s Electric Power Corporation (EPC) to improve energy supply in Samoa. Samoa currently has a goal of being a 100 per cent renewable energy nation by the end of 2017.

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Mr. Feng Dong (left), Managing Director of I.E.S Lab delivering a speech during the opening of the $250 million renewable energy project in Samoa
The World’s First Wave Array Hits 12 Months of Operation

The Carnegie Wave Energy’s Perth Wave Project (CETO 5), which is the world’s first commercial-scale wave energy array and is located in Perth, Australia, has completed 12 months of operation through AUD 13 million funding support from the Australian Renewable Energy Agency (ARENA). It is connected to the electricity grid and has the ability to produce desalinated water.

ARENA CEO, Ivor Frischknecht, said the successful operation was a huge achievement and further cemented Australia’s position as a leader in renewable wave power.

‘It demonstrates Carnegie, is well placed to continue progressing its innovative technology through the development of its next generation CETO1 6 unit.’ Mr Frischknecht said.

This technology is directly relevant to the Pacific Island countries and territories (PICTs). If PICTs adopt this technology, they will be able to harness the energy of the sea to generate electricity from renewable wave power and further reduce reliance on fossil fuels.

Carnegie has advised that it is in the process of helping islands to build an integrative, high penetration renewable system that could incorporate CETO systems in the future. In 2015, Carnegie signed memoranda of understanding with Mauritius and Seychelles in order to investigate the development of CETO wave farms and renewable energy micro grids.

Further information can be found at http://carnegiewave.com/projects/remote-islands/

1 The CETO 6 Project, located offshore of Garden Island, Western Australia is supported by the Australia Federal Government through a AUD $11m Australian Renewable Energy Agency (ARENA) grant as well as a debt facility from the Clean Energy Finance Council (CEFC). This next generation CETO unit has a targeted 1MW capacity, representing four times the output of the previous generation CETO 5 unit. The CETO 6 unit delivers increased power generation capacity and improved efficiency will reduce power costs.
Renewable Energy Penetration in Vanuatu

Renewable energy is perceived by many in the region as the solution to significant challenges of accessing and benefiting from energy such as electricity. Whether it is a solar powered lamp that is used for basic household lighting or a hydro generator for powering a town, renewable energy systems can be cheaper in the long run – as compared with fossil-fuel based energy systems – due to their low cost of generation and maintenance, even though they require high capital upfront for their establishment.

There has been a significant effort from the government to increase the use of renewable energy throughout Vanuatu with the intention of reducing the reliance on diesel. Such government initiatives include the subsidy to solar home systems under the Vanuatu Rural Electrification Program that is managed by the Department of Energy and the recently commissioned 767 kW solar photovoltaic (PV) farm that eventuated from an agreement between the Governments of United Arab Emirates (UAE) and Vanuatu.

The use of renewable energy has been supported by electricity utilities in Vanuatu, namely Union Electrique du Vanuatu Limited (UNELCO) in Tanna, Malekula, Port Vila and Vanuatu Utilities and Infrastructure Ltd (VUI) in Luganville. The comparison of electricity generated from on-grid renewable energy to that generated by burning diesel in Vanuatu is shown in Figure 1 below. Although the contribution from renewable energy sources has gradually increased in the last five years, there has not been much change in the total energy produced during the same period. This implies that the share of renewable energy has steadily increased in the generation mix in Vanuatu.

The distribution of the population across different islands and the high costs of grid extensions have limited the accessibility of electricity to less than 30% of the population. Due to government policies that are stipulated in the Vanuatu Energy Roadmap and continuous commitment from NGOs and aid donors, renewable energy is now present in some rural communities in the form of solar lights, solar home systems and micro grids.

The Utilities Regulatory Authority (URA), which is the statutory body mandated to regulate electricity and water supply services in Vanuatu, is also encouraging the penetration of renewable energy through its decisions to ensure that the benefits of grid-connected renewable energy technologies are passed on to all consumers. A good example is the URA commission’s decision in 2014 to incentivise VUI in Luganville by keeping 50% of the savings from additional generation if the Sarakata hydro – which they manage and operate – performed beyond a 69% capacity factor. Improved hydro generation in 2014 enabled the URA to further reduce tariffs in Luganville by 14%.

The URA believes that with continuous cooperation from electricity utilities and government support, Vanuatu electricity consumers can benefit further from renewable energy technologies through feed-in tariff schemes and incentivised tariffs that are set to take advantage of seasonal variations in the availability of renewable energy sources such as rain, wind and sun.

For more information:

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Postal address: PMB 9093 Port Vila
VANUATU
Website: www.ura.gov.vu
Twitter: @URAvanuatu
info@ura.gov.vu

Figure 1: Comparison in energy produced by diesel and renewable energy

Part of the 767kW Solar PV farm at the Ministry of Climate Change Adaption, Meteorology, Geo-Hazards Environment and Energy compound in Port Vila, Vanuatu.
Pacific Regional Data Repository (PRDR) Progress and Plans

This article provides an update on the PRDR (Pacific Regional Data Repository) from May 2015 to date, a glimpse of what is planned for 2016 and an overview on the portal upload progress. We intend to keep our readers posted on the progress of the portal content throughout the year, so look out for our PRDR articles in the next Energiser Editions.

As of 8 September 2015, after 12 months of an interim arrangement, the Pacific Community (SPC) was officially endorsed to be the permanent host of the PRDR. A memorandum was sent by SPC to the Energy Ministers and Officials in order for decisions to be made out of session on the permanent hosting of the PRDR in September and no objections were received on the recommendations.

In May 2015, SPC procured a new server through funding from the EU Energy Initiative Partnership Dialogue Facility (EUEIPDF). This server currently hosts the PRDR portal.

The bulk of the PRDR activities for 2015 have been supported through the technical assistance from the World Bank, which has provided funding support to SPC to strengthen the PRDR implementation since July 2015 and until June 2016. This covers the following activities:

- Country revisitation for the PRDR awareness and getting commitments from data providers to provide data to the PRDR through a signed data sharing agreement. The countries visited in 2015 were Samoa, Palau, Federates States of Micronesia (FSM), Republic of the Marshall Islands (RMI), Tonga, Tuvalu, Kiribati, Vanuatu, Fiji, and Solomon Islands with Papua New Guinea (PNG) targeted for 2016;
- Development and adoption of a medium-term strategy for the development of the PRDR for Sustainable Energy for All (SE4ALL) of which Mr Herb Wade has been contracted as the consultant to develop the strategy. A draft copy of the strategy has been developed and is currently being reviewed by the SPC team before it is circulated to the Pacific Energy Advisory Group (PEAG) members for their comments before it is being taken up for and endorsement in an upcoming regional energy meeting in 2016.

The role of the PRDR Steering Committee has been discontinued since December 2014 at the Pacific Energy Advisory Group Meeting and its role has now been taken over by the PEAG Meeting. The 2015 PEAG Meeting appreciated the progress on the PRDR. It acknowledged the support of the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP), the World Bank (WB), Australia and the European Union Initiative Dialogue Facility (EUEIPDF) in advancing this work. Immediate goals of the PRDR for 2016, as highlighted in the meeting, are as follows:

- To sign data sharing agreements with member countries’ energy data sources in order to submit data as collected to the PRDR.
- To obtain agreements with international agencies and donor organisations to provide non-confidential energy-related data, reports and project papers to the PRDR for public access.
- Obtain funding for five years of operation at around USD 180,000 per year.

The PRDR is a data repository, essentially a carefully filed archive of miscellaneous documents and data relating to energy in the Pacific Islands. The sole purpose of the PRDR is to overcome the problems of past database efforts that depended on national energy offices in the PICT to collect, format, verify and validate nationally sourced energy data. The PRDR will directly access primary data sources in the countries and make available the raw data that they collect. The longer-term vision of the PRDR Team is to use the data collected in the PRDR as the basis of a formal database for the Pacific region that can support and complement other databases that concentrate on energy and developing country data. ¹

Glimpse of 2016 Activities:

- Seminar and model building for Asia-Pacific Economic Corporation (APEC) Pacific Island states from 14–18 March 2016. The workshop will target country energy database officials in order for them to build their capacities in energy data modelling, econometric analysis and other analysis using the target data of the PRDR.
- Recruitment of a data repository intern to assist with data management, research and analysis. The internship is for a period of three months.
- Development of at least two country or project energy sites. Developments in the portal production also included the request for the inclusion of country specific sites that can directly feed into the regional portal. Once this is completed, the national site feature of the PRDR portal will also be offered to PICTs that currently do not have a national website, as well as linking the PRDR portal to interfaces with existing national websites.
- Visiting Nauru, PNG and Fiji to be completed by the second quarter of the year.

¹ Extract from the PRDR Operational Report
Below is a snapshot of the current contents of the portal (baseline as at January 2016):

- **Organisation (180)**
  - [http://prdrse4all.spc.int/production/list/organisations](http://prdrse4all.spc.int/production/list/organisations)
  - Captures list and contact details of organisations and agencies involved in the authorship, contributors, or providers of documents/data, linked to other sections of the portal.

- **People (35)**
  - [http://prdrse4all.spc.int/production/list/people](http://prdrse4all.spc.int/production/list/people)
  - Captures list and personal information of people involved as authors, contributors or providers of documents/data, linked to other sections of the portal.

- **Events (43)**
  - [http://prdrse4all.spc.int/production/list/events](http://prdrse4all.spc.int/production/list/events)
  - Provides a log account of regional and national energy workshops, meetings, training courses, and conferences where all related event proceedings are backed up and made available.

- **Projects (19)**
  - [http://prdrse4all.spc.int/production/list/project](http://prdrse4all.spc.int/production/list/project)
  - Provides a log account of regional and national energy projects in the region capturing the activities and associated reports linked to the projects undertaken to date.

- **Library (874)**
  - [http://prdrse4all.spc.int/production/list/publication](http://prdrse4all.spc.int/production/list/publication)
  - Comprises legislation, policies, plans, project documents, workshop proceedings and technical publications.

- **Data (122)**
  - [http://prdrse4all.spc.int/production/list/data](http://prdrse4all.spc.int/production/list/data)
  - Consists of raw data on petroleum and transport, renewable energy, utility and, economic and demographic data.

**Note:**

- Click on the links above to access the various sections of the portal.
- This is an energy portal for the Pacific, free of charge – log in is not mandatory; however, log in is needed to access the Organisation & People Pages. The rest of the portal is open.

**For more information:**

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## Pacific energy events calendar (May 2016–November 2016)

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
<th>Venue</th>
<th>Responsible agencies</th>
<th>Officer responsible</th>
</tr>
</thead>
<tbody>
<tr>
<td>17–18 May</td>
<td>World LPG Association / SPC Pacific Regional Summit on Liquid Petroleum Gas</td>
<td>Gold Coast, Australia</td>
<td>SPC</td>
<td>Alan Bartmanovich (<a href="mailto:AlanB@spc.int">AlanB@spc.int</a>)</td>
</tr>
<tr>
<td>16–19 May</td>
<td>Regional Industry Standards Advisory Committee (ISAC) Meeting on Sustainable Energy and Climate Change Adaptation Course Accreditation</td>
<td>Nadi, Fiji</td>
<td>SPC</td>
<td>Sarah Hemstock (<a href="mailto:SarahH@spc.int">SarahH@spc.int</a>)</td>
</tr>
<tr>
<td>7 June</td>
<td>Pacific Energy Conference</td>
<td>Auckland, New Zealand</td>
<td>NZMFAT &amp; EU</td>
<td>Stuart Calman (<a href="mailto:Stuart.Calman@mfat.govt.nz">Stuart.Calman@mfat.govt.nz</a>)</td>
</tr>
<tr>
<td>June</td>
<td>PRDR National Workshop</td>
<td>Port Moresby, Papua New Guinea</td>
<td>SPC</td>
<td>Frank Vukikomoala (<a href="mailto:FrankV@spc.int">FrankV@spc.int</a>)</td>
</tr>
<tr>
<td>1–5 August</td>
<td>Inauguration of the Pacific Centre for Renewable Energy and Energy Efficiency (PCREE)</td>
<td>Nuku’alofa, Tonga</td>
<td>SPC</td>
<td>Solomone Fifita (<a href="mailto:SolomoneF@spc.int">SolomoneF@spc.int</a>)</td>
</tr>
<tr>
<td>1–5 August</td>
<td>Energy Regulators Forum</td>
<td>Nuku’alofa, Tonga</td>
<td>SPC</td>
<td>Solomone Fifita (<a href="mailto:SolomoneF@spc.int">SolomoneF@spc.int</a>)</td>
</tr>
<tr>
<td>1–5 August</td>
<td>First meeting of the PCREE</td>
<td>Nuku’alofa, Tonga</td>
<td>SPC</td>
<td>Solomone Fifita (<a href="mailto:SolomoneF@spc.int">SolomoneF@spc.int</a>)</td>
</tr>
<tr>
<td>20–22 November</td>
<td>7th Meeting of the Pacific Energy Advisory Group</td>
<td>Suva, Fiji</td>
<td>SPC</td>
<td>Solomone Fifita (<a href="mailto:SolomoneF@spc.int">SolomoneF@spc.int</a>)</td>
</tr>
</tbody>
</table>

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### Energy Programme

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