

# **Preliminary Decision and Notice of Request for Comments and Public Consultation**

**Case U-0013-14**

**In the matter of investigating and implementing a Business  
Development Incentive electricity tariff for UNELCO in  
Port Vila**

**July 2014**

## Preliminary Decision

The Utilities Regulatory Authority (URA) Commission is pleased to issue this preliminary decision and accompanying staff report in the matter of investigating and implementing a Business Development Incentive (BDI) electricity tariff for UNELCO in Port Vila.

The electricity network in Vanuatu, and in particular in Port Vila and the surrounding area, has seen little growth in recent years while there is significant unused generation capacity in the UNELCO system. The Commission believes there is an opportunity to utilize and clear the excess generation capacity by offering an attractive price for incremental use. The price should cover all the out-of-pocket marginal costs of the provider. The aim of the BDI tariff is to stimulate demand growth by offering a significantly lower tariff for new commercial and industrial customers and additional load from existing large customers. This is in line with URA objectives to improve system efficiencies and reduce the overall cost of service to electricity consumers. This is also consistent with Vanuatu Government initiatives to make Vanuatu a more attractive destination for businesses and industry, such as the National Trade Policy Framework.

The proposed BDI tariffs are:

Customer category	Standard tariff rate	Proposed BDI tariff	Avg. discount
Commercial 220 V three phase	Fixed charge = 20 x P per kVA (1,092 vatu) Unit charge = 0.87 x P per kWh (48 vatu)	Fixed charge = 765 vatu per maximum kW demand per month (not indexed) Energy charge = 30 vatu per kWh (indexed to fuel cost)	35%
High Voltage 5.5 kV	Fixed charge = 25 x P per kVA (1,366 vatu) Unit charge = 0.7 x P per kWh (38 vatu)	Fixed charge = 478 vatu per maximum kW per month (not indexed) Energy charge = 30 vatu per kWh (indexed to fuel cost)	27%

*P = 54.62 vatu as of June 2014*

*Monthly kW demand shall be the maximum kW registered during the previous 12 months. Assumed power factor = 85%. Customer may be charged if their power factor is below 85%.*

This tariff has been designed to cover the marginal cost of generation while utilising excess generation capacity to serve new customers or customers expanding their operations. The monthly fixed charge is intended to contribute to the network costs, thereby lowering costs to all consumers. The fixed charge is set lower for High Voltage customers as they do not use the low voltage network. The energy charge is intended to cover the cost of fuel, assuming diesel generation and normal technical losses. The tariff is not intended to recover the fixed costs of the generation capacity since there is substantial underutilized capacity. The unit energy charge will be adjusted monthly according to variations in the price of fuel.

In order to achieve the desired outcomes, eligibility for the BDI tariff will be restricted to customers with minimum incremental subscriptions of 50kW load. The total amount of eligible incremental load will initially be restricted to 5,000 kW. Approved customers will be allowed on the BDI tariff for five years, after which they will revert to the standard tariff offered for their usage category.

The URA Commission after its deliberations has determined that the recommendations of the URA Staff should be adopted as a preliminary decision in this matter. A Final Decision shall be decided upon review of comments and information submitted by interested persons during the consultation phase.

The Commission is issuing a Notice of Request for Comments and Public Consultation. All interested persons including utilities, the Government, electricity customers and business groups are encouraged to submit their comments and attend any public meetings so as to enable the Commission to arrive at a fair and equitable Final Decision.

Johnson Naviti Marakipule, Chairman

Hasso Bhatia, PhD, Chief Executive Officer

## Notice of Request for Comments and Public Consultation

All stakeholders including utilities, the Government, electricity customers, business groups and other members of the public are invited to comment on this paper. Responses and information received will be considered in the development of the final Commission decision.

Written comments should be submitted to the URA no later than

**8<sup>th</sup> August 2014**

Submissions can be:

- made in person at:  
Office of the Utilities Regulatory Authority  
VNPF Investment Building, NPF Compound  
Crn Pierre Lamy & Andre Ballande Street
- mailed to:  
Utilities Regulatory Authority  
P.M.B 9093  
Port Vila, Vanuatu
- emailed to:  
James Ryan  
*Case Coordinator –U-0002-14*  
Utilities Regulatory Authority  
jryan@ura.gov.vu

Any submission should be accompanied by a signed cover letter and address, indicating case No. (Scanned material is accepted) addressed to Hasso Bhatia, PhD, CEO

URA staff shall hold a public meeting at the URA office in Port Vila to discuss and receive comments on the Preliminary Decision on 22<sup>nd</sup> July 2014.

Submissions shall be posted on the URA's website in accordance with the URA submission policy. Any information you may consider confidential should be marked as such, providing a brief explanation of the nature of the confidentiality.

The URA office can be contacted by telephone at +678 23335

# **Staff report**

**Case U-0013-14**

**In the matter of investigating and implementing a Business Development Incentive electricity tariff for UNELCO in Port Vila**

**July 2014**

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# 1. Introduction

## 1.1 Case information

Table 1: Case information

Case number	U-0013-14
Applicant	Utilities Regulatory Authority
In the matter of	Investigation and implementation of a Business Development Incentive electricity tariff for UNELCO in Port Vila
Commencement date	28 <sup>th</sup> April 2014

## 1.2 Purpose of this document

The purpose of this document is to describe a preliminary recommendation for a new Business Development Incentive (BDI) tariff to encourage new large electricity customers to establish in Vanuatu and stimulate existing customers to expand their businesses. All interested parties are invited to comment on this preliminary proposal, and all comments will be taken into account in the formulation of the Utility Regulatory Authority's (URA) final decision on this topic.

## 1.3 Background

The electricity network in Vanuatu, and in particular in Port Vila and the surrounding area, is one of low growth and excess generation capacity. Unfortunately utilities have not taken any action to address this situation and encourage growth. The installed generation capacity represents a sunk cost to the utility, and so the cost of any additional electricity generated is just the cost of fuel. This situation provides the opportunity to increase the utilisation of existing generation capacity and sell additional power at prices covering the marginal cost. This may attract new and growing businesses.

The high cost of electricity has been identified by the government (set out in the Trade Policy Framework) as a potential barrier to economic growth. By offering a reduced tariff for new business and industrial customers, this potential barrier can be lowered. The additional load and consumption from this scheme will increase the utilisation of existing capacity, which over the longer term will accelerate the requirement for investment in new, potentially more efficient, generation equipment. This will accelerate reductions in the cost of electricity generation, which will result in lowering of tariffs in general. With greater utilization of the network, fixed costs will also eventually come down. This scheme is consistent with other government initiatives to increase economic growth in Vanuatu, such as the National Trade Policy Framework.

## 1.4 Case Chronology

Table 2: Case chronology

Date	Activity
28 <sup>th</sup> April 2014	Case opened
May to June 2014	Initial review and analysis
8 <sup>th</sup> July 2014	Preliminary Decision and Notice of Request for Comments and Public Consultation released, with accompanying Staff Report
22 <sup>nd</sup> July 2014	Preliminary Decision public briefing at URA office
8 <sup>th</sup> August	Deadline for written submissions to the Preliminary Decision

## 1.5 Legal context

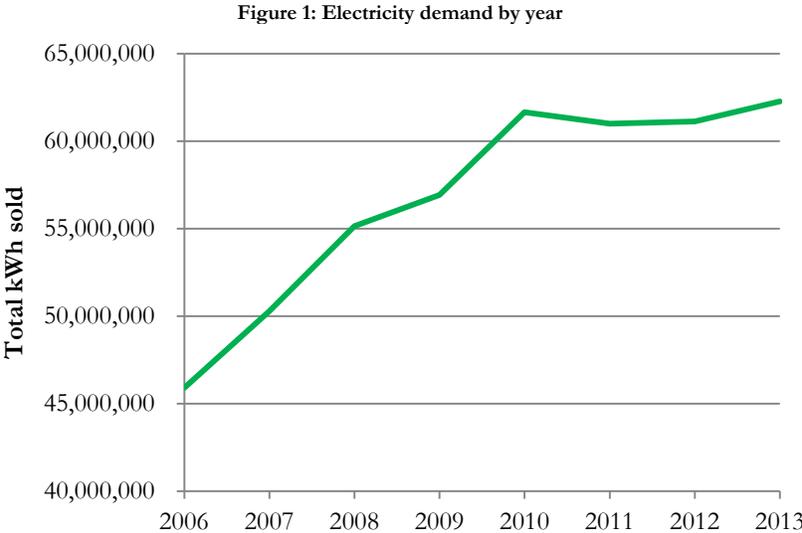
The legal framework of the energy industry in Vanuatu is based on the following legislation and contracts:

- Utilities Regulatory Authority Act (NO.11 of 2007) and amendments
- Electricity Supply Act [CAP 65] and amendments
- Geothermal Energy Act [CAP 197]
- Concession for the Generation and Public Supply of Electric Power in Port Vila and subsequent amendments
- MOU for management and operation of Luganville electricity network
- Concession contract for the Generation and Public Supply of Electric Power in Tanna island
- Concession contract for the Generation and Public Supply of Electric Power in Malekula island

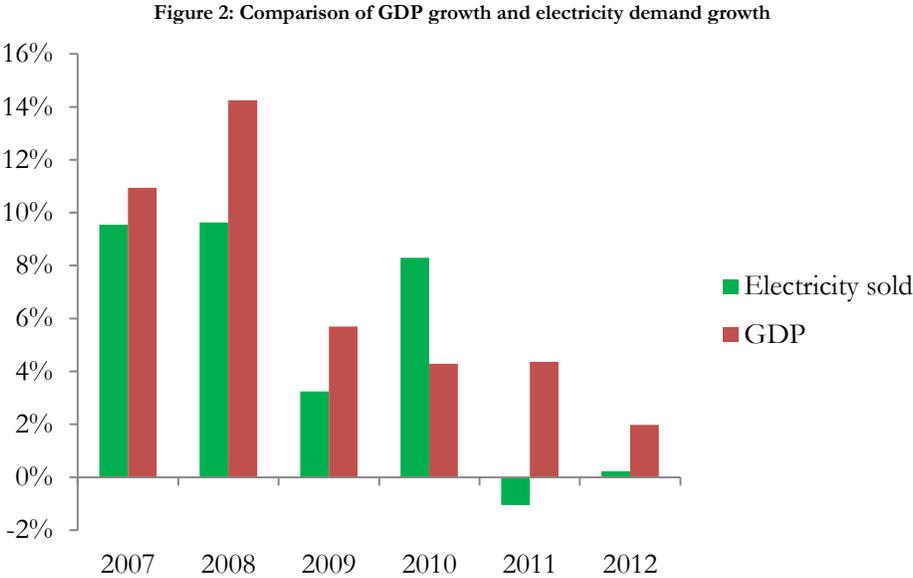
## 2. Tariff objectives

### 2.1 Low growth rate

Electricity growth has slowed dramatically since 2010. Over the years 2006 to 2010, electricity demand in kWh increased by an average of 7.65% per year. Since 2010, demand growth has been static, with only 0.34% growth per year.



Part of this reduction in growth may be related to a slowing of economic growth in general since 2008. However, since 2010 the economy has been growing at an average rate of 3.17%, which is much higher than electricity growth over the same period



As electricity demand grows, the fixed costs of the network are spread across more customers and energy sold, which over time results in lower tariffs. Slow growth rates restrict this and have the opposite effect, meaning that tariffs remain high. Unfortunately nothing has been done over this period to attract new growth.

## 2.2 Excess capacity

Total installed generation capacity in Port Vila is more than double the maximum peak demand experienced in 2013.

Table 3: Installed capacity by generation source, 2013

Generation source	Nominal installed, kW
Diesel / copra oil 2 x 4MW at Tagabe 1 x 3.2MW wind farm backup 12 x 1.2-2.2MW other machines	23,372
Wind	3,025
Solar	87
<b>Total</b>	<b>26,484</b>
Total kWh sold, 2013	53,081,393
Total kVA subscribed, 2013	52,211
Maximum peak demand, 18 <sup>th</sup> December 2013	11,160

The largest individual diesel generator is 4MW. Reserve margin should be maintained to cover the loss of this largest unit. This translates as 8MW of excess reserve margin. If peak demand increased by 5MW, this would still leave a reserve margin well in excess of the largest individual generator.

## 2.3 Tariff objectives

The aim of this BDI tariff is to stimulate demand growth by making use of existing excess capacity. The existing network and installed generation capacity represents a fixed sunk cost to the utility. This, in economics parlance, means that marginal cost of capacity is zero. The standard tariffs are set to provide sufficient revenue for the utility to cover all the installed capacity costs, based on the current level of demand. Therefore any incremental revenue less incremental costs is a net benefit to the system.

The marginal cost of electricity is the cost of generating an additional kWh of electricity. Therefore the marginal cost of utilising the excess capacity is the cost of fuel, and any additional network costs. As long as the revenue generated from the sale of this additional energy covers the marginal cost of production of electricity, there will be no adverse impact on the ability of the utility to cover all its costs. The marginal cost is much lower than the average total cost of energy, meaning that this energy can be sold at a significant discount to the standard tariff.

If the reduced tariff can stimulate additional connections and consumption, in the longer run this will accelerate the rate at which newer, larger and more efficient generation capacity is needed. This in turn will accelerate improvements in generation and network efficiency yielding benefits that can be shared with all customers. Large commercial and industrial customers are preferred as they typically have a high load factor. It may also stimulate broader economic growth, consistent with government objectives described in the National Trade Policy Framework.

## 2.4 Tariff characteristics

In order to achieve the desired objectives, the new tariff should have the following attributes:

- The tariff level should be significantly lower than the standard tariff, in order to attract new incremental subscriptions and consumption.
- The tariff must cover the marginal cost of generation (i.e. the fuel cost plus incremental losses), with a small margin for the utility.
- Eligibility should be restricted to new customers, or existing customers who wish to increase their load significantly. It should also be restricted to a maximum total amount.
- There should be a minimum period (e.g. five years) that the incentive tariff is made available. After that, the BDI customers shall revert to the appropriate standard tariff. The aim is to increase demand to the extent that at future tariff reviews the standard tariff can be reduced further due to more efficient utilization of the network and available generation capacity.

## 3. Proposed tariff

### 3.1 Business Development Incentive (BDI) Tariff

The proposed tariff is:

Customer category	Standard tariff rate	Proposed tariff schedule	Avg. discount
Commercial 220 V three phase	Fixed charge = $20 \times P$ per kVA (1,092 vatu) Unit charge = $0.87 \times P$ per kWh (48 vatu)	Fixed charge = 765 vatu per maximum kW demand per month (not indexed) Energy charge = 30 vatu per kWh (indexed to fuel cost)	35%
High Voltage 5.5 kV	Fixed charge = $25 \times P$ per kVA (1,366 vatu) Unit charge = $0.7 \times P$ per kWh (38 vatu)	Fixed charge = 478 vatu per maximum kW per month (not indexed) Energy charge = 30 vatu per kWh (indexed to fuel cost)	27%

$P = 54.62$  vatu as of June 2014

Monthly KW demand shall be the maximum kW registered during the previous 12 months. Assumed power factor = 85%. Customer may be charged if their power factor is below 85%.

### 3.2 Fuel price adjustment

The unit charge in the BDI tariff will be subject to adjustment for changes in the cost of diesel fuel, calculated monthly. The average landed price of fuel in Port Vila in May 2014 was 110.94 vatu per litre. The unit charge (30 vatu per kWh) will be adjusted up or down by the same proportion as the landed price of fuel in Port Vila varies from its level set at the time of the implementation of the BDI tariff.

### 3.3 Eligibility

Eligibility for the discounted tariff should be restricted to incremental subscriptions and consumption. If existing consumption switches to the BDI tariff, the loss of revenues shall have to be compensated for by raising all tariffs, thus negating the effect of the proposal. Thus strict eligibility criteria must be set that will be verified prior to approval of the BDI tariff for the customer. This tariff is only applicable for the network around Port Vila.

#### 3.3.1 New customers

If the customer is a new connection, the customer will still bear the normal cost of connection and any necessary network extension. The application will be cross-checked against requests to cancel connections to ensure that customers are not simply shutting down one connection to open another in order to benefit from the BDI tariff.

### 3.3.2 Existing customers

An existing customer that wishes to increase their load can benefit from the BDI tariff, but only for the incremental subscription and consumption. This will be achieved by applying the standard tariff for the pre-existing subscription and the average monthly consumption for the previous 12 months. The additional subscribed power and consumption above the previous average may be separately metered and charged at the discounted tariff. If the customer has previously reduced their load, then the standard tariff will be applied up to the maximum load for the customer in the last 12 months. This is to avoid customers requesting reductions in load, only then to request increases using the BDI tariff.

Technical details of connections for BDI customers shall be prescribed in Final Order after receiving comments from the interested persons

### 3.3.3 Minimum new load

In order to be eligible for the BDI tariff, the new or increased load must be at least 50kW.

## 3.4 Maximum capacity

Initially, the amount of total incremental capacity made available for this tariff will be restricted to 5,000 kW connected load, and the impact on system peak demand will be monitored. A periodic review of peak demand will determine whether any further increases of BDI subscriptions will be allowed. Each customer will benefit from this discounted tariff for five years, after which they will revert to the standard tariff for their customer category.

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**Utilities Regulatory Authority**

**Vanuatu**

You can access the U-0013-14 Preliminary Decision, July 2014 on our website [www.ura.gov.vu](http://www.ura.gov.vu), or by contacting us by telephone (+678) 23335, email: [breuben@ura.gov.vu](mailto:breuben@ura.gov.vu) or regular mail at U-0013-14, Utilities Regulatory Authority, PMB 9093, Port Vila, Vanuatu.