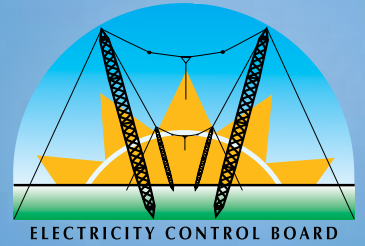


SPARK



ELECTRICITY CONTROL BOARD

Official Newsletter for the Electricity Control Board

April - May 2015

CEO's Message



Mrs Foibe Namene, CEO: Electricity Control Board

“The principal goal of the NIRP is to identify the supply mix of resources to meet the short- and long-term electric power needs in Namibia in a sustainable, efficient, safe and reliable manner, at the lowest reasonable cost.”

The electricity supply situation in Namibia is a subject of intense debate, triggered by the supply shortage, which is not only experienced in Namibia but the rest of the SADC region. Some commentators and experts have offered various solutions including renewable energy. For the Regulator, it

is important to address this situation taking into consideration the National Integrated Resource Plan (NIRP), a 20 year electricity sector development plan. The principal goal of the NIRP is to identify the supply mix of resources to meet the short- and long-term electric power needs in Namibia

in a sustainable, efficient, safe and reliable manner, at the lowest reasonable cost. The NIRP focused on electricity supply, but also took into account the impact of developing other energy sources and Demand Side Management measures capable of reducing electricity demand in Namibia.

The Plan development project was concluded in 2013. Altogether 37 expansion scenarios were formulated and analyzed using a specialized generation planning model. The shortlisted scenarios presented were appraised on the basis of their relative rankings on several key decision factors, for example:

1. initial capital investment,
2. reliance on power imports,
3. level of use of renewables,
4. type of plant/geographic location concentration,
5. operating complexity and
6. use of indigenous resources.

Based on these results, it was concluded and Kudu Gas and imports selected as the base case. The analysis indicated expansions based on Kudu Gas as the option with the lowest present worth costs over the planning horizon (the primary study period from 2012 to 2031 and an additional 15 years for end effects). Development scenarios of this option also include renewables.

It is important to underline the fact that the project was consultative and all stakeholders were consulted through a Project Steering Committee. The Plan therefore is a collective effort by the ESI stakeholders. Until it is revised with models rerun resulting in alternative options identified, it is imperative that efforts towards finding solutions for the current supply shortage speak to the Plan and its future projections.

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CONGRATULATIONS



Obed Kandjoze, MP
Minister of Mines and Energy



Kornelia Shilunga, MP
Deputy Minister of Mines and Energy

Giving effect and meaning to Namibia's new narrative is not going to be easy. It requires visionary leadership, dedication, commitment and patience. Capitalize on the existing foundation and strengthen it. The ultimate goal being a lasting legacy, for the Republic and its people.

From the Board, Management and Staff of the Electricity Control Board.

Still committed to its:

Vision
To be recognised as a leading regulator for achieving optimum viability and competition in the Namibian energy industry.

Mission
To regulate and control the Namibian ESI in the interest of all stakeholders with regard to price, quality and reliability.

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Editorial Note



The air is pregnant with excitement. No doubt about it. New President, new Ministers and of course a lot of expectations. For heads of institutions in both the public and private sectors, this means rallying their teams to give meaning to, and effect the Presidential and Ministerial directives. It's not gonna be easy. Especially given the importance of the social contract with the Namibian people.

For the energy sector, and the Regulator in particular, it has its work cut out for it. Everyday conversations on electricity supply, electricity prices, renewable energy as an alternative etc. are growing louder by the day. Oh, not to mention the special attention on the Kudu Gas to power project and Independent Power Producers (IPPs).

It goes without saying therefore that the Regulator has got to be at the top of its game and always one step ahead, for the pressure is on, and expectations mounting. Politicians. Investors. Electricity consumers.

Compounding matters is the looming drought, volatile foreign exchange rates and the long list containing the needs of the voters, all urgent. This by extension calls for a balancing act of some sort. A fine balancing act.

Read about how the Regulator will take to the field, and the extent to which its team is beefed up. Yes, these are exciting times to be a Regulator. Bring it on!

Feel free to speak to us:

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ECB Initiates Development of ESI Project Management Framework



“The development of an ESI Project Management Framework (PMF) will improve project planning and implementation maturity, along with the ability to monitor and report on projects that affect the industry and has developmental and economic benefits to the country.”

The Electricity Control Board (ECB) has identified the need to develop guidelines for improved project management procedures for the Electricity Supply Industry (ESI) stakeholders. Since its establishment in 2000, the ECB and the Licensees found themselves involved in a number of strategic projects. The massive impact of these projects on the nation and the electricity tariffs has made it increasingly important to properly manage them to successful completion, in order to realise the envisaged benefits.

ECB Chief Executive Officer, Foibe Namene, says the development of an ESI Project Management Framework (PMF) will improve project planning and implementation maturity, along with the ability to monitor and report on projects that affect the industry and has developmental and economic benefits to the country.

She says the development of the PMF will follow a phased-approach which includes:

- Comparing the current project management capabilities and practices in the ESI with mature industry

best practices for project management;

- Determining the gaps between the status quo and the desired final state in terms of organisational project management maturity (OPM); and
- Based on the analysis and findings, draft a Project Management Framework (PMF).

The Electricity Act (Act 4 of 2007) states that it is the role of the ECB to regulate the various electricity activities in the country, and this includes among others guiding licensees on effective project management practices, to ensure competency and follow a uniform or near uniform process reporting on projects.

“This structured approach will enable the ECB to have a consistent view of the whole industry and increase the level of viability on industry projects,” Namene said.

Various stakeholder workshops are planned to allow industry inputs into the development of the framework.

ECB Leads Deliberations on Renewable Energy Feed-in Tariffs



The Electricity Control Board (ECB) has planned a series of workshops to deliberate on the development of Renewable Energy Feed-in Tariffs (REFIT) along with associated draft Rules. Stakeholder discussions are expected to focus on what needs to be

done in developing an equitable and sustainable REFIT program.

The aim is to develop a standardised approach to Renewable Energy Tariff issues, and to devise a mechanism to procure

identified Renewable Energy technologies on pre-committed conditions. These conditions include pre-set tariffs, rules, application and project screening protocol as well as Power Purchase Agreement (PPA) Guidelines amongst others.

It is envisaged that the process would create an environment conducive to mobilizing small Independent Power Producers (IPPs) and their investors into Namibia's electricity sector.

This will enhance the overall performance and efficiency of the Electricity Supply Industry (ESI), and positively impact on social-upliftment, security of supply as well as investment and growth.

The development of Renewable Energy Feed-in Tariffs for Namibia, along with associated draft Rules, is supported by the United States Agency for International Development (USAID) through a Technical Assistance under the Africa Infrastructure Program (AIP).

ECB Helps Develop Measurement and Verification Guidelines on Demand Side Management and Energy Efficiency



North West University's Christo van der Merwe (in front with checked shirt) with some of the participants who attended the M&V workshop at Heja Lodge outside Windhoek.

Measurement and verification (M&V) is the independent analysis and reporting of demand side management and energy efficiency (DSMEE) saving impacts. M&V is designed to quantify and assess the impacts that result from DSMEE projects in an impartial manner.

The Electricity Control Board (ECB) intends to enhance the credibility of historical, current and future initiatives on energy efficiency and demand side management through the development and implementation of Measurement and Ver-

ification (M&V) Guidelines, complemented by targeted capacity building training to ensure sustainability.

ECB Chief Executive Officer, Foibe Namene, says her institution has appointed the North-West University M&V Team to develop and implement M&V Guidelines and to facilitate national capacity building on M&V through training.

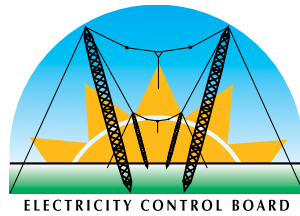
"The motive behind investing in capacity building training is to ensure that Namibia in the long run has specialists on M&V

guidelines implementation. It is thus expected that this project will build a pool of local experts from which the market can draw whenever such skills are needed," says Namene.

She says the introduction of M&V concepts and the building of capacity in Namibia will technically and commercially improve the credibility of current and future Demand Side Management and Energy Efficiency initiatives, and enable development of business cases that will sustainably lure private sector participation.

The National Integrated Resource Plan (NIRP) in its description of feasible Generation Options, incorporates several supply options that will contribute to the generation expansion plans. One of the six categories under which the options fall is Demand Side Management and Energy Efficiency (DSMEE). The NIRP specifically identifies a series of DSM and energy efficiency programs that can be implemented in Namibia to effectively manage the supply and demand balance. The plan also provides indicative costs associated with these programs.

"It is particularly with regards to authenticating the impact and viability of investments allocated to DSM and Energy Efficiency programs that M&V becomes very crucial," she says.



06 MAY 2015

MEDIA STATEMENT

NAMPOWER TARIFF ADJUSTMENT FOR THE FINANCIAL PERIOD 2015/2016

ESTEEMED ECB BOARD MEMBERS,
MEMBERS OF THE MEDIA,
COLLEAGUES,
LADIES & GENTLEMEN

It is my honour to announce that the Board of Directors of the Electricity Control Board (ECB) approved NamPower tariffs for the financial period 2015/2016.

1. TARIFF APPLICATION

NamPower made an application to the ECB in terms of section 27 of the Electricity Act, (Act 4 of 2007). In its application, NamPower requested for an effective bulk tariff increase of 13.20%, an increase from N\$ 1.17 to N\$ 1.32 per kWh (inclusive of generation and transmission) for the financial period 2015/2016, to meet its service delivery costs and for the tariff to remain cost reflective.

The tariff review process conducted by the ECB, leading to the approval of the tariff adjustment entails the following:

2. NAMPOWER'S JUSTIFICATION

The following reasons were provided by NamPower to justify the requested tariff increase:

- To cover incremental costs of electricity supply from imports and local generating thermal power stations, of which local include Van Eck, Paratus and Anixas.
- Not to breach NamPower's Debt Service Cover Ratio and Net Debt to Earnings before Interest, Taxes, Depreciation and Amortisation (EBITDA) minimum thresholds and ultimately avoiding defaulting on its loan covenants.
- The proposed tariff increase makes provision for the year on year revenue requirement of NamPower, taking into account actual costs and losses into account.

3. PRINCIPAL FACTORS CONSIDERED BY THE ECB

The tariff application review process included the following:

1. Analysing NamPower's submission in accordance with the approved ECB Cost- Plus Tariff Methodology rules and Policies;
2. Considering provisions of relevant documentations such as the White Paper on Energy Policy of 1998 and the National Integrated Resource Plan 2013 (NIRP);
3. Considering Cabinet decision number 21/20.09.05/006, this resolved that NamPower tariffs should reach and remain cost reflective by the financial period 2010/2011. That decision was revised in 2009 and the selected target date for reaching cost reflectivity was the financial period 2011/2012.

In terms of this Cabinet decision the ECB has been granting NamPower real tariff increases from 2005 onwards to ensure

that cost reflective tariff levels were reached by 2011/2012 and subsequently sustained beyond that period;

4. Conducting information sharing sessions. The purpose of these sessions was to share information and solicit stakeholders' input on the NamPower application;
5. Taking into consideration expectations of key stakeholders including Government and the possible tariff impact on the consumers and the Namibian economy;
6. The need to create and maintain a conducive environment to attract investment in the energy sector and to stimulate economic growth;
7. The need for NamPower to sustain its operations and service delivery in the short, medium and long term, enhance greater efficiency and seek innovative solutions;
8. The challenge posed by volatile import electricity prices and the impact of these on cost reflectivity.

4. ELECTRICITY SUPPLY FUTURE OUTLOOK

Namibia remains a net importer of electricity, at times importing up to 70% of its requirements from the region depending on the availability of water at the Ruacana Power Station. In order to address the situation several generation projects are planned in line with the National Integrated Resource Plan (NIRP). Most of these plants will only start generating after 2016 due to construction lead times.

The substantial shortage of energy in the Southern Africa region at this stage is putting pressure on energy tariffs not only in Namibia but in all of the countries in the SADC region. This situation will prevail until enough new generation capacity has been built.

The key challenge of Regulators all over the world has been and still remains balancing the interest and protection of the producers / suppliers on the one hand and the consumers on the other. The ECB is cognisant of the fact that a stable supply of electricity and the security of that supply is crucial to power the economic growth going into the future, but it is also aware that the tariff increase has an impact that is felt by all. Tariff increase means rise in the cost of living and production, and a potential to jeopardise job creation and poverty alleviation. It is therefore important that the ECB, as the Regulator, takes a long term view and ensures that its decisions are made on the backdrop of tough conditions prevailing in the economy at all times.

The Cabinet decision referred to earlier on implies that NamPower should remain cost reflective and it is the ECB's responsibility to ensure that tariffs comply with the directive to ensure a viable and sustainable electricity supply industry.

5. TARIFF REVIEW OUTCOME

Based on the facts, regulatory rules and policies, the ECB analysed and reviewed the NamPower tariff application, considered feedback from other stakeholders and decided that a 9.53% tariff increase would suffice for NamPower to cover its allowed operating costs, keep the lights on and fulfil its financial obligations. This means an effective bulk tariff increase from N\$ 1.17 to N\$ 1.28 per kWh.

The approved tariff adjustment is effective 01 July 2015.

6. CONCLUDING REMARKS

As mentioned above, electricity tariffs in Namibia, just like in most other SADC countries, will continue to rise until enough generation capacity is available. However, the Electricity Control Board in consultation with Government embarked on two studies; National Electricity Support Mechanism and Support Mechanism to improve electrification of Peri-Urban and Rural Areas. These studies are aimed

1. to address the issue of affordability of electricity to low consuming households. Final consultations for the implementation of the mechanism are underway with Government, and
2. to improve the electrification of peri-urban and rural areas in Namibia. This project is ongoing with recommendations expected to be made to the Government during the last quarter of this year (2015). Consultations with different stakeholder are ongoing.

The ECB is optimistic that both mechanisms will bring about positive development-related prospects and opportunities, and will contribute to our quest of poverty eradication.

The approved effective tariff adjustment of 9.53% for the financial year 2015/2016 is intended to ensure that NamPower can sustainably provide for the future electricity needs of the nation. The increase is applicable to NamPower bulk customers i.e. Regional Electricity Distributors (REDs), Local Authorities, Regional Councils and Mines. Respective bulk customers (Distributors) will individually apply to the ECB for tariff increases that will be applicable to end customers.

The Regulator intends to widen the scope of public participation in the tariff review process.

I THANK YOU

Foibe L Namene
Chief Executive Officer



SPARKED CORNER

Question: How does the Electricity Control Board determine the tariffs of the REDs, after the announcement of the NamPower bulk tariff?

Answer: It is important to first explain how the Electricity Control Board (ECB) determines the bulk tariff. The ECB developed a timeline and process for NamPower's tariff application and approval process. The target month for tariff approval annually is April, and implementation is July. Important milestones in the NamPower tariff application process are:

- Development of a tariff review plan by ECB;
- Discussions between ECB and NamPower before tariff application is submitted;
- NamPower submits a tariff application to the ECB by March;

- ECB commence with the review process of the application including consultations with industry stakeholders and the Ministry of Mines and Energy;
- ECB incorporate inputs of consultations and prepare recommendations
- Board approve recommendations for tariff approval
- ECB announce approved tariff
- Approved tariff is implemented on 1 July

After approval of the bulk tariff, NamPower formally informs its transmission customers, the distributors. It goes without saying that the NamPower tariff forms the basis of tariff application by the REDs and other distributors. The process of determining their tariff is almost similar

to that of NamPower, with the only difference being that for the distributors, a component of buying from NamPower should be included in the calculation of their tariffs. The distributors apply to the ECB for a tariff increase to meet different costs, such as:

- Purchasing electricity from NamPower;
- Operating and maintenance of infrastructure; and
- Customer services, depreciation, overhead and regulated return.

The ECB then review the cost estimates submitted and determines the tariff accordingly. The recommended tariff is approved and the distributors are obliged to inform customers about the increase. This is done through newspapers. The tariff is a true reflection of the cost of delivering the unit of electricity to the customer.

Know your electricity infrastructure: Distribution

An electricity power distribution system is the final stage in the delivery of electric power. It carries electricity from the transmission system to individual consumers. Distribution substations (such as displayed below) connect to the transmission system and lower the transmission voltage to medium voltage ranging between 2 kV and 35 kV with the use of transformers.



Primary distribution lines carry this medium voltage power to distribution transformers located near the customer's premises. Distribution transformers again lower the voltage to the utilization voltage of household appliances and typically feed several customers through secondary distribution lines at this voltage. Commercial and residential customers are connected to the secondary distribution lines through service drops. Customers demanding a much larger amount of power may be connected directly to the primary distribution level or the sub-transmission level.

Only large consumers are fed directly from distribution voltages.

Most utility customers are connected to a transformer, which reduces the distribution voltage to the relatively low voltage used by lighting and interior wiring systems. The transformer may be pole-mounted or set on the ground in a protective enclosure. In rural areas a pole-mount transformer may serve only one customer, but in more built-up areas multiple customers may be connected. In very dense city areas, a secondary network may be formed with many transformers feeding into a common bus at the utilization voltage. Each customer has a service drop connection and a meter for billing.

A ground connection to local earth is normally provided for the customer's system as well as for the equipment owned by the utility. The purpose of connecting the customer's system to ground is to limit the voltage that may develop if high voltage conductors fall down onto lower-voltage conductors which are usually mounted lower to the ground, or if a failure occurs within a distribution transformer. If all conductive objects are bonded to the same earth grounding system, the risk of electric shock is minimized.

Rural electrification systems, in contrast to urban systems, tend to use higher distribution voltages because of the longer distances covered by distribution lines. Rural services normally try to minimize the number of poles and wires. Single-wire earth return (SWER) line as shown below is the least expensive, with one wire.



It uses higher voltages (than urban distribution), which in turn permits use of galvanized steel wire. The strong steel wire allows for less expensive wide pole spacing. Other areas use higher voltage split-phase or three phase service at higher cost.

Underground power transmission is sometimes used in urban areas or sensitive locations such as areas prone to natural disasters like hurricanes and tornadoes. Underground cables take up less right-of-way than overhead lines, have lower visibility, and are less affected by bad weather. However, faults in buried transmission lines take longer to locate and repair.

A transmission grid is a network of power stations, transmission lines, and substations. A transmission substation such as the one illustrated at the beginning of this article, decreases the voltage of incoming electricity, allowing it to connect from long distance high voltage transmission, to local lower voltage distribution. It also re-routes power to other transmission lines.

Engineers design transmission networks to transport electricity as efficiently as feasible, while at the same time taking into account economic factors, network safety and redundancy. These networks use components such as power lines, cables, circuit breakers, switches and transformers. The transmission network is usually administered by a system operator.

To ensure safe and predictable operation the components of the transmission system are controlled with generators, switches, circuit breakers and loads. The voltage, power, frequency, load factor, and reliability capabilities of the transmission system are designed to provide cost effective performance for the customers.

Hello ECB

Appointments



Lameka Amuanyena
Senior Engineer: Power Supply



Leevi Namupala
Compliance and Monitoring
Engineer: Power Supply



Moses Shuudeni
Compliance and Monitoring
Engineer: Quality of Supply



Johann Malan
Manager: Corporate
Communications & Legal Services



Naftali Niilenge
Institutional Worker



Danel Wakudumo
Receptionist



Zenia Tsuses
Receptionist



David Hafenanye
Institutional Worker



Donovan Maasz
IT Technician

Promotions



Rachel Boois
Manager: Finance



Cesilie Katjimune
Accountant



Frans Kooper
Assistant Accountant



Veronika Ethingo
HR Officer

Sparky Moments



ECB CEO, Foibe Namene, with NBC Business Today presenter Yaruukekuro Ndorokaze, before explaining to the viewers the 2015/2016 bulk electricity tariffs.



ECB Manager for Economic Regulation, Pinehas Mutota and CEO Foibe Namene being interviewed by Good Morning Namibia's Ricardo Goagoseb.



Former Finnish President, Martti Ahtisaari, visiting the ECB with a group of investors.



ECB CEO Foibe Namene, Mines and Energy Permanent Secretary Kahijoro Kahuure, NamPower MD Paulinus Shilamba and ECB GM for Regulation Rojas Manyame on a visit during the refurbishment of the Van Eck power station in Windhoek.