

Nextier Power is a consulting firm that provides policy advisory, investment advisory, and support services to the electricity supply industry. The firm aims to use this weekly publication to educate Nigerians on the intricacies of the Nigeria electricity supply industry on the assumption that a more informed public would advocate for the right policies and programmes which, in turn, would lead to a robust market that delivers the electricity needs of Nigerians. This column will cover everything from the basics of the industry to the more intricate, sometimes, complex policies and programmes.

How Retail Electricity Tariff is Calculated

Introduction

In the Nigerian electricity market, one popular definition of a tariff is the amount charged by the distribution company to the customer for the services delivered within a period. However, a tariff is more than that. It also refers to the amount charged for the various activities carried out throughout the value chain – that is, the amount the transmission segment charges others for using its facilities to transmit high voltage electricity; and the amount the generation companies charge for generating power. These transmission and generation tariffs play a part in the derivation of the distribution tariff also referred to as the end-user tariff.

What is Tariff?

In simple terms, a tariff can be defined as the fee paid for receiving a service or purchasing a commodity. Such fees can be fixed for a period and become flexible over time.

A tariff is considered fixed if the amount is unchangeable while it is in place, until there is either an upward or downward review as the need arises or as predefined.

Tariff and the Nigerian Power Sector

As explained above, tariff in the power sector is the price paid for electricity generation, transmission and distribution by the end-user. In Nigeria, Tariff determination has been ongoing since the inception of electricity generation in 1896. However, this article focuses on the determination of tariff in the reform period which introduced the Multi-Year Tariff Order (MYTO). The intention of the MYTO is to allow operating licensees in the Generation, Transmission and Distribution of electricity achieve a full cost recovery for their services in the delivery of electricity to the final consumer.

In the pre-privatisation era, the full cost recovery was possible because of the availability of government subsidy to the sector to supplement operator collections from customers. This subsidy was withdrawn in 2013 as the sector became privatised. A part of the privatisation model according to the Power Sector Reform Roadmap envisaged the end of the subsidy following privatisation. Operators needed to become very efficient in their business models to ensure they achieved full cost recovery quickly.

The MYTO and the EPSR Act

Section 76 (1) of the EPSR Act designates certain activities as subject to tariff regulation. These include: generation, trading, transmission, distribution and system operation. This designation comes with a provision known as, “where the Commission” – that is, the Nigerian Electricity Regulatory Commission (NERC) considers regulation of prices necessary to prevent abuse of market power.

The EPSR Act further stipulates that prices for the said activities “shall be regulated

according to one or more methodologies adopted by the Commission for regulating electricity prices, and such tariff methodologies shall,” among other things:

- Allow a licensee that operates efficiently to recover the full costs of its business activities, including a reasonable return on the capital invested in the business;
- Provide incentives for the continued improvement of the technical and economic efficiency with which the services are provided;
- Provide incentives for the continued improvement of quality of services;
- Give to consumers economically efficient signals regarding the costs that their consumption imposes on the licensee's business;
- Avoid undue discrimination between consumers and consumer categories; and
- Phase out or substantially reduce cross subsidies.

The above rules indicate that there are both regulatory and transactional considerations for the fixing or calculation of tariff in the post-privatisation era, under the MYTO. The transactional considerations can be summed up by the description of the MYTO as “cost-reflective tariff.” This means a tariff at which customers can be supplied with affordable electricity while electricity companies are able to make reasonable profit.

This is unlike what was obtainable in the pre-privatisation era, when the power sector was a monopoly under the then NEPA or PHCN.

The sector was funded by subvention from the federal government rather than run as a business. So, with no competition and no motivation to recoup investment in the sector, there was no incentive for a cost-reflective tariff as described above.

The MYTO: A Purposeful Regime, an Overview

Among the goals of the MYTO is to ensure that power companies operating in the Nigerian Electricity Supply Industry (NESI) charge fair prices to electricity customers that allow them to fund their operations and make reasonable profit without compromising efficiency. Thus, the MYTO is designed as an incentive-based and regulation-oriented tariff regime.



(5) Street lights. Every electricity customer must belong to one of these tariff classes.

Tariff rate depends on the customer's tariff class while quantity of energy consumed in kilowatt-hours is in inverse proportion to the tariff.

Besides, the MYTO uses three building blocks in determining distribution and transmission tariffs. The NERC source specifies the building blocks as, (1) the allowed return on capital as regards fair, market-based rate of return on capital invested; (2) the allowed return of capital as regards recouping capital over the durability of the assets or depreciation; and (3) efficient operating costs and overheads.

Generation tariff uses a benchmark called Long Run Marginal Cost (LRMC) applied to the “most economically efficient new entrant”. The LRMC makes graduated assessments of the infrastructural value of such a power plant. This forms a basis for determining the price of such infrastructure in response to various prevailing sociopolitical and economic realities, and possibly building a tariff structure around the price.

Lastly, there is a feed-in tariff for renewable-energy-sourced electricity which NERC established in 2015 although not currently operationalized. This covers electricity generated by wind, solar, small hydro and biomass connected to the grid. The features of this special tariff include net-metering for very small capacities that are typically below one megawatt.

Summary

The derivation of the end-user retail tariff is the combination of all components of the generation, transmission and distribution variables discussed above. Previously, this was reflected by two major components in our electricity bills – fixed charge and energy charge. However, at the end of 2015, the fixed charge was abolished therefore, the cost reflective tariff being charged to end-users are lumped into the energy charge element of the tariff under the MYTO.

The MYTO is continually being reviewed to account for the fluctuations of macroeconomic variables to drive the development of the electricity market.

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