

## ***Have inclining block tariffs for electricity made a difference?***

*Prepared by Meagan Jooste and Ian Palmer<sup>1</sup>*

Published in Business Day on 31 October 2013

South Africa's retail electricity tariffs have been rising rapidly over the past five years. In an attempt to mitigate the impacts of such increases on the electricity accounts of poor households, the National Energy Regulator of South Africa (NERSA) approved the implementation of Inclining Block Tariffs (IBTs), in 2010. IBTs are stepped-pricing mechanisms applied to residential electricity consumers with charges per unit of electricity consumed increasing as the level of consumption increases. A primary objective of the tariff structure is to make electricity affordable to the poor through providing for a zero charge for the first block which usually corresponds to 50kWh consumed per month. A secondary objective is to promote energy conservation through applying high tariffs in the upper consumption brackets.

A recent study was aimed at assessing the extent to which IBTs meet the primary affordability objective. Two analyses of the electricity consumption bills of households were completed: the first of a sample of 12 municipal electricity providers and Eskom (which, between them, are responsible for supply to 66% of the population), over the 2008-2012 period, and the second of electricity tariffs for all municipal electricity distributors using NERSA's 2012/2013 tariff database.

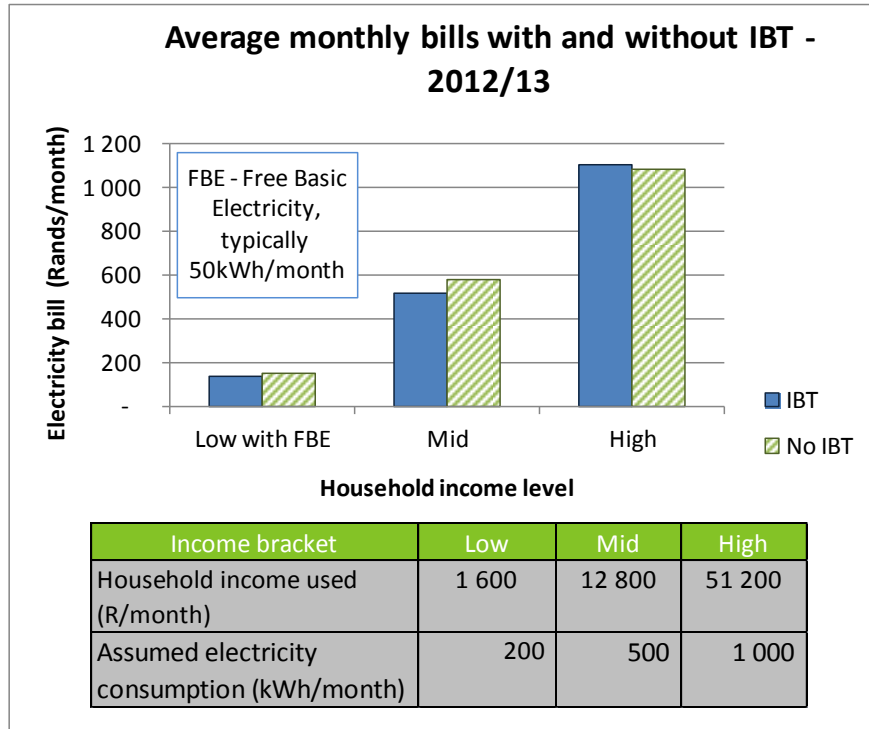
The first significant finding of this research is that municipal electricity service providers in South Africa have not all responded to the NERSA requirement for IBTs to be applied. About 30% of municipalities use other tariff structures, typically a flat rate per unit of consumption, complemented by a free basic electricity allowance of at least 50kWh per month for low end consumers and a fixed monthly charge for middle and high end consumers. While it has not been possible to assess all of their reasons for not applying IBTs, available information indicates a range of arguments: (a) IBTs may not necessarily be pro-poor given various other factors such as the number of people getting electricity from one meter; (b) IBTs present a threat to the viability of municipal revenue generation as they dampen demand from the best residential consumers who consume the most; and (c) there are technical constraints largely related to billing systems, specifically where pre-payment meter systems are applied.

The last reservation relates to the fact that the pre-payment electricity sales systems typically record the amount of electricity purchased by a consumer per month and not the amount used. In reality this means that consumption in the early part of the month is at a lower tariff than at the end of the month when the increasing amount of electricity consumed is charged at higher tariffs. So, for example, the purchase of prepaid electricity on the last day of the month may be at a high tariff while that on the first day of the next month may be at a zero tariff. This is difficult for consumers to understand.

---

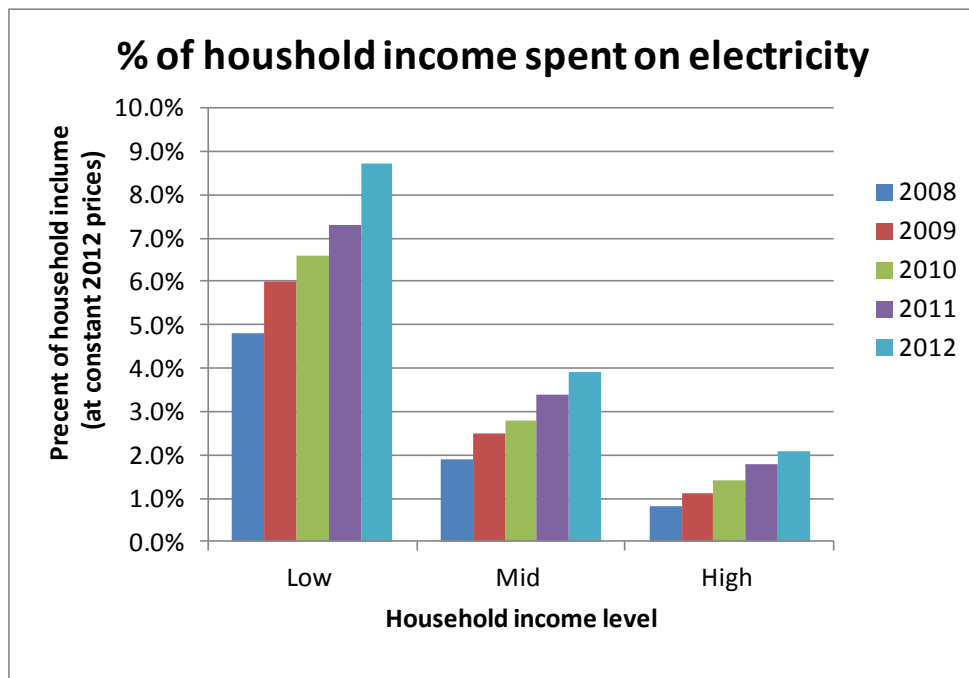
<sup>1</sup> Ian Palmer is a director of PDG, a development consultancy, and an Adjunct Professor at UCT's African Centre for Cities. Meagan Jooste is a PDG consultant.

The second major finding is that there is only a small difference in the bills for electricity between municipalities which apply IBTs and those that don't. In order to analyse this, typical consumption for three different household income groups - low, medium and high – was estimated and average monthly bills calculated using all the municipal tariffs on the NERSA database. The results are shown in the figure below:



These results call into question the wisdom of imposing IBTs: the impact on bills compared to the flat rate tariffs applied previously is marginal and yet a large amount of cost and effort has been required to implement these new tariffs, causing considerable confusion to consumers. In sum, those municipalities which do not apply IBTs have largely reached the same end result as those with IBTs.

Thirdly, the analysis confirms the rapid increase in the amount households pay for electricity. This is most usefully assessed as a proportion of household income in different brackets with an estimation of the amount of electricity typically consumed by households in each bracket, as shown in the figure below.



The indication is that the poor have not been insulated from increases in electricity tariffs with the bill for 200kWh of electricity increasing at an average of 15% per annum at constant 2012 prices (net of inflation). The corresponding rate of increase for high income households is 29% per annum. These figures can be compared to the average rate of increase in the bulk electricity tariff charged to municipalities by Eskom of 18% per annum. But the impact on poor households remains the greatest concern: the need for them to increase electricity payments for a modest amount of electricity from an indicative 4.8% to 8.7% of income is alarming, particularly when taken together with increases in transport, housing and food prices.

What does this mean for the future? In balance the opinion of most municipalities interviewed which were applying IBTs was that they are either satisfied with the way IBTs are working or, if not, do not want to go through another tariff restructuring exercise to revert to flat rate tariffs. At the same time those which do not apply IBTs are evidently satisfied with the existing situation with some being highly resistant to changing. They have a point. Eskom itself has put forward a motivation to move away from IBTs. A practical way forward would be to allow for flexibility with regard to the IBT tariff structure but focus on a means of keeping the bill for low income consumers to an affordable level. This will require higher levels of subsidy from the national fiscus or a greater degree of cross-subsidy from high income households and businesses.

#### ***Acknowledgements***

This research was motivated by Business Unity South Africa (BUSA). It was made possible through funding received from the UK Department for International Development (DFID) to conduct and manage a programme entitled the Employment Promotion Programme ("the EPP") through a subcontract between the University of Cape Town and PDG. The views and opinions expressed in this article do not necessarily reflect those of DFID or UCT.