

MYPD3 submission by the Electricity Governance Initiative of South Africa¹

November 20th, 2012

"Administered prices (fuel and electricity) have outpaced all other price increases, and are important drivers of inflation." -Gill Marcus: Engineering News, 19 January, 2012

Energy planning & price elasticity of demand

The IRP2010 based its energy investment roadmap for new build generation on the System Operator's (SO) moderate demand forecast. Taking an overly conservative stance, it considered only a fraction of the potential lower demand possible with effective energy efficiency and demand side management (EEDSM) programmes. The likely reactions of electricity users in response to consecutive high tariff increases ("price elasticity") were also not factored in. Alongside this, an overly optimistic GDP-growth forecast pushed the projected electricity demand in the SO-Mod to an expected annual growth-rate of about 2.9% from 2010 onwards².

Less than two years after promulgation of the IRP2010 it has already been proven that the SO-Mod forecast was overly optimistic and inflated. In its media statement of 12th October 2012³ Eskom reported that demand for electricity for the year-to-date was in fact more than 2% lower than in the same period in 2011⁴.

Interestingly, Eskom states in its MYPD3 application that "Price is more effective at promoting investment into energy-efficiency technologies than incentive schemes or other factors. If price levels provide the correct signals, consumers will respond by limiting electricity use and employing more energy-efficient technologies, reducing demand." Does this mean that Eskom accepts that price is a driver of reduced demand? If so, a circular argument emerges: we need to support economic growth and meet growing electricity demand with more grid investment, and hiking electricity prices will provide a revenue stream to pay for such build, even though rising prices reduce demand.

And yet, Eskom's MYPD3 application assumes that, contrary to what price elasticity trends have shown, electricity demand will increase by 1.9% compound annual growth a year over the MYPD 3 period, AND asks that Nersa should approve extending the control period from the current three years to five.

¹ The Electricity Governance Initiative (EGI) is a global network of civil society organizations dedicated to promoting transparent, inclusive and accountable decision making in the electricity sector. SA Partner organisations are: SAFCEI, WWF-SA, 350.org, Gender cc, Green Connection, Sustainable Energy Africa (SEA) & Project 90 by 2030.

² Major contributions to this estimated growth in electricity consumption have been assumed to come from the heavy industries' sectors and the municipalities.

³ (<http://www.eskom.co.za/content/StateoftheSystem-ThirdQuarter2012.pdf>)

⁴ The price path for the entire IRP would cost around R1.8 trillion and require a 20% increases per year until 2017/18, thereafter a 9% increase per year over 'MYPD4' and then 5% increases per year to 2030. However, since demand in the IRP has been likely been overestimated, the IRP build plan will naturally result in SA overbuilding capacity.

It is a fact that Electricity tariffs through two MYPD cycles of three years each have been increased aggressively – for most consumers these tariffs have been hiked too fast and too high – contributing to factory closures and job losses. Given these contextual realities, the continuation of the new build programme as outlined in the IRP2010, and seeing electricity price hikes as an income source appears very likely to lead to unaffordable over-capacity and wasted investments.

Electricity consumers of all sectors are feeling the effects of tariff increases and trying their best to reduce energy consumption. This is reflected in a clear and significant drop in electricity demand since 2011. Yes, strikes in the mining sector and a slower than anticipated economic growth rate contribute to this development but with more tariff hikes to come, a steadily decreasing demand trend is likely.

Instead of linking the likelihood of economic growth with greater electricity supply infrastructure investment (and the accompanying electricity price increases), and given that Energy efficiency measures are far cheaper than new build, we believe that the Department of Energy (DOE) and Eskom in particular, should be compelled to step up their effective Energy Efficiency Demand Side Management (EEDSM) efforts instead.

The impact on the poor, the role of Energy efficiency

How can we continue to argue that energy planning that includes investing in expensive new electricity build programmes that can only be paid for with rapidly and continually increasing tariffs alongside a static free basic electricity (FBE) allocation, growing unemployment and effectively decreasing household incomes is pro-poor?

We recognize that Eskom supports the need for a more pro-poor IBT structure (see page 24), but the proposed structure illustrates that fairly low users of electricity (<500kWh) will still pay significantly more than they do under the current IBT. There are reductions for very high users (>1500kWh pm) but increases for those who use less, reducing the price signal for energy efficiency substantially.

Eskom itself has realized that rising electricity prices lead to reduced demand. South African consumers in all sectors are feeling the severe economic pressures of rising fuel and electricity price hikes and related inflationary impacts.

The 2011 Census revealed that 84.7%⁵ of households in South Africa use electricity for lighting, and 11.4% use candles. 73.9% of households cook with electricity, others use paraffin (8.5%), wood (12.5%) and coal (0.7%). 58.8% use electricity for indoor heating.

But the significant increase in the number of households connected to the electricity grid since the 2001 Census provides a skewed picture of access to electricity. Eskom's electricity tariffs have increased on average by about 378% between 2001 and 2011 and Municipalities add their increasing margins on top of Eskom's tariffs. The average household income of black African households increased over the same period by 2.7 times⁶. The poorest

⁵ Up from 70.2% in 2001

⁶ 2012 Census

households therefore spend 47.7% of their incomes on food and 32% on housing, water, electricity, gas and other fuels⁷.

In its MYPD3 application Eskom has stated that it will spend only an average of 1.2% of revenue on Energy efficiency demand side management programmes⁸. Surely it can do better than this?

It is important to note here that we believe that the high cost power buy-back scheme is not a proper demand-side measure, and that Eskom has not come close to fully utilizing the potential for energy efficiency and DSM in the economy. DSM in the residential sector (which accounts for a large portion of peak demand) has by no means been exhausted. Demand side measures need to be vastly improved.

Given what has emerged around price elasticity of demand and the potential for energy efficiency to reduce demand, clearly another demand forecast – either as part of an IRP review or the next iteration of the IRP – needs to be undertaken before the tariffs that are being asked for can be granted.

Financing the Eskom build programme

On Pg 24/25 of the MYPD Eskom states that its current application "does not include any provision for additional build projects that are required or might be allocated to Eskom in terms of IRP 2010".

Since it is likely that at least some of the IRP could be built by Eskom over the next five years, it does not make sense to submit a tariff application that will not recover costs on such assets. Eskom requires regulatory and policy certainty, and the Department of Energy needs to assess and determine which projects are going to be built by Eskom and which by IPPs, since this will have a bearing on the price path going forward.

We ask that the findings of the economic modeling undertaken to show that increased taxes would have worse distortionary effects on the economy than cost-reflective tariffs (Pg 49) should be made public.

Electricity infrastructure investment & related price increases – to keep the lights on?

In 2010 Nersa approved a 25 % increase in electricity price per year over 3 years. This paid, amongst other things for:

- A R40-billion contract to Hitachi Power Africa for boilers at the Medupi and Kusile power stations. Chancellor House has a 25% shareholding in Hitachi.
- A R2-billion contract from Eskom to Bateman Africa for materials-handling at the new Kusile power station. Chancellor House has a 10% stake in Bateman Africa⁹.

⁷ BMR, 2012 and M&G, 9th Nov 2012

⁸ Table 41 in Eskom's application reveals that most of the IDM is actually spend on peak demand reduction and not on energy reduction. This is confirmed in chapter 5.2.1 Energy efficiency versus demand management.

⁹ Institute For Security Studies, 2011: "SA Democracy Incorporated: Corporate Fronts and Political Party Funding"

In conclusion, with this submission we ask:

- That Eskom is not provided with any tariff increases at this time. The completion of the IRP2010 review early in 2013 could provide a basis for revision of tariffs.
- That there should be a greater emphasis on significant investment in energy efficiency programmes.
- That the allocation of free basic electricity for the poor should be increased to enable them to have at least a similar level of use as in 2007.
- That the findings of the economic modeling undertaken to show that increased taxes would have worse distortionary effects on the economy than cost-reflective tariffs (Pg 49) should be made public.
- That we be provided the opportunity to make a presentation at the public hearings in January 2013.

This submission is made on behalf of EGI-SA by Project 90 by 2030 on November 20th, 2012.

It has been compiled by Brenda Martin (Project 90), Robert Fischer (Project 90), Liz McDaid (SAFCEI & Green Connection), Jesse Burton (ERC, UCT) and Yvette Abrahams (Gender cc).

EGI-SA partners endorsing this application:

- Project 90 by 2030
- 350.org
- South African Faith Communities Environment Institute (SAFCEI)
- Green Connection
- Sustainable Energy Africa (SEA)
- Gender cc
- World Wide Fund for Nature, South Africa (WWF-SA)

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Comment [BM1]: Awaiting confirmation from SEA & WWF