



30 November 2009

The National Energy Regulator of South Africa

Per email: mypd2@nersa.org.za

Dear Sir

RE: PRELIMINARY SUBMISSION ON THE APPLICATION BY ESKOM FOR A MULTI-YEAR PRICE DETERMINATION 2010/11 TO 2012/13 (MYPD 2)

We refer to NERSA's invitation published with its 'Issues Paper' on 30 October 2009 to comment on Eskom's abovementioned application.

We are grateful for this opportunity to comment. Please find enclosed herewith Idasa's preliminary submissions. To the extent that information currently available is limited or not in a final form, and in any event, we hereby request the opportunity to elaborate on these submissions at the public hearings anticipated.

Sincerely

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PRELIMINARY SUBMISSIONS

by

Idasa

to

THE NATIONAL ENERGY REGULATOR OF SOUTH AFRICA

(“**NERSA**”)

regarding

THE APPLICATION BY ESKOM FOR A MULTI-YEAR PRICE DETERMINATION

2010/11 TO 2012/13 (MYPD 2)

I. INTRODUCTION

1 These preliminary submissions are presented by Idasa in response to the invitation by NERSA to comment on Eskom’s application for a multi-year determination regarding the amounts it charges for electricity (referred to as the “MYPD 2” or the “tariff application”). Idasa acts as secretariat to the Electricity Governance Initiative of South Africa¹. These submissions have benefited from the inputs of several researchers and regulatory experts. We are grateful for their assistance.

2 NERSA alone is authorised to regulate the amounts which Eskom charges for electricity.²

3 The tariff application seeks a determination for the three year period commencing on 1 April 2010, except for municipal customers in respect of which the period will commence on 1 July 2010. Most notably, Eskom seeks substantial increases in the “target price” for electricity in this period (from a current average of 33cents/kWh to between 80 to 88 cents/kWh) based on the need to, *inter alia*, support a “capital expenditure programme” in order to meet increased demands and ensure a secure supply of electricity.

4 Following an analysis of the legal parameters for NERSA’s decision, and pursuant to legal advice obtained, these submissions deal with three broad themes:

¹ The Electricity Governance Initiative is an independent global effort to support transparency, participation, accountability and capacity in policy and regulation of the electricity sector, supported by the World Resources Institute (USA) and Prayas Energy Group (India). Idasa makes this submission solely in its own capacity, but many of the comments presented here build on the findings of the forthcoming assessment report of the Electricity Governance Initiative, South Africa, produced in collaboration of WWF-South Africa, the Energy Research Center of the University of Cape Town, Sustainable Energy Africa, Green Connections, Earth Life Africa, and the International Labour Research Group.

² NERSA is established in terms of s 2 of the *National Energy Regulator Act* 40 of 2004 (“the NERSA Act”). In terms of s 4(1)(c) of the NERSA Act one of its key functions is to undertake the functions in s 4 of the *Electricity Regulation Act* 4 of 2006, which includes the function (s 4(a)(ii)) to “regulate prices and tariffs”. The words “prices” and “tariffs” are both defined identically as meaning a “charge for electricity”.

4.1 First, we submit that NERSA cannot, and should not, make the multi-year determination sought by Eskom in the absence of relevant information – including, but not limited to, a final version of the Integrated Resource Plan (“IRP”) envisaged in the *Electricity Regulation Act 4* of 2006 (“the Electricity Act”); and/or the Integrated Energy Plan (“IEP”) envisaged in s 6 of the *National Energy Act 34* of 2008 (“the Energy Act”). In the absence of these plans, the increased charges sought by Eskom to fund capital expansion projects are at best premature. We say this as these plans are designed precisely to give effect to national policy³ and “guide” the antecedent issues regarding how “energy infrastructure” should be developed; by whom; and “the selection of appropriate technology to meet energy demands”. Given the wide-ranging impacts of these choices for the economy, the environment, and for social welfare of all South Africans, the IEP should be considered a legitimate basis for future electricity choices only if it has been subject to some form of public participation and comment consistent with the provisions of the *Promotion of Administrative Justice Act* (“PAJA”) 3 of 2000.

4.1 Secondly, as an incident of procedural fairness, interested and affected persons must be supplied with additional information to allow them to make meaningful representations, and be given the benefit of a sufficient opportunity to analyse such information. We also note that the public participation process thus far has been limited to notices in English, published on the internet and, according to information from NERSA officials, notices published in municipal offices. In more recent days, brief radio advertisements have also been aired. Considering the impact of the decision under consideration, we submit that this is insufficient.

³ Section 1 of the Electricity Act defines the IRP as a plan established by the national sphere of government to “give effect to national policy”.

4.2 Thirdly, we provide some preliminary comments on certain aspects of the MYPD 2, against the backdrop of issues raised by NERSA.⁴

5 We note that these submissions are ‘preliminary’ in the senses that:

5.1 Idasa, like all interested and affected parties, has been given a relatively short period of time to compile its submissions;

5.2 Idasa requests an opportunity to be granted an opportunity to make an oral presentation at the hearings envisaged to take place in January 2010, at which stage *additional material may be presented; and*

5.3 As noted above, Idasa requests access to additional information, which may require significant further comment.

6 Idasa is an independent public interest organization committed to promoting sustainable democracy based on active citizenship, democratic institutions and social justice. As such, Idasa does not at this stage express a firm view as to the necessary extent of infrastructural development required to meet future demand; by whom such development should be undertaken; and the appropriate mixture of available technologies which should be adopted to generate additional electricity supplies. Decisions clearly need to be taken, and cannot be avoided given the severe projected gap between energy supply and demand. Idasa’s principal concerns are instead (at least at this stage) that these issues must be:

6.1 open to meaningful public debate;

⁴ In an “Issues Paper” dated 30 October 2009.

6.2 based on adequate information, including about underlying assumptions; and

6.3 recognised as necessarily antecedent to Eskom’s tariff application.

7 In this regard we note that Eskom accepts that its application involves “country choices” (which we understand to mean poly-centric and policy-saturated determinations of national priorities) and that any “final determination” must be based on “engagement and dialogue with stakeholders”.⁵ In this regard, s 6(7) of the Energy Act clearly requires the Minister to “invite” and “duly consider” public comments.

8 Idasa however notes with concern that the time-frame for the approval of Eskom’s tariff application does not allow for debate on these antecedent issues.⁶ Furthermore, Idasa submits that these fundamental “country choices” cannot be relegated to the position of adjuncts to Eskom’s tariff application.

9 Indeed, these antecedent issues are not issues which fall to be determined by NERSA but must be determined in the IRP and IEP,⁷ which must be developed and reviewed pursuant to their own public participation processes, as prescribed by law. While the IRP and IEP processes are being managed by the Department of Energy (“DoE”) at present, and are not the responsibility of NERSA, we note with concern the absence of clarity regarding that

⁵ MYPD 2, at pages 5, 6 and 8.

⁶ Public comments must be provided by 30 November 2009, and hearings will be held in January 2010. This is necessary as NERSA’s determination must commence on 1 April 2010.

⁷ The Minister of Energy has the duty to develop and annually review the IEP, which shall guide infrastructure investment and the choice of generation methods. In terms of Regulations under the Electricity Act (published under Government Notice R721 in Government Gazette 32378 of 5 August 2009), the IRP must be drawn up by Eskom in consultation with the Department of Energy and NERSA, to adopt planning assumptions; plan scenarios based on those assumptions; determine a base plan based on the cheapest mode of generation; and adjust the base plan to take account of the model scenario planning and the government’s policies as to the appropriate mixture of generation technologies.

process, or even a public timetable for it. We accordingly submit that NERSA would be acting outside of its powers if it made a multi-year determination which was premised on assumptions which pre-empted, or constrained, the choices that must be made in the IRP and IEP. It thus follows that a tariff increase designed to fund infrastructural development cannot be properly considered before the IRP and IEP are finalised.

10 That being said, Idasa appreciates the countervailing consideration that recent events confirm the critical need to maintain Eskom's existing infrastructure and to develop additional power-stations. In this regard we note that Eskom suggests that if they are not granted an increase as sought, it would have "no option but to rephase the capital expansion projects to align with available funding" which would prejudice efforts to ensure a secure supply of electricity.⁸ A determination by NERSA which does not cater for necessary infrastructural development would thus be equally undesirable.

11 In light of these competing demands, Idasa submits that NERSA should:

11.1 Make a further interim determination for one year (i.e. the 2010/2011 operational year);

11.2 Call on the national government and Eskom to finalise the IRP and IEP, following due process as prescribed by law, including opportunities for public comment; and

11.3 Consider imposing a condition that a pre-determined proportion of the increased tariff must be paid into a special infrastructure development fund, which can be released to Eskom or another licensed electricity producer on the instructions of

⁸ MYPD 2 application, p 4 and 76.

the Minister of Energy, to fund necessary development (either in anticipation of, or in light of, the IRP and IEP).

12 Such an arrangement would cater for immediate action, while avoiding the obvious pitfalls of making long-term decisions, with many ‘down-stream’ consequences, in a crisis situation; and based on assumptions as to the more complex considerations which will be dealt with in the IRP and IEP. Idasa submits that Eskom, NERSA, the national government and the all interested and affected persons should be allowed the time and space to make deliberate choices after a transparent and inclusive process.

II. THE APPLICABLE LEGAL FRAMEWORK FOR NERSA’S DECISION

13 When exercising its discretion to determine the price of electricity, NERSA is bound by the principles of administrative justice in s 33 of the *Constitution of the Republic of South Africa, 1996* (“the Constitution”) and the *Promotion of Administrative Justice Act* (“PAJA”) 3 of 2000.⁹ These principles, together with other legislative requirements, entail that NERSA must act:

13.1 lawfully¹⁰ – that is to say, at a minimum, within its powers¹¹ and in accordance with relevant laws;¹²

13.2 for the reasons authorised by the relevant legislation¹³ – which in the current context essentially means in the public interest;¹⁴

13.3 in a “transparent” manner¹⁵ which accords with the expectations of those holding public office.¹⁶ This, we submit, entails strict compliance with the principles in s 195 of the Constitution;¹⁷

⁹ Section 10(3) of the NERSA Act confirms that decisions by NERSA are susceptible to review by a High Court in terms of PAJA.

¹⁰ Section 33 of the Constitution, read with s 6(2)((b), (d) and (i) of PAJA and s 10(1)(a) of the NERSA Act.

¹¹ Section 10(1)(c) of the NERSA Act.

¹² Section 10(1)(a) of the NERSA Act.

¹³ Section 6(2)(e)(i) of PAJA.

¹⁴ Section 9(f) and 10(1)(b) of the NERSA Act.

¹⁵ Section 9(a) of the NERSA Act.

¹⁶ Section 9(e) of the NERSA Act.

¹⁷ Section 195(1) of the Constitution provides as follows:

“Public administration must be governed by the democratic values and principles enshrined in the Constitution, including the following principles:

(a) A high standard of professional ethics must be promoted and maintained.

13.4 independently of undue influence of instruction¹⁸ – including that of Eskom;

13.5 in accordance with the provisions of procedural fairness.¹⁹ This does not only entail that interested and affected persons be given an opportunity to comment, but also that sufficient information must be made available so that all residents of the country can make meaningful representations;²⁰ and

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- (b) Efficient, economic and effective use of resources must be promoted.
 - (c) Public administration must be development-oriented.
 - (d) Services must be provided impartially, fairly, equitably and without bias.
 - (e) People's needs must be responded to, and the public must be encouraged to participate in policy-making.
 - (f) Public administration must be accountable.
 - (g) Transparency must be fostered by providing the public with timely, accessible and accurate information.
 - (h) Good human-resource management and career-development practices, to maximise human potential, must be cultivated.
 - (i) Public administration must be broadly representative of the South African people, with employment and personnel management practices based on ability, objectivity, fairness, and the need to redress the imbalances of the past to achieve broad representation.”

¹⁸ Section 9(c) of the NERSA Act, and s 6(2)(e)(iv) of PAJA, which states that any decision would be reviewable if made pursuant to the “unauthorised and unwarranted dictates of another ... body”.

¹⁹ Section 33 of the Constitution, read with s 4 of PAJA and s 10(1)(d) of the NERSA Act.

²⁰ A decision by NERSA is administrative action which affects the public, and as such is bound by the procedural requirements in s 4 of PAJA. In accordance with that provision, NERSA appears to have opted for a public participation process which is a hybrid of a ‘notice-and-comment’ procedure; and an ‘inquiry’. In terms of the Regulations under PAJA (published under Government Notice R1022 in the Government Gazette 23674 of 31 July 2002) information must be detailed enough to enable people to make meaningful representations (regulations 3(4) and 18(3)(a)). In this regard our Courts have often referred to the approach adopted Lord Mustill in the English case of *Doody v Secretary of State for the Home Department and Other Appeals* [1993] 3 All ER 92 (HL) at 106, that in order to make “worthwhile representations” persons must be “informed of the gist” of the matter under consideration. In *Tetra Mobile Radio (Pty) Ltd v MEC, Department of Works and others* 2008 (1) SA 438 (SCA) at para 11, the principle is affirmed that it is a “basic tenet of fairness” that sufficient information must be made available to effectively take part in any process. See too *Nisec (Pty) Ltd v Western Cape Prov Tender Board* 1998 (3) SA 228 (C) at 235C, in which the Court found that a “right to a hearing does include the provision of such information which would render the hearing meaningful in that the aggrieved party is given an opportunity to know all the ramifications of the case against him and thereby is provided with the opportunity to meet such a case.” See too *Earth Life Africa (Cape Town) v Director-General: Dept of Environmental Affairs & Tourism* 2005 (3) SA 156 (C) at para 52; and *Du Bois v Stompdrift-Kamanassie Besproeiingsraad* 2002 (5) SA 186 (C) at 192-194.

13.6 in a justifiable manner (in the sense that the decision must be rationally connected to the public interest, the information available and the reasons given)²¹ and objectively reasonable.²² Of particular importance for the current submissions, NERSA must have regard to all relevant information²³ and recognise relevant information which is not before it, and which limits its ability to make any decision.

14 Eskom simultaneously bears the duty to make information available to NERSA as may be necessary for the consideration of the discretion to determine a charge for electricity.²⁴

15 In common with all organs of state, NERSA in its decision-making, including on the MYPD 2 application is required to respect the obligations imposed by the *National Environment Management Act* (“NEMA”). The ‘Principles’ set out in s 2 of the Act

²¹ Section 9(a) of the NERSA Act. See *Pharmaceutical Manufacturers Association of SA and Another: In re Ex parte President of the Republic of South Africa and Others* 2000 (2) SA 674 (CC) at para 85 found that:

“Decisions must be rationally related to the purpose for which the power was given, otherwise they are in effect arbitrary and inconsistent with this requirement. It follows that in order to pass constitutional scrutiny the exercise of public power by the Executive and other functionaries must, at least, comply with this requirement. If it does not, it falls short of the standards demanded by our Constitution for such action.”

See also *Bel Porto School Governing Body and Others v Premier, Western Cape, and Another* 2002 (3) SA 265 (CC) at paras 86-90.

²² Section 33 of the Constitution, read with s 6(2)(h) of PAJA. The requirement of reasonableness is also evident in s 10(1)(e) and (f) of the NERSA Act, which requires decisions to be based on “reasons, facts and evidence” that can be summarised and clearly explained.

In *Minister of Health and Another NO v New Clicks South Africa (Pty) Ltd and Others (Treatment Action Campaign and Another as Amici Curiae)* 2006 (2) SA 311 (CC) at para 108 it was held that while rationality involved a lower “threshold test”, reasonableness invoked a “variable but higher standard, which in many cases will call for a more intensive scrutiny”. In *Sidumo and Another v Rustenburg Platinum Mines Ltd and Others* 2008 (2) SA 24 (CC) at para 110 the Court confirmed that the approach to reasonableness was based on consideration of the questions, stated in the negative, whether a decision was “one that a reasonable decision-maker could not reach?”

²³ Section 6(2)(e)(iii) of PAJA.

²⁴ Section 14(1)(b) of the NERSA Act

describe a holistic approach to sustainable development that apply to any decision that impacts on the environment.²⁵

III. THE ABSENCE OF RELEVANT INFORMATION

16 Although Eskom’s application relates to the next three-year period, the portion of the increased tariff ear-marked for infrastructural re-generation and development is premised on, *inter alia*:

16.1 **First**, the assumption that Eskom will maintain its effective monopoly to produce the additional electrical supply required. Eskom acknowledges in this regard that its role “in providing security of supply and the extent to which it will build new capacity needs to be clarified”. It however continues that it would be “prudent to proceed on the basis that Eskom will continue with its current capital expansion programme”.²⁶ We submit that a more prudent approach would be to await careful

²⁵ Key provisions in s 2 include: Section 2.4(a)(ii) ...that pollution and degradation of the environment are avoided, or, where they cannot be altogether avoided, are minimised and remedied; Section 2.4(d) Equitable access to environmental resources, benefits and services to meet basic human needs and ensure human wellbeing must be pursued and special measures may be taken to ensure access thereto by categories of persons disadvantaged by unfair discrimination. Section 2.4(e) Responsibility for the environmental health and safety consequences of a policy, programme, project, product, process, service or activity exists throughout its life cycle. Section 2.4(l) There must be intergovernmental coordination and harmonisation of policies, legislation and actions relating to the environment. Section 2.4(m) Actual or potential conflicts of interest between organs of state should be resolved through conflict resolution procedures. Section 2.4(n) Global and international responsibilities relating to the environment must be discharged in the national interest. Section 2.4(p) The costs of remedying pollution, environmental degradation and consequent adverse health effects and of preventing, controlling or minimising further pollution, environmental damage or adverse health effects must be paid for by those responsible for harming the environment.

²⁶ MYPD 2 application, para 7, p 8; and para 8.8, p 50.

consideration and clarification of this issue. This is so particularly in view of government's public commitment to the participation of independent power producers (IPPs), including RE IPPs.

16.2 Secondly, Eskom's own anticipations of electricity demand over the next 10 years, supposedly contained in a report of June 2009, and which "forms the basis for the MYPD 2" application.²⁷ Such a projection should again be made in the IRP and IEP.

16.3 Thirdly, the "target price" is based on "generation choices" made by Eskom.²⁸ It appears these choices are contained in Eskom's own "Capacity Plan".²⁹ This plan has not been made available but supposedly takes cognisance of the need to meet carbon dioxide targets through alternative sources of energy generation and a long-term mitigation scenario adopted by the cabinet in July 2008.³⁰ However, it appears that all new generation capacity plans until 2017 relate to primarily additional coal fired power stations only.³¹ This choice is made despite the acknowledgement that the country's international obligations to reduce carbon emissions are unpredictable.³² Again, we submit that this decision is one that must be contained in the IRP and IEP. Eskom's views in this regard may be noteworthy, but cannot be decisive.

17 In addition, Eskom's application acknowledges that its proposals are compromised by uncertainty regarding the extent to which government may elect to subsidise capital

²⁷ MYPD 2 application, para 7, p 19.

²⁸ MYPD application, para 1, p 1 n1; para 2, p 8 n3.

²⁹ MYPD application, para 7, p 19.

³⁰ MYPD application, para 3, p 10.

³¹ MYPD application, para 7.2, p 23.

³² MYPD application, para 7.3, p 24.

expenditure directly; the extent to which other methods may be available to raise loans or equity; and the extent of proposals for the poor.

18 In light of the above, we submit that any increase in Eskom’s tariff which is premised on the need to promote infrastructural development, cannot be meaningfully considered in anticipation of the consideration of all the above issues in the IRP and IEP. In this regard Eskom accepts that its own role in such infrastructural development, and the choice of technology, must be determined from the IRP.³³

19 Eskom’s answer appears to be that NERSA should proceed because the tariff application is consistent with a draft version of the IRP (developed by Eskom, NERSA, government departments and “other stakeholders”) and will be amended based on a final version.³⁴

20 We respectfully disagree. The IRP and IEP must be subject to their own public participation processes. Preliminary indications based on a draft version would thus be wholly unreliable. Furthermore, making a decision which relies on a draft version of the IRP would indicate a worrying assumption that the final IRP will not be amended in light of contributions during the public participation process.

21 We must also accentuate our view that these “country choices” cannot be relegated to the position as adjunct considerations to the MYPD 2 application. By this we mean that these issues (i.e. such as the need for infrastructural development; Eskom’s role; how they will be financed; and the technologies to be used) must be carefully considered in their own right. They cannot be considered merely in passing in order to approve Eskom’s tariff application.

³³ MYPD application, para 7, p 18.

³⁴ MYPD application, para 7, p 19.

22 In the circumstances we submit that the multi-year price determination in its current form is premature, and furthermore:

22.1 would be unlawful and *ultra vires* the powers of NERSA, in that NERSA will be employing assumptions of its own (or of Eskom) which should be determined in the IRP and IEP;

22.2 is tantamount to accepting the dictates of Eskom regarding the need for additional electricity production and the methods which must be adopted to generate that electricity;

22.3 would not be transparent or in the public interest – in that huge amounts of money would be made available to Eskom in the absence of certainty about the capital expenditure required; that necessary capital expenditure will be carried out by Eskom; or that the production choices made by Eskom are those which best suits the needs of the country and the environment; and

22.4 would be neither rational nor reasonable – in that NERSA would be making a decision that finances a subset of options that may or may not ultimately be included within the IRP and IEP before those documents have been subjected to public participation processes in their own right.

IV. PROCEDURAL FAIRNESS

23 As noted above, procedural fairness entails the requirement that interested and affected persons must be supplied with adequate information. In the current context, we submit that this would require Eskom to provide sufficient supporting documentation which

would allow interested and affected persons to validate several key assumptions which underpin the tariff application.

24 In particular, based on the MYPD 2 application alone, the following documents can be identified, which we submit should be made available to all interested and affected persons (and not only to NERSA):

24.1 The draft IRP, which appears to have been drafted by Eskom with inputs by NERSA, government departments and other (unnamed) stakeholders;

24.2 Eskom's review (of June 2009) regarding anticipated electricity demand for the next 10 years; and

24.3 Eskom's "Capacity Plan", containing its determination as to the choices as to the desirable mixture of methods of electricity production.

25 In addition, interested and affected persons should be supplied with any data and information collected pursuant to mechanisms envisaged and created under s 3 of the Energy Act.

26 All of the above information must, we submit, be supplied immediately and without delay as an incident of the procedural fairness rights of interested and affected persons.³⁵ Current jurisprudence provides for practical mechanisms that balance adequate recognition of

³⁵ This information is not, and need not be sought in terms of the requirements of the *Promotion of Access to Information Act* 2 of 2000 ("PAIA"). These documents are sought pursuant to the requirements of procedural fairness alone, which entitles interested and affected persons access to as much information as is necessary to meaningfully participate in this public participation process. Cf. *Tetra Mobile, supra*, at para 11 and 13.

sensitivities concerning commercially sensitive information with the right to procedural fairness.

27 Idasa would encourage NERSA to consider constituting a small task-team comprising representatives of interested and affected persons to validate the data and assumptions in and underpinning the MYPD 2 application. We are informed that comparable ‘technical validation’ process has been used by regulators in India and has proven useful to: require transparency; enhance efficiency and meaningful participation; and build a better case for appropriate tariffs. NERSA has also used a similar mechanism in the recent past when, for instance, it developed a renewable energy feed-in tariff. This resulted in a relatively robust mechanism with wide-ranging support and resultant legitimacy.

28 At a minimum, we would suggest that public workshops should be held in anticipation of the public hearings, to address and attempt to clarify some of the complex technical issues raised in Eskom’s application, and in this and other submissions.

29 We would further repeat that the invitation for public participation thus far, while reportedly issued in several official languages, appears largely limited to documentation in English available on the internet or at municipal offices, and seems to us insufficient considering the scope and impact of Eskom’s application. NERSA has taken important steps to make crucial information available to the public, including the MYPD 2 application and its issue paper regarding the MYPD 2. However, dissemination of limited information as described above may not be adequate for particularly grass roots stakeholders who should ideally have this information in a readily understood form well in advance.

Eskom's Demand Forecast³⁶

30 There is very little information included in the MYPD 2 about the basis for projected demand for electricity, although it does propose three ranges of demand (anywhere from 15,000 to more than 27,000 MW by 2020). The demand projections may, however, be overly optimistic as they do not consider the impacts of increased prices on electricity demand, nor consider sufficiently ambitious sustained improvements in energy efficiency. Correspondingly, the new infrastructure requirements to meet this demand may be too ambitious.

31 We understand that NERSA has requested a study of the economic impacts of the MYPD to help inform its decision-making process, which should shed new light on the likely impacts of price increase on GDP and, in turn on demand for electricity, since this issue does not appear to be addressed directly in Eskom's forecast. The demand forecast is primarily based on "bottom up" methodologies, through consultation with customers about their future energy requirements. While the forecast was compiled in August, the timing of the underlying consultation has not been disclosed. The timing of course affects its accuracy. Large customers are almost certainly anticipating some price increases, but a price increase of 45% per annum seems far higher than consumers would necessarily anticipate (anecdotal evidence suggests that anticipated cost increases would have been closer to 30%, which would seem broadly consistent with NERSA's electricity cost projections as reflected in its reasoning for its interim MYPD decision.³⁷)

³⁶ Note, this section responds to question 15 posed in the NERSA issues paper on the MYPD 2

³⁷ National Energy Regulator of South Africa, "Reasons for Decision in the matter regarding Eskom Price Increase Application 2009 by ESKOM HOLDINGS LIMITED" 17 Sep 2009.

32 Historically, we understand that elasticity has been measured at around -0.2. However, this figure was derived based on small changes. The National Electricity Response Team (“NERT”) commissioned analysis of increased electricity prices on the South African economy³⁸ suggested that:

32.1 One year 27% increase – electricity consumption falls by 5% - translating into an elasticity of -0.18

32.2 One year 72% increase – electricity consumption falls by 10% - translating into an elasticity of -0.138

33 If even conservative estimates of price elasticity are factored in to the demand projections, it seems likely that the need for new generation capacity would reduce significantly. Table 1 below estimates the possible effects. We should stress that these estimates are not precise, but instead illustrative to demonstrate that further exploration of this issue is urgently needed.

Table 1 Reduction in Build Programme and projected sales revenue from price elasticity proposed by NERT.

Year	Reduction in Sales	Reduction in Sales Revenue (in 2009 Rand)	Reduction in Build programme required
2010/11	2903 TWh	R2.9 Bn	560 MW

³⁸ Miriam Altman, Rob Davies, Andrew Mather, Dave Fleming, Howard Harris. *The Impact of Electricity Price Increases and rationing on the South African Economy: Final Report to the National Electricity Response Team (NERT) Economic Impact Task Team*. Pretoria: Human Sciences Research Council Center for Poverty Environment and Growth and WSP Consulting Engineers Energy Management. July 2008.

2011/12	6266 TWh	R6.2 Bn	1200 MW
2012/13	9398 TWh	R9.3 Bn	1800 MW

34 Underpinning Assumptions

- The Load factor of 76.55% of 2009 does not change through 2013.
- The Existing System Capacity is 43.385 GW
- Large Customers anticipate a price increase of 30%, so elasticity is factored for the additional 15% increase. Only increases above projected CPI dampen projected demand.
- The lowest price elasticity figure determined by NERT of -0.138 was used.
- Loss factors were deduced from the Annual report as follows 2010/11 – 9.97%, 2011/12 – 9.73%, 2012/13 – 9.6%

35 NERSA’s proposal to introduce an inclining block rate tariff also seems poised to offer a new price signal to incentivize reduced consumption of electricity, while also offering potential benefits in terms of protections for the poor.)

Recommendations to NERSA

36 Since the demand forecast underpins the new capacity investment decisions listed in the MYPD 2 it is essential for NERSA to have as much confidence as possible in both the forecast and the process by which it was derived. It is necessary to:

- 36.1 Clarify the process by which the demand forecast was developed, and make the assumptions that underpin it transparent
- 36.2 Clarify the impact of demand elasticity on projected sales and explain the links between the demand forecast and the energy efficiency

The Cost and Reliability of Coal³⁹

37 Eskom's coal-fired power stations have run at higher than normal capacity to meet demand, and as a result additional coal has to be purchased above and beyond the long term contracts they already have in place. In addition, Eskom projects that coal prices will increase over the coming years due to a higher demand for coal from the export market. It is clear that security of coal supply has been a serious problem for Eskom, in part as a result of financial pressures that have reduced coal stockpiles, as well as the need to diversify sources of coal supply through short term contracts with smaller suppliers.

38 The analysis included in MYPD 2 seeks to indicate that Eskom's costs of coal procurement are, despite recent spikes and escalation, still lower than global costs, by linking fluctuations in export prices of coal at the Richards Bay Terminal with the prices Eskom has been paying domestically. However, the grades of coal used domestically and exported are different. The average calorific value of coal sold for domestic energy production is 4330 kcal/kg⁴⁰, whereas the energy content of export grade coal is usually greater than 6000kcal/kg. This comparison therefore does not seem appropriate. It is plausible that increased demand for export could bring down the price for domestic grade coal as it is produced as a by-product.

39 Of Eskom's 9 long-term contracts for coal, 6 are cost plus and 3 are fixed price. The structure of the cost plus contracts with a guaranteed Return on Investment being paid, do not incentivise efficiencies in production. Given that Eskom purchase almost two thirds (by mass) of coal sold domestically, Eskom have significant power in the domestic coal

³⁹ Note, this section responds to questions 17, 18, 19 posed by the NERSA Issues Paper on the MYPD.

⁴⁰ Anglo American PLC, "Coal Fact Book", 2008

market⁴¹. There continues to be very little transparency about the terms on which Eskom is sourcing coal.

40 NERSA should investigate whether Eskom is doing everything possible to keep the costs of coal procured from private companies as low and competitive as possible given its dominant role in the domestic market. The terms of procurement also do not seem clear: for example, competitive bidding processes have proven to reduce costs significantly in other countries, while also increasing the transparency of the contracting process. It is particularly important to ensure Eskom have a strategic view of how to use this power over the next 5 years as they attempt to transition away from short and medium term to longer term contracts.

41 The MYPD 2 proposes Eskom will need to recoup almost R10 billion until 2015 to invest in roads, chiefly in the Mpumalanga region. It also notes that municipal governments are receiving a levy to maintain roads, but they are failing to invest in the requisite road maintenance. Essentially, the proposal seems to ask consumers to pay twice for road maintenance.

Recommendations to NERSA

- More transparency about the procurement and contracting systems for coal supply is needed
- Responsibility for road maintenance needs to be clarified. Consumers should not be asked to pay twice.

⁴¹ ERC, Unpublished Coal Research, 2009

Role of Renewable Energy⁴²

42 In general, the deployment of renewable energy in South Africa has been slow relative to the vast potential that exists in the country. Despite a target, in 2003's Renewable Energy White Paper, of 10,000 GWh of renewable energy, so far only 296GWh from renewable energy has been produced (DME 2009). The assumptions underpinning the cursory approach in the application to renewable energy are not made transparent in the submission, and would seem to be unfounded given the international electricity sector experience with renewable energy. They seem particularly questionable given the demonstrated disruptions in supply of coal, and its escalating costs

43 In justifying its proposed capacity additions on the basis of ensuring a 15% reserve margin, Eskom states that renewable energy cannot be counted against reserve margin capacity at all, as a result of its intermittency. Two points are worth considering here: few technologies offer 100% availability, including conventional coal fired base load plants. Yet some forms of renewable energy, notably concentrating solar thermal plants, have the potential to act as both base and peaking plants because of their onsite heat storage.⁴³ NERSA's own REFIT guidelines⁴⁴ include load factors of 27% for wind, 80% landfill gas methane, and 40% for parabolic trough CSP.

44 The role of renewable energy in the MYPD 2 application is largely limited to the discussion around non-Eskom generation and revenue requirements. In the revenue requirements that Eskom sets out, the renewable energy IPPs are not disaggregated from

⁴² Note, this section responds to questions questions 16 and 22 posed in the NERSA Issues Paper on the MYPD

⁴³ Andrew Marquard, Bruno Merven, Emily Tyler. *Costing 15% renewable electricity by 2020*. Cape Town: Energy Research Centre. 2008.

⁴⁴ National Energy Regulator of South Africa. *Renewable Energy Feed-In Tariff Guidelines: 20 Reasons for Decision*. March 2009.

the possible IPPs in total. It is therefore not clear how much of the new generation capacity is expected to come from renewable energy.

45 NERSA's efforts to develop a Renewable Energy Feed-in Tariff (REFIT) represented an important step to jumpstart investment in these technologies. Underlying analysis completed in developing the REFIT suggested that over time the costs of renewable energy were indeed likely to decline. Yet the Eskom MYPD 2 application only partly includes the REFIT Phase 1 capacity, and the REFIT phase 2 is not included at all.

46 It is worth noting, as MYPD 2 does not, that the World Bank administered Clean Technology Fund has recently committed \$250 million in support of the proposed 200 MW Eskom Upington Concentrating Solar Thermal Power Facility, and \$100 million in support of the 100 MW Ceres wind farm.⁴⁵ An additional \$350 million and \$300 million respectively in public financing have been committed by the African Development Bank, the International Bank for Reconstruction and Development, the European Investment Bank, and the German KfW Bankengruppe for these two projects. Indeed, in the midst of the economic recession, the international renewable energy industry has demonstrated sustained growth, and financing for renewable energy seems relatively accessible based on this recent experience.⁴⁶

47 Eskom's MYPD 2 does state that it is "committed to contributing to the overall country strategy taking into account affordability constraints that may result from this price application. Eskom has used the emission target contained in the Long Term Mitigation

⁴⁵Department of Environmental Affairs. *Draft Clean Technology Fund Investment Plan for South Africa*. Pretoria. October 2009; DEAT press release on SA Clean Technology Investment Plan

⁴⁶ REN21. 2009. Renewables Global Status Report: 2009 Update. Paris: REN21 Secretariat. Available at <http://www.ren21.net/globalstatusreport/g2009.asp>.

Scenario (LTMS) as a reference in developing a scenario for a plan that the country should aspire towards”⁴⁷. It is important to acknowledge that Eskom has taken a notable step by placing its capacity expansion plans in the emerging context of potential constraints, when compared with the assumptions underpinning past planning and tariff increase requests.

48 However the capacity expansion choices that Eskom has proposed, as well as its demand management options, do not seem to reflect the mitigation options for the electricity sector identified in the LTMS scenarios, and would seem to imply that electricity production will continue to constitute a large share of South Africa’s future GHG emissions. Its investment decisions are likely to substantially constrain South Africa’s ability to reach the LTMS objectives of emissions peaking and declining by 2030.⁴⁸. Given that the LTMS have been approved by Cabinet, and provide a basis on which South Africa is assuring the world that it will do its part to help the planet respond to the global challenge of climate change, this would seem to be a significant risk.

Recommendations to NERSA

- Renewable energy options require more serious consideration within the MYPD 2, particularly given the escalating costs and unreliability of coal fired power generation, which are further compounded by their local and global environmental impacts including water stresses and pollution, air quality, and greenhouse gas emissions

⁴⁷ MYPD application, para 2, p 23.

⁴⁸ Scenario Building Team. *Long Term Mitigation Scenarios: Scenario Document*. Pretoria: Department of Environment Affairs and Tourism. October 2007, p 25 and 27. The LTMS draws attention to the “the large gap between where our emissions are heading and where they need to go” (25), even without considering the added emissions from Medupi and Kusile, and states that “if the peak is too high, the decline is harder to achieve – likewise if the peak comes too late” (27). Given the challenges contained in the LTMS already, the added emissions from the new plants will considerably increase the difficulties of lowering emissions.

- These options should be reconciled with the analysis and policy objectives that underpin the REFIT, which include enhancing energy security for South Africa and reducing environmental impact, while helping foster a new renewable energy industry for the nation⁴⁹

Energy Efficiency⁵⁰

49 NERSA has raised questions in its issue paper on the MYPD 2 application about whether the proposed Eskom administered demand side management programme is an appropriate use of resources raised through the tariff increase request. Energy efficiency is an urgent priority for South Africa given supply shortfalls. Negawatts saved through energy efficiency and DSM will be far less costly than the new MW that would be added through the proposed capacity building programme.

50 For example, independent modelling by researchers at the Energy Research Centre at the University of Cape Town building on the analysis underpinning the LTMS has highlighted the potential for energy efficiency to reduce demand enough to consider postponing some new proposed plants, especially if supplemented with more use of renewable energy technologies. The analysis further suggests that by delaying the need for the next power plant, there is a requirement in 2013 of “40% less investment, which shrinks to around 12% from 2015 onwards. The obvious implication of this is that a renewable target implemented with an efficiency programme would impose far lower investment costs on the power sector”.⁵¹

⁴⁹ Department of Minerals and Energy. *White Paper on Renewable Energy*. November 2003. And Department of Minerals and Energy. *White Paper on Energy Policy*. 1998.

⁵⁰ This section corresponds to questions 24, 25 and 26 posed by the NERSA Issues Paper

⁵¹ A, Marquard, B. Merven, & E. Tyler, “Costing a 2020 target of 15% renewable electricity for South Africa”, WWF: 2008. The research models the possibility of producing 15% of electricity from

51 We note with concern that the full potential and impact of the proposed programme are not discussed in any detail. The scope, ambition and proposed expenditures for the proposed DSM Programme are not clear. The MYPD does give a general outline of possible future costs, predicting an escalation in these costs, and including grants for customers' implementation costs of DSM projects, energy efficient equipment, project measurement verification, media costs, and fund administration. However no budget is included, and it is not clear how these funds will be spent, or how the impact of these investments will be monitored and evaluated. Eskom has been implementing DSM for many years, with limited results by most accounts. Yet there is little information on how the proposed new programme would address prior limitations, and build on lessons learned.

52 The full potential for energy efficiency in South Africa is poorly understood on a technical level, and is an issue in urgent need of further and more systematic analysis. Over the past year, however, steps have been taken to improve understanding of the options at hand. Analysis produced for the National Electricity Response Team in 2008 suggested that there were immediate opportunities to save more than 6TWh in the manufacturing sector alone, and potentially 11TWh from increased efficiency in commercial office parks, with other retail sectors able to reduce consumption by up to 10%, and more than 8TWh from residential savings; and potential consumption savings of 22TWh, and 4300MW capacity through 2010.⁵² The DSM programme will achieve 8.4TWh cumulative savings in

renewable energy – concentrated solar power and wind – by 2020, coupled with energy efficiency measures that reduce total demand for electricity by 9%. The efficiency obtained, coupled with the renewable build, suggested that the construction of some coal fired infrastructure, such as Kusile, could be postponed until after 2020

⁵² Altman et al, 2008.

consumption by 2012. The cumulative DSM savings over MYPD 2 (Table 11) amount to 1076MW, which are only a quarter of the potential savings identified in the NERT analysis.

53 From a governance perspective, the management of the EE-DSM programme by Eskom is itself highly problematic. There is an obvious conflict of interest in expecting the utility to actively manage lowering demand when its financial stability depends on increasing sales of electricity. This conflict is exacerbated by the current financing shortfall that Eskom is facing. In the case of both the DSM and the proposed Power Conservation Programme, we would suggest that an independent governing body should be established to review programme applications, and monitoring the impact of programmes supported. These bodies should operate in accordance with the highest standards of transparency, reporting in real time on the programmes supported and their impact.

54 An underlying problem is that sustained sales of electricity at higher prices are essential for Eskom to recoup its capital expenditure programme to build new infrastructure, and there is an inherent conflict of interest between reducing demand to the maximum potential and the Eskom's revenue structure. NERSA should explore regulatory methods that "decouple" Eskom's revenues from increased sales of electricity, to create a supportive framework for Eskom to pursue efficiency in a more ambitious way over the long term.

Recommendations to NERSA

- More information on the costs, impacts, and monitoring and evaluation frameworks for the EE-DSM programme are urgently needed
- Explore whether more ambitious energy efficiency programmes could be an alternative to some of the construction of costly new coal fired generation capacity.
- In the case of both the DSM and the proposed Power Conservation Programme, an independent governing body could be established to review programme applications, and monitoring the impact of programmes supported. These bodies should operate in accordance with the highest standards of transparency, reporting in real time on the

programmes supported and their impact, and actively reach out to stakeholders in the design and implementation of programmes.

Access to reliable energy for the poor⁵³

55 Access to reliable electricity for the poor is an enduring social and economic challenge for South Africa. The principal mechanism proposed by Eskom to address this challenge is an increase in the Free Basic Electricity (FBE) allocation.

56 In principle, the proposal to increase the FBE allocation seems well worth further consideration, although such measures have implications for energy policy in South Africa, and its implementation will impact a wide cross section of stakeholders beyond Eskom. Consequently, before expanding the programme, the limitations of the existing programme should be assessed and addressed.

57 There is evidence to suggest that the existing FBE scheme could be better targeted. The collection of data on who is accessing FBE allocations is poor at best, and much better information about impacts is urgently needed in order to better target this subsidy.⁵⁴ Some municipalities are not able to provide the FBE because of lack of funds, or the lack of appropriate use of these funds for electricity. Another problem is that of shared connections amongst multiple households, which may result in a lack of eligibility for the FBE (because higher volumes of use precludes provision of FBE), and individual households not each receiving the 50kWh for which they should qualify. Issues of

⁵³ Note, this section responds to questions 34 – 38 posed by the NERSA Issues Paper on the MYPD.

⁵⁴ Eugene Visagie. *The supply of clean energy services to the urban and peri-urban poor in South Africa*. Energy for Sustainable Development , volume 12 No. 4, December 2008.

targeting are thus paramount to addressing energy poverty through FBE, but exact figures are unknown.

58 We would also note that increasing the allowance of free basic electricity does not address issues of access to electricity for those who are not presently served by existing or planned infrastructure service. The focus on investment in new infrastructure to service existing customers, and prospective new industrial users of electricity as the priority for the investment programme, raises issues of equity.

Recommendations to NERSA

- An assessment of options to better target the FBE, and to collect better information on the collection and impact of the FBE allocation is needed
- The impact of proposed Eskom programmes on those who presently lack access to electricity should also be included