

Sustainable Energy Briefing 24: South Africa's Nuclear Procurement Process

Published December 2012

This briefing explores the constitutionality of the proposed large-scale procurement of nuclear energy. The Department of Energy is obligated, under section 217 of the Constitution, to ensure that any procurement is “fair, equitable, transparent, competitive and cost-effective.” The Public Finance Management Act likewise requires that departmental financial decisions be efficient, accountable, and cost-effective.¹ The briefing outlines the extent to which the proposed process is not compliant with the Constitution and the Public Finance Management Act, locates the concerns within previous procurement corruption, and makes recommendations.

Table of Contents

I. Introduction	Pg. 1
II. Transparency and Governance in the procurement process	Pg. 2
III. Cost-effective Procurement	Pg. 4
IV. Lessons from the Arms Deal for large-scale procurement	Pg. 5
V. Conclusion	Pg. 8

I. Introduction

The nuclear procurement vision of the Department of Energy proposes a fleet of nuclear power stations will involve a level of investment unprecedented in South Africa. Such a program could potentially create an onerous financial burden on the State for many decades to come.

Minister of Energy Dipuo Peters has made it clear that, by the end of this year, the Department intends to invite bids for the construction of up to six nuclear reactors along South Africa's southern coastline. It will be the biggest state tender in South Africa's history. Cost estimates vary, but even a conservative R300-billion estimate is five times larger than the infamous arms deal². Factoring in typical time and cost overruns, as well as the associated runaway interest repayment rates, one energy economist calculated that the cost could exceed R1.4-trillion – roughly double the country's projected tax revenue for the 2011-2012 financial year³.

South Africa has a dubious history with regard to the procurement of megaprojects. The spectre of the arms deal, under investigation by an official commission, still haunts the government. Even now, an investment company part-owned by the ANC is building boilers for two power stations under state contracts that will see billions flow back to the ruling party.

There are well-founded fears that a new nuclear-build tender will ignite a feeding frenzy, opening up unprecedented opportunities for corruption, political patronage and the abuse of state power for party political gain.

¹ PFMA, sections 38, 45, 51, and 57

² Mail & Guardian; Editorial: SA Headed for more nuclear fallout, 3 August 2012

³ Ibid

II. Transparency & Governance in the procurement process

The transparent use of the state's resources is constitutionally required by sections 195, 215 and 217 of the Constitution. The PFMA also explicitly requires departments and public entities to have transparent systems for procurement.⁴ The state has a duty to foster transparency through the provision of timely, accessible and accurate information to the public.⁵

This constitutionally and statutorily required transparency is so far lacking in the proposed procurement process for nuclear energy. Only minimal information has been provided to the public, contrary to the imperatives of section 195. The nuclear expansion programme – a multi billion rand project – was not discussed in the 2011 and 2012 Medium Term Budget Policy Statement, the Minister of Finance's 2012 Budget Speech or the President's 2012 State of the Nation address.⁶ The National Nuclear Energy Executive Co-ordinating Committee, a body created in 2011 to lead and oversee the nuclear expansion, has not yet met.⁷ Even state-owned entities such as the National Nuclear Regulator,⁸ the South African Nuclear Energy Corporation,⁹ and Eskom¹⁰ have protested the lack of guidance provided by the Department of Energy regarding nuclear procurement. Yet Minister Peters has indicated that the government has budgeted R300 billion for the project and that key decisions will be finalized before the end of the year.

Further, the Department of Energy has specifically excluded nuclear energy from regulations governing the procurement of new generation capacity.¹¹ Those regulations set minimum standards for power purchase agreements, provide a framework for the implementation of a procurement programme with an independent power producer, and facilitate the planning for new generation capacity through feasibility studies. There has been no promulgation of similar regulations to govern nuclear power, in spite of the fact that the IRP 2010 committed the government to finalise the regulatory framework for the procurement of non-Eskom generated power as well as regulations for the implementation of the IRP 2010.¹²

Finally, the Department has refused to cooperate with civil society groups that seek transparent administration of this process. In February 2012, Earthlife Africa wrote a letter questioning the constitutionality of the procurement of the entire fleet of nuclear reactors at one time. The letter asked for clarification of the Department's intentions regarding the number of reactors and amount of energy to be procured, and when such procurement would take place. In June 2012, Earthlife Africa submitted a PAIA request to learn the results of a readiness and safety assessment of South Africa's nuclear infrastructure. Greenpeace Africa and Koeberg Alert Alliance also submitted PAIA applications for this information. None of these requests received a reply from the Department.

In the early 90s, Trevor Manuel, then the head of the ANC's economic desk, said at a conference on the future of the nuclear industry: "We shall not tolerate circumstances in which policy on issues as critical as a

⁴ PFMA, sections 38 and 51

⁵ Constitution, section 195

⁶ National Treasury, 2011 Medium Term Budget Policy Statement, 25 October 2011; 2012 Budget Speech. Minister of Finance Pravin Gordhan. 22 February 2012; Jacob Zuma, President of the Republic of South Africa. State of the Nation Address. 9 February 2012.

⁷ Terence Creamer. "SA sets up nuclear oversight body, to name participants 'in due course.'" Engineering News, 28 November 2011; Terence Creamer. "SA's assessment of nuclear readiness to be handed to IAEA for review." Engineering News, 29 May 2012.

⁸ Energy department clarifies roles of Necsca and NNR. Business Live. 29 March 2012

⁹ Ibid

¹⁰ Terence Creamer. "Eskom calls for urgent 'guidance' on its role in energy plan." Engineering News Online, 22 May 2012.

¹¹ GNR 399 of 4 May 2011: Electricity Regulations on New Generation Capacity

¹² IRP 2010, clause B.22 and Appendix E

nuclear programme be confined to experts in dark, smoke-filled rooms. The debate must be public and the actions transparent.”¹³

However, in the final White Paper, published in July 1998, specific reference was made to the expansion of the nuclear industry, which, it stated, would only occur in the context of: “an integrated energy policy planning process with due consideration given to all relevant legislation, and ... subject to structured participation and consultation with all stakeholders.”¹⁴

The White Paper also signalled that there would be some restructuring of the nuclear industry “necessary to ensure the environmental sustainability and cost-efficiency of South Africa’s energy economy, while seeking maximum benefit from historical investment.” This restructuring would be undertaken in ‘a participatory fashion’, and, before any final decision was made on the future of Koeberg, there would be a full-scale investigation into its financial and technical performance ‘made available for public scrutiny and comment’.¹⁵

However, taken together with Trevor Manuel’s earlier pronouncements guaranteeing transparency, these promises in the White Paper have not materialised. There has thus been no broad stakeholder consultation on the future of the nuclear industry; nor has this applied specifically to the future of Koeberg, as promised in the 1998 White Paper. Most of the decision making on the industry has been centred on the DME (Department of Energy since May 2009), and the Department of Public Enterprises, which oversees Eskom. The decision making has been from the top down, without any significant stakeholder participation. What appears to be government policy has been formulated without any policy debate on these matters having taken place within the policy arenas or local structures of the ruling ANC party.¹⁶

This lack of transparency is symptomatic of how the executive branch of government has come to dominate national policy making. Cabinet has become susceptible to the special pleading and some of the false claims of the industry.¹⁷ As a result, the nuclear lobby has retained its highly subsidised place in the sun at the expense of cleaner technologies, human health and the environment.¹⁸

¹³ Environmental Monitoring Group (EMG) and African National Congress (ANC) Western Cape Science and Technology Desk, The nuclear debate: Proceedings of a conference on nuclear policy for a democratic South Africa, Cape Town, 11–13 February 1994, Cape Town: EMG, 1994, 5.

¹⁴ South Africa, Department of Minerals and Energy (DME), White paper on the energy policy of the Republic of South Africa, Pretoria: DME, 1998, section 7.2.iv.

¹⁵ DME, White paper on the energy policy of the Republic of South Africa, 1998, sections 7.2.iii, v.

¹⁶ David Fig; ISS Paper 210: Nuclear energy rethink? The rise and demise of South Africa’s Pebble Bed Modular Reactor; April 2010

¹⁷ Numerous examples of the industry’s special pleading exist. These include the notions that South Africa’s industrial path requires nuclear energy, that renewable energy cannot service the country’s base energy load and that an end to state subsidies would undo the industry’s required research and development efforts. These arguments were reflected in many ministerial statements, particularly those of ministers Erwin, Mlambo-Ngcuka, Sonjica, Xingwana, and Hogan. An example of the impact of the lobby on government took place in April 2005. Watchdog organisation Earthlife Africa had informed the media of the existence of an unfenced radioactive calibration centre in a dairy farming area close to NECSA headquarters at Pelindaba. Earthlife was subsequently attacked for doing this by the then minerals and energy minister, Phumzile Mlambo-Ngcuka, who threatened to pass legislation outlawing scaremongering and signalling government’s intention to place more stringent controls over the public pronouncements of NGOs. President Mbeki endorsed the minister’s response. Within a few days the NNR confirmed that indeed radioactivity was emanating from the site and ordered NECSA to take appropriate precautions to impede public access, thus vindicating Earthlife’s position. It is unlikely that the minister and president would have responded on this matter without considerable pressure from the industry.

¹⁸ David Fig; ISS Paper 210: Nuclear energy rethink? The rise and demise of South Africa’s Pebble Bed Modular Reactor; April 2010

III. Cost-effective procurement

The state is required to choose the best-cost option for procurement by a number of constitutional provisions. Section 217 of the Constitution requires procurement to be “fair, equitable transparent, competitive and cost-effective. Section 195 of the Constitution mandates that public administration promote the “efficient, economic and effective use of resources.” Section 215 of the Constitution requires that the budgets and budgetary processes promote “transparency, accountability and the effective financial management of the economy, debt and the public sector.” PFMA sections 38, 45, 50 , 51, 57 all place additional duties on the state to act in a cost-effective and economical manner.

The DOE is basing its decision to procure nuclear energy on the IRP 2010-2030, a document that contains both incomplete and outdated information. The determination of the cost of nuclear power in the IRP 2010 is inadequate:– it does not take into account the full life cycle costs of nuclear reactors, which can amount to billions of rand per reactor. A full appraisal of all life cycle costs of nuclear power includes waste management, decommissioning, project financing, insurance, and operational costs.

The dramatic expansion of the nuclear program will have effects throughout the nuclear regulatory structure and will require expenditure beyond the simple construction of new nuclear reactors. Firstly, the CEO of the NNR said that the proposed nuclear build would require the regulator to increase technical capacity by 50 percent. He noted this increase would require a proportional increase in the NNR’s budget¹⁹. Treasury’s allocations to the NNR, however, are stable through 2014²⁰.

Secondly, the Fukushima nuclear disaster and the state’s Integrated Nuclear Infrastructure Review led to changes in nuclear safety that will increase the cost per reactor to build and maintain.

As a result of post-Fukushima safety assessments at Koeberg and Safari-1, the NNR recommended a number of improvements to reduce risk and manage accidents²¹. These improvements will have to be incorporated into the design of any new reactor. The NNR has also adopted requirements that must be met to gain a future nuclear authorization, for example, new testing and maintenance provisions.

These new safety measures are unaccounted for in the IRP 2010.

South Africa recently undertook an Integrated Nuclear Infrastructure Review (INIR), a readiness assessment scheduled for completion by May 2012²². The review measures South Africa against the International Atomic Energy Agency’s milestones for nations engaged in nuclear power. The INIR explores a wide range of topics, including “South Africa’s policy and political position, nuclear safety, management, legislation, funding and financing, safeguards, regulatory frameworks, radiation protection, electrical grid capacity, human resource development, siting and support facilities, environmental protection, emergency planning, security and physical protection, the nuclear fuel cycle, radioactive waste, industrial involvement and procurement.”²³

The INIR will provide information on improvements required to bring the nuclear infrastructure into compliance with international standards. This could include changes in the electrical grid, increased safety measures at nuclear plants, or additional environmental protections. The DOE has not released the

¹⁹ Sarah Wild. “Nuclear build ‘needs tougher regulator.’” Business Day, 15 June 2012.

²⁰ Sarah Wild. “Nuclear build ‘needs tougher regulator.’” Business Day, 15 June 2012.

²¹ National Nuclear Regulator. Media briefing on measures taken to strengthen our safety regime and nuclear power plants operations post Fukushima-Daiichi nuclear accident. 14 June 2012.

²² Press release, Department of Energy. Role clarification for State Owned Entities in the nuclear build programme. 29 March 2012.

²³ Minister Dipuo Peters. New Age Business/SABC breakfast briefing. 31 May 2012.

suggestions of the INIR to the public, even in the face of PAIA requests. However, any improvements and their associated costs must be included in the pricing of a nuclear programme.

Thirdly, the IRP 2010 does not factor in the probability or the cost of a nuclear disaster and the creating of emergency plans. The chances of a nuclear disaster simply cannot be ignored when weighing the value of nuclear power against its potential costs.

Lastly, the Minister of Finance has acknowledged that infrastructure projects have often experienced “significant cost over-runs”²⁴, a history that required improved planning, costing, and project management. The rest of the world has seen these types of overruns in nuclear power projects specifically. Generation III nuclear technology, which the IRP 2010 seems to promote²⁵, has been beset with cost overruns²⁶. This likelihood should be accounted for in the costing process.

The IRP 2010 explicitly acknowledged the many uncertainties in future planning, including uncertainties over demand and the cost of nuclear power. To compensate for these uncertainties, the IRP 2010 envisioned a maximum of two years between revisions. To facilitate the revision process, the IRP 2010 called for a “detailed mechanism or policy on revision.” The IRP 2010 also recommended the creation of a “permanent governance arrangement for the IRP” with “larger participation from civil society, business and labour.”

To date, this revision policy has not been promulgated, and no IRP governance structure has been created. The scheduled revision of the IRP 2010, however, could account for the deficiencies outlined above. When the IRP appropriately takes account of all relevant costs of a nuclear program, it can provide the government with a recommended energy mix that accurately reflects the most cost-effective scenario.

Without accurate information, it is impossible for the government to fulfil the requirement of cost-effective decision-making regarding large-scale energy provision

IV. Lessons from the arms deal for large scale procurement

In 1999, the State entered into a military procurement contract where the Executive had failed to inform Parliament of certain costing information. Steps need to be taken to prevent a repeat of this major shortcoming in financial governance.

The decision by South Africa’s first democratically elected government to purchase US\$ 4.6 billion worth of weapons has been the single largest - and one of the most controversial - public procurement deals in post-Apartheid South Africa.

In the 1995 Defence White Paper, the Ministry of Defence highlighted the need for restructuring and reviewing the status of the new South African National Defence Force. The Defence Review highlighted the need to re-equip the SANDF to meet the traditional national-security needs of the new democracy. This process resulted in the proposal of a multi-billion rand Strategic Defence Procurement Package, widely referred to as the Arms Deal. The bill for the Package would be picked up by the South African Treasury, indirectly through taxes, over the next few years. Expenditure of this nature ignited a national debate on Defence spending.²⁷

²⁴ 2012 Budget Speech. Minister of Finance Pravin Gordhan. 22 February 2012. p. 11.

²⁵ IRP2 App B para B.10

²⁶ Olkiluoto in Finland, Flamanville in France

²⁷ Judge Heath: The arms procurement deal in South Africa; Information Portal on Corruption in Africa

Government claimed that the Package would pay for itself in the long run through counter-trade agreements of investment in South Africa with contracted companies, known as the Offsets programme. However, SA's affordability report showed that the country could not actually afford the deal, and that the offsets were useless. It's been calculated that almost a million jobs were lost in this process.

Controversy around the Arms Deal spread as allegations of irregularities in the tendering process and the lack of transparency in subsequent investigations came to light by the media.²⁸ The projected cost of the arms deal was between R28-R30 billion, while the actual cost was R70 billion. The deal has spanned four administrations, with a myriad of politicians connected and drawn into deals with connections to the global arms trade – resulting in the cabinet sub-committee's lack of transparency. Party campaign contributions meant that the political party rather than the individual see themselves as gaining. There has been a subsequent rise of a shadow state in which there is a greater reliance on the security sector for exerting control over the political space.

In the Arms Procurement Deal in South Africa, democracy was seen to have failed. The call by the oversight committee for an in-depth investigation with particular reference to an investigation by objective experts, was never adhered to and therefore failed the principles of democracy.

In fact, members of the oversight committee made an about turn after the initial conclusion which they had arrived at – in other words, their opinion regarding the investigation of the validity of the arms deal changed completely. The general view in South Africa is that these members were instructed by the executive to “toe the line”. This impacted on the separation of powers and therefore on democracy.²⁹

The parliamentary oversight committee did not recommend that the contract be cancelled. However, the committee proposed an investigation into certain glaring flaws in the negotiating process which led to contracts governing the Deal.

A complete investigation conducted by the agency equipped for that purpose, as recommended by the committee, was not undertaken.

This lack of adherence to recommendations of parliament is the reason why controversy still looms over the South African Arms Deal even though the contracts were signed by the government some years ago.

The key element emerging from most large procurement deals is the concentration of decision-making power in the hands of a few officials, often leading to bribery and corruption. To what extent should decision-makers be required to explain the choices they make?³⁰

In addressing this question, procurement decision-making processes should not be seen as technical issues separate from political matters. There is a need for two different types of accountability - political accountability and administrative accountability. Political accountability is required to avoid government policies and programmes that do not correspond to public preferences and interests³¹.

Administrative accountability is required to reduce the level of waste, corruption, fraud and abuse to a minimum. Accountability needs both internal and external control systems. In both, the control systems need to be based on laws that establish right to information³².

²⁸ Information Portal on Corruption in Africa; South African Strategic Defence Procurement Package

²⁹ Judge Heath: The arms procurement deal in South Africa; Information Portal on Corruption in Africa

³⁰ Ibid

³¹ Ibid

³² Ibid

In South Africa, a law, namely the Promotion of Access to Information Act, was published in 2000. Under this act, one of the South African contractors who tendered for the Arms Deal but who was not awarded the tender, won a court decision against top ranking government officials and agencies to force them to hand over information regarding the Arms Deal tendering process to him. This was a landmark case to aid transparency. Corruption inflates the price of purchased equipment and increases the tax burden on citizens. For poor people this is an unforgivable betrayal of public trust. This was evident in the South African arms deal which value was inflated.

The SCOPA Report on the Arms Deal

Of relevance to the concerns raised in this Briefing on the proposed nuclear procurement, is the report of the Select Committee on Public Accounts (SCOPA) in 2000 reviewing the Arms Deal.³³ SCOPA commissioned this report after the Auditor-General raised concerns relating to the Arms Deal:

1. SCOPA stated that when Cabinet entered into the arms procurement contract it had not fully taken into account all the costs that the contract implicated, such as unfavourable foreign exchange movements, the cost of servicing the loans taken to finance the package and price escalation conditions in the contracts.³⁴
2. The contract that was initially meant to cost R30,3 billion had risen to R43,8 billion a year after it was entered into.³⁵ SCOPA expressed its concern that the overall cost of the package would increase further.³⁶
3. It also recommended that this information should have been made available to the public.³⁷ Cabinet was aware of the risk of the greater costs of the contract, yet did not make the public aware of this.³⁸
4. SCOPA expressed doubts as to the suggested positive economic benefits of entry into this contract and suggested that these estimated benefits were not properly verified before being accepted.³⁹

Many of the concerns raised in the SCOPA report are very similar to the concerns raised in this Briefing, and in various submissions made to by civil society organisations. Moreover, it is not stated explicitly in the report, but it can be reasonably inferred that the decision to enter into arms contract was not made openly and transparently. Furthermore, as this information was kept within the Executive, one can also deduce that it was not made available to Parliament. This failure to provide relevant information to the Parliament and public was not only a failure by the Executive to carry out its functions in accordance with principles of open and democratic governance as established by the Constitution, but also a failure by Parliament to ensure that necessary processes were in place to oversee and scrutinise Executive action and promote transparency. This failure by both parties contributed to the controversy of the Arms Deal and the ill-use of public resources.

With respect to the current proposed nuclear expansion program, these concerns raised by SCOPA should be borne in mind. Parliament should act to ensure that there will not be a repeat of these mistakes in any future procurement process, let alone the current proposed nuclear procurement.

³³ SCOPA, The Special Review of Strategic Arms Purchases, 14th Report, October 2000.

³⁴ SCOPA's 14th Report; October 2000; The Special Review of Strategic Arms Purchases; Page 1

³⁵ Ibid.

³⁶ Ibid.

³⁷ Ibid

³⁸ Ibid

³⁹ Ibid, p. 2

V. Conclusion

The nuclear energy procurement process is taking place in a context of dramatic changes to policies of transparency and public participation first implemented under Nelson Mandela in 1995. The state has since then grown increasingly secretive, and repressive. There have been very limited discussions on nuclear energy in the broader public, despite indications in the 1998 White Paper on Energy. The Nuclear policy was a top-down process without significant stakeholder participation.

Most concerning are the areas for corruption within the bidding process, combined with issues of conflicts of interest which are likely to be reflected in party political funding.

A recent Mail and Guardian editorial stated: “In our report we reveal that one of the frontrunners for the tender, French nuclear parastatal Areva, splurged huge amounts of money when a nuclear tender was first issued in 2008. There are allegations that this was done at least partly to gratify people close to then-president Thabo Mbeki and his deputy Phumzile Mlambo-Ngcuka, in the hope that this would put the company in pole position. The ANC, now under the leadership of Jacob Zuma, was aware of the potential of the contract as an unprecedented source of patronage. In quick succession, the party recalled Mbeki and withdrew the tender. The French taxpayer has had to shoulder a \$2-billion loss stemming from Areva's ill-considered exercise.”⁴⁰

The article itself covers a range of issues indicating nuclear suppliers' attempts to manipulate “strategic alliances” to buying political favour for the bidding process.⁴¹ [Toshiba-Westinghouse's local subsidiary announced that it was preparing a "realigned strategy in order to better prepare ... to meet the future needs of the South African nuclear industry". Westinghouse did not say so, but it will also be realigning its strategic political alliances – if it has not already done so. Other rivals have been equally busy: Russian nuclear parastatal Rosatom opened its third international office here in July and has been lobbying hard since the beginning of the year.⁴²

The proposed nuclear procurement process does not currently meet the Constitutional and PFMA requirements. The process is not “fair, equitable, transparent, competitive and cost-effective.” Nor can the financial decisions of the department of Energy be efficient, accountable or cost-effective without adequate and up-to-date information.

The failure of the government to comply with the PFMA and the Constitution creates the risk that any procurement decision be set aside as unlawful.

Sustainable Energy Briefings are produced by the SECCP,
funded by HBS and SSNC.

seccp@earthlife.org.za - Tel: +27 11 339 3662 -
www.earthlife.org.za



⁴⁰ Mail & Guardian; Editorial: SA Headed for more nuclear fallout, 3 August 2012

⁴¹ Lionel Faull, Sam Sole, Stefaans Brummer & Selma Shipanga; French nuclear frontrunner's toxic political dealings in SA; Mail & Guardian; 3 August 2012.

⁴² Mail & Guardian; Editorial: SA Headed for more nuclear fallout, 3 August 2012