Midterm Review of RSA-3001: South African Energy Sector Policy research and capacity Development Programme

Midterm Review

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Econ Pöyry AS

Commissioned by the Royal Norwegian Embassy, Pretoria

Report 2008-060

Midterm Review of RSA-3001: South African Energy Sector Policy Research and Capacity Development Programme

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The report is presented in a series, compiled by Norad to disseminate and share analyses of development cooperation. The views and interpretations are those of the authors and do not necessarily represent those of the Norwegian Agency for Development Cooperation.

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Midterm Review of

RSA-3001: South African Energy Sector Policy Research and Capacity Development Programme

Commissioned by
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Acronyms

AGM – Annual General Meeting

BEE – Black Economic Empowerment

CD – Chief Directorate

CDM – Clean Development Mechanism

CEF – Central Energy Fund

DAC – Development Assistance Committee

DG – Director-General

DME – Department of Minerals and Energy

EDC – Energy Development Corporation

ESA – Energy Solutions Africa (Pty) Ltd

ESMP – Energy Security Master Plan

FY – Fiscal Year

GEF – Global Environment Fund

GTZ – German Agency for Technical Cooperation

HDSA – Historically disadvantaged South Africans

IPP – Independent power plants

KPI – Key Performance Indicators

NERSA – National Energy Regulator of South Africa

NIEMS – National Integrated Energy Modelling System

NOK – Norwegian Kroner

Norad – Norwegian Agency for Development Cooperation

NVE – Norwegian Water Resources and Energy Directorate

NPD – Norwegian Petroleum Directorate

OECD – Organisation for Economic Cooperation and Development

PASA – South African Agency for Promotion of Petroleum Exploration and Exploitation (also known as Petroleum Agency SA)

PMC – Project Management Committee

RDP – Reconstruction and Development Programme

RNE – Royal Norwegian Embassy

RSA – Republic of South Africa

SA – South Africa

SADC – Southern African Development Community

UN – United Nations

UNDP – United Nations Development Program

ZAR – South African Rand

Executive Summary

Abstract

This midterm review assessed the achievements so far of the Programme, 'South African Energy Sector Policy Research and Capacity Development Programme (RSA-3001)', with a focus on the classic OECD DAC criteria. The assessment and recommendations from this review are to serve as an input to the Programme's annual meeting scheduled for 17 June 2009.

Background and summary of the Programme

The Programme builds on two previous phases of energy cooperation between Norway and South Africa running from 1998 to 2005. The budget consists of a financial grant of up to NOK 35 million over a three-year period; so far NOK 27.3 million (78%) has been transferred, though all of this has not been spent. Five Subprogramme Business Plans were developed, each signed by the South African Department of Minerals and Energy (DME), a relevant South African implementing institution reporting to the DME, and a Norwegian counterpart organisation. The Programme originally was to run until end-March 2009. In November 2008 it was agreed to extend it for an additional year while remaining within the original budget envelope.

Effectiveness and efficiency

Approximately half the Programme grant has been spent by end-March 2009. The review team estimates that the Programme had spent approximately ZAR 22.1 million by the end of the 2008/09 fiscal year. This represents approximately 65% of the portion of the grant received so far, or about 50% of the total grant.

If the full amount of this fiscal year's budget is spent, approximately 90% of the total Norwegian grant would be spent by the end of the (extended) Programme period in NOK terms. If instead, half of this year's budgeted amount is spent, a little over 70% of the total grant would be spent.

As of mid-May 2009, out of 60 approved projects, 20 had been completed, while 23 were ongoing or partially completed. Subprogrammes with the most completed projects are Upstream Petroleum with 8, and Hydrocarbons with 6. These Subprogrammes also have the best ratio of completed projects against approved (budgeted) projects.

Completion and expenditure rates were broadly similar to those of South African institutions' internal projects. Although the Embassy expressed disappointment at lack of progress, achievements should be placed in perspective. Most SA institutions stated that completion and expenditure rates on the Programme were broadly similar to those of comparable internal projects.

Impact and sustainability

Most respondents said that Norwegian funds represented an important addition to their budgets. Additional funds allowed SA institutions to expand the list of priorities they could address and/or concentrate more intensively on particular priorities. Interviewees had contradictory perspectives on whether Norwegian funds were easier to obtain and use than internal funds.

The Programme allowed participating SA institutions to take advantage of more expensive and (they felt) better quality expertise than otherwise would have been the case. Several interviewees commented that, even after the Programme comes to an end, a lasting benefit will be the Norwegian professional acquaintances they have made and whom they now feel they will be able to contact for further advice.

The Programme is helping put into place several systems and outputs that will outlast the Programme. Among others, the Programme will have helped put into place a pricing policy framework for electricity; a distribution quality-of-supply database covering stadium sites within the cities that will host the 2010 football World Cup; a system for Petroleum Regulatory Accounts; implementation of a petroleum licensing system; a database of existing onshore geological information; an inventory of South Africa's oil and gas resources; and South Africa's continental shelf extension application to the UN.

Major factors for under-achievement

The Programme was diverse and its management structure complicated. In order to promote potential synergies across institutions, as well as DME ownership of all Norwegian assistance to the energy sector, the Embassy desired one integrated programme instead of the model it had used in earlier phases – being a series of separate programmes with each institution. However, this led to a complicated system of approvals and service-level agreements to ensure financial controls between the DME and the other South African participants.

Outsourcing the Programme Manager may have improved efficiency but probably undermined DME ownership. DME twice assigned Programme Managers who were not regular DME employees, the last one sitting outside DME. The Embassy several times had expressed concern to DME about this, but in the end acquiesced to DME's judgement in the spirit of recipient-led assistance. DME reportedly had originally tried to set up a new permanent internal post for the Programme Manager, but was not successful.

DME became a bottleneck. A practical problem with running all the money and project approvals through one institution (DME) was that a bottleneck occurred when the first Programme Manager resigned in July 2007 and was replaced after a gap four months later without the benefit of a handover. The new Programme Manager then required time to fully bring himself up to speed – although appears to have done so rather quickly. During the gap, Subprogrammes that were interested in pursuing projects experienced difficulty getting funds and approvals.

Most Subprogramme institutions lacked project management skills. This meant it was often difficult to carry out projects in practice.

DME was pre-occupied by 'fighting fires'. During the period the Programme was running, DME had to deal with a number of energy emergencies in the country, including power blackouts.

Reporting to the Embassy was not sufficient to enable it to follow the Programme. It is important for the Embassy to understand a programme sufficiently in order to make informed decisions to continue or discontinue it. Moreover, the reporting needs to enable new staff to quickly bring themselves up to speed – even in the event of a gap in Embassy monitoring staff, as happened for several months in 2008. Reporting procedures agreed in the Programme Business Plan appear to have been adequate for this purpose but were not fully followed/enforced.

There were no consequences for lack of progress, while large monetary transfers led to unspent balances, which may have undermined incentives to make progress. Since the present Project Manager took over about 1 ½ years ago, the Embassy has made only one, large transfer of money from the Embassy to the RDP fund, equivalent to nearly 40% of the total programme budget. Since then, the Programme has not had to call upon any further funds from the grant. Making large, annual transfers to a programme that had not spent previous years' budgets would seem to undermine one of the Embassy's key levers to address underperformance, i.e., the threat of a temporary cut in funds.

Recommendations and lessons learned

The following are the priority recommendations for the remaining period of the present programme and lessons learned that should be incorporated into eventual future programmes. Details for each may be found in Chapter 5.

Recommendations for the current programme

- The DME should prioritise a financial overview; this will help ensure that remaining funds are efficiently allocated.
- The DME should ensure that Subprogrammes have sufficient freedom to shift funds between approved projects for the remainder of the Programme.

Lessons learned for possible future programmes

- Engage a smaller number of recipient institutions per programme.
- Ensure the programme management function is located within the recipient institution.
- Ensure the Embassy can adequately monitor the programme; enforce agreed reporting procedures.
- Transfer funds in smaller amounts to avoid undermining incentives to spend.
- The Embassy should convene more than one progress meeting per year to take advantage of the moral authority of the Embassy as a motivating factor.

The review also comments on the institutional cooperation and twinning arrangements; reviews the tasks that need to be completed to finalise the Programme; and suggests ideas for eventual further cooperation in the energy field, with an emphasis on climate change, renewable energy and energy efficiency.

1 Introduction

1.1 Purpose and scope of the midterm review

This is the midterm review of the 'South African Energy Sector Policy Research and Capacity Development Programme (RSA-3001)'. According to the terms of reference (provided in Annex 1) and discussions with Norad and the Norwegian Embassy in Pretoria, the main purpose of this midterm review is to 'assess the programme achievements this far…' using the classic OECD DAC assessment criteria. The assessment and recommendations of this review are to be 'taken into account by DME management, the [Programme Management Committee/PMC] and serve as an input to the annual meeting scheduled for mid-2009'.

The assessment also comments on institutional cooperation arrangements, actions that need to be taken to wind down the Programme and on possible areas for continued energy cooperation after 2010, with an emphasis on climate change, renewable energy and energy efficiency, 'based on Norwegian expertise, South African priorities and programme achievements'.

The original terms of reference also call for 'recommendations on the remaining period of the programme', including advice on ways to simplify and improve programme organisation and management and on 'priorities for the remaining programme period to ensure relevance to current challenges in the RSA energy sector'. However, given the delay in holding the midterm review, most of the projects for the remaining four months of activity have already been determined, so it was agreed that it would not be useful to cover these issues.

1.2 Methodology

The review takes as a starting point the OECD Development Assistance Committee (DAC) Criteria for Evaluating Development Assistance: Relevance, Effectiveness, Efficiency, Impact and Sustainability. It is based on a combination of document review and interviews with key stakeholders.

Interviews were held with Norwegian stakeholders such as Norad, the Royal Norwegian Embassy in Pretoria, former Embassy officials, the Norwegian Water Resources and Energy Directorate (NVE), and the Norwegian Petroleum Directorate (NPD). South African stakeholders interviewed include the Department of Minerals and Energy (DME), Petroleum Agency SA (PASA), the National Energy Regulator of South Africa (NERSA), the Energy Development Corporation (EDC) of the Central Energy Fund (CEF), and the current and past Programme Managers. A list of persons consulted is provided in Annex 2.

A list of the most important documents consulted is included in Annex 3.

The review takes into account feedback from the review team's presentation of preliminary findings to stakeholders at the Norwegian Embassy in Pretoria, held on 15 May 2009 at the end of the in-country mission. It also incorporates comments received in response to a draft report sent to stakeholders on 2 June 2009.

It should be noted that it was not within the terms of reference to review the outputs of individual projects within the Programme. At the project level, the review only lists the status of each of the 60 projects approved by the Programme Management Committee. It also notes stakeholders' views on which projects were felt to be the most useful to the recipients and most sustainable. Financial information at the project level was not available for the review team. While the review comments on the status of some 40+ key performance indicators (KPIs), some of which are outputs of particular projects, Programme documents do not explicitly link these KPIs to relevant individual projects, and project-level KPIs were apparently not developed.

1.3 Team

Norad held a tender through which it chose Econ Pöyry to conduct the midterm review. The review team, which included both Norwegian and South African-based consultants, was led by Philip Swanson. Other team members were Andreas Vogt and Mark Pickering, while Eivind Magnus provided quality assurance.

Comments may be addressed to Philip Swanson (phil.swanson@poyry.com).

1.4 Background and summary of the project

The Programme builds on two previous phases of energy cooperation between Norway and South Africa that ran from 1998 to 2005. It is further based on the Memorandum of Understanding signed between the Norwegian and South African governments in March 2004, among other background documents. Discussion on RSA-3001 began in late 2004; the Norwegian budget appropriation (*bevilgningsdokument*) was signed in September 2005; and the Programme Business Plan was signed by the Norwegian Embassy, the DME and the South African National Treasury in March 2006. The Programme budget consists of a financial grant of up to NOK 35 million over a three-year period.

Five Subprogramme Business Plans were developed, each signed by the DME, a relevant South African implementing institution reporting to the DME, and a Norwegian counterpart organisation (four Subprogrammes were with NVE and one with NPD). All Subprogramme Business Plans were reportedly signed in 2006 with the exception of the Energy Regulation agreement, which was only signed in March 2009.

Table 1: Subprogrammes

Subprogramme	SA institution	Norwegian institution
Hydrocarbons (downstream)	DME – Chief Directorate of Hydrocarbons	Norwegian Water Resources and Energy Directorate (NVE)
Electricity	DME – Chief Directorate of Electricity	NVE
Upstream Petroleum	Petroleum Agency SA (PASA)	Norwegian Petroleum Directorate (NPD)
Alternative Energy	Then Central Energy Fund (for the Energy Development Corporation / EDC)	NVE
Energy Regulation	The National Energy Regulator of South Africa (NERSA)	NVE

At the 2007 Annual Meeting it was decided to refocus implementation and reporting along three themes: Energy Planning, Climate Change, and Regulation. However, the Programme and Subprogramme outputs remained unchanged and reporting was still by Subprogramme in practice.

The original Programme Manager, a contractor based in DME, left at the end of July 2007. DME replaced him in November 2007 with a consulting firm though a procurement process which covered the Programme Management function, plus two other DME projects (both of which were later partially funded by the Programme).

The Programme was originally planned to run until end-March 2009. In November 2008, it was agreed to extend the Programme by an additional year while remaining within the original budget envelope. The Project Management Committee (PMC) nonetheless decided that all project activities should wind down by the end of September 2009, leaving only administrative activities to continue through to the new end date of March 2010.

As of end-March 2009, the Norwegian Embassy had transferred 78% of the original grant to the South African treasury.

2 Assessment

2.1 Relevance

The Programme's Goals and Purpose remain relevant but were always very general. The 'Programme Goal' as stated in the Business Plan is 'Legislation and regulatory frameworks in place and implemented in support of the DME's energy goals'. The 'DME Goal' referred to is 'Sustainable access to all forms of energy and related opportunities for various consumer groups through the optimal allocation of appropriate energy options by 2015'. While it is somewhat unusual to separately list the goals of the programme and recipient in a programme document, it is arguably a practical way to emphasise that the programme is aiming to keep the overall goal of the recipient in mind. Nevertheless, the DME Goal is so high-level that it is difficult to connect it in any practical manner to most of the individual projects covered by the Programme.

The 'Purpose' of the Programme also remains relevant though general: 'the implementation of concrete interventions towards the establishment of enabling frameworks for effective governance and regulation, equitable market liberalisation and sustainable economic growth'.

The five main Programme 'Outputs' listed in the overall Business Plan are essentially sector-specific restatements of the Programme 'Goal' for the areas covered by the individual Subprogrammes. Each is then repeated almost word-for-word as the Goal in the relevant Subprogramme Business Plans.

The consultation process ensured reasonable alignment with priorities. The original Programme Manager, Mark Beare, a consultant located within DME at the time who had worked on implementing aspects of the previous phase of Norwegian funding, drafted much of the Programme Business Plan and individual Subprogramme Business Plans. He did so after consulting at different levels with each of the organisations involved in the Programme. Input also included a workshop held in September 2004 involving all participating Norwegian and South African institutions. Mark Beare believes that he adequately captured the priorities of most of the participating institutions, an assertion corroborated by most of those institutions. However, he noted difficulty obtaining consolidated feedback in some cases, particularly from DME's CD: Electricity, and in retrospect he felt that this Subprogramme was not well aligned with the actual electricity priorities of DME at the time. This was also the opinion of the review team, which collectively has a long and diverse background in South African energy policy.

The Programme had sufficient flexibility to maintain alignment with priorities. The previous Programme Manager also noted that he had received different messages at different levels in some institutions regarding priorities at the time the Subprogramme Business Plans were being developed; he felt this was particularly the case for PASA. However, the Programme's flexibility reportedly allowed the original project list for the Upstream Petroleum Subprogramme to be substantially re-written after a change of leadership at PASA. Most other Subprogramme managers also reported that they were able to add new projects so that their Subprogrammes generally remained relevant to their institutions.

A number of risks were identified in the preparatory phase; some would have been difficult to address without substantial changes to the Programme. The pre-programme appraisal by SAD-ELEC identified a number of risks, notably including

- 'Ability of DME to absorb the outputs' and delays due to 'internal human resource constraints in DME and other target institutions, e.g., related to transformation prerogatives, women empowerment and management limitations';
- 'Loss of core Programme staff to private sector during Programme implementation';
- 'Spreading the available Programme funds and resources too thinly across a large number of projects and activities to be implemented by five different target entities';

- 'Difficulties in measuring and monitoring Programme impacts due to detailed outputs not being defined and use of inappropriate KPIs'; and
- 'Programme co-ordination, accountability and reporting problems due to complexity of proposed management and administrative arrangements and insufficient progress reporting in-between Annual Meetings'(see p. 35).

The appraisal listed a number of recommendations to help deal with some of these risks (p. 36). The Embassy recognised these risks and addressed them primarily by discussing them with DME. Some changes were made, but generally the Embassy decided to accept the proposed model in line with the Norwegian assistance policy of emphasising recipients' ownership/responsibility.

The main changes agreed to address the identified risk factors appear to have been an addition of a semi-annual meeting and improvements to some of the KPIs and reporting procedures. However, as noted elsewhere, the semi-annual meetings were not regularly held, the KPIs were not monitored and the reporting procedures (to the Embassy) were not fully followed or enforced.

The human resource constraints would have been difficult for the Embassy and/or Programme to address, and some of the other risks would have been difficult to address without substantial changes to the Programme, e.g., a refocus on DME at the expense of the other SA institutions and major changes to the proposed administrative management structure. The Embassy appears to have engaged in wishful thinking (at least in retrospect) when it suggested it would be possible to renegotiate and change the administrative model once the Programme got underway.[1] More importantly, however, the Embassy implicitly argued that making major changes at the beginning of the programme could undermine DME ownership (appropriations document, p. 7).

On the other hand, the Embassy commented that there was already an apparent lack of ownership on the part of the DME leadership, while the Business Plan seemed mainly to be the work of a consultant (Ibid., p. 6). This remark presumably referred to the first Programme Manager, who was a consultant hired by CEF and seconded to DME. It begs the question whether the Embassy should have insisted more strongly on improvements to the Programme if it doubted DME had strong ownership in the first place. Otherwise, there was a potential for ending up with the worst of both worlds: a less-than-optimally designed programme that was not even owned by the recipient. However, this was not an easy situation for the Embassy, since it was the recipient's choice to use the (very qualified) consultant. Nevertheless, it illustrates the complication of having someone who is not a regular employee of the recipient organisation take the lead for a programme on the recipient's behalf. To be fair, the Embassy expressed strong reservations about this issue at the time, and the DME tried to create a permanent position within DME for the first Programme Manager, but ran up against civil service rules because the post was (arguably correctly) viewed as not being permanent. But this begs the question of why the DME did not find someone who was already in the institution to serve as Programme Manager. The DME noted that it was short of staff at the time, so apparently could not spare someone. However, this should have been (and was to some extent) taken as a sign of lack of commitment. Later, despite this having

[1] 'Dersom den viser seg å bli for komplisert, må det tas høyde for at den evt. kan reforhandles og endres undervegs' (Bevilgningsdokument, p. 7).

been an issue earlier, the DME appointed another consultant to serve as the second Programme Manager, this time someone not even sitting in DME.

To help avoid an ambiguous ownership situation in future programmes, one of the review team's main recommendations is for the Embassy to insist that recipients appoint programme managers who are already regular employees in the organisation (see Recommendations chapter).

Norway pushed its own agenda most when it came to climate and renewables. While the Embassy generally left it to the individual South African institutions to decide the priorities to be addressed in their Subprogrammes, the Embassy reportedly pushed its own agenda strongly in the Subprogramme involving CEF/EDC. In particular, the Embassy insisted informally that this Subprogramme address climate and renewables, areas where CEF/EDC had previously had little activity. Prior to this intervention, the CEF/EDC reportedly had showed relatively more ownership than most in designing its own Subprogramme. This intervention therefore may have somewhat undermined CEF/EDC's ownership in the Programme.

The refocus into three 'themes' had little practical effect other than perhaps to justify inclusion of several new activities. The three themes introduced at the Annual Meeting in 2007 were Regulation, Energy Planning, and Climate. Each of the five Subprogrammes was then assigned as a whole to one of these themes, irrespective of whether the projects in the individual Subprogramme touched on more than one theme.[2] The introduction of themes appears to have justified the inclusion of a number of new activities to become part of the Programme that did not easily fall under any of the original Subprogrammes: notably energy planning at the DME, which only emerged as a separate Chief Directorate within DME after the Programme had commenced and which involved both hydrocarbons and electricity; also the Designated National Authority (DNA) as the in-country institution responsible for assessing projects under the Clean Development Mechanism (CDM).

Despite the introduction of themes, Programme reporting continued to be undertaken by the same Subprogramme institutions. In the minutes from the second Annual Meeting, it was noted that it had been difficult in practice to change reporting to the three themes (3.4.3-4). While the addition of themes may not have complicated Programme management in practice, it at least added to the impression of complexity in what was already becoming a difficult programme for the Embassy to follow.

[2] The two DME Subprogrammes were assigned to the 'Regulation' theme, the PASA Subprogramme to the 'Energy Planning' theme and the CEF/EDC Subprogramme to the 'Climate' theme.

2.2 Effectiveness

This section examines the extent to which the project attained its objectives, as well as the major factors contributing to this.

2.2.1 Achievements

Expenditure

Approximately half the Programme grant has been spent so far. The Norwegian Embassy has so far transferred approximately NOK 27.3 million (78%) of the original NOK 35 million grant; this has been deposited into the SA Treasury's RDP Fund. According to figures provided by the current Project Manager, this has resulted in receipts of approximately ZAR 34.2 million into the RDP (see Table 2).

Table 2: Transfers by Embassy

Date	NOK deposited	ZAR received	ZAR:NOK
04/11/2006	5,200,000	4,962,049	0.9542
06/17/2006	800,000	896,191	1.1202
14/05/2007	7,600,000	8,755,382	1.1520
26/03/2008	13,655,000	19,587,778	1.4345
TOTAL	27,255,000	34,201,400	Avg 1.2549

Source: Programme Manger

Using figures provided by the Programme Manager and several Subprogramme managers, the review team estimates that the Programme had spent approximately ZAR 22.1 million by the end of the 2008/09 fiscal year (i.e., by end-March 2009), the original end date of the Programme (see Table 3). This represents approximately 65% of the portion of the grant received so far, or about 50% of the total grant.

Table 3: Actual expenditure

Subprogrammes	FY06/07 ZAR	FY07/08 ZAR	FY08/09 ZAR	TOTAL FY06/07-FY08/09 ZAR
Hydrocarbons (DME)	6,045,814	699,659	821,198	7,566,671
Electricity (DME)	214,620	190,825	1,343,801	1,749,246
Upstream petroleum (PASA)	98,076		2,049,230	2,147,306
Energy regulation (NERSA)			682,045	682,045
Alternative energy (CEF/EDC)		1,926,087	2,862,828	4,788,915
Projects outside Subprogrammes				
Designated National Authority (DME)			142,301	142,301
Energy Planning (DME)			2,407,776	2,407,776
Unallocated reserve				0
Programme management	933,640	358,572	1,367,923	2,660,135
TOTAL	7,292,150	3,175,143	11,677,102	22,144,395

Source: Econ Pöyry, based on data received from Programme Manager and some Subprogramme mangers

If the exchange rate had continued to be approximately NOK 1 = ZAR 0.9542, as it was when the first NOK transfer was made, then the Programme could be said to have spent about 66% of the original budget in Rand terms (see Table 4).[3]

Table 4: Actual expenditure against budget at original exchange rate

Subprogrammes	Actual expenditure FY06/07 - FY08/09	Original budget	Original budget at original ex-rate	Portion of original budget spent at original ex-rate
	ZAR	NOK	ZAR	
Hydrocarbons (DME)	7,566,671	6,400,000	6,107,137	123.9%
Electricity (DME)	1,749,246	6,400,000	6,107,137	28.6%
Upstream petroleum (PASA)	2,147,306	5,000,000	4,771,201	45.0%
Energy regulation (NERSA)	682,045	6,000,000	5,725,441	11.9%
Alternative energy (CEF/EDC)	4,788,915	3,000,000	2,862,721	167.3%
Projects outside Subprogrammes				
Designated National Authority (DME)	142,301			
Energy Planning (DME)	2,407,776			
Unallocated reserve	0	5,500,000	5,248,321	
Programme management	2,660,135	2,750,000	2,624,161	101.4%
TOTAL	22,144,395	35,050,000	33,446,119	66.2%

Source: Econ Pöyry, based on collected data and Programme Business Plan

There have been large variations in expenditure across Subprogrammes. As can been seen in the last column of Table 4, the Subprogrammes which have spent the largest portions of their original budgets are Hydrocarbons (DME) and Alternative energy (CEF/EDC) – both of which could be said to have spent more than their original budgets in Rand terms at the exchange rate prevailing at the beginning of the Programme. The Subprogrammes which so far have spent the least with respect to their original budgets are Regulation (NERSA) and Electricity (DME).

Most of the remaining grant is budgeted for the remainder of the Programme. According to the Project Manager, the budget for the remaining period of the Programme (2009/10) is ZAR 18.8 million. Subtracting funds spent so far from funds received so far (ZAR 34.2 million – ZAR 22.1) and adding reported estimated interest income of at least ZAR 1.6 million implies that approximately ZAR 13.7 million is still available from the portion of the grant transferred so far. (Some ZAR 3.4 million of this is sitting in the RDP Fund.) This suggests that the Programme will need to request an extra ZAR 5.2 from Norway, equivalent to about NOK 4 million at the current exchange rate.

If the full amount of this fiscal year's budget is spent, approximately 89% of the total Norwegian grant will have been spent by the (extended) end of the Programme in NOK terms. If instead, half of this year's budgeted amount is spent, approximately 72% of the total grant will have been spent by the end of the Programme period after the remaining ZAR are translated back into NOK at the exchange rate prevailing as of mid-May 2009.

[3] On the other hand, if the same exchange rate had actually prevailed, the purchases of Norwegian assistance that were made under the Programme would have cost less in Rand terms. According to figures provided by the Programme Manager, the purchase of Norwegian assistance (including training) accounted for just under 50% of total expenditure under the Programme.

Converting the original Programme budget into Rand at the exchange rate that was prevailing at the beginning of the Programme, actual expenditure in Rand would be 123% of the original Programme budget if all funds budgeted for this year are spent, and 94% if half of this year's budget are spent.

Projects

Approximately one-third of approved projects have been completed. The table in Annex 4 was drawn up by the Project Manager at the request of the review team. It provides a list of the 60 projects that have been included in annual work plans or otherwise approved by the Project Management Committee (PMC).

The original lists of projects in the Subprogramme Business Plans contained about 70 discreet projects, not counting projects related to management of the Programme; 41 of these made it into the annual work plans, along with 19 additional approved projects, for a total of 60 approved projects. Further projects may be added at the upcoming June 2009 Annual Meeting.

As of mid-May 2009, 20 approved projects had been completed, while 23 were ongoing or partially completed. This indicates a completion rate for approved projects so far of about 33%, or 70% by the end of the Programme if all 21 ongoing and 2 partially complete projects are completed.

In addition, there were reportedly two projects that were completed without using any Programme funds. However, a review of the Annual Reports suggests that this number is probably higher and may include some of the projects listed as completed using Programme funds.

As indicated in Table 5, the Subprogrammes with the most completed projects are Upstream Petroleum (PASA) with eight, and Hydrocarbons (DME) with six. The best current completion rate also belongs to Hydrocarbons (DME) with 60% and Upstream Petroleum (PASA) with 44%. The lowest completion rate belongs to NERSA with 0% and to Alternative Energy with 21%.

Table 5: Numbers of approved projects completed and ongoing

Subprogrammes	Number approved	Number completed	Number ongoing or partially	Completion rate	Completion rate if all ongoing are completed
Hydrocarbons (DME)	10	6	2	60%	80%
Electricity (DME)	6	2	2	33%	67%
Upstream petroleum (PASA)	18	8	6	44%	78%
Regulation (NERSA)	7	0	6	0%	86%
Alternative (CEF/EDC)	14	3	6	21%	64%
(Projects outside Subprogrammes)	5	1	1	20%	40%
TOTAL	60	20	23	33%	72%

Source: Programme Manager

Key Performance Indicators (KPIs)

Over 60% of KPIs from the main Business Plan were met, but the chosen KPIs were not very useful in practice and never monitored. In the overall Business Plan, there were about 18 KPIs for Goals and Purpose and a further 24 under the five main

Outputs.[4] There were similar numbers of KPIs in the individual Subprogramme Business Plans, though many of these repeated the KPIs in the overall Business Plan.

Based on discussions with the Programme Manager and Subprogramme managers, we determined that, of the 42 main KPIs we examined in the Programme Business Plan, 27 (64%) had been fulfilled (16) or partially fulfilled (11). However, this does not take into account that most of the fulfilled KPIs were achieved later than planned.

Most of the fulfilled or partly fulfilled KPIs were at least partly achieved through contribution from the Programme. Only 6 appear to have been achieved without any contribution from the Programme. Annex 5 provides a list of the KPIs from the Programme Business Plan, showing which were fulfilled.

The review team felt that the chosen KPIs were not very useful in practice. First, the number of KPIs was probably too large to meaningfully track. Second, the KPIs were either very high-level or essentially the titles of individual projects. Third, while many KPIs were similar to project titles, they were not clearly linked with those projects, even in the Subprogramme Business Plans. The overall Business Plan called for the separate Subprogramme Business Plans to ‘quantify the KPIs for each line item in the approved Annual Work Plans and associated Approved budgets’ (p. 28), but apparently this did not happen. This made it difficult to monitor the KPIs in practice.

The review team attempted a similar counting exercise with the KPIs for each Subprogramme Business Plan, but concluded that this would be more time-consuming than the effort was probably worth. To the extent that those KPIs were essentially the same as project titles, we concluded that a review of Subprogramme KPIs would be a less satisfactory indicator of progress than simply counting the number of projects approved and completed, as already performed above.

The team found that no one had been monitoring the KPIs.

Cross-cutting issues

The Programme handled cross-cutting issues of HIV/AIDS, BEE and gender under existing policies but generally did not make special efforts to address or monitor these. The overall Business Plan notes that,

> *there are a number of issues that are so important that they need to be included in all activities of the Subprogramme, including work plans, operational and organisational appointments. These include poverty reduction, promotion of historically disadvantaged persons and entities, including women, and the impact of HIV/Aids on the energy sector. These issues will be mainstreamed at every opportunity and included as integral deliverables on all Subprogrammes to be implemented*. (p. 7)

The current Programme Manager and the Subprogramme representatives indicated that no specific projects were undertaken to address these issues directly. (A gender and BEE strategy was discontinued.) However, most stressed that, because the Programme was implemented using regular government procedures, e.g., for procurement, most of these issues were addressed implicitly.

The Norwegian appropriations document (*bevilgningsdokument*) had warned that it ‘will be a challenge to follow up that this was operationalised in the various sub-

[4] We have excluded the KPIs related to managing the Programme, as well as the vague indicator, ‘where insufficient capacity exists, external specialists will be contracted…’, which is repeated under each Output.

programmes' (p. 7). In fact, no effort was made to monitor activities or impacts in these areas.

The two KPIs in the Programme Business Plan that relate to these issues were the following:

- '25% of the petroleum value chain controlled by HDSA [historically disadvantaged South African] persons/entities by 2010.' (p. 9)
- 'At least 30% of the personnel trained throughout the Programme are previously disadvantaged South African women.' (p. 10)

The first KPI has been partially fulfilled but was in any case well outside the immediate control of the Programme. The second one was within its control. Although the review team found that records were not kept on the number of previously disadvantaged South African women trained under the Programme, anecdotal evidence suggests that the number trained was over the target of 30%.

2.2.2 Major factors for under-achievement

The Programme was diverse and its management structure complicated. The Programme consisted of five Subprogrammes with a similar number of institutions across a diverse set of energy policy issues. In order to promote potential synergies across institutions, as well as DME ownership of all Norwegian assistance to the energy sector, the Embassy desired one integrated programme instead of the model it used in earlier phases of having a separate programme with each institution.

A complicated system of approvals and service-level agreements was therefore established to achieve the desired accountability system between the DME and the Subprogrammes outside the DME and to ensure the relationships between the DME and NERSA, EDC and PASA were in compliance with the Public Finance Management Act (PFMA). In the end, however, these systems proved too weak to achieve the desired synergies or incentives for project fulfilment.

Moreover, the intra-South African institutional links originally created for the Programme appear to have relied to a large extent on the personal relations and management skills of the original Programme Manager. Unfortunately, when he left, it may have been difficult for someone else to utilise these structures – especially for an external consultant and after a significant time gap.

Outsourcing the Programme Manager may have improved efficiency but probably undermined DME ownership. Both Programme Managers appear to be competent individuals whose management skills undoubtedly contributed to the successes that the Programme did achieve. However, neither was a regular DME employee. The first, Mark Beare, sat within DME, but was an outside contractor, whose contract furthermore was with the Central Energy Fund (CEF), which in turn seconded him to DME. The second Programme Manager, Moeketsi Thobela, was a contractor who sat outside DME.

If an important goal of having one large Programme was to increase DME ownership of all energy assistance, locating the Programme Management function outside DME was not likely to promote this. The Embassy had expressed concern about having non-DME managers in both cases, but in the end acquiesced to DME's judgement, in the spirit of recipient-led assistance. It should be noted that the Embassy, although sceptical to the outsourcing of the PM function, expressed satisfaction with the work of the present

Programme Manager. It should also be noted that DME attempted to create an internal post for the original Programme Manager but was not successful.

DME became a bottleneck. A practical problem with running all the money and project approvals through one institution (DME) was that a bottleneck occurred when the first Programme Manager resigned in July 2007 and was not replaced until November of that year – after which the new Programme Manager required time to fully bring himself up to speed (although did so rather quickly). In the meantime, Subprogrammes that were interested in pursuing projects sometimes experienced difficulty getting money and approvals, while those that were not making progress did not have an overall Programme Manager to maintain Programme discipline.

Box 1: Actions taken when the new Programme Manager arrived

The RNE asked the new PM to undertake a review of the Programme's status and submit a requisition for a disbursement of funds shortly after appointment, towards end-November 2007;

The requisition, based on the requirements of the various sub-programmes excluding NERSA, was drafted and submitted mid-December 2007 to align with the RNE's financial year-end. However, since the amount requested - approximately ZAR15 million - was larger than what the RNE had budgeted, the decision was that the required disbursement would be made early in 2008;

In the meantime, NVE held a workshop with NERSA on 10 December 2007, the primary aim being to revise that sub-programme business plan in preparation for re-inclusion in the Programme. In light of the decision to effect the disbursement referred to above early in 2008, the RNE requested the PM to revise the requisition so that NERSA's work-plan, as revised at the 10 December workshop, should be included. The revised requisition (approximately ZAR17 million) was duly submitted end-January 2008;

Based on the revised requisition, the funds were transferred from the RNE to the RDP Fund on 26 March 2008;

In the meantime, the PM had drafted service level agreements as agreed with the DME CFO that these would be required to facilitate transfers to the EDC, NERSA and PASA in compliance with the Public Finance Management Act (PFMA). Comments from the various parties were incorporated before the agreements – excluding NERSA's - were submitted for approval by the DME DG (as the Accounting Officer in terms of the PFMA). Following their approval by the DG, PASA and EDC signed the agreements with the DME on a bilateral basis. The last of these agreements – between DME and CEF – was signed by both the relevant parties mid-July 2008. The disbursements to EDC and PASA were effected mid-August 2008. It should be noted that part of the process involved the verification of PASA's banking details since that was the first time funds were being transferred to that institution ;

Source: Current Programme Manager

Recipient institutions lacked sufficient project management skills. This refrain was heard within several South African institutions and from Norwegian partner institutions. One reason suggested for this was that such skills were missing in the education of new staff hired by the institutions involved in the Programme, particularly among non-engineering staff. Lack of project management skills meant it was often difficult to carry out projects in practice.

DME was pre-occupied by 'fighting fires'. During the period the Programme was running, DME had to deal with a number of energy emergencies in the country, including power blackouts. Dealing with these issues reportedly took significant management attention away from the issues being dealt with by the Norwegian Programme.

Reporting to the Embassy was not sufficient to enable it to follow the Programme. All of the past and present Embassy personnel to whom the review team spoke admitted that they had found it difficult to gain a sufficient grasp of the Programme, due to its diverse nature and its complicated structure and procedures.

The main reporting to the Embassy was the annual report presented at the Annual Meeting. In the view of the review team, the annual reports presented up to this point have not provided an adequate overview of Programme activities and expenditure with sufficient reference to original goals, work plans and budgets, as called for in the outline for such reporting in the Business Plan (p. 23 and 38). This presumably made it difficult for the Embassy to place the Programme's progress in context. According to the minutes for the annual meetings, the Embassy made comments to this effect. According to the current Programme Manager, however, aspects of the format used in the second and upcoming annual reports were adopted from the report used for the first Annual Meeting and confirmed at the 2008 Annual Meeting. The Programme Manager further reported that he had a number of meetings with the Norad representative whom the Embassy had requested to assist with a review of the Annual Report. However, the clarification sought as part of this process was primarily regarding the numbers and not the format.

The Programme Business Plan also required the Programme Manager to provide a 'semi-annual' report each year (p. 23), but this reporting instrument appears not to have been used in practice. The Appraisal pointed out the risk of 'Programme coordination, accountability and reporting problems due to complexity of proposed management and administrative arrangements and insufficient progress reporting between Annual meetings' (p. 35). It went on to say that, 'Past experience has amply demonstrated that longer intervals correlate with decreasing quality in reporting' (p. 36).

The Programme Business Plan further stated that 'DME and/or RNE can request information relating to any aspects of the Programme and/or its Subprogrammes at any time (p. 19 and again on p. 21).

According to the Embassy, since October 2008, the Embassy has been copied in on the monthly progress report that the Programme Manager sends to DME. While useful, this document is not part of the official reporting process called for in the Business Plan, but is part of the contractor's obligations under his contract with the DME, which also covers two other projects he has been doing besides management of RSA-3001. (Parts of these other projects were later incorporated as new projects under the Programme.) Because this monthly report is not part of the official reporting procedures foreseen in the Business Plan, but is directed at the DME, and covers issues in addition to RSA-3001, it does not follow the reporting outline in the Business Plan and thus does not appear to be in a format that would easily allow the Embassy to monitor the Programme. Nevertheless, the review team feels it was a good initiative on the part of the Embassy to ask to be copied in on these reports.

It is important for the Embassy to understand a programme sufficiently well that it is in a position to decide to continue or discontinue the programme. Moreover, the reporting needs to enable new personnel arriving at the Embassy to quickly bring themselves up to speed – especially after a gap without a handoff period, as happened at the Embassy during May, June and July 2008.

The outlines for the annual and semi-annual reports provided in the Business Plans, if more closely followed/enforced, would probably have provided a good start for gaining and maintaining a sufficient understanding of the Programme (and would have made it easier for the review team to conduct a more accurate review).

It should also be noted that the Business Plan allows Norway the right to withhold disbursements, inter alia, if documentation specified in 5.4.3 (Reports and Audits) 'is not delivered as agreed from time to time'. This provision was invoked once: The disbursement effected in 2008 from the Embassy to the RDP Fund was made subject to confirmation of the date on which the 2006/07 audit report was to be released, as well as a report outlining the status of the Programme at the time (January 2008).

The understanding that energy cooperation would probably end with the end of this Programme may have undermined incentives for the Embassy to push DME to improve progress and reporting for part of the Programme period. Some former Embassy personnel speculated whether the advance decision by the Norwegian government to discontinue energy cooperation after the termination of the present programme undermined recipients' incentive to participate fully. It is not clear that this was the case. Moreover, such knowledge arguably would have given recipients an incentive to get more out of it. Rather, it is worth considering if the intention to discontinue cooperation in this field with South Africa gave the Embassy a disincentive to push DME to improve progress and reporting, at least until the Joint Declaration of 2008, which included a focus on climate and energy issues.

Despite the fact that the relationship with DME might end, several past Embassy personnel told the review team that they still had felt political pressure (from within the Norwegian government) to maintain a good relationship with DME. This prerogative also conceivably could have undermined incentives to push DME very hard about reporting or about progress in general. However, current Embassy personnel discount this, emphasising that there is no political pressure not to raise issues of concern.

There were no consequences for lack of progress, and large monetary transfers were built up into unspent balances, which may have undermined incentives to make progress. Since the present Project Manager took over about 1 ½ years ago, the Embassy has made only one, large transfer of money from the Embassy to the RDP fund. At NOK 13.7 million (ZAR 19.6 million), this was equivalent to nearly 40% of the total programme budget. Of this, some ZAR 3.4 million was left in the RDP fund,[5] and an even larger amount was left over at the end of the year to be carried over. Since then the Programme has not had to call upon any further funds from the grant, although it may do so at the next Annual Meeting. It should be pointed out that this transfer was in line with the budget and plan of the Programme and followed a request from DME.[6]

One of the main problems with this Programme has been under-expenditure, but there do not appear to be any consequences built into the Programme for this. Moreover, making large, annual transfers to a programme that had not spent previous years' budget would seem to undermine the main incentive to spend that the Embassy controlled, i.e., the threat of cutting funds in the event of under-performance. This is because more money is already available than is actually needed, without any effective time limit for

[5] By the time funds were transferred from the Embassy to the RDP Fund on 26 March 2008, the depreciation of the Rand reportedly had resulted in the ZAR amount increasing to a level higher than the ZAR 17.44 million that was used as a basis to allocate NOK 13.7 million in January/February 2008. This new amount was ZAR 18.6 million. Only the ZAR 17.44 million that had been motivated for was subsequently transferred to the DME, leaving the balance to accrue interest.

[6] This took into account that out of the two disbursements that had been planned for 2007, only one (approximately ZAR 8 million) had been effected (in May 2007). This also took into account that, of this amount, ZAR 6.2 million had been refunded back to the Embassy for expenses related to activities from the previous programme (RSA0027) that had been completed during the tenure of RSA3001 (2007 AGM minutes). The EDC had also indicated reimbursements would be required to offset Programme-related expenditure that had been funded from own sources pending transfers of funds during the 2007/08 financial year.

spending it. When the Embassy did eventually threaten Subprogrammes with the possibility of cutting access to funds at the PMC on 2 October 2008, followed up by the Subcommittee to scrutinise revised work plans as part of developing the application for the extension of the Programme to March 2010, interest in the Programme by most of the participating South African institutions appeared to revive. However, Subprogrammes did not necessarily need to show actual progress in expenditure in order to get access to Programme funds extended by a year; they only needed to show sufficient motivation in the form of a letter for each project they were interested in continuing or starting. Moreover, this took place when the Programme was already supposed to have been winding down.

The Embassy may wish to consider smaller, more frequent transfers in future, to prevent unspent balances from building up and to tie new payments more closely to project progress. Early Programme documentation anticipated semi-annual transfers.[7] Norwegian economic regulations also anticipate two or more instalment payments per year.[8]

[7] See Appropriations document p. 6 and Programme Business Plan p. 25.

[8] Paragraphs 6.3.5 of the Regulations on Financial Management in Central Government (Adopted 12 December 2003, with adjustments latest on 14 November 2006) states: 'Grants shall be paid when the recipient needs to meet the expenses concerned in accordance with Storting decision of 8 November 1984: a) Grants for the operation of an agency shall be paid in instalments (per month, quarter or half year), adapted to the size of the amount, the purposes it is to support and administrative costs related to outgoing payments. […]'

2.3 Efficiency

Completion and expenditure rates were broadly similar to those of South African institutions' internal projects. While the Embassy expressed disappointment about project expenditure and completion rates under the Programme, such rates should be put into context.

We were not able to obtain hard information about comparative use of participating South African institutions' internal funds. However, representatives from almost all participating South African institutions with whom the review team spoke told us that expenditure and completion rates under the Programme were about the same as those for comparable internal projects using voted funds; some felt the rate to be slightly higher, some slightly lower.

Some interviewees commented that expenditure and completion rates should be higher for projects using donor funds because of the 'moral authority' of the Embassy. For example, some commented that it was more 'embarrassing' to have to explain non-performance to the Embassy than it was to one's own internal boss. On the other hand, the Programme Manager commented that, because his position was not a line function, he sometimes felt in 'competition' with Subprogramme managers' own bosses in terms of getting Subprogramme managers to give Programme activities the same priority as internal activities. Nevertheless, the intention to align the Programme to the strategic priorities of the implementing organisations (e.g., by allowing for more budget reviews than is possible when voted funds are concerned) is one approach used by the Programme to address this challenge.

Most institutions stated that they had integrated the Programme projects into their own internal processes, e.g., in terms of reporting, but some seem to have integrated the Programme more than others. For example, PASA appears to be the only institution to have integrated performance on projects under this Programme into the internal performance management system, meaning that line managers' bonuses were dependant on the completion of Programme targets.

Since much procurement was reportedly carried out using regular government procedures, procurement efficiency was probably similar to that of internal projects. All projects were required to use the ordinary government procurement system, except in cases where participating South African institutions elected to use the expertise of Norwegian institutions with which they had already signed contracts under the Programme, i.e., NVE and NPD.

However, the Norwegian institutions usually did not conduct the projects themselves, but organised international tenders on the Norwegian government procurement site, Doffin, on behalf of their South African counterparts. The Norwegian partner institutions would then follow this up by advising the South Africans which consultants to pick and by reviewing and commenting on the work that the consultants eventually produced. As more than one participating South African institution commented, projects under the Programme were thus often able to take advantage of higher quality international consultants than otherwise might have been the case.

On the other hand, consultants hired under the Doffin-based tenders were probably more expensive than those hired via tenders conducted within South Africa, especially as the Rand exchange rate vis-à-vis the Norwegian currency deteriorated. But the fact that the money was additional and tied to projects under the Norwegian Programme probably made price a relatively minor concern. Hiring of external consultants via Doffin took place primarily under the Upstream Petroleum Subprogramme in conjunction with NPD. NVE provided assistance primarily using its own staff.

Programme administration costs of about 12% are higher than the target. According to our estimates based on Table 2, Programme Administration costs were about 12.8% in the first fiscal year, 11.3% in the second, and 11.7% in the most recent fiscal year. The average is lower than the 16% estimated in the original draft of the Business Plan, but significantly higher than the 8-10% target foreseen in the budget of the final Business Plan and Appropriations document. Moreover, this apparently does not include administrative costs for the individual Subprogrammes, most of which appear to have been borne by the participating South African institutions and not charged to the Programme.

The administration costs will rise during the Programme close-out phase as audits and final reports are completed. On the other hand, given the large amount of project expenditure budgeted for the remaining year of the Programme, a high expenditure rate by the various Subprogrammes during the last year of the Programme could bring down the average administrative costs for the Programme.

Programme management accounting was weak but faced significant hurdles. It should be noted that the Programme financial information presented to the review team was from multiple sources and time periods and were not in a consolidated or consistent format. This is partly due to the fact that each Sub-programme institution has its own accounting system, and that different accounting standards are used. For instance, government departments such as DME operate on a cash accounting basis (the so-called GRAP standard) while state-owned entities (PASA, CEF/EDC and NERSA) operate on an accruals basis. Since the Subprogramme institutions' accounting systems do not talk to each other, it would have been difficult for the Programme Manager to generate management accounts from a Programme perspective. Despite this obvious weakness no effort appears to have been made to build a Programme-level system capable of generating consolidated Programme management accounts (at least since the financial management function was moved from CEF).

It should also be pointed out that audited Programme accounts for the most recent two fiscal years were not yet available (covering April 2007 through March 2009, which is most of the Programme period). The only audit available at the time the team was drafting this report covered the first year, i.e., the period April 2006 through March 2007.[9]

The funds transfer procedures were complicated but broadly worked. Donors to South Africa are required to deposit funds into the RDP Fund. The DME requested funds from the proper RDP account and the individual Subprogrammes requested funds from the DME after approval of their work plans and budgets by the Programme Management Committee (PMC).

[9] Programme audits usually take place from around August/September of each year. A process is underway to undertake the 2008/09 audit earlier, i.e., before August 2009. The audit report for 2007/08 was not ready pending a process required by the Auditor General, i.e., the signing of a representation letter by the DME and CEF, as well as internal approvals at the Auditor General. The 2007/08 audit reportedly took longer than anticipated, due in part to resolution of issues that resulted from the absence of a Programme Manager between July and November 2007, e.g., inputs not obtained during the 2006/07 audit and financial reporting updates resulting from the settlement of a number of 2007/08 invoices during 2008/09 at the EDC.

During the first year of the Programme, an additional step between DME and the Subprogrammes was the CEF, which had been given responsibility for funds management because of its experience in performing treasury functions. This responsibility was later taken back into the DME, reportedly to increase DME ownership of the Programme, even though it was effectively managed by the outsourced Programme Manager who issued instructions to DME's Finance department as to where they funds should be sent, based on approvals by the PMC and responsible DME Chief Directors.

Most Subprogrammes expressed reasonable satisfaction with the funds transfer process, barring some hiccups at the beginning when difficulties were experienced with transferring money from the RDP Fund to DME, and then again during the gap between the two Programme Managers.

Anti-corruption measures appear to have been adequately included in the project design and in the regular SA government procedures used in executing the project; the team did not encounter any suggestion of funds mismanagement. The Business Plan includes prohibitions against irregular practices and an approval procedure requiring several different signatures on transfer payments, contracts and expense claims. While the Midterm review was not an audit, it did not find any information or hear reports from any interviewees that would raise any suspicions of mismanagement of funds.

Some Subprogramme managers felt that the diversity of the Programme may have been a drawback. Two Subprogramme mangers commented that PMC meetings had not seemed worthwhile because the Programme covered too wide an array of projects, many of which had little relevance to their own work. Related to this, the same interviewees questioned recent round-robin processes used to approve projects, which include a sign-off from the representative of each Subprogramme. The main criticism they had of the round-robin process was that it required PMC members involved in one Subprogramme to judge projects from other Subprogrammes that they knew very little about. One PMC member felt that separate PMC meetings for different themes could have been more interesting to attend and would furthermore have made the project approval process more informed. Another option would have been to have a programme focused on a single theme. However, the review team recognises that these processes helped save time and that there would have been logistical difficulties in doing things differently under a programme as diverse as the present one.

Donor cooperation was not a major issue. Norway is the major donor to the South African energy sector and furthermore has responsibility for coordinating donor assistance to the energy sector to all countries within the Southern African Development Community (SADC). DME has received some bilateral support from Denmark and Germany (Danida and GTZ) on renewables and from Denmark on energy efficiency. The only other donors to the sector appear to be UNDP and GEF, which have worked with EDC/CEF, notably on solar water heating. Neither DME nor EDC felt that these projects overlapped with the Norwegian Programme or had led to problems related to donor coordination.

2.4 Impact

The review team asked interviewees what were the main benefits of the Norwegian Programme that would not have accrued in the absence of the Programme.

Most respondents said that Norwegian funds represented an important addition to their budgets. Having additional funds allowed SA institutions to expand the list of priorities they could address and/or concentrate more intensively on particular priorities. For institutions with access to reliable independent funds – such as NERSA, which befits from a levy on electricity sales – the Norwegian funds may have been less attractive. The importance of having additional funds has increased for some institutions as internal budgets have become tighter since the advent of the world financial crisis.

Interviewees were not unanimous on whether Norwegian funds were easier to obtain and use than internal funds. This seemed to depend on procedures within individual institutions' administrations. One interviewee pointed out that strict internal procedures combined with the integration of Programme-funded projects into internal systems meant that Programme funds could actually be more difficult to obtain than normal voted funds since they effectively required a double approval process.

While Programme-funded projects were normally subject to the same procurement rules as internal projects, an apparent advantage is that they could effectively bypass some internal procedures when using Norwegian consultants.

Norwegian expertise helped train personnel, prioritise and review work by consultants and develop systems. The work of NVE and NPD, as well as that of most of the foreign trainers and consultants, was highly valued by all South African interviewees. In the absence of Norwegian funds and partners, most of the participating SA institutions would not have been able to hire the foreign consultants and trainers that they did. The Programme thus allowed them to take advantage of more expensive and (they felt) better quality expertise than otherwise would have been the case.

2.5 Sustainability

The review team asked interviewees what benefits will most likely remain after the Programme ends.

Some trained personnel will leave, but South Africa as a whole is still likely to gain. The team was not able to get complete figures for training conducted under the Programme, but according to figures provided by EDC, DME-Planning and PASA, the Programme so far has helped provide at least 310 person-days of training to about 60 persons within participating institutions, and to train a further 100+ persons from other institutions invited to take part, including some from Angola, Mozambique and Namibia.

Of the persons trained at institutions directly taking part in the Programme, there was only one reported case of someone leaving since the training. However, anecdotal evidence suggests a far higher rate. Moreover, past experience indicates that a large number may leave within a few years of the Programme, as the training makes them more attractive to other employers, particularly in the private sector. For example the former Programme Manager estimates that of the approximately 35 persons trained to work in the Petroleum Controller under the previous phase of Norwegian-South African energy cooperation, there are unlikely to be more than five still working for it.

While persons who leave an institution after training may deprive that institution of the direct benefits of that training, it is generally recognised this training is still likely to benefit the South African economy and society as a whole since the trained persons will probably use the learned skills in their new position.

The Programme helped build long-term professional relationships. Several South African interviewees commented that, even after the Programme comes to an end, an important lasting benefit will be the professional acquaintances they have made and whom they now feel they will be able to contact for further advice.

The Programme helped put into place several systems and other outputs that will out-last the Programme. Among others, the Programme helped produce the following:

- South Africa's Extended Continental Shelf Claim was successfully submitted on time to the UN in May 2009. (Norwegian assistance was instrumental in preparing this document, which could have an important impact on the country's control over potential natural resources on or below the sea floor)
- Database of existing onshore geological information (Programme funds which will enable PASA to search through DME and private mining house exploration archives)
- Inventory of South Africa's oil and gas reserves and resources (Norwegian consultants' expertise was instrumental in the design and compilation of what will be an annually updated database. This inventory will enable government to reliably assess South Africa's natural petroleum assets for future planning purposes)
- Downstream petroleum controller's office and licensing system (although part of this appears to have been done under the previous phase of the Programme)
- Pricing policy framework for electricity (largely done by local consultants but work reviewed by NVE)
- Initial specification of the Energy planning/modelling system to help meet DME's obligations under the Energy Act (still being set up)
- Distribution quality-of-supply database (focuses on the stadium sites within cities that will be hosting the 2010 World Cup, but can be expanded; DME will hand this system over to NERSA)
- Production of the Petroleum Regulatory Accounts system (yet to be populated with data)

2.6 Institutional cooperation

The Programme was more focused on individual projects than on institutional development. The Programme Business Plan called for the Programme to help build capacity 'both individually and organisationally' (p. 7). It called for Norwegian counterpart institutions to 'provide institutional cooperation in terms of support for development, policy and regulatory evolution and processes and skills transfer for the capacity building process…' (p. 27). Where capacity development took place, however, it tended to be at the individual level, e.g., through training. The main instances when the Programme addressed capacity beyond the individual level was when it advised on policy, e.g., when NVE personnel spent time working with DME staff to explain ideas and options for an electricity pricing policy and later to comment on the policy that DME drafted itself. The Programme also went beyond the individual level when it helped create systems, e.g., databases, and when it engaged in institutional capacity reviews, e.g., as NPD did at PASA.

In retrospect, one respondent from NVE felt that such a large Programme could have benefitted from at least one long-term advisor, e.g., someone from NVE working within DME in order to better ensure knowledge transfer at the institutional level and to keep up the momentum of the Programme.

The Norwegian partners had limited mandate and scope to force their SA partners to make progress. For example, the contract governing the relationship between NVE and CEF obliged NVE only to 'cooperate fully with the CEF/EDC to ensure' that approved projects were 'successfully accomplished' (6.2-3). The Norwegian partner institutions did not have influence over the provision of funds to their SA partners, so could not use this as an inducement to progress. It should also be borne in mind that the Norwegian partner institutions did not have any responsibilities to the Embassy or Norad in terms of reporting progress, but were effectively contractors reporting to their SA partners. Actual progress thus depended to an important extent on the interest of the SA partners in cooperating. Based on discussions with NVE, NPD and relevant SA partner institutions, despite limited mandates, both Norwegian partner institutions appear to have performed reasonably well in terms of encouraging their SA partners to make progress and following up with them when they did not see progress on particular projects.

Some Embassy staff were under the assumption that NVE had a coordinating role at the Programme level and asked the review team to comment on this. However, a review of Programme documents and a discussion with NVE about this indicates that this assumption is not correct. Although NVE was involved in more Subprogrammes than NPD was, the roles of the two Norwegian institutions were analogous, i.e., to serve as advisors to their respective SA partners under service-provision contracts.

Some of the original Subprogramme managers reportedly lacked specialist knowledge. This may have made it difficult for them to identify priority areas for cooperation and effectively work with their Norwegian counterparts. It also may have limited their interest in the Programme.

Several of the NVE twinning arrangements appeared to be mismatches. Although NVE is a regulator, it was paired with a government department (DME) and a state-owned company (CEF/EDC). The twinning arrangement between NVE and the South African energy regulator NERSA made more sense, though NERSA's lack of interest in the Programme thwarted that relationship. The relative success of the Upstream Petroleum Subprogramme may have been due to a combination of pairing similar types of institutions and a keen interest in institutional cooperation on the part of the South African partner, however the latter factor was probably more important.

Some interviewees both in recipient institutions and in Norwegian partner institutions suggested that the Programme should have dealt more with skills related to institutional-level management issues. As noted already, lack of project management skills within most recipient organisations was a challenge to the Programme's progress. Another area where some felt more should have been done was human resource policies, especially recruitment.

3 Finalisation of the Programme

The Embassy asked the review team to briefly note the main administrative tasks that need to be completed in order for the Programme to be finalised by the end of the present fiscal year (end-March 2010), and to alert the Embassy to any potential problems in this regard.

The administrative tasks required to wind down the Programme are well known to the Programme Manger and appear to be largely under control. The main tasks will be:

- Final progress and financial reports by the Subprogrammes to the Programme Manager
- Final Programme report by Programme Manager (according to the PM, this could be completed before end-March 2010)
- Final-year audit FY2009/10 (note that audit from FY2007/08 is only expected to be available within the next few weeks, while status of audit for the most recent final year is not clear)
- Final Annual Meeting
- Return of unspent funds to the Embassy via the RDP.

There is some confusion in Subprogrammes about the real end date of the Programme. It was agreed at the last PMC meeting in 2008 that all projects under the Programme should be completed by the end of September 2009, and only administrative tasks connected with ending the Programme should carry on through the new official end-date in March 2010. However, some Subprogrammes appear to believe that it would be permissible for projects to carry on to at least through the end of the 2009 calendar year, while at least one seemed to others clearly expect the entire Programme to be extended for a further year.

Several large projects are in danger of not being completed on time. Based on discussions with the Programme Manager and Subprogramme managers, the following projects appear to be in most danger of not being completed in time:

- Regulatory accounts (DME Hydrocarbons)
- Energy planning (DME Planning)
- Utility monitoring (NERSA)
- IPP framework (DME Electricity)

In addition, several Subprogrammes have noted that some approved projects will not be started in the remaining time. For example, PASA has said that an approved follow-up project to address eventual UN comments on South Africa's Continental Shelf extension application is not likely to begin until the UN provides comments, which will be sometime in 2010 or later; PASA is therefore seeking to shift the funds from this project to another approved project which is short of a similar amount.

The Programme Manager's contract comes to an end before the Programme does. The Programme Manager's contract with DME runs out at the end of October 2009. Given the important managerial work left to be done to finish up the Programme, the

DME is considering extending the contract. However, this must comply with normal competitive procurement procedures, which only allow for an extension if the value of the extension is less than 20% of the original contract value.

The recently-announced split-up of DME may take some attention away from the Programme for several months. The split into separate energy and minerals Departments and the ensuing reorganisation of the Energy Department, whilst simultaneously moving offices, may detract DME's attention from completing its projects and fulfilling its Programme management responsibilities.

4 Ideas for possible follow-up cooperation

It was understood at the beginning of the present Programme that energy cooperation between Norway and South Africa would probably be phased out at the end of the Programme. However, the Embassy has indicated that further energy cooperation may yet take place in line with the Norwegian government's current emphasis on climate and renewables; this is already reflected in a recent declaration signed between the Norwegian and South African governments.

The Embassy asked the review team for initial ideas for possible future cooperation with a focus on climate and renewables, building if possible on the present Programme. However, the Embassy stressed that this should not be considered a priority topic for the review, since there were already a number of other processes in existence to identify opportunities for cooperation within these areas.

At the request of the review team, EDC submitted a list of programme ideas it said it would be interested in pursuing (See Annex 6). Some of the more promising of these ideas include the following:

- Continue work with mini-hydro, e.g., expand work on site identification and feasibility studies to planned new dams and Greenfield sites
- Conduct similar work for wind and ocean-current project development
- Training on CDM project development
- Development of an energy efficiency audit programme for government buildings
- Development and testing of sustainable biofuels

Other promising ideas outside the climate area that were suggested by other interviewees include the following:

- Supporting energy policy programmes in South African universities to help train future staff for DME and other government organisations, and to build capacity for independent policy-making in academia that government can use; in particular, the Energy for Research Centre at the University of Cape Town that runs a master's programme for some 20 students is looking for core funding for the next three years
- Assisting DME and NERSA with the implementation of the recently announced Renewable Energy Feed-In Tariffs (REFIT)
- Continuation of energy planning work

While agreeing that climate is an important policy area, several South African interviewees stressed that, to maintain interest, a future Norwegian cooperation programme would also need to address some of the more immediate issues that face African policy makers. A recent article by Prof. Anton Eberhard in *Business Day* (attached as Annex 7) outlines what he feels are now the main energy policy challenges facing the incoming energy minister.

5 Recommendations & Lessons learned

This chapter presents recommendations for the remaining period of the present programme and lessons that should be incorporated into eventual future programmes.

5.1 Recommendations for the current programme

Given the late date for this midterm review (project activities are to end in less than four months), Norad and the Embassy agreed that the scope for providing recommendations for the remaining period of the Programme would be very limited. The two recommendations below are the most important ones that should and could be implemented to help increase the accountability and usefulness of the Programme.

The DME should prioritise a financial overview; the outcome of this process should be used to ensure that remaining funds are efficiently allocated

The financial situation presented in this review represents the team's best effort to understand the Programme based on information provided. However, the team did not feel that the information was adequate to provide a completely reliable overview of where resources had been spent on the Programme. Moreover, audited accounts were not yet available for the two most recent completed financial years. (The audit for the second financial year is expected shortly.)

The lack of adequate financial information is not necessarily the fault of the Programme manager. The Programme Manager reports to DME on the management function of this Programme, so presumably it is up to DME to instruct the Programme Manager on the type of financial information it requires, to satisfy both its own needs and the needs of the funder. Further, it is up to the Embassy to specify its own information needs to the DME.

The difficulty of producing and maintaining an adequate financial overview is understandable, given the major differences in the accounting systems of the participating SA institutions (e.g., cash-based vs. accruals-based systems). However, this should have led DME to create early on a management accounting system for the Programme that could overcome these complications.

The production of an adequate financial overview will enable the PMC to 1) allocate remaining funds so that they can be spent efficiently during the remaining period of the Programme, and 2) prepare an eventual evaluation and/or audit at end of the Programme. The financial review should, *inter alia*, show how much money has been spent on each project and participating institution to date; how much remains unspent and where it is; and how much is budgeted for which projects for the remainder of the programme.

Such an overview reportedly is being prepared for the 2009 Annual Meeting; the DME and Embassy should meet with the Programme Manager before this meeting to ensure that the overview will meet their information needs.

DME should ensure that Subprogrammes have sufficient freedom to easily shift funds between approved projects

Some Subprogrammes told the review team that they expected not to complete some approved projects, while other approved projects may require or could use more funds. However, they told the team that they anticipated difficulty getting permission from Programme Management to shift funds from one project to another.

In order to avoid bureaucratic delays in the approval process and to ensure that the available funds are usefully spent, it is recommended that Subprogrammes be permitted to shift funds between approved projects.

5.2 Lessons learned for possible future programmes

The following are the main lessons learned from the current programme that should be taken into account in any future donor assistance programmes in the South African energy sector.

Engage a smaller number of recipient institutions per programme

The cross-cutting nature of the Programme was potentially valuable, but the large number of institutions complicated its execution.

Running the administration for all the institutions through one agency created the risk of a bottleneck – which unfortunately occurred.

> **Conclusion**: Any future programmes should be conducted with only one or a small number of recipient institutions. For programmes outside DME, coordination with DME may be addressed by inviting the Department to participate on the programme steering committee.

Ensure the programme management function is located within the recipient institution

Having the Programme management function outside the DME may have increased efficiency, but appears to have undermined DME ownership.

It proved difficult in practice to create a <u>new</u> position in DME to manage the Programme.

> **Conclusion**: Ensure similar future projects are managed internally by a staff member who already has a regular contract within the recipient organisation.

Make sure the Embassy can adequately monitor the programme; enforce agreed reporting procedures

The Programme was complicated, and the Embassy did not understand it well.

The Embassy needs to understand a programme so that it is able to decide to continue or to stop it.

The reporting also needs to be sufficiently straightforward so that new Embassy personnel responsible for monitoring it are able to quickly bring themselves up to speed – even if there is a gap between Embassy staff responsible for the programme, as happened during the current one.

The reporting procedures in the Business Plan were not fully followed and/or enforced. The Business Plan for the present Programme allowed the Embassy to stop payment in such circumstances.

> **Conclusion**: The Embassy should insist on sticking with agreed reporting templates and procedures – or seek to change them – to ensure it is able to monitor the programme. The Embassy should stop payment if it considers reporting to be inadequate for the Embassy to carry out its monitoring role.

Transfer funds in smaller amounts to avoid undermining incentives to spend

The Business Plan foresaw transfers from the Embassy to the DME twice per year, though in practice large annual transfers usually took place.

Unspent funds built up in the DME and Subprogramme institutions, possibly undermining incentives to spend on a timely basis.

The Embassy threat to cut funding in late 2008 seemed to helped to get the Programme moving again.

> **Conclusion**: To more closely link funding to performance and to avoid creating large overhangs of unspent funds within recipient institutions, the Embassy should make programme transfers in several tranches each year – although this may lead to greater administrative responsibilities for the Embassy.

The Embassy should convene more than one progress meeting per year to take advantage of the moral authority of the Embassy as a motivating factor

The Annual Meeting was the only point at which the Programme and Subprogrammes were required to give account of themselves to the Norwegian Embassy.

Several interviewees stressed the moral authority of the Embassy as an important motivating factor, noting that it was more embarrassing to have to explain non-performance to the Norwegian Embassy than to one's own boss. Several also noted that there was usually a flurry of activity just prior to an Annual meeting, followed by a falloff in effort since major reporting was only required on an annual basis.

The Business Plan foresaw additional, 'semi-annual' meetings, but in practice these do not appear to have taken place. Nevertheless, the participation of Embassy staff as observers at PMC meetings since October 2008 is step in the right direction.

> **Conclusion**: The Embassy should increase the use of the Embassy's moral authority as an incentive for progress by holding meetings more frequently than once a year.

Annexes

Annex 1: Terms of Reference

TERMS OF REFERENCE

FOR MIDTERM REVIEW OF THE

SOUTH AFRICAN ENERGY SECTOR POLICY RESEARCH AND CAPACITY DEVELOPMENT PROGRAMME (RSA-3001)

1. Background

The South African Energy Sector Policy Research Programme (RSA-3001) was initiated 09.03.06 with the signing by RSA and Norway of the business plan proposed by the Department of Minerals and Energy (DME).

The program was to run over a period of about three years until end March 2009, with a total budget of NOK 35 mill. Upon DME's submission 28.10.08, Norway agreed by letter 27.11.08 to a no cost extension of the programme until March 2010. As of today Norway has disbursed NOK 27.255.000, -or approximately 78% of the original grant, and programme activities are expected to wind down by the end of 2009.

2. Overview of the Programme

The programme was designed as a continuation of the previous cooperation between RSA and Norway on energy policy development (RSA-0027), with the purpose of assisting DME in the implementation of these policies through the development of strategic tools and the strengthening of management capacities in DME and key government entities responsible for the regulation and development of the energy sector.

The program goal: "Legislation and regulatory frameworks in place and implemented in support of DME's energy goals."

DME goal: "Sustainable access to all forms of energy and related opportunities for various consumer groups through the optimal allocation of appropriate energy options by 2015."

The program includes 5 defined outputs/deliverables with key performance indicators, focusing on restructuring of the electricity industry, liberalisation of the hydrocarbons subsector, regulation of the energy sector, promotion of renewable energy options and transformation of the core functions of the Petroleum Agency. Effective management of the capacity building programme itself, is in addition defined as an output of the programme.

The programme comprises 5 subprogramme business plans with more detailed goals and outputs for the respective government institutions involved, and 5 institutional contracts for the twinning of these with relevant sister institutions in Norway. The involved institutions have been twinned as follows:

- Restructuring of the electricity industry: Department of Minerals and Energy (DME) and the Norwegian Water Resources and Energy Directorate (NVE);

- Liberalisation of the hydrocarbons subsector: Department of Minerals and Energy (DME) and the Norwegian Petroleum Directorate (NPD)
- Regulation of the energy sector: National Energy Regulator (NERSA) and NVE;
- Promotion of renewable energy options: Energy Development Corporation (EDC) and the Norwegian Water Resources and Energy Directorate (NVE);
- Transformation of the core functions of the Petroleum Agency: Petroleum Agency of South Africa (PASA) and NPD (subcontracted by NVE).

The budgets and the agreed programme extension have been updated in annual meetings. To ensure priority of the capacity building activities, the annual meeting in June 2007 decided to refocus programme implementation and reporting along the following 3 themes:

- Energy planning;
- Climate change;
- Regulation.

The defined programme and subprogramme outputs remains, however, unchanged.

DME is responsible for overall programme implementation, and EDC, PASA, NERSA and DME for their respective subprogramme. A Programme Management Committee (PMC) with members from all the involved RSA and Norwegian institutions was established to ensure programme coordination, and a programme manager was appointed by the DME.

3. Purpose and Context of the Review

The purpose of this mid-term review is to assess the programme achievements this far and to provide recommendations for the remaining period of the programme.

The assessments and recommendations of the review shall be taken into account by DME management, the PMC and serve as input to the annual meeting scheduled for mid-2009.

4. Scope of Work

The review shall briefly assess the relevance, effectiveness, efficiency, sustainability and impact so far of the programme.

Particular emphasis shall be put on the following issues:

- Programme organisation and management recommendations to simplify and improve implementation;
- Effectiveness and efficiency of the institutional cooperation and twinning arrangements;
- Priorities for the remaining programme period to ensure relevance to current challenges in the RSA energy sector, as well as effective programme finalisation.

All assessments shall be performed on the basis of a thorough knowledge of the programme and the South African context in which it has been planned and implemented. The review shall also, on a preliminary basis, assess possible areas and options for continued cooperation after 2010 addressing climate change, renewable energy and energy efficiency challenges based on Norwegian expertise, South African priorities and program achievements.

5. Implementation of the review

The work shall be carried out in close co-operation with, and through interviewing, relevant authorities and organisations in RSA and Norway, the Norwegian Embassy in Pretoria and Norad. The Norwegian Embassy in Pretoria in cooperation with the PM will assist in setting up meetings and the travel programme.

Fieldwork shall be carried out during two weeks in South Africa starting as soon as practical. Prior to the visit to South Africa a systematic desk review of key documents shall be carried out.

South African and Norwegian institutions important for the review team to meet, and key documents to be made available for the desk review by the Embassy and Norad, are listed in annexes I and II.

6. Competency and Expertise Requirements

The competence required to successfully carry out this consultancy include:

- A strong grasp of the theory and practice of development co-operation;
- Extensive experience in the design, appraisal, implementation and review of institutional development programmes;
- Familiarity with the context of energy sector reforms in RSA;
- Extensive knowledge of the management requirements for Norwegian development co-operation;
- Highly developed “process” skills – communication, facilitation and teamwork;
- The ability to write clearly and succinctly;
- Adherence to deadlines.

7. Reporting Requirements

A summary of the team's main assessments and findings shall be presented to the DME and the Norwegian Embassy in Pretoria before the end of the fieldwork, and shall be sent to Norad, Oslo.

A draft final report shall be submitted to the same parties within two weeks after the fieldwork. Any comments to this shall be forwarded to the team within two weeks after submission of the draft.

The final report shall be presented within two weeks after the above, to the same parties.

The final report shall be written in the English language and shall not exceed 30 pages plus an executive summary and attachments.

Pretoria, 12.02.09

[signature]

Tor Christian Hildan

Norwegian Ambassador to RSA

Annexes:

I: Institutions and State owned entities

II: Relevant Documents

Annex 2: List of persons interviewed

Norad, Oslo

Inger Stoll

Jan Eriksen, Senior Adviser

Rolv Bjelland

Norwegian Water Resources and Energy Directorate (NVE), Oslo

Amir Messiha

Kjell Repp

Torodd Jensen

Norwegian Petroleum Directorate, Stavanger (meeting in Oslo)

Oystein Kristiansen

Royal Norwegian Embassy, Pretoria

Helge Stange, Counsellor

Tim I. B. Lund, Environmental Counsellor

Margaret Mokhuane

Department of Minerals and Energy, Pretoria

Muzi Mkhize, Chief Director: Hydrocarbons

Ompi Aphane, Chief Director: Electricity

Tshilidzi Ramuedzisi, Chief Director: Energy Planning

Dakalo Netshivhazwaulu, Deputy Director: Financial Planning and Management Accounting

Petroleum Authority of South Africa (PASA), Cape Town

Dave Broad, Geological Advisor

Ntsiki van Averbeke, General Manager: Regulation

David van der Spuy, Manager of Resource Evaluation Department

National Energy Regulator of South Africa, Pretoria

Jacquelene Coetzer, Senior International Cooperation and Partnership Officer

Central Energy Fund / Energy Development Corporation, Johannesburg

Sibusiso Ngubane, Project Manager

Energy Solutions Africa (Pty) Ltd, Johannesburg

Moeketsi Thobela, RSA-3001 Programme Manager

Honey Mamabolo, member of Programme Management Team with focus on Climate Theme

Others

Prof Anton Eberhard, Management Programme in Infrastructure Reform and Regulation (MIR), University of Cape Town

Mark Beare, Deloitte (former RSA-3001 Programme Manager), Pretoria

Annex 3: List of main documents consulted

Approval of the extension of the South African Energy Sector Policy Research and Capacity Development Programme RSA-3001. Tim Lund, Royal Norwegian Embassy (November 27, 2008).

Bevilgningsdokument (Appropriation document), "RSA3001, The Norwegian assisted South African Energy Sector Policy research and Capacity Development Programme 2005-2008". Royal Norwegian Embassy, Pretoria (September 12, 2005).

Business Plan for the South African Energy Sector Policy Research and Capacity Development Programme - RSA-3000 (Proposed). Department of Minerals and Energy, Republic of South Africa (March 2, 2006).

Disbursement Application Submission. (December 6, 2007).

Draft Project Delta Minutes – RSA3001 Programme Management Committee, Sub-Committee Meeting. H. Mamabolo (October 14, 2008)

Draft Project Delta Minutes – RSA3001 Programme Management Committee Meeting. H. Mamabolo (October 2, 2008)

Subject: FW: RSA-3001, Ny utkast til Business Plan. E-mail correspondence between Norad-Postmottak - Arkiv and Halvard Øien (Sent: 7. februar 2006 08:41). Final Report: Appraisal of South Africa-Norway Energy Sector Co-operation 2005-2008 (RSA-3001). SAD-ELEC (Pty) Ltd. (April 4, 2005).

Information Pack for Participants to the 2007 Annual meeting of the *South African Energy Sector Policy research and Capacity Development Programme RSA-3001*. Royal Norwegian Embassy, Pretoria (June 1, 2007).

Information Pack for Participants to the 2008 Annual meeting of the *South African Energy Sector Policy research and Capacity Development Programme RSA-3001*. Royal Norwegian Embassy, Pretoria (May 20, 2008).

Management report on the regularity audit of the South African Energy Sector Policy research and Capacity Development Programme – RSA 3001 for the year ended 31 march 2007. Auditor-General, Republic of South Africa (March 13, 2008.).

(ME-637): Project Delta Monthly Activity Reports. M. Thobela: November 2008, December 2008, January 2009, February 2009, March 2009, April 2009.

Memo: Energy cooperation program RSA 3001. Rolf Bjelland (September 14, 2007)

Minutes of the 2007 RSA-3001 Programme Annual General Meeting 1 June 2007.

Minutes of the 2008 RSA-3001 Programme Annual General Meeting 20 May 2008.

Minutes from Meeting between DME and Norwegian Embassy 30.11.2005

Monthly Report (financial) – RSA 3001 NERSA Subprogramme: May 2009

Monthly Reports – RSA3001 PASA Implementation tracking 2008-2010: March 2009, April 2009

Motivation for the extension of the Programme to March 2010. Report by DME / M. Thobela (October 31, 2008)

Motivation letter: Extension of the RSA3001 Programme to March 2010, DME / Nhlanhla Gumede (October 28, 2008).

Organisational Review and Training Needs Assessment (TNA) for Petroleum Agency South Africa (PASA). BRIDGE Consult AS (May 2008).

Project Delta Minutes (RSA3001 Programme Review). Programme Management Committee (March 19, 2009).

RSA-3001 Business Plan for the South African Energy Sector Policy Research and Capacity Development Programme. Svar på bestilling (Answer to request). Norad (October 23, 2005).

RSA3001 Revised Composite Budgets 2006, 2007, 2008. / NVE invoice – authorised as per Norwegian Embassy letter (excel sheet).

RSA3001 Status Report for APRIL 2009 (dsb-npd-2009-009). Petroleum Agency South Africa (PASA), (April 2009).

RSA3001 Status Report for MARCH 2009 (dsb-npd-2009-006). Petroleum Agency South Africa (PASA), (March 2009).

RSA3001 Subprogramme Business Plan – *Alternative Energy Cooperation* – a component of the South African Energy Sector Policy research and Capacity Development Programme. proposed by CEF (Pty) Ltd and the Norwegian Water Resources and Energy Directorate (May 26, 2006).

RSA3001 Subprogramme Business Plan – *Energy Regulation Cooperation* – a component of the South African Energy Sector Policy research and Capacity Development Programme. Proposed by the National Energy Regulator of South Africa (NERSA) and the Norwegian Water Resources and Energy Directorate (August 22, 2006).

RSA3001 Subprogramme Business Plan – *Electricity* – a component of the South African Energy Sector Policy research and Capacity Development Programme. Proposed by the Chief Directorate of Electricity and the Norwegian Water Resources and Energy Directorate (March 6, 2006).

Reiserapport fra Rolv Bjellands for besøk til RSA 7 - 15. september 2007. Rolf Bjelland (October 1, 2007)

RSA3001 Subprogramme Business Plan – *Hydrocarbons Cooperation* – a component of the South African Energy Sector Policy research and Capacity Development Programme. Proposed by the Chief Directorate of Hydrocarbons and the Norwegian Water Resources and Energy Directorate (August 22, 2006).

RSA3001 Subprogramme Business Plan – *Upstream Petroleum Cooperation* – a component of the South African Energy Sector Policy research and Capacity Development Programme, (including a Service level Agreement between the Petroleum Agency South Africa and Department of minerals and Energy). Proposed by the Petroleum Agency South Africa and the Norwegian Petroleum Directorate (August 22, 2006).

South African Energy Sector Policy research and Capacity Development Programme, RSA 3001 Upstream Petroleum Cooperation. Øystein Kristiansen (NPD International co-operation). Activity reports 2008: January – March, April – June, July – September.

Study of the Introduction of an Independent System Operator to facilitate the implementation of the Independent Power producer (IPPs), first report in *Overview of Electricity Models Used in different Countries to Facilitate Investments in Power Generation*, Electricity Policy Analysis and Regulation Directorate of the Department of Minerals and Energy (March 26, 2009).

Timeline – up to 31 March 2010: Project Delta – RSA3001 – NERSA

Annex 4: Status of approved projects

Table A: Status of approved projects: Compiled by Programme Manager at request of review team

Theme	Sub-programme	SA Agency	Project	Old / New[10]	Status	Deliverable(s)	BP Output KPI addressed
			First Annual CDM Tracking Report	O	On-going	Report	Relevant capacity built to manage projects
		DME	Appointment of technical experts	O	In-house	Institutional capacity	Relevant capacity built to manage projects
			CC31:NVE/EDC Workshop-attended workshop in January 2008	O	Complete		Training programme designed and implemented
			CC32:Biofuels Programme Rollout	O	Partially Complete	Report	Training programme designed and implemented
			CC33:CDM Capacity Building	O	On-going	Institutional capacity	External specialist contracted
			CC34:Hybrid Mini-Hydros Wind and Solar Power Generation-report complete	O	Complete	Report	Investigate carbon emission reduction options
			CC35:Regional Training on Small hydropower	O	Complete	Institutional capacity	Training programme designed and implemented
			CC36:International Research & Development Programme	O	Discontinued	Report	Training programme designed and implemented
Climate Change	Alternative Energy	EDC	CC37: Mapping Wind Energy Potential	O	Discontinued	Report	Investigate carbon emission reduction

[10] Indicates whether a project was in the original Subprogramme Business Plans ('old') or added later ('new')

							options
			CC38:Bankable report studies-hydropower sites-3 pre-feasibility study reports	O	Not yet started	Reports	Investigate carbon emission reduction options
			CC39:Feasibility studies	O	Not yet started	Reports	Investigate carbon emission reduction options
			CC40:Policy for the development of SSH in SA	N	On-going	Approved policy document	Investigate carbon emission reduction options
			CC41:BEE Capacity Building Initiative for Biofuels	N	On-going	Institutional capacity	Investigate carbon emission reduction options
		NEEA	CC42:NEEA Solar Power	N	On-going	Energy-use equipment	Investigate carbon emission reduction options
			Electricity reticulation modelling (WC2010) - 2nd draft report w/shop	N	On-going	Report	
			IPP Framework Development - not started	N	Not yet started	Approved policy document	
			PM: NVE technical support	O	On-going	Institutional capacity	
			LTMS Study	N	Not yet started	Report	Investigate carbon emission reduction options
			Electricity Pricing Policy - policy promulgated	O	Complete	Approved policy document	Pricing Policy Developed
Regulation	Electricity		QoS of Electricity Supply Policy - report completed. Development of regulations suspended	O	Complete	Approved policy document	
Energy	N/A	DME	Energy Planning Capacity-building -ongoing	N	On-going	Institutional capacity	

Planning			Integrated Energy Planning Strategy – discontinued	N	Under review	Report	
			SANEDI BP Development - not yet started	N	Not yet started	Report	
			ESMP Implementation	N	Under review	Project plan/regulations	
			NIEMS Management	N	Complete	Reports	
			*Petroleum Pricing Review (Task 141)	N	On-going	Reports and pricing model	
			Training needs analysis - done in-house	O	In-house	Report	Training needs recommendations implemented
		DME	Gender and BEE Strategy – discontinued	O	Discontinued	Report	
		NERSA	RSA3001- TRAINING PROGRAMME NERSA	O	Complete	Institutional capacity	Support for NERSA members training
			COMMITTED 03/06: CAPACITY BUILDING	O	Complete	Institutional capacity	Training programme designed and implemented
			COMMITTED 03/06:STRAT STOCKS POLICY REVIEW - report complete	O	Complete	Approved policy document	Strategic Stocks Policy published/External specialist contracted
			COMMITTED 03/06:PPAA RETAIL LIC SYST DEV - system implemented	O	Complete	IT system	PPAA Licensing System Operationalised/External specialist contracted
			COMMITTED 03/6:REG ACCTS DEV - regulatory accounts developed	N	Complete	Reports and pricing model	
Regulation	Hydro carbons	DME	Training – MEETI	O	Complete	Institutional capacity	Training programme designed and implemented

			Training - North West University	O	On-going	Institutional capacity	Training programme designed and implemented
Energy Planning			Reserves and Resource evaluation training	O	On-going	Institutional capacity	Development and implementation resource evaluation methodologies
Energy Planning			Extended Continental Shelf Claim	O	Complete	Institutional capacity	Facilitate SA's extended shelf claim
Regulation			HRD - Upstream petroleum legislation	O	Complete	Institutional capacity	Training programme designed and implemented
Regulation			HRD - Upstream Govt petroleum contracts	O	Discontinued	Institutional capacity	Training programme designed and implemented
Regulation			HRD - Health and safety	O	Complete	Institutional capacity	Training programme designed and implemented
Regulation/Energy Planning			Training needs assessment	O	Complete	Report	Comprehensive training/institutional capacity assessment
Energy Planning/Regulation			Technical support – NPD	O	On-going	Institutional capacity	
Energy Planning/Regulation			Petroleum Devt and operation (PETRAD)	O	Complete	Institutional capacity	Training programme designed and implemented
Energy Planning/Regulation			Petroleum Policy and Management (PETRAD)	O	On-going	Institutional capacity	Training programme designed and implemented
Regulation			Oil and Gas industry disputes	O	Discontinued	Institutional capacity	
Energy	Upstream Petroleum	PASA	Extended Continental Shelf Claim - Doalos	O	Complete	Institutional capacity	Facilitate SA's extended shelf claim

Planning							
Energy Planning/Regulation			Petroskills (Petroleum Economics)	N	Complete	Institutional capacity	Training programme designed and implemented
Energy Planning/Regulation			PETRAD Workshop Zambia	N	Complete	Institutional capacity	Training programme designed and implemented
Energy Planning			Deep basin analysis	N	On-going	Report	Development and implementation resource evaluation methodologies
Energy Planning			Exploration training exercise	N	On-going	Institutional capacity	Development and implementation resource evaluation methodologies
Energy Planning			CBM Consulting	N	Not yet started	Institutional capacity	Contract suitably qualified resource consultant
Energy Planning			Data search	N	Not yet started	Institutional capacity	Development and implementation of resource evaluations methodologies
Energy Planning			Resource evaluation consultant	N	On-going[11]	Institutional capacity	Contract suitably qualified resource consultant
			Institutional Capacity review programme (Staff training & ELRI seminar)	O	Partially Complete	Institutional capacity	Training programme for members/secretariat
Regulation	Regulation	NERSA	Rollout of Web-based reporting system for electricity utilities (Conduct training workshops	O	On-going	Training for utilities	Regulatory rules promulgated and reviewed

[11] This project is the only one whose status has been modified by the relevant Subprogramme from that provided by the Programme Manager

			for utilities)				
			Rollout of Web-based reporting system for electricity utilities (Installation of the system at utilities)	O	On-going	IT system	Regulatory rules promulgated and reviewed
			Develop policy to promote the stability of the electricity sector (Price path analysis)	O	On-going	Report	Public policy advocacy options…
			Develop policy to promote the stability of the electricity sector (Modelling)	O	On-going	Report	Public policy advocacy options…
			Develop and maintain a system for monitoring the performance of electricity (EPDMS)	O	On-going	IT system	Regulatory rules promulgated and reviewed
			Develop framework for the resale market in South Africa (Framework implementation)	O	Under review	Report	Regulatory rules promulgated and reviewed

Source: Programme Manager

Annex 5: Status of Key Performance Indicators

This annex provides an overview of 42 KPIs in the Programme Business Plan. It excludes the KPIs related to Programme Management (Output 6), as well as the vague indicator ‘where insufficient capacity exists, external specialists will be contracted […]’, which in the Business Plan is repeated under each Output.

***KPIs related to Programme Goal**: "Legislation and regulatory frameworks in place and implemented in support of the DME's energy goals"*

KPI	Achieved	Contribution by Programme	Comment
DME policy paper(s) on new electricity supply published by 2008	Partly	Yes	This is part of DME's current work plan, to be achieved in DME. An IPP policy is being elaborated currently, but not a wider policy on new electricity supply. Some regulations have been implemented in this area, but outside any policy framework
DME policy paper(s) on managed liberalisation of downstream liquid fuels published by 2008	Partly	No	Partially achieved as part of Petroleum Products Act. Government may also have felt was adequately covered by White Paper.
Publishing of a strategic Stocks Policy for South Africa by 2007	Partly	No	Energy Security Master Plan covers this somewhat. A DME document on this has been developed but not yet published. "Task 135" under previous Norwegian programme contributed to this.
Promulgation of the Energy Sector regulations starting in 2006	Partly	Partly	The Programme contributed to the Energy Act via its work on the required modelling
Reviewing the effectiveness of the regulations and the various energy sector regulators starting in 2007	No	No	
Publishing of a Gas Sector Development Strategy	No	No	A gas infrastructure Plan was developed by DME prior to programme in 2005
Free Basic Energy Policy 2008 published for comment		No	

***KPIs related to DME Goal**: "Sustainable access to all forms of energy and related opportunities for various consumer groups through the optimal allocation of appropriate energy options by 2015"*

KPI	Achieved	Contribution of programme	Comment
Licensed Electricity IPPs commissioned by 2008 (DME IPP Tender project)	No	No	
25% of the petroleum value chain controlled by HDSA persons/entities by 2010 (DME HEPSP)	Partly	No	
Supply of renewable energy increased by at least 10,000 GWh by 2013 (REWP, 2003)	No	No	Renewable electricity feed-in tariffs have been decided. Biofuels policy not yet approved, but there has been some work on biofuel fuel specs.
National efficiency improvement target of 12% in the energy sector by 2014 due to appropriate regulatory interventions and market reforms (EES, 2006)	No	No	There are draft NERSA regulations for power conservation.
Evaluation report on South African petroleum resources published by 2008	Yes	Yes	The system and training funded by the Programme. Final report due in 2009.

***KPIs related to Purpose**: "The implementation of concrete interventions towards the establishment of enabling frameworks for effective governance and regulation, equitable market liberalisation and sustainable economic growth".*

KPI	Achieved	Contribution of programme	Comment
DME and where appropriate, associated institutions have implemented a human resource succession and retention plan from 2006	Partly	Partly	
Ongoing [Petroleum Products Amendment Act] operationalisation process with regard to managed liberalisation of the market from 2006	Yes	Yes	The system and training funded by the Programme

Ongoing ESI restructuring process with regard [to] electricity generation and establishing [a] regulatory framework from 2006	No	No	Regulations on IPP procurement framework have been drafted but not finalised.
NERSA business plan implemented by 2006	No	No	
Upstream resource and regulatory management framework developed by 2008	Partly	Yes	
At least 30% of the personnel trained throughout the programme are previously disadvantaged South African women	Yes	Yes	

KPIs related to Output 1 (Electricity)*: The capacity in place to manage the restructuring of the electricity sector in support of a transparent competitive and sustainable electricity industry.*

KPI	Achieved	Contribution of programme	Comment
Comprehensive training needs assessment concluded by 2007			
Pricing Policy Development to address various aspects of subsidisation, foreign direct investment and tariff modelling as ongoing areas of cooperation during 2006/07, 2007/08 and 2008/09	Yes	Partly	Done by local consultants
Training Program designed and implemented by 2006, annual milestones met in 2007-2008			
New generation techno-economic analysis completed by 2007			

KPIs related to Output 2 (Hydrocarbons)*: Capacity built to enable effective implementation of the policy framework and capacity in place for the managed liberalisation of a sustainable hydrocarbons sector.*

KPI	Achieved	Contribution of programme	Comment
Support for the training members of NERSA implemented by beginning of 2006	Yes	Yes	
Comprehensive training needs recommendations implemented in 2006	Yes	No	In-house
Training Program designed and implemented by 2006, annual milestones met in 2007-2008	Yes		
PPAA Retail Licensing System operationalised by 2006	Yes	Yes	Mostly don in-house, but Norwegians helped train
SDA capacitated with appropriate resources by 2006	Yes	No	
Strategic Stocks Policy developed and published by 2007	No	No	
Gas Sector Development Strategy developed and published by 2007	No	No	An upstream offshore gas strategy has been developed, but without Programme support

KPIs related to Output 3 (Regulation)*: Capacitate the regulatory framework and research mechanisms (rules) for regulation of the energy sector.*

KPI	Achieved	Contribution of programme	Comment
NERSA members and secretariat trained by 2006	No		
Public advocacy policy options in relation pricing and competition in the energy sector published by 2008	Partly	Yes	Project just beginning
Training programme for NERSA members/secretariat designed and implemented by 2006, annual milestones met in 2006-2008	No		
Regulatory rules promulgated and reviewed 2006-2008	Partly	Yes	Projects just beginning

KPIs related to Output 4 (Alternative Energy)*: Promote and operationalise renewable and low carbon energy options in a manner that encourages local economic growth and poverty reduction.*

KPI	Achieved	Contribution of programme	Comment
Training programme designed and implemented by 2006, annual milestones met in 2007-2008	Yes	Yes	
Relevant capacity developed to manage appropriate projects by 2006	Yes		
Appropriate projects scoped according to workplan by 2008	Yes	Yes	
Investigate carbon emission reduction options such as carbon capture	Partly	Yes	

KPIs related to Output 5 (Upstream Petroleum)*: To facilitate a smooth transformation of the core functions of the Agency under the new Minerals and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002).*

KPI	Achieved	Contribution of programme	Comment
Contract suitably qualified resource evaluation analyst in 2006 with appropriate workstation support capacity	Yes	Yes	Workshops 1 & 2 completed in 2008 and 2009 made use of ‘invaluable’ Norwegian expertise
Comprehensive institutional capacity/training needs assessment concluded by 2006	Yes	Yes	Completed in 2008
Training programme designed and implemented by 2006, annual milestones met in 2007-2008	Partly	Yes	PASA commented that the ‘inflexibility of process did not permit easy substitution of training courses’
Development and implementation of resource evaluation methodologies for routine ongoing evaluation of SA’s petroleum resources by 2006	Yes	Yes	Workshop 3 and final inventory will be completed in 2009 using Norwegian expertise
Facilitate South Africa’s Extended Shelf Claim	Yes	Yes	‘Extremely useful’ Norwegian consultant input

Annex 6: Complete list of follow-up projects proposed by CEF-EDC

12 May 2009

ITEM	KEY AREA OF INTERVENTION	POTENTIAL DELIVERABLES	REMARKS
Existing Projects			
1.	Hydro	o Finalise the three identified Hydro Power Projects	
		o Feasibility studies for the two Eastern Cape Mini Hydro Projects	Although these projects are under way, there is a high likely hood that by the time the Programme finishes in September 2009, the Process will most probably not be complete
		o Jozini mini Hydro feasibility study	The process of delivery has been delayed by the lack of authorisation hence the feasibility studies may also not be complete by the end of September 2009. Therefore there is a need for an extension.
		o There is potential for further development of Mini and medium scale Hydro schemes in SA,	Norwegian Co operation

		even though the country has limited sites, the very minimal sites have not been developed fully. These would include hydro plants directly from the rivers. o DWAF is investigating the establishment of new dams hence there will be an opportunity for studies to assess the potential for small to medium scale Hydro power o South Africa in collaboration with the SADC countries can also carry out studies that will develop more capacity for power hydro power generation especially in Mozambique, Zambia and Lesotho o Determine sites and feasibility in SADC.	Hydro potential has not been fully exploited in SA therefore there is genuine potential for the sector to be developed.
2.	Bio fuels and Transport Fuels	o Support in the process of testing 2nd generation bio fuels o Bio diesel using algae as feed stock o Research on bio ethanol Feed Stocks for SA special attention to Sweet sorghum, grain sorghum (DDGS markets) o Institutional support for participating bio fuels programme BEE farmers o Feasibility study for Concentrated Natural Gas (CNG) Project	
3.	CDM	o Training for CEF Carbon interns	
4.	Wind		
	NMBM Wind farm	o Wind Mast Measurements	

		o Financial Modelling for wind Projects	
		o Wind farm Project Development and management training o Determine wind & site potential offshore SA o Conduct feasibility studies for local high potential areas	Norwegian co operation
5.	Energy Efficiency	o Government Buildings energy use audits o Feasibility studies for potential commercial projects o Energy Service company training programme	
Follow on (new proposal)			
1.	Land fill gas (Methane for Power generation)	o Feasibility Studies / Financial Modelling / Gas Engine operation Training /	
2.	Bio mass gasification	o Efficient and clean conversion of Municipality waste and bio mass for electricity generation	
3.	Solar Water Heating	o Training of installers/maintainers	Training institutions identified and course accredited by Construction CETA
4.	Ocean Current energy resource	o Determine potential and best sites off SA coast	Can link to offshore wind – if it overlaps

Annex 7: Article by Prof. Anton Eberhard on current energy challenges

Ten Ways to Provide Country With More and Cleaner Power [opinion]

http://www.individual.com/story.php?story=101523024

by Anton Eberhard

Johannesburg, May 21, 2009 (Business Day/All Africa Global Media via COMTEX) --

IT IS the hope of all South Africans, and the belief of many, that we shall be better governed in the next five years than we were in the past five. There is the prospect of new leadership, policy renewal and a greater commitment to implement policy more effectively.

Most of us could point to sectors of government that could be improved. My area of expertise is energy and there is no doubt we could have done better. SA experienced unprecedented blackouts, which curtailed economic growth and caused widespread inconvenience. The distribution of petrol, diesel and gas has not been as reliable as it should have. Far too many continue to suffer inadequate, unsafe or unaffordable energy services. And environmental impacts remain a problem.

A comprehensive energy policy was published as a white paper in 1998. Its overall policy objectives were sensible: an energy sector that promotes economic competitiveness, social equity and environmental sustainability. Energy security and improved sector governance were seen as important elements in achieving these goals. There was a refreshing demand-side emphasis. However, many of the detailed policies in the white paper need updating or more effective implementation.

I suggest 10 important policy priorities for new Energy Minister Dipuo Peters, pictured right. First, the government has no integrated coal policy. More than 70% of our primary energy and more than 90% of electricity comes from coal. SA ranks fifth internationally as a producer and exporter. Coal has been the fastest-growing fuel globally over the past decade. But the government has no clear export strategy and there is no integrated development of mining, rail and port infrastructure to facilitate either exports or anticipated increases in local production and consumption, within acceptable environmental constraints.

Second, SA's continued dependence on coal implies that our carbon emissions are disproportionately large. International climate change negotiations will inevitably include countries such as China, India and SA in new commitments to reduce greenhouse gas emissions. Trade penalties on carbon-intensive exports are also being considered.

While our environment ministry has long-term mitigation scenarios and strategies, they are not yet having any effect on investment decisions. Eskom is building two more coal-fired power stations and will probably contract a third and fourth. Sasol is planning another coal-to-liquids plant. Clearly the government needs to develop a more consistent and integrated climate change policy.

Third, while the Department of Minerals and Energy has published a paper on the security of supply of liquid fuels, there is little evidence that it is providing leadership on key issues, including new refinery, pipeline, storage and distribution capacity, and more efficient transport options.

In the absence of clear policy pronouncements and purposeful action, industry players appear to be acting separately, sometimes with opposing and costly outcomes.

Fourth, electricity supply security remains important, despite the temporary supply cushion from the fall in demand linked to the global recession. If we are to avoid costly blackouts in future, then responsibility must be allocated, and appropriate institutional capacity developed, to ensure that new power is procured in time and at the least cost.

There are still three different agencies undertaking electricity expansion planning. Procurement for new private power appears to be ad hoc. Procedures for dealing with unsolicited bids are not transparent, and contracting and dispatch arrangements for independent power producers are exposed to potential conflicts of interest within Eskom.

The electricity sector recommendations in the 1998 white paper have been superseded by piecemeal, and sometimes contradictory, measures. In short, what is needed is a new electricity sector policy.

Fifth, while a reliable electricity supply depends on having sufficient, operating, power stations, it also requires reliable grid networks to transport the electricity to users. Municipalities distribute about half of our electricity and many are not investing adequately in maintaining these networks.

The government's planned solution is to transfer these networks to regional electricity distributors but the only way that will happen is if the rights of local government are curtailed. The proposed constitutional amendment will be opposed. A more pragmatic solution would be to invest in human and physical capital in the 12 largest distributors, which account for 80% of the electricity distributed by local government. Eskom could take over smaller, poorly performing distributors, while some of the medium-sized municipalities that are doing a reasonable job could be left alone.

Sixth, while the electricity regulator has made a bold decision to approve feed-in tariffs to Eskom that could support private investment in renewable energy, clarity and progress are needed on a range of issues before these investments become a reality. Further work is needed on robust power-purchase agreements, institutional capacity for contracting effectively, and transmission connection arrangement.

Seventh, sharp electricity price increases are necessary to finance Eskom's investment in new capacity. The government has probably reached the limit of its support for Eskom in the form of a R60bn loan and debt guarantees totalling R176bn. Eskom's access to private debt is becoming more difficult and expensive. Failure to raise electricity prices to levels that reflect costs will result in Eskom making a loss, maintenance and investment being delayed, and the lights going out. Devising special tariffs for low-income families will be difficult.

Eighth, South Africans should be encouraged to use energy more efficiently. Ours is the world's 16th-most electricity-intensive economy, which prejudices our competitiveness and environmental sustainability. Higher prices will be the most effective means to shift consumption patterns, but these must be supplemented by demand-side management incentives.

Ninth, the energy needs of poor households are still inadequately met. Nearly a third of South Africans still have no access to the grid. The electrification programme has slowed and there is no chance that the goal of universal access by 2014 will be met. If a political backlash is to be avoided, the programme will need a thorough review of targets, planning, technology choices, funding and implementation.

Even those with access to electricity can afford to use only modest amounts and rely also on paraffin, gas and fuel wood.

Much useful work was done in SA in the 1990s on household energy. We have yet to see an integrated and adequately resourced programme to tackle energy poverty. In rural areas, little progress has been made in sustainable production of fuel wood and its safe combustion in efficient stoves.

Tenth and last, energy policy priority relates to nuclear energy. SA continues to invest in the experimental pebble-bed nuclear reactor and fuel fabrication. The government is also considering a future fleet of conventional nuclear power stations. SA needs a national debate on the future development and use of nuclear energy, including its potential costs, safety, environmental benefits and dangers of weapons proliferation.

The above list may seem daunting - but real progress can be made if there is greater policy clarity and a renewal of institutional capacity to enable effective implementation.

Eberhard was the founder director of the Energy and Development Research Centre at the University of Cape Town and is now a professor at its Graduate School of Business.