

TERMS OF REFERENCE

REVISION OF THE RENEWABLE ENERGY WHITE PAPER POLICY AND TARGET

1. PURPOSE

The purpose of this Terms of Reference (TOR) is to request for proposals to revise the White Paper on Renewable Energy Policy of 2003 and its target.

2. BACKGROUND

The Department of Energy (the Department) is responsible for the development and implementation of the Renewable Energy Policy as described primarily in the White Paper on Renewable Energy of 2003. This policy document sets a target of 10 000 GWh renewable energy contribution to the final energy mix by 2013 that could be achieved through the appropriate development and implementation of renewable energy technologies.

With the assistance of the World Bank, the Department has established a Renewable Energy Market Transformation (REMT) Project Unit which aims at eliminating barriers to renewable energy development, thus reduce the greenhouse gas emissions and assist the country to reach the 2013 renewable energy target and beyond. The REMT Project supports Renewable Energy Power Generation (REPG) and Solar Water Heater (SWH) initiatives through a help desk by offering pre-investment finance and an opportunity to leverage off established investment networks. REMT further supports the Department and other relevant government agencies with technical assistance and capacity building in policy development, regulatory framework, financing mechanisms and resource assessment. The project has established its Implementation Support Unit (REMT-ISU) at the Development Bank of Southern Africa (DBSA). It is in the context of policy development support that the REMT-ISU is making this Request for Proposals (RfP) on behalf of the Department.

3. RATIONALE

The 2003 Renewable Energy White Paper makes a commitment for a mid-term (5-years) review. The Renewable Energy White Paper Policy is currently halfway through the target period of ten years. The Department has therefore been tasked to evaluate the policy; to assess if the target, objectives and deliverables are being achieved, and also to determine whether the policy direction remains appropriate.

Thus the Department hosted a Renewable Energy Summit on 19-20 March 2009 for which the REMT-ISU produced the Summit Report which has been finalised and made available on the Department's website. Subsequent to the summit, the Summit Resolutions were also finalised. Furthermore, the Department formed the Policy Review Committee (PRC) which is an advisory body constituted of the Government Departments, State Owned Entities, Municipalities, Academic Institutions, Non-Government Organisations, Community Based Organisations, representatives from Business and Labour Movements. The PRC will assist with the policy review process, which is planned to be completed by end of 2009/10 financial year. The Terms of Reference for the (PRC) and timelines for the completion of the review process have also been finalised. Officials from the Department, the South African Wind Energy

Programme (SAWEP) and REMT will form the Policy Steering Committee (PSC) that will guide and supervise the service provider appointed for this policy review assignment.

Besides the mid-term review commitment, there are other compelling reasons why the existing Renewable Energy White Paper requires a thorough review including:

1. Energy security has become a huge challenge in South Africa since the approval of the existing policy with very slim reserve margin in the electricity sector. This opens up opportunities for renewable energy in new generation capacity plans and at the demand-side.
2. Electricity price has increased dramatically making renewable energy more and more competitive.
3. There has been huge volatility in fuel prices globally making renewable energy portfolios more and more attractive.
4. Evidence of climate change has become more compelling and the South African Cabinet has strengthened its commitment by approving a strategy document (Long-Term Mitigation Scenarios – LTMS) which includes very ambitious targets for renewable energy and energy efficiency. It is important that the Renewable Energy White Paper is made coherent with the LTMS.
5. The 2012 Government's commitment to universal access to electricity has become more and more challenging and therefore innovative approaches for widening access to modern energy including renewable energy becomes imperative.

4. PROJECT OBJECTIVES

The White Paper on Renewable Energy is essentially a subset of the 1998 White Paper on Energy and therefore its review would be undertaken within this context in order to ensure coherence of Government Policy. Thus the key objectives of this assignment would be to revise the White Paper on Renewable Energy Policy of 2003 and its target. Other objectives also include:

1. To examine the overall progress achieved and barriers encountered in the existing White Paper in consideration of current and future energy security and environmental challenges in order to articulate the benefits and opportunities of renewable energy in the economy (Task 5.1).
2. To analyse the risk profiles of different energy scenarios for the country in the short-, medium and long-term in order to identify the opportunities for renewable energy (Task 5.2).
3. To review and recommend appropriate and essential elements of renewable energy policy that will enable a speedy and robust transition to a more sustainable energy economy through effective implementation strategies (Task 5.3).
4. To review the current renewable energy target set in the White Paper on Renewable Energy and come up with appropriate sustainable Renewable Energy Targets for the country through prioritisation of different renewable energy services for the society and economy under the overarching framework of the Energy White Paper (Task 5.4)
5. To review the effectiveness of existing strategic goals, objectives and deliverables of the renewable energy policy and make appropriate recommendations (Task 5.4).
6. To assess progress made by current support mechanisms like policy, regulatory and legislative instruments for creating investment certainties and make recommendations on what revisions would be needed and how they would be co-ordinated (Task 5.5)
7. To assess suit of pre-investment and long-term financing mechanisms required for promoting renewable energy development in South Africa. (Task 5.6)

8. To examine how effective the integration of other key cross-cutting issues have been addressed and how to enhance that with effective governance and partnerships (Tasks 5.7 & 5.8).

5. SCOPE OF WORK

The revision of the White Paper should build on existing policy work emerging from the recent local energy security challenges, global fuel crisis, global financial crisis and the urgency of climate change negotiations. This should include existing TIPS Renewable Energy Briefing Paper which discusses the “Potential of Renewable Energy to Contribute to National Electricity Emergency Response and Sustainable Development”. The policy should be reviewed and revised in the context of 1) energy security, climate change, energy poverty and socio-economic challenges of the country, 2) approved South African Integrated Resource Plan (if available), 3) recently published Electricity Regulations on New Generation Capacity and 4) NERSA approved Renewable Energy Feed-in Tariffs and Standard Power Purchase Agreement. The scope of the policy revision should include the following:

5.1 **Context and situation analysis.** This will deal with policy and target progress, gaps and implementation barriers as well as key changes and realities in the policy environment both locally and internationally that should drive the revised policy agenda.

5.2 **Prioritised role of renewable energy in current and future policy realities.** This task should identify opportunities in the energy context as well as conduct the risk profile analysis indicating where renewable energy can make significant impact at reasonable costs and reduced resource requirements. This should be clearly outlined indicating sectoral and technological opportunities. International benchmarking should be undertaken so that South Africa may draw experience from what other countries have done in order to either adapt or adopt such best practices in the sectoral interest, if needs be.

5.3 **Essential Elements of Renewable Energy Policy Implementation.** This task will clearly spell out what elements of renewable energy policy would be essential for developing detailed strategies for policy implementation. The consultant will identify potential implementation challenges such as EIA's, PPA's, grid connection and integration, project lead times, project development financing, etc and propose ways to address them. This task will provide an overview of current and future essential elements of renewable energy policy for successfully dealing with these challenges during implementation like 1) sustainable development principles, 2) financial, legal and regulatory instruments, 3) information management and dissemination, 4) human resources and capacity building and 5) institutional arrangements. The roles and responsibilities of all the various sectoral players must be clarified. A matrix can be developed to outline any flow of events and what levels of government (and private sector) that these opportunities are likely to be implemented.

5.4 **Revised Targets, Strategic Goals, Objectives and Deliverables.** This task, which forms the core of the project, will seek to revise the Renewable Energy Targets, strategic goals, objectives and deliverables for the required financial and fiscal instruments, legal and regulatory instruments, technology development, awareness raising, capacity building, education and technology support centres.

The objective of the approach is to determine the optimal quantity of power generation based on renewable energy given a set of technical and economic assumptions. The analysis begins at the provincial/state level, first developing the renewable energy project database and then determining the

unit costs of various renewable energy projects on a unit cost basis (in R per kWh). It then constructs a provincial/state supply curve relating cost per kWh to electricity production. The selection of economically viable projects requires a comparison of project costs with the production and social cost of on the same per unit basis.

To determine the social costs of coal use, the model calculates coal production costs in each province/state. It adds to these costs an estimated cost of the environmental damage that results from coal use. Since consistent data may not be available for all of RSA's provinces/states, the estimate could be based on the *benefit transfer method* – using well-established studies outside of South Africa but adjusting the costs for country conditions.¹ The cost analysis for renewable energy is based on production costs of the renewable energy technologies plus a *capacity penalty*, if applicable. This penalty represents the cost of not having continuous power available for dispatch to the grid and the need to establish a form of back-up generating capacity, as in the case of hydropower projects without storage capacity.

The simulation model extrapolates a national supply curve for electricity generation from renewable energy from the provincial supply curves. It then allocates all electricity production from all renewable energy projects with a unit generation cost less than that of coal in the estimate of the quantity economically justified without considering environmental externalities. It also groups all projects with a unit cost less than the production cost of coal plus the externality cost. This quantity is considered the economic optimum from an environmental perspective and forms the base case of the analysis.

The target year for the scale-up of renewable energy to the grid is fixed. The quantity analysis is then based on economic costs, i.e. without the inclusion of taxes and duties. Production costs are subsequently calculated as the annual operating and maintenance costs plus an annualized equivalent of capital costs. Key assumptions, especially regarding annualised capital costs for the economic life of generation plants and externality values, are to be clearly stated in the methodology.

Since key barriers to progress on the existing Renewable Energy White Paper have been policy, regulatory framework and funding mechanisms, special attention should be given to these issues in developing appropriate methodologies in the following sub-tasks:

5.4.1 **Baseline information analysis.** This would involve the assessment of renewable energy resources through identification and quantification of existing and potential RE projects. This would form the main foundation of the Renewable Energy White Paper Revision especially in terms of the macroeconomic impact analysis and the resultant renewable energy targets.

5.4.2 **Macroeconomic impact analysis.** This task would set renewable energy targets based on macroeconomic impact analysis of renewable energy portfolios emerging out of the baseline information and risk profile analysis. Appropriate cost-supply curves would have to be developed for determining ambitious but realistic renewable energy targets. Different targets should be set for short-term, medium-term and long-term, in consultation with the Project Steering Committee (PSC). Typically a short-term could be up to 5 years, medium-term could be up to 20 years and long-term could be up to 50 years depending on the strategic positioning adopted by the PSC. Choices made

¹ The damage cost analysis considers damage from three main air pollutants – oxides of sulfur (SO_x), oxides of nitrogen (NO_x) and particulate matter that would be emitted from plants with pollution controls (electrostatic precipitators).

should be guided by economic competitiveness, strategic positioning of the country and benefits of regional integration. The key tasks would include the following:

5.4.2.1 In consultation with the Project Steering Committee (PSC), the Consultant will develop selection criteria (e.g. functionality, input and output parameters) to be used to identify and recommend appropriate macro-economic model(s) that can be used to analyze the economic impacts and costs of plausible renewable energy portfolios for determining appropriate renewable energy targets.

5.4.2.2 Based on the baseline information analysis, sectoral profiling and Cabinet allocated 30/70 new generation split between IPPs and Eskom respectively, the Consultant, in consultation with the PSC, will propose renewable energy portfolios (GWh, MW, load factor, levelised cost) for the short-term, medium-term and long-term. These renewable energy portfolio analysis should build on existing Cabinet approved work like the Climate Change Long-Term Mitigation Scenarios (LTMS).

5.4.2.3 The Consultant will run the macro-economic model for each of the renewable energy portfolios and will report on the economic impact and viability of the proposed renewable energy portfolios. The information on the costs of the different renewable energy technologies used in the macroeconomic model should be drawn from the levelised cost calculations used for the Renewable Energy Feed-in Tariffs (REFIT) studies undertaken by the National Energy Regulator of South Africa (NERSA) as well as international benchmarks. The main outputs of this task would be the renewable energy targets for the short-, medium- and long-terms which would form the foundation of the revised Renewable Energy White Paper. This task should improve and build on existing work, for example, the 2004 DME Renewable Energy Macroeconomic Study and the WWF Study Costing 15% Renewable Electricity Target by 2020.

5.4 Policy, Regulatory Framework and Legislation. Debates at the recent Renewable Energy Summit exposed the lack of clarity and stakeholder consensus regarding what policy and regulatory mechanism South Africa should adopt in fast tracking the development of its renewable energy resources. Although the Energy Regulator has already adopted the REFIT approach, there are still concerns whether a tendering system should not be pursued along side or some sort of a hybrid of the two mechanisms. This task should draw on international best practices and make clear recommendations for the unique South African situation so that the revised policy document would have a clear and definite policy support instead of a confusing one. The task should further assess the appropriate legislative instrument for consolidating this policy and regulatory support in order to enhance certainty in renewable energy investments. The Consultant should also explore other complementary policies and regulatory frameworks that would be effective in stimulating renewable energy investment opportunities in both the supply- and demand-sides of the energy sector. For example, appropriate policies for enhancing the value of the “green attributes” of renewable energy should also be explored. However, the Consultant will be required to highlight priority areas for the country.

5.6 Funding Support Mechanisms. This task would focus on review and development of appropriate and effective funding matrix in which all the existing and innovative funding mechanisms and options (e.g. REFSO once off capital subsidy, National Treasury environmental and

sustainable energy levy, REFIT, TRECs, CDM, donor grant, mix-credits, “green” premiums, debt, equity etc) are described and compared in terms of funding institutions, targeted RE technologies, target groups, funding limits, cost of financing, duration, application procedures and terms and conditions. The Consultant should also benchmark with similar funding mechanisms and options in other countries and report on their effectiveness with recommendations. The appropriate role of existing financial support like REFSO and donor support programmes such as REMT and SAWEP should be reviewed since we now have decent REFIT in place with significant returns on investment. The task should also analyse and recommend strategic financing opportunities for Government development financial institutions.

5.7 Cross Cutting Issues. The revision of linkages of the policy with cross cutting issues should include integrated energy planning, energy efficiency, environment and health, energy poverty and energisation, gender issues, BEE and job creation, regional dimensions of the transition, trade and international cooperation.

5.8 Review and recommend effective governance and partnerships.

6. DELIVERABLES

The project deliverables shall be as outlined below. The deliverables of all reports should be in both electronic and hard copies. All reports should have stand-alone executive summaries as well as combined executive summary and main reports. The costs of all required workshops would be borne by the REMT Unit or the Department. The cost of producing professionally bound copies of all reports would be borne by the REMT Unit. The key project deliverables shall be the following:

1. Draft inception report. This report should propose clear and detailed project concept, analytical framework, methodology, and execution plan for undertaking this assignment.
2. Inception Report Workshop at which the draft inception report will be presented to the Project Steering Committee (PSC) for their guidance and approval of the final structure of the Project.
3. Final inception report. The final inception report would be the guide book for the project onwards after approval by the PSC.
4. Baseline report on South African renewable energy potential and targets. This report will capture the detailed outputs of the tasks on baseline information analysis and the macroeconomic impact analysis (Task 5.4). Thus this stand-alone report will consolidate all the information, modeling and analysis that clearly define and justify South African renewable energy targets and priorities as the basis for the revision of the Renewable Energy White Paper.
5. Draft Detailed Revised Renewable Energy White Paper capturing the summarized outputs of Task 5.4 and the detailed outputs of all the other tasks.
6. Draft Revised Renewable Energy Policy Document which will be a high level policy document drawing key policy statements from the Detailed Revised Renewable Energy White Paper.
7. Stakeholder Workshop on both the Draft Baseline Report and the Draft Revised Renewable Energy White Paper.
8. Final Baseline Report and Revised Renewable Energy White Paper (detailed and high level policy document).

7. PROJECT TIMELINES PAYMENT SCHEDULE

The Consultant would propose appropriate project implementation plan for effectively completing this assignment by the end of January 2009. The timelines below could serve as a guide. The Consultant would be paid upon delivery of the milestones as scheduled below:

<i>Milestone</i>	<i>Deliverable</i>	<i>Timeline</i>	<i>% of Contract Price Paid</i>
1	Completed and Signed Contract		
2	Draft Inception Report	Up to 2 weeks	
3	Approved Final Inception Report	Up to 3 weeks	15
4	Draft Renewable Energy Baseline Report	Up to 2.5 months	20
5	Approved Final Baseline Report, Draft Revised Renewable Energy White Paper and Draft Renewable Energy Policy Document	Up to 3.5 months	35
6	Stakeholder Workshop	Up to 4 Months	
7	Approved Final Revised Renewable Energy White Paper and Final Renewable Energy Policy Document	Up to 5 Months	30

8. PROJECT MANAGEMENT AND STAKEHOLDER PARTICIPATION

The project will be managed and administered by the Project Coordinator of REMT. The Consultant will report to the REMT Project Coordinator on all matters related to this project.

The project oversight and approval role will be undertaken by the Project Steering Committee (PSC) which will be chaired by the Department's Clean Energy Chief Directorate. Other members of the PSC will include officials from the Department's Clean Energy Chief Directorate, REMT and SAWEF. Representatives from the Department's Electricity and Hydrocarbon Chief Directorates shall also be invited to serve on this committee.

To ensure efficient and sufficient stakeholder participation, the TOR would be distributed to all relevant renewable energy stakeholders, especially the Policy Review Committee, after the appointment of the preferred bidder. Comments would be requested from the stakeholders as input to the Inception Report Workshop. All draft reports would also be distributed to all relevant Stakeholders for inputs. Stakeholders have a final opportunity for interrogating and making inputs to the revised policy at the Stakeholder Workshop. The Consultant's submission could propose alternative ways of improving this stakeholder involvement.

9. CONSULTANTS QUALIFICATIONS

The Consultant Team shall have the following minimum professional experience and abilities:

- Applicable engineering, science and or business degree(s);
- Relevant exposure and experience in the renewable energy sector and sufficient knowledge of South African energy policies and legislations;
- Relevant experience and involvement in policy development preferably energy, climate change and environment issues;

- Professional experience in project and stakeholders management;
- Professional experience in communication and reporting at all levels; and
- Working knowledge and exposure with macro-economic modeling and impact assessment studies.

10. SKILLS

The Consultant shall command an exceptional English language and excellent report writing skills.

11. MATERIAL INPUTS

The Consultant will indicate all existing work that would be consulted in this assignment and any required reports would be provided by the REMT Unit upon request. Information provided on this would assist in evaluating how knowledgeable and experienced the Consultant is regarding this assignment.

12. PROJECT PROPOSAL SUBMISSION AND DEADLINE

The proposal submission must clearly be broken down into technical and financial proposals. The technical proposal should provide information on the Consultant's understanding of the project and how it would be undertaken whilst the financial proposal should deal with how project resources are allocated and costed. **All costs shall be stated in South African Rand (ZAR).** The project proposal should display a clear understanding of the tasks required and the submission should at least include the following:

1. Consultant's comments on the Terms of Reference: this could be expert comments on alternative ways of structuring the project and its tasks more effectively as well as omissions that should be covered or details that should be toned down.
2. Project description as understood by the Consultant
3. Research methodology
4. Existing work to be consulted in this assignment
5. Project execution plan
6. Qualification of all Consultancy Team
7. Project management
8. Project resource allocation and well-explained costing thereof

The proposal can be in electronic or hard copy form and this should reach the offices of the REMT Unit at the DBSA New Road Offices **by 16:00 on 14 September 2009**. After this time any proposal received would be disqualified.

13. PROCUREMENT, PROPOSAL EVALUATION AND CONSULTANT SELECTION CRITERIA

The proposal would be evaluated by the REMT Project Team and co-opted staff from the Department. The Evaluation Committee shall be made up a minimum of three experts. Due to the time constraints of the project the procurement notification would be sent to a wide list of shortlisted energy research consultants in concurrence with the Department's renewable energy staff. To ensure significant and fair competition as much as possible, the Request for Proposal (RfP) would be distributed at many websites including the DBSA and the Engineering News Online. The Evaluation Report will publish the names of all

consultants included in the closed tender to demonstrate how widely the tender was distributed and the extent of competition it offered.

Item	Criteria	Score
A	<i>Technical Proposal Criteria</i>	
A.1	Knowledge and understanding of the South African renewable energy sector and its relationship with the energy sector as well as international best practices	10
A.2	Understanding of the project, its tasks and deliverables: relevance of consultant's comments, project description, research methodology, existing work to be consulted	35
A.3	Project execution plan	20
A.4	Relevance to Socio-Economic Imperatives of South Africa	10
A.4	Relevance of Consultant's qualification and experience	15
A.5	Project management	10
<i>TOTAL</i>		<i>100</i>

The evaluation of the proposals shall be carried out in two stages: first the quality, and then the cost. Evaluators of the technical proposals shall not have access to the financial proposals until the technical evaluation, including any World Bank reviews and no objection, is concluded. Financial proposals shall be opened only thereafter. The evaluation shall be carried out in full conformity with the provisions of the RFP.

The Proposal Evaluation Committee would be using the above criteria for assessing the quality of the technical proposals. Each proposal shall be evaluated on the basis of its responsiveness to the TOR. A proposal shall be considered unsuitable and shall be rejected at this stage if it does not respond to important aspects of the TOR or it fails to achieve a minimum technical score of 50 out of a total of 100.

After the evaluation of quality is completed, the financial evaluation will start. For the purpose of evaluation, the cost shall include all consultant's remuneration and other expenses such as travel, report printing, or secretarial expenses but will exclude expenses on workshops. The proposal with the lowest cost would be given a financial score of 100 and other proposals given financial scores that are inversely proportional to their prices.

The total score shall be obtained by weighting the quality and cost scores and adding them. The weight for cost shall be 20 points out of a total score of 100. The consultant obtaining the highest total score shall be invited for negotiations.

14. DECLARATION

This Request for Proposal (RfP) does not exclude participation of entities that have interests in renewable energy investments or businesses which could benefit from specific policy choices. However, the project proposal should provide a declaration of this/these interest(s) and how the potential conflict of interest risk would be mitigated against in the execution of this project. The Project Evaluation Team reserves the right to accept or reject this proposed risk mitigation as adequate.

15. CONTACT PERSON

Any response and enquiries regarding this Request for Proposals (RfP) should be directed to Ms Dineo Mathonsi at the Renewable Energy and Market Transformation (REMT) Unit at the Development Bank of Southern Africa. Her contact details are:

Tel: 011 313 3598; Email: DineoM2@dbsa.org .

16. INTELLECTUAL PROPERTY

All the intellectual property associated with this project will remain with the Department.