



**MANDELA** INSTITUTE

# Climate Change, Energy & the Environment

## Methodology Review Workshop Report

Developed for Konrad Adenauer Stiftung (KAS) by the Mandela Institute, University of the Witwatersrand, School of Law

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## PROPOSED METHODOLOGY ON CLIMATE CHANGE RESEARCH

### 1. Introduction

The Mandela Institute in partnership with the Konrad Adnauer Stiftung (KAS) held an implementation workshop on the 22nd of May 2015 to assess the research scope and methodology of the proposed research project on renewable energy to be implemented by the Mandela Institute. The objective of the workshop was to obtain input from the stakeholders which would enable the team to perfect the research scope and design.

The workshop participants included experts from Wits University, KAS, CSIR, Edward Nathan Sonnenberg law firm, NGOs such as WWF, Ground Work and Conservation South Africa, as well as a representative from the Spanish Embassy in South Africa. The newly appointed researchers for the project were also present. The workshop was co-ordinated by Dr. Fola Adeleke who will be responsible for co-ordinating the entire project.

Dr. Dix in his opening address indicated that the research project was motivated by the fact that climate change threatens our future and therefore all states had an equitable duty to respond to climate change. He further indicated that economic advancement and the environment are not contradictory terms and for this reason, sustainable development does not have to be economically unfriendly.

## 2. Research Scope

The participants were briefed on the aim of the research project: to investigate the effectiveness of the renewable energy procurement programme as a strategy towards climate change mitigation and the solutions that renewable energy presents in access to energy and the realisation of socio-economic rights. A summary of the previous scoping workshop held in 24 November 2014, was given. The summary highlighted some of the suggestions given to Mandela Institute by the participants on refining the project's research scope.

In his presentation, Dr. Adeleke indicated that the research project is intended to focus on two broad parts;

1. Reviewing the South African Renewable Energy Independent Power Producer Procurement Programme (REIP4) in relation to achieving a developmental objective that benefits communities as well as in helping the government to meet its international commitments on climate change mitigation.
2. How renewable energy solutions can address access to energy in rural areas and make communities economically active to improve their standard of living.

### 2.1 Review of the REIP4 (REIP4)

South Africa occupies a central position in the global debate in terms of the development of the most effective policy instruments to accelerate and sustain private investment in renewable energy. Debates have intensified on the most effective policy instruments to accelerate and sustain investment by the private sector into these renewable energy technologies. In 2009, the government began exploring feed-in tariffs (FITs) for renewable energy, but these were later rejected in favor of competitive tenders. The resulting program is the REIP4 and has channeled substantial private sector expertise and investment into grid-connected renewable energy in South Africa.

To date, a total of 64 projects have been awarded to the private sector, and the first projects are already on line. Private sector investment totaling US\$14 billion has been committed, and these projects will generate almost 4000 megawatt (MW) of renewable power. The boldness of this Programme is a clear response to three critical issues which needed to be addressed: i) South Africa's urgent need for new generation capacity to alleviate critical energy supply constraints; ii) mounting international pressure to decarbonize the country's energy supply; and iii) a significant political will and desire to promote a sustainable renewable energy industry which would deliver both cost-effective energy and socioeconomic benefits.

- ✓ **Task 1: Investigative research on the effectiveness of the REIP4 as a strategy towards climate change mitigation and the solutions that renewable energy presents in addressing energy access and realising socio-economic rights.**

The intended research scope will be firstly through extensive literature research on existing research in the field collected by government, non-governmental organisations and independent power producers (IPPs). Other government policy documents relating to renewable energy will be considered.

Field and desktop research to be conducted; reports to be considered include:

1. 'South Africa's Renewable Energy IPP Procurement Program: Success Factors and Lessons' May 2014 by the University of Cape Town and the World Bank Institute
2. WWF 'Enabling Renewable Energy in South Africa: Assessing the Renewable Energy Independent Power Producer Procurement Programme' 2014

The reports will inform the basis of the identified stakeholders to consult in the financial services sector, the IPPs, relevant government departments and communities.

The proposed research will investigate Non-financial and Financial aspects of the Programme.

**Non-financial aspects**

These relate primarily to the process and procurement policies and the key non-financial themes from preliminary literature review that is worth considering include:

- a) Price discovery process such as market established tariff;
- b) Financial burden on the private sector: Preparation and submission of bids has required a significant amount of risk to be carried by developers such as land procurement, permits, Environmental Impact Assessments (EIAs), technical studies which are all undertaken with significant capital without any guarantee of success;
- c) Ambitious pace of development: Impact on skills;
- d) Grid connection challenges: Only once projects have been awarded Preferred Bidder status can Eskom commence its approval processes to ensure it has the resources to safely and reliably connect the IPP to the grid; There is a fundamental disconnect between what the IPP needs (certainty in terms of connection with as close to a fixed price as possible) and what Eskom needs (visibility in terms of how many total megawatts from REI4P will go onto the grid, when and from where);
- e) Standardisation of Power Purchase Agreement (PPA) terms;
- f) Local content requirements: Cost competitiveness and short term job creation versus socio-economic benefits and subsidization of foreign imports.

**Financial aspects**

Majority of project debt for renewable energy has come from local commercial banks through non- or limited-recourse financing. Areas to consider include:

- a) Interest rate risk: Long-term rates and inflation are two of the most significant variables impacting project economics, and therefore tariff levels bid.
- b) Diversification of funding sources: Commercial banks have dominated the market to date, despite the mismatch between their preference for shorter-dated loan tenors and the longer-dated tenors typically required, the latter of which can be punitive in terms of capital reserve requirements.
- c) Broad-Based Black Economic Empowerment (BBBEE) financing vehicles: A key aspect of REIP4 has been the requirement for meaningful black economic empowerment (BBBEE) participation in projects. To date, financing of BBBEE participants in REIP4 has largely been the domain of Development Finance Institutions.

## 2.2 Renewable energy solutions in rural communities

- ✓ **Task 2: Investigate how renewable energy solutions can address access to energy in rural areas and make communities economically active while improving standards of living.**

Extended field research will be conducted that consists of research interviews, focus group discussions and workshops. The tentative plan is to work in two communities where IPP projects exist and conduct:

1. A workshop on the research project as well as the REIP4 and the specific RE project in the community.
2. Research interviews with IPPs and government.
3. Two focus group meetings of no more than 15 people that consist of various stakeholders: community leaders, community based organisations etc.

4. Host a town hall meeting for community members to air their views on the related issues to the scope of research.

### **TENTATIVE RENEWABLE ENERGY RESEARCH QUESTIONNAIRE**

**It is proposed that questions will address the following areas:**

1. Energy sources currently available in the community.
  2. Personal and economic uses of energy.
  3. Alternative sources of energy that can be made available.
  4. Effectiveness, accessibility and cost of the alternative sources.
  5. Community engagement in renewable energy project
  6. Government engagement and collaboration with communities on renewable energy.
  7. Factors triggering current energy projects in communities.
  8. Success factors for energy projects.
  9. Knowledge and capacity by the community on renewable energy
  10. Barriers to the development of renewable energy.
  11. Added value benefits of renewable energy projects.
  12. Familiarity with government's renewable energy policy.
  13. Economic and social impact on access to affordable and regular energy.
- ✓ **Task 3: Evaluate the climate change response strategy in the context of socio-economic and environmental rights and the rights of communities who are most vulnerable to climate change**



- ✓ **Task 4: In the context of the National Development Plan, investigate and report on how the climate change response strategy and renewable energy initiatives can contribute towards the outcomes of the NDP particularly socio-economic rights.**
- ✓ **Task 5: Promote empowerment in renewable energy programmes or activities in rural communities through capacity building and education of community leaders.**

### **3. Desired Outcomes**

1. Develop the background paper and the field research report into one report that highlights regulatory gaps, community challenges, as well as identify findings and recommendations.
2. Incorporate the outcomes of COP 2015 in the report for regulatory planning and implementation.
3. Host a Policy dialogue; Host a meeting with relevant stakeholders to disseminate findings of report and seek input particularly from government on the effectiveness of renewable energy procurement framework as a strategy towards climate change mitigation and adaptation. In addition, evaluate the climate change response strategy in the context of socio-economic and environmental rights, and the rights of communities who are most vulnerable to climate change.
4. Publish the final report and host a dissemination event where the final report is publicly released which documents community needs that will inform the future policy making of government in renewable energy.
5. Publish research findings in a journal focussed on climate change and renewable energy.

## 4. Stakeholders' views

During the review of the proposed research scope and methodology by the stakeholders, it was broadly stated that:

- The intended scope of the research was too broad and should be significantly narrowed.
- The appropriateness of the methodology should be considered in relation to how it takes into consideration SA's international (UNFCCC) climate change obligations, the National Development Plan with socio-economic rights as a benchmark and the REIP4.
- The objectives of the project should not be spread out too wide to enable a successful project.

Other considerations:

- It should be acknowledged that :
  - The primary purpose for initiating the REIP4 was to address the current energy crisis and not access to RE by rural communities.
  - IPPs are not well equipped to address socio-economic developments issues such as access of rural communities to renewable energy.
  - Forcing socio-economic requirements will have an impact on FDI into RE.
  - RE is too expensive and it should be made cheaper for access by rural communities. \* REIP4 is not in its current state designed to do this.
- Legislation affecting access to energy by communities should be taken into consideration. The focus should not be on the REIP4 which should not be the benchmark but rather the rural electrification programme of government.
- Ensure policy dialogues with the Department of Energy to improve social development within the REIP4 and also to ensure that the effectiveness of the project can be measured.
- Distinguish what the government is currently doing on the rural electrification programme, in relation to renewables and what this project seeks to achieve.

- Unlock access to renewables at a municipal level.
- Analyse revenue impact at a municipality level with the introduction of RE.
- Assess the affordability/cost effectiveness of renewable energy as revenue collection by the municipalities defeats objectives of access to energy.
- Investigate the impact of change in succession of companies providing renewable energy at a municipal level.
- Demystify the view that RE is a temporary measure as people await being connected to the grid.
- Capacity building on the need to address climate change in the political realm to enable politicians to include environmental agendas in their manifestos which eventually translate into policies.
- Consider partnerships to conduct the project to expand capacity/expertise.
- Identify only one theory of change for the project.
- Focus on MI's strengths in actualising the project.

## 5. Conclusion

Taking into consideration the proposed recommendations from the workshop participants, the Mandela Institute agreed to limit the intended research project on renewable energy solutions and community impacts. The institute will in addition to analysing the REIP4, give emphasis to other existing government policies focused on access to energy in communities. The MI with the two new researchers designated to this project will immediately commence the redesign of the research scope and methodology based on the comments received.