

Terms of Reference

Renewable Energy Industrialisation in South Africa:
Identifying efficient local production opportunities

Location: South Africa

Application Deadline: 02nd October 2020

Category: Services

Type of Contract: Consultant, Individual Contract (Local)

Languages Required: English

Starting Date: Upon contract signature/s by both parties

Expected Duration of Assignment: 2 months / 50 working days

Title: Renewable Energy Industrialisation in South Africa: Identifying efficient local production opportunities

1. INTRODUCTION

The South African Wind Energy Project Phase 2 (SAWEP 2) is funded by the Global Environment Facility (GEF) with the Department of Mineral Resources and Energy (DMRE) as the Executing Entity/Implementing Partner, and supported by the United Nations Development Program (UNDP) South Africa Country Office. The project objective is to overcome barriers to the attainment of South Africa's 2010 Integrated Resource Plan target of 3,320 MW of wind power generation online by 2018/19.

In order to achieve this, the project focusses on four components: *Component 1: Monitoring and Evaluation of the implementation of local content requirements*, *Component 2: Resource-mapping and wind corridor development support for policy-makers*, *Component 3: Support for the development of small-scale wind sector* and *Component 4: Training and human capital development for the wind energy sector*. Each component is associated with specific outputs and a set of activities.

2. BACKGROUND

This research is being commissioned in support of the development of the South African Renewable Energy Masterplan (SAREM). The global renewable energy market and associated supply chains have seen considerable growth and changes in market dynamics over the last years. With the view to growth of the short- to medium-term renewable energy market in South Africa, and the potential benefits that could accrue to South Africa of attendant localisation, it is of interest to revisit the full spectrum of renewable energy components to identify efficient local production opportunities in the short to medium term.

The Department of Mineral Resources and Energy (DMRE) has been tasked, by the Presidency, to be the lead department in drafting the South African Renewable Energy Masterplan (SAREM). **the dtic**, represented by the CD: Green Industries, has been designated as a supporting department and is tasked with those sections of the Masterplan which deal with localisation of renewable energy technologies and components and renewable energy industrial development.

The national masterplan process falls under the reimagined Department of Trade, Industry and Competition (dtic) led industrial strategy for South Africa. It builds upon the approach taken by the automotive sector, as well as the sector plan process developed between private- and public sectors, led by the Public Private Growth Initiative (PPGI) in conjunction with the Presidency. SAREM is one of 14 industry specific masterplans in progress since July 2019 when Minister Patel took over as Minister of dtic.

The masterplan development approach is a collaboration between industry, labour and government to develop an industrial plan for the sector. This includes setting out a vision for an industry in South Africa, identifying blockages and constraints, and proposing a set of key actions that need to be taken forward over the short and medium term. The masterplans essentially facilitate a process whereby industry commits to a certain amount of investment and creating a certain number of jobs against an industry masterplan. Government, for its part, undertakes to understand and remove impediments to these plans.

The governance structure for masterplans can be adapted, but generally consists of:

- An Executive Oversight Committee (EOC), chaired by the Minister of DMRE with a small number of industry and union representatives. The EOC provides oversight on the implementation of the masterplan.
- An industry reference group made up of experts from relevant government departments, labour, the sector and academics that the researchers consult with in the development of the masterplan.
- In addition to the reference group, the Masterplan research team engage with individual stakeholder groupings throughout the process of development of the plan.

The masterplan is an industrial plan of action for a defined sector and a mechanism to bring government and the sector together to develop a coordinated plan. It is further a way in which to form a common evidence base for the sector, including forming a joint view on the challenges/opportunities, targets and objectives. Masterplans live through the action plan, monitored and evaluated as part of a structured, accountable process within government and the sector.

- It focusses on encouraging optimal industry growth for good of the industry and broader society
- Encourage sustainable investment in the sector
- Identify employment opportunities and skills development requirements
- Identify national, regional, broader international possibilities
- Identify opportunities to deepen industrialisation (cross-sector linkages)
- Identify new horizon projects and opportunities

In addition to primary research on industry status quo, market opportunities and studies of comparator markets, the research team will integrate relevant research packages to support the development of the Masterplan, as may be suited to the particular needs of the plan. The study described herein is one such research package.

Stimulating the economy through an industrialisation plan such as SAREM is a complex problem. The SAREM project will consider macro-economic dynamics through a lens of job protection and job creation, taking into account multiple factors as the research and plan formulation proceeds. It is acknowledged at the outset that there are multiple perspectives on the efficacy of different measures taken to date to stimulate local economic activity on the back of the renewable energy infrastructure build programme. The considerations include, among others, the effectiveness of the socio-economic development criteria, market mechanisms for procurement, the flow of revenue through financing structures and the potential trade-off of electricity price point to support economic development co-benefits. It may be identified that for example that, notwithstanding that a particular component can be manufactured locally at a quality standard and price that passes financial due diligence, it fails to be taken up at scale in EPC procurement. In order to answer why this occurs and what levers may rectify this dynamic, the broader SAREM background research process requires this study package to provide the data baseline. From this data point, such questions can then be taken up in the subsequent work as to whether there is line of sight to a pipeline that passes the critical point for economy of scale, whether the associated risks for establishing capacity are covered and what other levers there might be to be put in place to rectify such inefficiencies in market clearing. As such, this piece of work establishes the micro-level baseline for cause and effect in the macro-level complex questions to be explored.

3. OBJECTIVE

To conduct a study and submit a report and research findings supplemented by recommendations and appropriate decision support information that can be used by the South African Government and stakeholders in the determination of a procurement policy position regarding the optimum creation of jobs through manufacturing renewable energy components as part of a masterplan for the renewable energy industry in South Africa.

In order to make the study tractable, the focus is to be on the price point¹ per job creation potential associated with local versus imported components for utility scale wind systems, utility and small scale photovoltaic systems (PV), concentrated solar power (CSP) systems (with and without storage), biomass, biogas, landfill gas, large- and small scale hydro, battery storage², and general recommendations, as appropriate, to enable economic growth

¹ In some there may be a discount to local manufactured products (i.e. it is cheaper to do locally than import when the full shipping and associated costs are considered) – in such instances, if local manufacturing is not happening there is a medium term efficiency gain to require local manufacturing of that component.

² The level of detail to which the components of each of these technologies are to be considered will be determined by a number of factors including availability of information and impact on findings of study. This is to be considered by the consultant in developing the methodology and time plan and will be agreed to at the inception meeting.

and job creation in South Africa. Ultimately this will yield an output that allows policy makers to quantify and compare the benefits of localising different aspects of the value chains.

The study seeks to answer the following high level questions:

1. What are the job creation and wider economic benefits of local production of different renewable energy value chain components?
2. Where might South Africa have export opportunities for manufactured goods into global renewable energy value chains?
3. Which value chain components should be incentivised/required for local production in the short to medium term (2020 – 2030)?

4. SCOPE OF WORK

The consultant is required but not limited to conducting a desktop study which is supported through consultation with stakeholders (such as suppliers and manufacturers) and make recommendations based on a strategic analyses of the findings.

4.1 Co-benefits of local production

What are likely other co-benefits (i.e. value-creating opportunities such as GVA, skills in related industries, economic multiplier of manufacturing etc) of producing particular components in the South African context?

4.2 A per job efficiency of local production

Quantify the efficiency of job creation by local production of each value chain component for all relevant renewable energy value chains, by its relative impact on total project cost.

Quantify the job creation associated with the local manufacture of each key value chain component. Present this as an appropriate (policy-relevant) metric per jobs per component.³

4.3 Potential for global scale

Identify (potential) local production components where South Africa may have export potential into global renewable energy value chains, considering possible scales of the domestic and international markets. The level of production currently envisaged in response to the Integrated Resource Plan (IRP) 2019 can be used as the minimum scale of local production and an analysis done as to the scale of production to enable global opportunities for particular renewable energy components.⁴

4.4 Risk matrix

Provide a high-level risk matrix outlining who holds what aspects of risk in local production (e.g. policy risk, quality risk, demand risk) and who is best placed to hold such risk (e.g. project developers, OEMs, EPC, DMR&E, DTIC, DSI, National Treasury etc.). Provide suggestions of risk mitigation for local manufacturing (e.g. if there is a delay in renewable energy auction bidding round, a dtic incentive is paid).

³ It is expected that in many instances this premium will be negative when transport costs are considered. Negative premium components are key enablers for job creation in renewable energy.

⁴ This can also be done as a scenario analysis, for example, to make the analysis tractable in the project timeframe

4.5 Recommendations

Based on the above analysis (4.1 – 4.4), provide a set of recommendations on which value chain components should be incentivised/required for local production in the short to medium term (2020 – 2030).

General:

Steps 4.4 and 4.5 need to be augmented with input from the SAREM Industry Reference Group, as facilitated by the SAREM project manager and research team.

For all of the above, an indication needs to be given of the level of confidence in data and/or a clear indication given of any further information that may be required or developed to a greater level of detail to confirm or refine the data and associated recommendations.

5. DELIVERABLES

Deliverable	Description, Content
Deliverable 1: Inception Report	Attend inception briefing meeting, and thereafter produce Inception Report detailing comprehensive approach and methodology, work plan and timeline of activities, and related specific details. Note that the proposed (policy-relevant) indicator per job (4.2) would need to be discussed and agreed on at this meeting.
Deliverable 2: Progress report 1	Covering 4.1 and 4.3, and approach to 4.4 and 4.5
Deliverable 3: Workshop with SAREM Industry Reference Group	For input into 4.4 and 4.5. Practical arrangements for this workshop will be made by the SAREM Project Team, but the consultant will be responsible for the workshop content and co-facilitation.
Deliverable 4: Final Report	Incorporating revisions, and confirming approval. Consultant to provide draft report and allow 5 working days for feedback.

6. CONTRACT PERIOD

The project should be completed within 50 working days of signing of the contract.

7. MINIMUM REQUIREMENTS

- The consultant should have a post graduate degree in science, energy, economics, engineering or related field.
- Proven experience in doing economic analysis in the context of renewable energy localisation
- Knowledge of the South African renewable energy- and manufacturing environment
- Knowledge of the global renewable energy manufacturing content and ability to readily access industry stakeholders for up-to-date technical and financial information

- Professional, hands-on experience and proven track record on report writing of projects of a similar nature and size.
- Experience in professional communication and reporting at all levels.

8. PROJECT ADMINISTRATION

Whilst the contract is held with UNDP, the work will be overseen by the Project Coordination Unit (PCU).

9. EVALUATION CRITERIA

The evaluation of proposals will be conducted according to UNDP procurement rules. A two-stage procedure is utilised in evaluating the proposals, with evaluation of the technical proposal being completed prior to any price proposal being opened and compared. The price proposal of the proposals will be opened only for submissions that passed the minimum technical score of 70% of the obtainable total score of 100 points in the evaluation of the technical proposals. The technical proposal is evaluated on the basis of its responsiveness to the Term of Reference (TOR) **and candidates may be requested to make a presentation to the Technical Evaluation committee.** In the Second Stage, the price proposal of all contractors, who have attained minimum 70% score in the technical evaluation will be compared.

Selection will be based on a least costly technically qualified proposal where the approach to the work, qualifications and experience (Technical proposal) will be weighted a maximum of 70%, and the price offer (Financial proposal) which is a maximum of 30%.

Technical Evaluation Criteria

Evaluation Criteria	Max score
Post graduate degree in science, energy, economics, engineering or related field. Documented experience in economic analysis in the context of renewable energy localisation	15
Documented experience demonstrating knowledge of global renewable energy markets and evidence of industry networks/access to relevant industry stakeholders	15
Documented experience demonstrated knowledge of the relevant South African renewable energy- and manufacturing- environment.	10
Proposed Methodology (A clear methodology. The methodology must outline how the Scope of Work will be carried out according to each deliverable with an understanding of the assignment).	25
Proposed Work Plan (Detailed work plan with milestones, timelines and resources and designated responsibilities of the team leader and individual members must be indicated in the proposal for achieving of the deliverables).	25
Professional, hands-on experience and proven track record on stakeholder engagement and report writing of projects of a similar nature and size	10

16. RESPONSE FORMAT

To facilitate the analysis of responses, all interested parties are required to prepare their response in accordance with the instructions outlined in this section. All proposals should be electronically generated. The vendor will be hired on a UNDP contract.

Applicants are required to submit the following:

- A Technical Proposal: Letter of Interest, stating why you consider your service suitable for the assignment and a brief methodology on the approach and implementation of the assignment;
- Evidence and examples of similar projects that have been successfully completed;
- Personal CV highlighting qualifications and experience in similar projects; and a statement of commitment regarding the availability of the personnel during the project duration in order to ensure successful completion of all deliverables within the required timeframe
- Work references - contact details (e-mail addresses) of referees (organisation for whom similar assignments have been produced);
- All-inclusive financial proposal indicating consultancy fee (South African Rand) and a breakdown of expenses (unit price together with any other expenses) related to the assignment. The proposal must incorporate all the costs travel etc for the service provider to achieve the required deliverables

Applicants are required to submit the following documents to bid.pretoria@undp.org on or before the **02nd October 2020** with the subject line: **Job Code Title and Reference Number**.

17. CONTACT PERSON

For any enquiries regarding this call for proposal, contact the UNDP procurement.enquiries.za@undp.org / lerato.maimela@undp.org