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**TERMS OF REFERENCE FOR APPOINTMENT OF A SERVICE PROVIDER FOR SAMPLING AND TESTING OF PETROLEUM PRODUCTS IN THE SOUTH AFRICAN PETROLEUM INDUSTRY IN TERMS OF REGULATIONS REGARDING PETROLEUM PRODUCTS SPECIFICATIONS AND STANDARDS NO. R. 627 FOR THE DEPARTMENT OF ENERGY FOR A PERIOD OF TWELVE (12) MONTHS.**

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## **1 BACKGROUND**

- 1.1 The Petroleum Compliance Monitoring and Enforcement (PCME) Directorate is located within the Chief Directorate: Office of the Controller of Petroleum Products in the Branch: Petroleum and Petroleum Products Regulation at Department of Energy. This directorate's mandate is to ensure that petroleum operators in the South African petroleum industry comply with the Petroleum Product Act, 1977(Act No. 120 of 1977) as amended and its Regulations.
- 1.2 Prior to 2006, the South African petroleum industry was not regulated in terms of fuel specifications and standards that oil companies were expected to comply with. Oil companies were at a leeway to produce, export and import petroleum products such as petrol and diesel at any level of specifications and standards. When the process of introducing cleaner fuels in the South African petroleum industry began, the focus was on the reduction and complete removal of lead in petrol and reduction of sulphur content in diesel.
- 1.3 During 1920s, lead alkyl has been supplemented to petrol as an octane boost as well as preventing engine knock. Not only did it occur in South Africa, throughout the 1970s, lead alkyl was used globally until such time when its negative health effects were deciphered resulting into a total ban of lead additives in petrol. Nonetheless, South Africa was not leading in pioneering fuel quality improvement in the world; it followed countries such as United States of America, Canada and Japan who began with the removal process in the mid 1970s.

- 1.4 Sixteen years after the inception of removal process in the developed countries, South Africa started by reducing lead levels in petrol from 0.836 gPb/l to 0.60 gPb/l. Subsequently, lead additive continued to be reduced until complete ban in January 2006.
- 1.5 Post 2006, South Africa began to experience influx of new vehicle technology that uses catalytic converters in order to improve air quality by restraining vehicle exhaust emission to the atmosphere. Lead additive is prone to damaging catalytic converters which then results into substantial vehicle emissions. During this period, the market also experienced reduction of sulphur levels in diesel. For example, diesel sulphur content was reduced from 5 500 ppm to 3 000 ppm in 2001 and further reduced to 500 ppm in 2006, with a niche grade of 50 ppm also being introduced in some part of the country. And sulphur content on unleaded petrol (ULP) was also reduced from 1000 ppm to 500 ppm.
- 1.6 The relationship between the quality of fuel and change of engine technology should not be taken for granted. The quality of fuel may result into the improvement of vehicle technology in the country. From the perspective of cleaner environment, health and vehicle technology enablement, the developed countries such as Japan, Europe and USA considered the following fuel parameters to be of paramount importance: Petrol: to reduce level of benzene in order to reduce carcinogenic emissions, reducing volatility to reduce evaporative emissions, reducing sulphur to improve catalytic converter efficiency and reduce particulate matter (PM); Diesel: to reduce sulphur to improve particulate matter and oxides of sulphur (SO<sub>x</sub>) and oxides of nitrogen (NO<sub>x</sub>) emissions, and tightening total aromatics, final boiling point and cetane number.
- 1.7 According to South African Petroleum Industry Association (SAPIA) 2010 Annual Report, the consumption of petrol, diesel and illuminating paraffin was 11 311 billion liters, 9 109 billion liters and 544 million liters respectively. The capacity of South African seven refineries was sitting at 703 000 bbl/day in 2010. The local demand exceed the supply, hence the shortfall is met through imports of crude oil and refined products for more than 60%. This industry is characterized by more than 6 000 service stations.

1.8 In executing its mandatory responsibilities, the Petroleum Compliance Monitoring and Enforcement (PCME) directorate undertakes to appoint a capacitated service provider to conduct fuel sampling and testing exercise on behalf of the Department of Energy (DoE). The objective of the project is to monitor compliance with regard to fuel specifications and standards and gather information about compliant and non-compliant petroleum operators to the legislation, track their compliance performance and attain broader understanding of their challenges in terms of compliance. This will provide a clearer compliance picture of what is actually happening in the petroleum industry with regard to production of fuel quality, quantity and the entry and exit of such products in the South African market.

1.9 The project further aims to build a compliance database that will inform future policy and Regulation formulation in terms of fuel specifications and standards as well as enhancing compliance monitoring and enforcement generally. With this objective in mind, it is projected that the fuel sampling and testing project will valuably contribute to future practical interventions by the DoE to assist oil companies in compliance issues and enable them to conduct their operations without contravening the Petroleum Product Act, 1977( Act No. 120 of 1977) as amended and other Regulations.

## **2 OBJECTIVES OF THE PROJECT**

2.1 To establish the level of compliance to the fuel specifications and standards;

2.2 To determine the magnitude of petroleum products that are below a set of minimum standards; and

2.3 Identifying challenges confronting the operators with regard to compliance and make policy recommendations based on the findings of the project.

### **3 SCOPE OF WORK**

The successful service provider is expected to perform the following functions as a minimum deliverable; all the items referenced in the Scope of Work below and to adequately address all the listed objectives:

- 3.1. Collect a minimum of 10 samples of petrol and diesel in all nine provinces every month of the selected sites in a particular financial year and conduct laboratory analysis (testing) of all samples. A total minimum of each specified petroleum product sampled and tested should amount to 1080 units;
- 3.2 Testing properties in Petrol must include appearance, octane, aromatics content, benzene, manganese (metal content) and sulphur content;
- 3.3 Testing properties on Diesel must include appearance, Cold Filter Plugging Point (CFPP), sulphur content, total contamination and water;
- 3.4 Additional properties should be tested as per the request of the DoE.
- 3.5 Preparation of a report summarizing the results of analytical testing and comparing the results to relevant fuel specifications and standards as per Regulations;
- 3.6 Samples of appropriate size will be collected from each selected site to allow excess sample to be retained by the service provider for a period of two (2) years after the end of the financial year under review for potential future compositional analysis;
- 3.7 Develop comprehensive sampling plans and methodology designed to represent specified populations of service stations. The sampling methods and choice of sample sizes must achieve adequate randomness and representativeness. Proposed sampling plans and methodologies shall be submitted to DoE for approval;

3.8 In consultation with the Project Manager, the service provider shall handle testing results in accordance with applicable confidentiality and law. The service provider shall adhere to the same confidentiality level that DoE personnel are required to maintain, and shall take steps through which all persons employed by the service provider and any sub-contractors will be made aware of the service provider's obligations for protection of confidentiality; and

3.9 Based on the lessons learned during the sampling and testing exercise, the service provider should make recommendations to the DoE for future policies and regulations design as well as compliance monitoring and enforcement strategies.

#### **4 REPORTING REQUIREMENT AND PROGRESS MEETINGS**

4.1 It is envisaged that the Department of Energy will require an initial meeting with the successful bidder(s) to agree on the project process and options to be investigated. Reporting to DoE will be through the Project Manager: Deputy Director: Technical Compliance, and shall be done in the following manner:

4.1.1 Executive summary of the report (Word and PowerPoint)

4.1.2 Hard and electronic copies monthly reports including annexure of laboratory results; and

4.1.3 Report on inspectors skills transfer on the sampling method used.

#### **5 PAYMENTS**

5.1 The Department will not make an upfront payment to a successful service provider. Payment will only be made in accordance to the delivery of service that will be agreed upon by both parties and upon receipt of an original invoice.

#### **6 COMPLETION DATE**

6.1 The duration of the project is twelve (12) months after signing of the contract with the successful service provider.

## **7 COMPULSORY INFORMATION SESSION**

7.1 Briefing session will be held in on **17 September 2013** at the Department of Energy, at 192 Corner Paul Kruger and Visagie Streets at **10H00**.

## **8 TAX CLEARANCE CERTIFICATE**

8.1 The bidder is required to submit an original and valid Tax Clearance Certificate issued by the South African Revenue Services together with the bid documents before the closing date and time of the bid. Failure to comply with this condition will invalidate the bid

## **9 CONFIDENTIALITY OF INFORMATION**

9.1 The names of all the members of the team must be disclosed for the prior approval of DoE. Any changes, replacements and/or additions should be submitted for prior approval of DoE.

9.1.1 a bidder is affiliated with a firm or entity that has been hired (or is proposed to be hired) by Department of Energy or the lender.

## **10. TERMS AND CONDITIONS**

10.1 A service level agreement will be entered into with the successful service Provider which will include, inter alia, obligations of the DoE and the successful service provider.

10.2 The DoE reserves the right to appoint more than one service provider/s for the project.

## **12. EVALUATION METHODOLOGY**

### **12.1 Cost**

12.1.1 The service provider will be requested to provide a quote regarding the work to be undertaken for this project;

- 12.1.2 The quotation value must present the total cost on the project which will be payable by the DoE to the service provider upon satisfactory work delivery, and as per the agreed payment schedule;
- 12.1.3 The total cost must be VAT inclusive and should be quoted in South African currency (i.e.rands). This should include payment schedules linked to deliverables. Disbursements will be in equal payments according to set milestones.
- 12.1.4 The proposed payment schedule that does not match the quantity and quality of work done will work against the proposal.

## **12.2 Broad-Based Black Economic Empowerment**

- 12.2.1 Provisions of the Preferential Procurement Policy Framework Act (PPPFA 2011 and its Regulation will apply in terms of awarding points.
- 12.2.2 Bidders are required to submit original and valid B-BBEE Status Level Verification Certificates or certified copies thereof together with their bids, to substantiate their B-BBEE rating claims.
- 12.2.3 Bidders who do not submit their B-BBEE status level verification certificates or are non-compliant contributors to B-BBEE will not qualify for preference points for B-BBEE.
- 12.2.4. In a case of Exempted Micro Enterprise, the following documents **MUST** be: Submitted
- (a) Verification agencies accredited by SANAS; and
  - (b) Registered auditors approved by IRBA.

## **12.3. Bidders who qualify as EMEs**

- (a) Accounting officers as contemplated in the CCA; or
- (b) Verification agencies accredited by SANAS; or

- (c) Registered auditors (Registered auditors do not need to meet the prerequisite for IRBA's approval for the purpose of conducting verification and issuing EMEs with B-BBEE Status Level Certificates).

12.3.1. The table below depicts the B-BBEE status level of contribution:

<b>B-BBEE Status Level of Contributor</b>	<b>Number of points (90/10 system)</b>
1	10
2	9
3	8
4	5
5	4
6	3
7	2
8	1
Non-compliant contributor	0

## **12.4 Company Experience**

12.4.1 Service providers should at least have ten (10) years' experience in the fuel testing, sampling and analysis, deep knowledge of the South African petroleum industry, industry trends and related policies and legislations, demonstrate capability of analysing fuel samples using internationally accepted methods, good ability to collate and interpret data and make recommendations thereof, demonstrate skills in project management, demonstrate communication, writing and presentation skills.

12.4.2 Content supported by proof from 3 contactable referees indicating that similar project was executed should be attached.

## **12.5 Team leader and team members' experience**

12.5.1 Team Leader must have at least five (5) years' experience and individual team members must have at least three (3) years' experience in the fuel testing, sampling and analysis, deep knowledge of the South African petroleum industry, industry trends and related policies and legislations, demonstrate capability of analysing fuel samples using internationally accepted methods, good ability to collate and interpret data and make recommendations thereof, demonstrate skills in project management, demonstrate communication, writing and presentation skills.

12.5.2. CV's of the team leader and team members must be attached to the technical proposal as proof.

## **12.6 Qualification**

12.6.1 Team leader and team members must possess a minimum of a bachelor's degree in the relevant discipline (i.e Chemistry or Petrochemical engineer). Copy of certified certificates of the team leader and team members must be attached to the technical proposal as proof. **Failure to attach proof, bidders will forfeit functionality points.**

## **12.7 Project Plan**

12.7.1 Project plan with intermediate and final outputs and identified timeframes/milestones;

12.7.2 Proposed Methodology; and

12.7.3 Management of the project.

12.7.4 The successful service provider will be required to present their Project Execution Plan.

## **12.8 Skills Transfer Plan**

12.8.1 Service providers are required to demonstrate how they will transfer skills to internal officials regarding the project.

### 13. EVALUATION CRITERIA

13.1 Bids will be evaluated on 90/10 point system as outlined in the PPPFA of 2011.

The proposals will be evaluated in two phases:

**Phase 1:** Bidders will be evaluated based on functionality. The minimum threshold for functionality is **70 out of 100 points**. Bidders who fail to meet minimum threshold will be disqualified and will not be evaluated further for price points.

No	Criteria	Weights
1	<p><b>Company Experience:</b></p> <ul style="list-style-type: none"> <li>❖ Service providers should at least have ten (10) years' experience in the fuel testing, sampling and analysis, deep knowledge of the South African petroleum industry, industry trends and related policies and legislations, demonstrate capability of analysing fuel samples using internationally accepted methods, good ability to collate and interpret data and make recommendations thereof, demonstrate skills in project management, demonstrate communication, writing and presentation skills.</li> <li>❖ Proof from 3 contactable referees indicating that similar project was executed should be attached.</li> </ul>	<p><b>30</b></p> <p>25</p> <p>5</p>
2	<p><b>Team leader and team members:</b></p> <ul style="list-style-type: none"> <li>❖ Team Leader must have at least five (5) years' experience in fuel testing, sampling and analysis, deep knowledge of the South African petroleum industry, industry trends and related policies and legislations, demonstrate capability of analysing fuel samples using internationally accepted methods, good ability to collate and interpret data and make recommendations thereof, demonstrate skills in project management, demonstrate communication, writing and presentation skills.</li> <li>❖ Individual team members must have at least three (3) years' experience in fuel testing, sampling and analysis, deep knowledge of the South African</li> </ul>	<p><b>10</b></p> <p>5</p> <p>5</p>

	<p>petroleum industry, industry trends and related policies and legislations, demonstrate capability of analysing fuel samples using internationally accepted methods, good ability to collate and interpret data and make recommendations thereof, demonstrate skills in project management, demonstrate communication, writing and presentation skills.</p> <ul style="list-style-type: none"> <li>❖ CV's must be attached as proof.</li> </ul>	
3.	<p><b>Qualifications:</b></p> <ul style="list-style-type: none"> <li>❖ Team leader and team members must possess a minimum of a bachelor's degree in the relevant discipline (i.e. Chemistry or Petrochemical engineer).</li> <li>❖ Proof of certified certificates must be attached.</li> </ul>	<b>20</b>
4	<p><b>Project Plan:</b> Detailed Project/ Execution Plan and Management should be attached.</p> <ul style="list-style-type: none"> <li>❖ Project plan with intermediate and final outputs and identified timeframes/milestones;</li> <li>❖ Proposed Methodology</li> <li>❖ Management of the project.</li> </ul>	<p><b>30</b></p> <p>10</p> <p>10</p> <p>10</p>
5	<p><b>Skills Transfer</b></p> <ul style="list-style-type: none"> <li>❖ Service providers are required to demonstrate how they will transfer skills to internal officials regarding the project.</li> </ul>	<b>10</b>
<b>Total</b>		<b>100</b>

**For purpose of evaluating functionality, the following values will be applicable:**

<b>0=</b>	<b>Very Poor</b>	Do not meet the requirements
<b>1=</b>	<b>Poor</b>	Will not be able to fulfil the requirements
<b>2=</b>	<b>Average</b>	Will partially fulfil the requirements
<b>3=</b>	<b>Good</b>	Will be able to fulfil the requirements
<b>4=</b>	<b>Very Good</b>	Will be able to fulfil better in terms of the requirements adequately
<b>5=</b>	<b>Excellent</b>	Will fulfil the requirements exceptionally

## Phase 2:

<b>Price</b>	<b>90</b>
<b>B-BBEE compliance</b>	<b>10</b>

### 14. **FORMAT AND SUBMISSION OF THE PROPOSAL**

- 14.1 All the standard bidding documents (SBD) must be completed in all respects by bidders. Failure to comply will invalidate a bid.
- 14.2 Bidders are requested to submit two (2) copies: 1 original plus copy of the proposal and bid documents.

### 15. **CLOSING DATE**

- 15.1 Proposals must be submitted on or before **27 September 2013 at 11h00** Department of Energy, 192 Corner Visagie and Paul Kruger Streets, Pretoria in the bid box marked Department of Energy. **No late bids will be accepted.**

### 16 **ENQUIRIES**

- 16.1 All technical enquiries to be directed in writing to:

Mr Letshego Mabena

Tel: 012- 406 7579

Email: [letshego.mabena@energy.gov.za](mailto:letshego.mabena@energy.gov.za)

Mr Ngwako Kekana

Tel: 012 406 7583

Email: [Ngwako.kekana@energy.gov.za](mailto:Ngwako.kekana@energy.gov.za)

16.2 All bid enquiries should be directed to:

Ms Lebogang Mosuwe/Ms Daisy Maraba

Tel: 012- 406 7742/7748

Email: [Lebogang.mosuwe@energy.gov.za](mailto:Lebogang.mosuwe@energy.gov.za)/[Daisy Maraba@energy.gov.za](mailto:Daisy.Maraba@energy.gov.za)