# THE APPOINTMENT OF A SERVICE PROVIDER TO PREPARE AN EPC RFP FOR THE CONNECTION OF AN IDENTIFIED FUEL INFRASTRUCTURE WITHIN THE SANPC REFINERY

## 1. INTRODUCTION

CEF SOC Ltd is a state-owned company involved in the search for appropriate energy solutions to meet the energy needs of South Africa and the sub-Saharan African region. It also manages the operation and development of the oil and gas assets of the South African government. The company falls under the auspices of the Department of Minerals and Petroleum Resources (DMPR). For more information on the company, you can visit our current website: www.cefgroup.co.za

The refinery is situated at: 1 Refinery Road, Isipingo, Prospection, Durban.

## 2. BACKGROUND

The SANPC Refinery is seeking to appoint one (1) service provider to undertake a design and costing of new pipelines, prepare the scope and costing of repairs of existing sections of pipeline and storage tank, RFP and tender preparation for construction - the service provider is referred to hereinafter as the "Main Contractor". This project is related to the import of diesel (also referred to AGO- Automotive Gas Oil) from the Island View Complex to SANPC refinery.

During the period that the refinery was in operation, diesel was manufactured and transferred to the Island View Complex via a dedicated diesel transfer line. The intent of this project is to use as much of the existing infrastructure and now transfer product (Diesel) from Island View back to the SANPC Refinery. The key differences from the previous operation are:

- Transfer product (Diesel) in the reverse direction.
- Make use of a section of an existing 16" crude line to transfer product to a tank (T1108) located at South Tank Farm (STF)
- Fabricate and install new sections of lines to link the existing diesel to the 16" crude line as well as linking the existing 16" crude line to SANPC refinery tank T1108 located at STF.

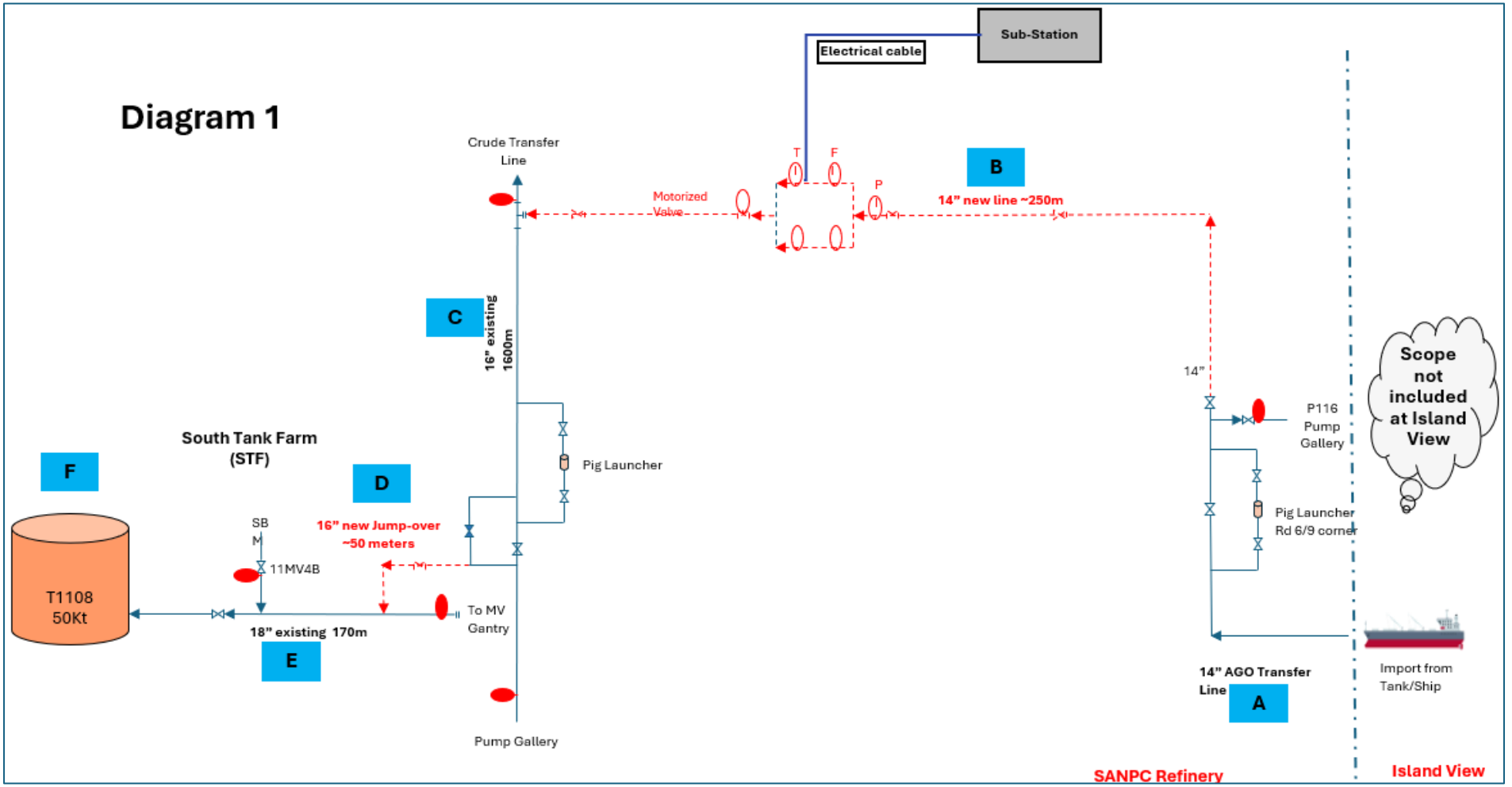
## 3. PROJECT OVERVIEW

The project encompasses the engagement of various services required by the Main Contractor to:

- Design the new pipe sections
- Design electrical, instrumentation and control scope.
- Design Civil scope
- Design assessment and repair of the existing lines and related infrastructure
- Prepare a BOQ and cost estimation for the installation of new pipelines and inspection and repair of existing pipelines.
- Prepare an EPC RFP and contract package
- Prepare a technical evaluation criteria
- Support CEF with technical bid evaluation and contract negotiation
- Support CEF in the final review and contract finalization
- Provide oversight function during construction and prepare final handover documentation.

## 4. SCOPE OF WORK

**Layout of the scope of work: Diagram 1**



The scope of work from the Island View berth up to the battery limit located at the pig launcher located at Bayhead within the Island View complex is not part of this scope of work. However, activities related to inspection and pigging of the 14" AGO (Automotive Gas Oil/ Diesel) transfer line will require entry into the Island View complex to undertake pigging activities at the pig launcher.

The following scope of work requirements is broken down into sections as shown in Diagram 1 above:

- **A.** Existing 12km, 14" x 300# Transfer Line from the pig launcher located at the Island View complex to the pig launcher located SANPC refinery.
- **B.** 14" x 300# new section of line from tie-in point at road 9 to 16" crude line tie-in point at the corner of road 6 and road 11 (approximately 250m).
- **C.** Existing 16" x 300# crude line from the tie-in point at the corner of road 6 and 11 to STF pump gantry (approximately 1600m).
- **D.** 16" x 300# new jump-over to join existing 16" crude line to existing 18" x 150# (spec break) crude line going to tank T1108 (approximately 50m)
- **E.** Existing 18" x 150# crude line to tank T1108 (approximately 170m).
- **F.** Existing tank T1108.

**Note:** The above distances are approximations and are to be used for tendering purposes. Final dimensions shall be as per design specifications. Material procurement quantities must be in accordance with inspection recommendations based on findings after NDT assessments.

**SCOPE DETAIL**

The Main Contractor will engage/ sub-contract required services, procure all required materials and arrange the necessary equipment to undertake this project and be responsible for all related activities for completion of this project. The scope detail below A to F makes reference to Diagram 1 above.

### A. Existing 12km, 14" x 300# AGO Transfer Line from the pig launcher located at the Island View complex to the pig launcher located SANPC refinery.

The 14" transfer line runs 12km underground between the Island view complex to SANPC refinery. This line requires inspection sign-off of fit-for-use. A registered inspection authority must be engaged by the Main Contractor for inspection scope on the 14" AGO transfer line which must include intelligent pigging services and hydrotest as specified by the inspection authority. Any NDT requirements as specified by the authorized inspection authority must be included. The scope should also include drying out the line on successful completion of the pigging activity. All associated services including NDTs, scaffolding, cranage and equipment hire must be included in the Main Contractor costing. The last pigging activity was undertaken in December 2018 and a report is available for review.

**B. 14" 300# new section of line from tie-in point at road 9 to 16" crude line tie-in point at the corner of road 6 and road 11.**

A new section of line is required to join the existing 14" AGO line to the existing 16" crude line. The new 14" line section is approximately 250m. A motorized valve, 2 (two) flowmeters, 1 (one) pressure indicator and 2 (two) temperature indicators, must be incorporated on this new section of line for fiscal measurement- refer to Instrument Scope **(Annexture 1 for details)**. The piping design, drawings and bill of materials must include the instruments. Power supply to the instruments is also required with all associated materials and installation Distance from instruments to the nearest substation is approximately 300m. The scope of work includes the services of the design engineers (Mechanical, Civil, Electrical and Instrument) for the design, specifications, AFC drawing packages required for fabrication as well as procurement of materials (piping, valves, inline fittings and instruments, cables, etc. The Main Contractor scope includes the design, specification and verifications, blasting and painting, Civil scoped items, AIA involvement, NDTs, scaffolding, cranage, and any other associated services. The inspection requirements will be defined by an approved inspection authority.

**C. Existing 16" x 300# crude line from the tie-in point at the corner of road 6 and 11 to STF pump gantry.**

The existing 16" crude line was previously used to transfer crude from STF tanks. A section of this line from the corner of road 6 and road 11 to STF (approx. 1.6km) is intended for use in this project. The last pigging report completed December 2019 is available for review. The Main Contractor is to assign an authorized inspection authority to carry out inspection of the existing line section (approx. 1.6km). Based on NDT results the inspection authority is to make recommendations for maintenance and repairs on the line to ensure integrity of the line for the next 5-6 years.

The Main Contractor will scope execution of the recommended inspection scope of work. Due to current NDT information not being available for this line, the Main Contractor is required to plan materials, equipment and resources required to replace 10% of the existing line. Also plan to blast and paint 25% of the existing line. However, the actual scope for execution will be determined by the inspection recommendations. The scope of work includes design verification, inspections, NDTs, scaffolding, blasting, painting, consumables, equipment, and any other resources required to undertake the inspection recommendations.

**16" x 300# new jump-over to join existing 16" crude line to existing 18" x150# crude line going to tank T1108.**

A new section of line (approximately 50m) is required to join the existing 16" crude line to the 18" existing crude line that goes to tank T1108 at STF. The spec break from 300# to 150# will be located at the 16" to 18" adjoining flanges. The scope of work includes the services of the design engineer for the design, specifications,

AFC drawing package required for fabrication, blasting and painting costing, Civil materials and resources for work packages for supports and any platforms required, AIA involvement, NDTs, scaffolding, cranage, and any other associated services. The inspection requirements will be defined by the approved inspection authority.

**D. Existing 18" x 150# line to tank T1108.**

The existing 18" crude line to tank T1108 was previously used to transfer crude from the SBM. A section of the 18" line will be used to join tank T1108 to the 16" new jump-over mentioned in D above. The Main Contractor is to assign an authorized inspection authority to carry out inspections of the existing line (approx. 170m). Based on NDT results the inspection authority is to make recommendations for maintenance and repairs on the line to ensure integrity of the line for the next 5-6 years. The Main Contractor will arrange execution of the recommended inspection scope of work. Main Contractor is required to plan materials, equipment and resources required to replace 10% of the existing line as well as blast and paint 25% of the existing line. However, the actual scope for execution will be determined by the inspection recommendations.
The scope of work includes design, inspections, NDTs, scaffolding, blasting, painting, consumables, equipment, and any other resources required to undertake the inspection recommendations.

**E. Existing tank T1108.**

Tank T1108 was previously used to store crude. The tank was last repaired in 2023, boxed up and put into service. In 2025 the tank was de-inventorised and cleaned for inspection. The scope of work for the Main Contractor is to engage with an approved inspection authority for inspection of the tank and sign off for box-up of the tank.
The main contractor is to plan for tank calibration, blasting and painting of 2 Sqm (two square meters) of the floor coating (refer Annexture 2 for paint specifications). The approved inspection authority is to issue a box-up certificate. The assigned design engineer (Pr. Eng) is also required to carry out an assessment and approve the change of service of tank T1108 from crude oil to AGO/ diesel.

## 5. SPECIFICATIONS GUIDE

The ship discharges to the14" transfer line from Island View to the SANPC refinery. The 14" transfer line is a 300# system. Design pressures, flow rate and temperatures on the 300# system shall be used also for calculations. The 14" transfer line will connect into the 16" x 150# line after the pig launcher at the SANPC refinery. Design pressure, flow rates and temperature shall be used for the calculations.

**Specifications shall be in accordance with the following**:

### 5.1. Mechanical

- Piping and – SMLS, SCH 30 ASTM A106-B
- Fittings -SCH 30, BW ASTM A234-WPB
- Flanges - RF SCH 30, ASTM A105
- Valves: Gate Valves, 300# RF Body: ASTM A105/A216-WCB/WCC. Trim: AISI 410, Stellite.

### 5.2. Instruments & Electrical

- Instrument and Electrical scope details- refer to Annexture 1

### 5.3. Ship Discharge

- Typical ranges of ship discharge conditions

| Parameter | Typical Range |
|---|---|
| Cargo temperature | 20–50°C |
| Cargo pump discharge pressure | 5–12 bar(g) |
| Flow rate (small tanker) | 200–500 m³/h |
| Flow rate (medium tanker) | 500–2,000 m³/h |
| Flow rate (large product tanker) | 2,000–5,000+ m³/h |

### 5.4. Tank T1108

An 18" x 150# line connects the 16" x 150# line to tank T1108. Tank T1108 design limits for maximum flow rate is 2,400 m³/h.
The bidder is to make use of the above to calculate and specify a safe rate of transfer of diesel to the tank (T1108).

## 6. GENERAL

- Before any work may commence on site, service providers must have their HSE files approved by the SANPC Refinery HSE Department. The Main Contractor is responsible for ensuring that all appointed service providers comply with this requirement. SANPC Refinery will not be held responsible for any delays resulting from failure to obtain final approval.
- To be provided by SANPC Refinery:
  - Training for Induction
  - Training for Confined Space Entry
  - Training for Hot-work License
  - Main Contractor and sub-contractor laydown areas required for equipment and site establishment
  - Power supply to site establishments
  - Utilities (water and ablution facilities)
- Contractors to supply all other requirements necessary for execution of works.

## 7. SAFETY

- All contractors involved in the project as well as contractor personnel must comply with requirements prescribed by the OHS Act and OHS Regulations- Act 85 of 1993.
- In accordance with the OHS Act the Main contractor will appoint a 16.2 to manage health and safety matters within SANPC Refinery.
- Contractors shall be required to ensure that all employees working on site are made aware of their responsibilities with regards to safety, health and environment during induction awareness training.
- Good housekeeping practices to ensure that the work area is kept clean, neat and tidy at all times.
- Ensure that staff are aware of the site emergency evacuation procedures and first-aid and medical facilities
- Daily Toolbox Talks to be conducted by the contractor supervision and signed attendance registers to be kept on file.
- Last minute risk assessments to be conducted before commencement of every activity and registers to be kept on file.
- The contractors will also comply with the SANPC Refinery rules and regulations.
- The contractors safety officer will ensure that regular audits are carried out on site to identify and intervene on unsafe situations and near miss acts during work execution. Any findings to be reported and recorded in the SANPC incident management system
- All incidents to be reported to the relevant clearance issuers and maintenance supervisors.

## 10. PHASE 1: TECHNICAL EVALUATION CRITERIA

Bidders will be evaluated according to the below technical evaluation criteria. Minimum Technical Threshold is 70%. It must be noted that if the Bidder does not meet the 70% minimum threshold, the bidder will be disqualified and not be evaluated further.

**Bidders Relevant Experience**

**10.1. COMPANY EXPERIENCE**

Proven company's experience in the scoping of Turnkey/ EPC Projects over R60m at **Major Hazard Installations** within the last ten years. The services must include Design, Fabrication, Inspection, Procurement, Mechanical, Gritblasting and application of coatings, Scaffolding, Welding, Civil, Rigging, Electrical, Instrumentation, Quality Control, HAZOPS and associated services. The project scope must include process piping and storage of petrochemical products.

**The bidder must provide signed and dated reference letters from previous and current clients on clients' letterheads for *the execution of Turnkey projects related to process piping*. The reference letters should not be more than ten years.**

The evaluation committee reserves the right to verify all letters. Unsigned, not a letterhead and undated letters will result in bidder scoring zero.

| | Evaluation Criteria | Document as Evidence | Score | Weighting % |
|---|---|---|---|---|
| Experience in providing Design and project management services at Major Hazard Installations in the past ten years. | Bidder submitted >3 relevant reference letters – for the execution of Turnkey projects > R60m related to process piping. | Reference letters on Client company letter heads for the execution of Turnkey/EPC projects related to process piping and storage facilities in petrochemical installations. | 5 | 40% |
| | Bidder submitted 3 relevant reference letters – for the execution of Turnkey projects > R60m related to process piping. | | 3 | |
| | Bidder submitted 2 relevant reference letters – for the execution of Turnkey projects > R60m related to process piping. | | 2 | |
| | Bidder submitted 1 relevant reference letter – for the execution of Turnkey projects > R60m related to process piping. | | 1 | |
| | Bidder submitted no relevant reference letter – for the execution of Turnkey projects > R60m related to process piping | | 0 | |

| Relevant Experience |
|---|

**10.2. DESIGN ENGINEER (Pr. Eng.) EXPERIENCE**

The Design Engineer (Pr. Eng.) plays a key role in making sure that all the applicable standards are followed for the assessment of the existing systems, project process boundaries, material specifications, AFC drawings, designs, HAZOPS etc. The Design Engineer must have sufficient experience and a proven track record with piping and storage at **Major Hazard Installations** (Petrochemical Industry).

**Bidder to provide CV of the Proposed Design Engineer clearly listing the name of clients, project work previously completed, the value of the project and the duration of the work completed with each client.**

| | Evaluation Criteria | Document as Evidence | Score | Weighting % |
|---|---|---|---|---|
| CV of proposed Design Engineer (PR Eng) | >12 years' experience as a Design Engineer on projects undertaken at Major Hazardous Installations. | CV of proposed Design Engineer | 5 | 20% |
| | >10 but ≤ 12 years' experience as a Design Engineer on projects undertaken at **Major Hazard Installations** (Petrochemical refinery). | | 4 | |
| | >8 but ≤ 10 years' experience as a Design Engineer on projects undertaken at **Major Hazard Installations** (Petrochemical refinery). | | 3 | |
| | >6 but ≤ 8 years' experience as Design Engineer on projects undertaken at **Major Hazard Installations** (Petrochemical refinery). | | 2 | |
| | >4 but ≤ 6 years' experience as a Design Engineer on projects undertaken at **Major Hazard Installations** (Petrochemical refinery). | | 1 | |
| | <4 years' experience as a Design Engineer on projects undertaken at **Major Hazard Installations** (Petrochemical refinery). | | 0 | |

| Relevant Experience | | | | |
|---|---|---|---|---|
| **10.3. Quantity Surveyor**<br><br>Proven experience as a Quantity Surveyor on piping and storage projects at **Major Hazard Installations** (Petrochemical refinery) within the last 15 years.<br><br>**Bidder to provide CV of the Proposed QC Inspector clearly listing the name of clients and work previously completed indicating the duration of the work completed with each client.** | | | | |
| | **Evaluation Criteria** | **Document as Evidence** | **Score** | **Weighting %** |
| CV of proposed Quantity Surveyor | >12 years' experience as a Quantity Surveyor on projects undertaken at **Major Hazard Installations** (Petrochemical refinery) Installations. | CV of proposed Quantity Surveyor | 5 | 20% |
| | >10 but ≤ 12 years' experience as a Quantity Surveyor on projects undertaken at **Major Hazard Installations** (Petrochemical refinery) Installations. | | 4 | |
| | >8 but ≤ 10 years' experience as a Quantity Surveyor on projects undertaken at **Major Hazard Installations** (Petrochemical refinery) Installations. | | 3 | |
| | >6 but ≤ 8 years' experience as Quantity Surveyor on projects undertaken at **Major Hazard Installations** (Petrochemical refinery) Installations. | | 2 | |
| | >4 but ≤ 6 years' experience as a Quantity Surveyor on projects undertaken at **Major Hazard Installations** (Petrochemical refinery) Installations. | | 1 | |
| | <4 years' experience as a Quantity Surveyor on projects undertaken at **Major Hazard Installations** (Petrochemical refinery) Installations. | | 0 | |

| Relevant Experience | | | | |
|---|---|---|---|---|
| **10.4. ELECTRICAL, INSTRUMENT AND CONTROL SYSTEMS ENGINEER/ TECHNICIAN'S EXPERIENCE**<br>The assigned Electrical, Instrument and Control Systems Engineer for the project must have extensive experience working on Engineering Instrumentation Control Systems software and hardware for Major Hazardous Installations and must be professionally registered.<br>**Bidder to provide CV of the Proposed Electrical, Instrument and Control Systems Engineer/ Technician clearly listing the name of clients and description of work previously completed indicating the duration of the work completed with each client.** | | | | |
| | **Evaluation Criteria** | **Document as Evidence** | **Score** | **Weighting %** |
| Experience of proposed Electrical, Instrument and Control Systems Engineer | >10 years' experience as an Electrical, Instrument and Control Systems Engineer on projects undertaken at **Major Hazard Installations** (Petrochemical refinery) Installations. | CV of proposed Electrical, Instrument and Control Systems Engineer | 5 | 20% |
| | >8 but ≤ 10 years' experience as an Electrical, Instrument and Control Systems Engineer on projects undertaken at **Major Hazard Installations** (Petrochemical refinery) Installations. | | 4 | |
| | >6 but ≤ 8 years' experience as an Electrical, Instrument and Control Systems Engineer on projects undertaken at **Major Hazard Installations** (Petrochemical refinery) Installations. | | 3 | |
| | >5 but ≤ 6 years' experience as an Electrical, Instrument and Control Systems Engineer on projects undertaken at **Major Hazard Installations** (Petrochemical refinery) Installations. | | 2 | |
| | >3 but ≤ 5 years' experience as an Electrical, Instrument and Control Systems Engineer on projects undertaken at **Major Hazard Installations** (Petrochemical refinery) Installations. | | 1 | |
| | <3 years' experience as an Electrical, Instrument and Control Systems Engineer on projects undertaken at Major Hazardous Installations. | | 0 | |

## 11. PHASE 2: COMMERCIAL EVALUATION

**Price and Specific goals (80/20)**

As prescribed in terms of the Preferential Procurement Policy Framework Act (PPPFA), Act 5 of 2000 and its Regulations, the following preference point system will be applicable:

- In terms of SCM regulation 3 (2)(b); Either the 80/20 or 90/10 preference point system will apply, the lowest acceptable tender will be used to determine the acceptable preference point systems.

Price Criteria
Price and Specific goals

As prescribed in terms of the Preferential Procurement Policy Framework Act (PPPFA), Act 5 of 2000 and its Regulations, the following preference point system will be applicable:

- The 80/20 system for requirements with a Rand value of up to Fifty Million Rand (R50,000,000 including all applicable taxes);

Price Criteria

[Weighted score 80 points]

| Evaluation Criteria |
|---|
| • Commercial offer |
| • Commercial discounts<br>• Exchange rate exposure |

CEF (SOC) Ltd will utilise the following formula in its evaluation of Price:

$$PS = 80\left(1 - \frac{Pt - Pmin}{Pmin}\right)$$

Where:

Ps = Score for the Tender under consideration
Pt = Price of Tender under consideration
Pmin = Price of lowest acceptable Tender

Preference /specific goals criteria
[Weighted score 20 points]
SBD 6.1 Preference Points Claims Form

The specific goals promoted in this tender is:

| Specific goals | Points |
|---|---|
| **Historically disadvantaged individual (HDI)** | |
| Enterprises with ownership of 51% or more by person/s who are black | 10 |
| Enterprises with ownership of 51% or more by person/s who are women | 5 |
| Enterprises with ownership of 51% or more by person/s who are youth | 3 |
| Enterprise with ownership of 10% or more by person/s with disability | 2 |
| **Total** | **20** |