



The Petroleum Oil and Gas Corporation
Of South Africa (SOC) Ltd
Reg. No. 1970/008130/30

151 Frans Conradie Drive, Parow 7500

Private Bag X5, Parow 7499
Republic of South Africa

Tel: +27 (0)21 929 3000
Fax: +27 (0)21 929 3144

TO ALL INTERESTED PARTNERS

ENQUIRY NO: RFP 0001/ 2023
REQUEST FOR PROPOSAL (RFP)
PARTNERSHIP FOR DEVELOPMENT, REFURBISHMENT, MODIFICATION,
UPGRADE, FUNDING AND/OR OPERATION OF THE GTL REFINERY IN
MOSEL BAY

CLOSING DATE: 20 FEBRUARY 2023 @ 15H00 (CAT)
(tenders@petrosa.co.za)

1. Introduction

PetroSA is planning to reinstate to full production level its Mossel Bay Production Assets which includes the FA Platform and GTL-Refinery (Gas Loop and Liquids Refinery) in the earliest possible time at least costs following suspension of production in 2020 due to feedstock challenges. The Mosselbay Refinery has capability to process both Gas and Condensate. There is a long-term feedstock solution that is under development which is expected to supply feedstock to enable full production capacity as of 2027/2028. This solution is most likely to affect the FA Platform and Gas Loop Section. The condensate section could be decoupled from this long-term solution thus ensuring uninterrupted production. The Shareholder is in support of a Partnership agreement to accelerate production reinstatement and optimise the operation in the short to medium term.

Interested Parties (Applicants/Potential Partners) are invited to submit **conceptual** proposals, on an incentivised basis, to partner with PetroSA in developing the project. Incentivisation proposals should take into account PetroSA's desire to link the success of the projects to financial incentives for the Interested Parties. This

Directors:

Mr Nkululeko Poya (Chairperson),
Mr Llewellyn Delport, Mr Leon Haywood, Ms Nolubabalo Sondlo, Mr Mthozami Xiphu,
Group Chief Executive Officer (acting): Ms Sandisiwe Ncemane
Group Company Secretary: Ms Marlene Khumalo

could take the form of sharing in production revenues, performance based contracting or equity participation. Proposals should preferably include part or full financing of the project.

It is PetroSA's desire to receive a turnkey solution from design to commissioning including funding and feedstock security, however other combinations which are fit for purpose are encouraged and will also be considered by PetroSA.

Whilst PetroSA has a significant level of GTL Refinery engineering expertise, subsurface expertise in geology, geophysics and reservoir engineering disciplines, the preferred partner or partners will have an opportunity to interrogate the data during the business development process.

The conceptual proposal/s received will be evaluated by PetroSA and followed by discussions with the Interested Parties.

Applications must be submitted electronically via email to tenders@petrosa.co.za on or before 20 February 2023 @ 15H00 (CAT).

In keeping with the principles of good corporate governance, which include adequate fraud prevention measures as required by the Public Finance Management Act (PFMA), PetroSA has established a **toll free hotline, No 0800 117 861**, where any act of fraud should be reported. This “whistleblower” facility is managed by an independent company that will ensure the anonymity of the whistleblowers and establish the substance of any allegations made.

2. Background

The Petroleum Oil and Gas Corporation of South Africa (PetroSA), is a wholly state-owned company of the Government of South Africa and registered as a commercial entity under the South African law. PetroSA is a subsidiary of CEF SOC Limited (CEF) which is wholly owned by the State through the Department of Mineral Resources and Energy.

The core business activities of PetroSA are:

- The exploration and production of oil and natural gas
- Participation in, and acquisition of local/ international upstream petroleum assets
- The production of synthetic fuels from offshore gas at Gas-to-Liquid (GTL) refineries in Mossel Bay, South Africa
- The development of domestic refining and liquid fuels logistical infrastructure
- The marketing and trading of oil products and petrochemicals

The PetroSA GTLR facility has operated since the early 1990's utilising indigenous natural gas reserves offshore Mossel Bay in the production of synthetic motor fuels for the South African fuels market. The facility in its original design can produce 36,000 bpd of fuels, derived from High Temperature Fischer Tropsch (HTFT) synthesis of natural gas, and supplemented with imported condensate feedstock. Indigenous gas has been sourced from gas reserves developed by PetroSA offshore Mossel Bay and tied back into the FA Platform processing raw natural gas into gas and condensate streams conveyed to the onshore GTL facility in two subsea pipelines, respectively. Additional reserves have been brought into production since the original commissioning of the facilities in the 1990's, but these have now largely been depleted over the years of operation, and without further development of indigenous gas production or alternative feedstock strategies, the facility has run out of gas feed. The facility is capable of processing up to 18,000 bpd of condensate from either indigenous origin or via imports.

In anticipation of the end of life of existing gas fields PetroSA has developed various alternative feedstock strategies and conducted concept and more detailed studies to assess the viability of these options. These alternative feedstock options have been studied as part of the project for the Review of the Strategic Master Plan for the Mossel Bay Operations which have been performed by Advisian. PetroSA has evaluated alternatives to feedstock, which aligns closely to previous cases studied.

The six cases or scenarios identified are tabled below summarising the strategic cases identified to possibly resume the Mossel Bay operations. PetroSA used an independent firm to review/validate the cases.

Table 1: Strategic Cases Identified

Case Name	Case Description	Implementation schedule
Case 1: LNG feedstock	Feedstock of 210 kNm ³ /h LNG and imported feedstock (7.5kbpd)	Original schedule: 2023 to 2031 Proposed change in assumption – to start 2026 to 2033 due to 3-3.5 lead time for new built shuttle regasification vessel. If vessels are available, faster deployment may be possible
Case 2: Luiperd Block 11b/12b feedstock	Feedstock of 234 kNm ³ /h Luiperd Gas 20kbpd unstabilised and imported feedstock	2027-2038
Case 3: Liquid FEED 15 000 bpd (for year 1) Case 3: 1 x 1 - 5 years using existing gas (requires further offshore field development after year 1)	Option to partially bridge the gap until long-term feedstock available. Gas feed from current offshore fields and facilities Bulk of condensate feed will be imported. Small volume local associated condensate requires additional development Capex to extend beyond 1 year	2023-2024 With additional field development Capex: 2023-2028
Case 4: Liquid FEED 46000 bpd (Enhanced Condensate Project)	Revamp of the existing GTL refinery to enable processing of imported condensate / light crude 46kbpd liquid feed No processing of landed gas Upgrade of Marine Loading facility to enable offloading of Suezmax tankers	2025-2045
Case 5: 200000 bpd refinery nameplate capacity to process liquid feedstock (Crude)	200000 bpd refinery nameplate capacity to process liquid feedstock (Crude) inclusive of modifications for CF2 specification. Modifications to include decoupling of gas loop from refinery. Reforming and synthol could remain or be removed but will only process gas which will produce supplementary liquid feedstock for the 200 000 bpd refinery.	5 Years
Case 6: 12 000 bpd	Minimum capital investment into	2 Years

Case Name	Case Description	Implementation schedule
production	a refinery project which would enable production of tailgas and co-feed it with bioalcohols in order to produce fuels.	

Other Information

PetroSA is also an upstream oil and gas company. The first oil and gas discoveries in Block 9 were made mainly in the 1980's. Production of gas from the F-A field commenced in 1992. Gas and condensate is piped 80km from the F-A platform to PetroSA's Gas to Liquids (GTL) Refinery in Mossel Bay. Further fields such as E-M, South Coast Gas (SCG) associated fields, and more recently F-O, were developed to maintain the capacity required for the GTL refinery to produce optimally. The GTL plant will be the market for any gas developments and drilling in Block 9 or off the coast of South Africa.

3. Technical Details of Infrastructure

3.1 Overview

The PetroSA Gas – to – Liquids Refinery [GTLR] is located on the outskirts of the town of Mossel Bay, in South Africa.

The GTLR processes indigenous gas from the FA platform into petrol, diesel, and other value added products. Finished products from the GTLR are transferred to the PetroSA tank farm located in Voorbaai for dispatch via a Conventional Buoy Mooring [CBM] or Single Point Mooring [SPM].

3.2 FA Platform

The FA platform, owned by PetroSA, is located in the Indian Ocean, approximately 90km south of Mossel Bay in a water depth of approximately 90m. It is a manned platform with the primary function of separating the water from the condensate and gas extracted from the wells. The condensate and gas are transported to the GTLR via two pipelines:

Table 2: Pipelines

No	Product	Pipe Diameter x wall thickness	Piping Material	Design Pressure [bar]	Design Temp [°C]
1	Gas	18" x 14.3mm	API 5L X42	93.1	-29 / 93.3
2	Condensate	8" x 9.5mm	API 5L X65	128.0	-29 / 93.3

3.3 GTLR

The GTLR uses the High Temperature Fischer Tropsch process to convert the indigenous gas into petrol, diesel, alcohol and specialty distillates. The refining section of the GTLR converts the indigenous & imported condensate to fuels. The GTLR is essentially a 3 – train operation capable of processing up to 220 kNm³/hr of gas, with each train capable of approximately 70 kNm³/hr. The GTLR is currently processing at 70 kNm³/hr due to the dwindling gas supply from the offshore wells. Part of the installed infrastructure at the GTLR is a 10 000m³ cryogenic storage tank. This tank provides a buffer capacity to the GTLR in the event of an outage of the FA platform. The liquefaction rate to the tank is 15 kNm³/hr and the regasification rate is 220 kNm³/hr.

Overland pipelines connect the GTLR to the PetroSA - owned Voorbaai tank farm, located approximately 15 km east of the GTLR:

Condensate is imported to the GTLR as supplemental feedstock for processing into fuels.

The GTL refinery is currently offline and undergoing preservation maintenance. The refinery is regulated in terms of Mine Health & Safety Act (Act 29 of 1996) and a full shutdown inspection and recertification is required before recommissioning. The shutdown scope will include the execution of six turnarounds outages (three Synthol and Three Reformer trains) and additional three boiler outages. There are critical long lead spares required to reinstate the refinery to full production including replacement of the SPM pipeline section (1,4km subsea), recertification of CBM, Subsea equipment, FA Platform, Refinery Units and tank farm maintenance.

3.4 Voorbaai Tank Farm

The Voorbaai Tank farm acts as final storage for finished products and as intermediate storage for imported products. Imports to and exports from the tank farm are facilitated via the CBM and SPM, located approximately 3km offshore in 20m water depth. The CBM is rated at 42 000DWT and the SPM at 50 000DWT. The following pipelines connect the tank farm to the SPM & CBM:

Table 3: Pipelines connected to tank farm

No	Product	Pipe Diameter x wall thickness	Piping Material	Design Pressure [bar]	Design Temp [°C]
1	Petrol – SPM	12" x 6.4mm	API 5L X42	15.0	30
2	Diesel – SPM	14" x 7.0mm	API 5L X42	19.5	30
3	Alcohol – CBM	10" x 9.27mm	ASTM A106GrB	17.0	55
4	LAD – CBM	12" x 12.7mm	API 5L X52	21.0	40

3.5 Mossel Bay Harbour

The Mossel bay harbour is approximately 15km from the GTLR. It is owned and managed by the Transnet National Ports Authority. PetroSA uses the Mossel Bay harbour as the base for its offshore services for the FA platform, CBM and SPM. The multipurpose Quay 4 at the Mossel bay harbor has a length of 130m and a maximum

permissible draught of 6.5m. Additional information on Mossel Bay or any of the other South African ports can be found on:

<http://www.transnetnationalportsauthority.net/OurPorts/>

3.6 Rail And Road Network

The GTLR is located just off a national road, the N2, and is connected to the rail network that leads to the Mossel Bay harbour and the wider national rail network within South Africa.

4. Who Should Apply?

PetroSA will give preference to Partners/Bidders who meet the following requirements:

- State Owned or State Supported Oil and Gas Entities from oil and gas producing nations with access to feedstock (oil, gas and other) and own financial resources to undertake the project; and or
- Entities with proven and formalised relationships with oil and gas producing nations; and or
- Project Developers who are in a position to finance the development at risk up to Financial Investment Decision (FID) and will only recover development costs at financial close; and or
- Proposals for a turnkey solution, including development, funding (capital raised) and sustainable feedstock supply.

5. Evaluation Criteria

Applications will be evaluated on the basis of the below criteria. Entities/Applicants who previously submitted unsolicited proposals in the last 6 months need not resubmit, but should confirm and ensure that the proposals are still valid. PetroSA will allocate points and may negotiate with any or all of the top three (3) potential partners who score the highest points and are strategically the best fit for PetroSA and the CEF Group.

Applicants (Bidders) must score a minimum of 80 points (80%) in the evaluation criteria in order to be shortlisted. Should all the bidders score less than 80 points, the top 3 highest scoring bidders may be shortlisted and PetroSA may negotiate with all or any of them.

In order to assist with an efficient evaluation process, please include all supporting documentation, where applicable.

Table 4: Bid Evaluation Criteria

<u>POINT SCORING EVALUATION CRITERIA</u>		
CRITERIA	DOCUMENTATION REQUIRED	SCORE
Submit proposal aligned to brief - conceptual proposal that leverages on existing PetroSA infrastructure & assets	Proposal supports utilisation of a) PetroSA Gas Resources, b) FA Platform, c) GTL-Refinery and d) Tank Farm <u>Point allocation:</u> <ul style="list-style-type: none"> Combination of 4 items listed - 20 points. Combination of 3 items - 15 points Combination on 2 items - 10 Points Only relevant to one item - 0 points 	20
State Owned Oil and Gas Entities from oil and gas producing nations <u>OR</u> Entities with proven and formalised relationships with oil and gas producing	Evidence to be either company profile, website address, letter of support or other publicly verifiable information of state ownership information or state support <u>Points Allocation:</u>	10

<u>POINT SCORING EVALUATION CRITERIA</u>		
CRITERIA	DOCUMENTATION REQUIRED	SCORE
nations	<ul style="list-style-type: none"> • Majority state owned – 10 points • Minority state owned/supported – 5 points • No state ownership – 0 points 	
Development Budget from Concept to FID	<p>Confirmation of at Risk Project Development costs availability:</p> <p><u>Points Allocation:</u></p> <ul style="list-style-type: none"> • USD 5 million available - 10 points • USD 2,5 million available – 5 points • No project development budget – 0 points 	10
Ability to raise estimated required capital for the project	<p>Provide a conditional Project Funding Letter. This could take the form of a</p> <ol style="list-style-type: none"> a) Letter of interest, or b) Credit Guarantee, or c) Term sheet <p>The entity issuing such a letter must have sufficient resources available.</p> <p><u>Points Allocation:</u></p> <ul style="list-style-type: none"> • Available Funding above US\$200 million - 20 points • Partial Funding up to USD 150 million – 5 points • No funding – 0 points 	20
Capability : Feedstock Security	Provide company profile or other information confirming ownership and/or access to proposed feedstock (Oil & Gas Resources) to support the project	10
Capability: Technical Competence	Provide company profile showing proven technical competence in developing and/or executing brownfield projects	10
Timelines – high level indicative timeline for project implementation (commissioning of Plant)	<p>Provide project timelines</p> <p><u>Points Allocation:</u></p> <ul style="list-style-type: none"> • Delivery by 2023 – 10 points • Delivery by 2024 – 7,5 points • Delivery by 2025 – 5 points • Delivery after 2025 – 0 points 	10

<u>POINT SCORING EVALUATION CRITERIA</u>		
CRITERIA	DOCUMENTATION REQUIRED	SCORE
Feasibility of the proposed solution	Proposed solution <u>Points Allocation:</u> <ul style="list-style-type: none"> • Solution is implementable with no dependencies – 10 points • Solution implementable with immaterial dependencies – 5 points • Solution is not easily implementable and has significant dependencies – 0 points 	10

Interested parties who currently meet all the requirements and have previously (in the last 6 months) submitted all the information are not required to re-submit additional information. However, it is the Interested Party's responsibility to ensure that PetroSA has or receives the documentation required before the closing time and date.

6. Contracting

PetroSA reserves the right to withdraw this RFP, reissue the RFP and/or divide the scope and contract with more than one Partner.

PetroSA shall not be obliged to accept the bidder with the highest points. No agreement between PetroSA and the successful bidder shall come into existence until such time as a written contract signed by PetroSA and the bidder is concluded.

It is envisaged that once the evaluation is concluded, PetroSA will enter into negotiations with one or more of the shortlisted bidders in order to conclude a partnership agreement (or Memorandum of Agreement). PetroSA and the successful Partner will jointly develop the project business case to Final Investment Decision (FID) for the reinstatement of the Refinery.

7. Scope Clarification Meeting / Site Inspection

PetroSA has scheduled a scope clarification meeting at 10:00 on 7 February 2023, on Microsoft Teams. Should the Bidder wish to attend please inform the PetroSA representative by 10:00 on 6 February 2023, submitting names and contact details of attendees, in order to arrange the necessary access.

The cost of attendance will be for the Supplier's own account.

7. Declaration

By submitting an application (offer to partner with PetroSA and the CEF Group of Companies) you declare that:

- (a) the information provided is true and correct;
- (b) the person submitting the application electronically is duly authorised to submit the application on your behalf;
- (c) the application is completed independently from, and without consultation, communication, agreement or arrangement with any competitor.
- (d) documentary proof regarding any proposal will be submitted to the satisfaction of PetroSA when called upon to do so;
- (e) the Potential Partner consents to a "due diligence" (where necessary) being conducted on it by PetroSA or its authorised representatives regarding the Entities' legal and empowerment status, technical ability, creditworthiness, security clearance, etc., and you undertake to co-operate fully in this regard;
- (f) You understand and acknowledge that any award made will be subject to the conclusion of a written agreement between the Parties.

6. Enquiries

Technical enquiries regarding this invitation should be addressed to Abram Moloto at telephone no. +27 021 929 2047 or e-mail address ABRAM.Moloto@petrosa.co.za.

General and commercial enquiries should be addressed to Nesha Gaca at + 27 044 601 3043 or e-mail address nesha.gaca@petrosa.co.za.

7. Submission Date & Time

Please submit your application, proposal or letter on interest on or before 20 February 2023 on 15H00 by email to tenders@petrosa.co.za

Kind Regards,

C Bunting

Group Supply Chain Manager