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TNPA/2023/05/0004/28328/RFP

Professional Services for detailed engineering, design and construction supervision for Richards Bay Liquified Natural gas terminal common user infrastructure.

No.	Reference	Date Received	Clarification Required	TNPA Response
TENDER CLARIFICATION MEETING QUERIES				
01	Commercial	27-31 July 2023	Request for tender extension	~~**No extensions of time will be granted for this tender.**~~ Tender closing date extended to 20 October 2023 at 16:00. Issued with Addendum 01 and available on the National Treasury e-tenders website.
02	Technical	31 July 2023	Could you kindly provide the as-built drawings of existing Berth 208? These drawings are necessary for the contractor to carry out their tender design and assess	The general layout drawing of berth 208 attached to addendum 01 and available on the National Treasury e-tenders website
03	Technical	31 July 2023	In order to better proceed with the tendering design, we kindly request the completed geotechnical and bathymetric/topographic survey results conducted near Berth 207 and the 13 km pipeline route.	~~All available Geotech Information will be shared with addendum.~~ Issued with Addendum 01 and available on the National Treasury e-tenders website.
04	Technical	31 July 2023	Could you please confirm if there has been an Environmental Impact Assessment (EIA) analysis conducted for the new Berth 207? If such analysis	The Environmental Impact Assessment process is yet to be undertaken parallel to the Detailed Engineering designs for the Berth 207. The Environmental services Consultant will be

			has been carried out, we kindly request that you provide us with the EIA report.	introduced and expected to work with the appointed bidder post award.
05	Technical	31 July 2023	Please kindly provide the CAD drawings given in Annexure A - Marine Facilities Conceptual Study Report, so that tender can generate design drawings more precisely? to come in, etc and we have to unfortunately replace the proposed subcontractors. Is it possible to perhaps without modifying the position of the proposed berth 207, please clarify whether alternative berth layouts are acceptable for owner? such as variations in the arrangement and numbers of mooring dolphins and breasting dolphins.	Yes, variations will be accepted. The drawings provided are at a concept level and will be refined as the project progresses into the design phase.
06	Technical	31 July 2023	This project requires importing of equipment. please clarify whether owner accept payment in currencies other than South African Rand, such as US dollars or euros.	TNPA will pay for the services rendered in South African currency, i.e., Rands.
07	Technical	31 July 2023	**Annexure A, drawings** Please kindly provide the CAD drawings given in Annexure A - Marine Facilities Conceptual Study Report, so that tender can generate design drawings more precisely?	~~TBA~~ Link sent via one drive and uploaded on the National Treasury website

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08	Commercial	31 July 2023	Any preferred vendor list for equipment and material in this project, please clarify.	List attached with clarifications
09	Technical	31 July 2023	We understand that Berth 208 should be operated normally during the construction of the new berth 207, is there any restrictions/limitations of berth 208 operation during construction work of new berth 207, such as piling driving, etc.	**Attached to Addendum 01** and uploaded on National Treasury website.
10	Technical	31 July 2023	We understand that Berth 208 should be operated normally during the construction of the new berth 207, is there any restrictions/limitations of berth 208 operation during construction work of new berth 207, such as piling driving, etc.	The operation at berth 208 must not be interrupted under any circumstances during the construction phase. The Port is open to a variety of construction methodologies as long as it does not disrupt the operation at berth 208. The contractor is advised to consider international best practices and guidelines including but not limited to ISGOTT guidelines for tankers and terminals during the design phase.

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11	Technical	31 July 2023	**RFP, Annexure C, page 16, Figure 3- Proposed pipeline evacuation servitude from berth 207 to Port boundary.** Please kindly provide the 13km gas pipeline routine layout CAD drawings? And topographic survey results along pipe routine.	The Port does not have 13km gas pipeline CAD drawings. A general servitude drawing has been provided which indicates the planned routing for the evacuation pipeline.
12	Technical	31 July 2023	Please clarify that only a 20-inch (600mm) gas line is required for this tender. The installation of DN100 vapor return, DN350 and DN150 LNG pipelines will be carried out in the future and is not included in the scope of this tender.	The estimated 20-inch line (+/- 13 km) is required as a primary transmission line for LNG. Bidders are to also include in their scope the provision of the DN100 vapor return line.

13	Technical	11 August 2023	**Final Site Walkabout**	An additional site visit at 10:00am will take place on Wednesday 16 August 2023. All that will be attending to please advise via email to: Mphoyakaomphile.Ngwenya@transnet.net by Tuesday 12:00pm. The following: -Name and Surname

				-ID -Email address. *Note: meeting point the permit office at 8:30am to allow sufficient time to sort out permits
14	Technical	15 August 2023	**Key dates** Considering the Tender closing date being extended from 14-Sep-23 to 20-Oct-23 as Addendum 01, please can the dates listed in "***C1.2: Contract Data***" be confirmed. For example: item 3 - 11.2(3) the completion date for whole of the works item 3 - 11.2(9) key dates item 30.1 access dates (which state 16 Oct 2023) item 31.2 starting date (which states 16 Oct 2023)	**Completion date:** 29 March 2027 **Conditions to be met:** Submit preliminary designs – 04 April 2024 Complete detailed design – 04 October 2024 **Site access dates:** Berth 207 – 20 November 2023 Gas Pipeline site – 20 November 2023 Bulk Services site – 20 November 2023 **Starting date:** 20 November 2023 Updated documents will be included in **Addendum 02**
15	Technical	21 August 2023	**Geotechnical:** Currently the only geotechnical information to the Tenderer's disposal is the PRDW geotechnical review document S2018-3-TN-GT-001-R0. This information alone is not sufficient for this tender process.	The PRDW documents were shared in the link and on the National Treasury e-tenders website. Kindly advise if you did not receive the link.

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			Could we please have copies of the documents listed below which are all referred to in the PRDW review? Please include all borehole logs and laboratory test results with the reports. Marine GeoSolutions, 2006. Marine Geophysical Survey Report, s.l.: Protekon. Marine GeoSolutions, 2008. Marine geophysical survey for the feasibility study related to development of container handling facilities – Richards Bay Harbour, Durban: MGS. Protekon, 1995. Preliminary Geotechincal Investigation for the Coalex Project at the South Dunes Area, Johannesburg: Protekon. Protekon, 2005. Geotechnical Investigation for the Proposed Chemical Berth 208 in the Port of Richards Bay, Richards Bay: National Ports Authority of South Africa We would require all the raw data/base geotechnical investigation data associated with each of the geotechnical investigations. This information is critical in order to perform a design. We therefor request that this in made available at your earliest convenience.	

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16	Technical	21 August 2023	**CAD Drawings:** Please kindly provide the CAD drawings provided in Annexure A - Marine Facilities Conceptual Study Report, so that tender can generate design drawings more precisely? Please also provide a comprehensive set of as-built drawing for Berth 208.	CAD drawings are in the PRDW document, zip files shared in the link Berth 208 is an operational facility and due to sensitivity of operations, TNPA cannot issue the Berth 208 drawings. If the bidder has a query related to Berth 8, the bidder shall raise the specific query for which they seek clarity.
17	Technical	21 August 2023	**The Contract Data Point 3** - Time refers: Considering the amended closing date of 20 October 2023 and the tender validity of 12 weeks, the dates provided in Point 3 should be updated. to reflect the current tender closing date (i.e. start date and site access date is shown as 16 October 2023)?	Refer to point 14 above. The updated dates to be issued with **Addendum 02.**
18	Technical	21 August 2023	The Contract Data Point 3 - Time refers: Tender Data, page 10 of 12 refers: The maximum points for this bid are allocated as follows: PRICE - 90 B-BBEE STATUS LEVEL OF CONTRIBUTION -10	The landside storage facility is not part of the scope of this RFP.

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			Level 1 & Level 2 = 3 Points The promotion of enterprises located in uMhlathuze Local Municipality for work to be done or services to be rendered in that municipal area = 3 Points The promotion of supplier development through subcontracting a minimum of 30% of the value of • Construction of Marine structures - Berth 207 • Construction of gas transmission pipeline and support system • Construction of Bulk services • Construction of land storage facility Please confirm that the Construction of the land storage facility is not included in the Scope of Works for this tender? (Also see C3.1 Scope, 1.1 Executive overview and Point 1.2 Employers Objective)	
19	Commercial	21 August 2023	**Returnable Document T2.2-14:** T2.2-14 "Proposed Organization and Staffing" and T2.2-29 "Organogram & CV's of Key Persons" seems to require the same information.	T2.2-14 requires a list of the proposed staff, whereas T2.29 is for the key persons as listed in the returnable including their qualifications and experience.

			Please clarify what information and documentation is required under T2.2-14 "Proposed Organization and Staffing"	
20	Technical	22 August 2023	**Clarification 1.1:** For the Marine Structures; is the order of precedence to determine the minimum functional requirements for which the design must be produced? Highest order of precedence: Main body of Part C3 Works Information: Second order of precedence: Annexure A to Part C3 Works Information including all the drawings presented therein of the preferred layout and concept design which shall form part of the design basis: Third order of precedence: Annexure C to Part C3 Works Information Not Applicable in entirety: Annexure B to Part C3 Works Information.	**Clarification 1.1:** Functional design specification has been added, refer to section 2.5 of Part C3 Works Information and it should be read in conjunction with the Works Information and **Annexure A.** If there are any ambiguities, bidders shall raise a query.
21	Technical	22 August 2023	**Clarification 1.2:** For the Gas Transmission Line and support structures; is the order of	**Clarification 1.2:** Functional requirements for the gas pipeline are detailed in Part C3 Works Information. Annexure C shall be read in

			precedence to determine the minimum functional requirements for which the design must be produced? Highest order of precedence: Main body of Part C3 Works Information: Second order of precedence: Annexure C to Part C3 Works Information including all the drawings presented therein of the servitude and concept design which shall form part of the design basis: Not Applicable in entirety: Annexure A to Part C3 Works Information Not Applicable in entirety: Annexure B to Part C3 Works Information	conjunction with the Works Information. If there are any ambiguities, bidders shall raise a query.
22	Technical	22 August 2023	**Clarification 1.3:** For the Bulk Services; the order of precedence to determine the minimum functional requirements for which the design must be produced? Highest order of precedence: Main body of Part C3 Works Information: Second order of precedence: Annexure B to Part C3 Works Information including all the drawings presented therein shall form part of the design basis: Not Applicable in entirety: Annexure A to Part C3 Works Information	**Clarification 1.3:** Functional requirements for Bulk Services are detailed in Part C3 Works Information. **Annexure B** shall be read in conjunction with the Works Information. If there are any ambiguities, bidders shall raise a query.

			Not Applicable in entirety: Annexure C to Part C3 Works Information Highest order of precedence: Main body of Part C3 Works Information: Second order of precedence: Annexure C to Part C3 Works Information including all the drawings presented therein of the servitude and concept design which shall form part of the design basis: Not Applicable in entirety: Annexure A to Part C3 Works Information Not Applicable in entirety: Annexure B to Part C3 Works Information.	
23	Technical	22 August 2023	**2. Concept Designs Provided in the Works Information are to be "Validated".** Scope of Services 1.7.1 Detailed Engineering and Design Development. This section states in the first bullet point that a primary activity is, "Concept Design/Prefeasibility design validation". This requirement to validate implies that the bidders are required to adopt the concept designs provided in the Works Information and validate that these meet the functional requirements of the Works Information.	Fully concur

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24	Technical	22 August 2023	As an example, the concept design drawing titled, "Berth 207 Site Plan" with drawing number S2085-01-DR-ST-101-S1-R1 (page 68 of Annexure A) is the jetty layout that must be adopted by all bidders, must be validated to meet the functional requirements of the Works Information and further developed to detailed engineering completion per the approvals process described in the NEC contract terms.	Fully concur
25	Technical	22 August 2023	Bidders that produce a tender design that deviates from the design decisions presented in the concept designs will be deemed non-compliant.	No **Additional Notes:** The landside scope that is not part of this project is the LNG terminal and terminal infrastructure, this will be constructed by others.
26	Technical	22 August 2023	**Clarification 2.1.** Please confirm that in order to comply with the tender requirements and submit a compliant bid; for the Marine structures, the concept designs presented in Annexure A to Part C3 Works Information must be adopted by all bidders, validated and developed further.	Fully concur, however, meaningful deviation can be accommodated.
27	Technical	22 August 2023	**Clarification 2.2.** Please confirm that in order to comply with the tender requirements and submit a compliant bid; for the Gas Transmission Line and support structures,	Fully concur, however, meaningful deviation can be accommodated.

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			the concept designs presented in Annexure C to Part C3 Works Information must be adopted by all bidders, validated and developed further**.**	
28	Technical	22 August 2023	**Clarification 2.3.** Please confirm that in order to comply with the tender requirements and submit a compliant bid; for the Bulk Services, the concept designs presented in Annexure B to Part C3 Works Information must be adopted by all bidders, validated and developed further.	Fully concur, however, meaningful deviation can be accommodated.
29	Technical	25 August 2023	SBD 6.1 Preference Points Claim. The table under section 1.4 of this SBD states: Preference Item Points **B-BBEE STATUS LEVEL OF CONTRIBUTION** Level 1 & Level 2= 3 Points The promotion of enterprises located in uMhlathuze Local Municipality for work to be done or services to be rendered in that municipal area = 3 Points The promotion of supplier development through subcontracting a minimum of 30% of the value of • Construction of Marine structures - Berth 207	If the Bidder is level 1 or Level 2 the bidders will score 3 points. If the bidder promotes enterprises within uMhlathuze the bidder will score 3 points and if not 0 will be allocated. Subcontracting one of the listed or some of the listed SMMEs will earn 4 points for the bidder.

			• Construction of gas transmission pipeline and support system • Construction of Bulk services • Construction of land storage facility portions of the contract to /with EMEs and/or QSEs 51% owned by black people, youth, women or disabled people= 4 points Non-compliant contributor (3 – 9) = 0 points Does the reference to "Non-compliant contributor (3-9)" in the table mean bidders whose B-BBEE Contributor status is at levels 3-9 are deemed non-compliant in entirety. In other word, If a bidder with a B-BBEE Status Level of 3 is deemed non-compliant, please confirm if the reference to the "=0 points" is a reference to scoring 0/3 points allocated to B-BBEE Status Level OR does it refer to scoring 0/10 points allocated to preference in entirety. Please clarify: 1. Does the reference to "non-compliant contributor (3-9)" in the table mean bidders whose B-BBEE Contributor status is at levels 3-9 are deemed non-compliant in entirety. In other word, if a bidder with	If the bidder's B-BBEE scorecard is above Level 2 contributor there will be no points allocated for that specific goal. i.e. The bidder will score zero (0) out of three (3).

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			a B-BBEE Status Level of 3 is deemed non-compliant, please confirm if the reference to the "=0 points" is a reference to scoring 0/3 points allocated to B-BBEE Status Level OR does it refer to scoring 0/10 points allocated to preference in entirety.	
30	Commercial	25 August 2023	1.2 In relation to the promotion of supplier development through subcontracting a minimum of 30% to 51% black owned EME or QSEs, please confirm how many points will be claimable by a bidder in relation to this section if the bidder is able; 1.2.1 to achieve 15% or 1.2.2 to achieve 45%	 0 points 4 points
31	Technical	25 August 2023	Gas Pipeline Functional Specification **2.1.** Please provide; **2.1.1.** The coordinates for the gas distribution hub where the pipeline must terminate **2.1.2**. The design gas pressure and temperature at which the FSRU will supply the gas **2.1.3**. The design gas pressure and temperature at which the bidder's pipeline must provide at the gas distribution hub termination point.	2.1.1. TNPA assumes that the bidder(s) is referring to the +/- 13 km pipeline within TNPA's port limits. At this stage TNPA does not have co-ordinates to share with the bidders, the project team anticipates this to be developed at Detailed Design phase. The pipeline route for the 13 km line is provided "attached" and TNPA expects bidders to price on this info.

			2.1.4. Confirmation whether custody transfer metering is required in the scope or is this intended to be provided by customers downstream of the gas distribution hub. If required in this scope please confirm the number of custody transfer meters required. **2.1.5**. Section 1.7.8 of Part C3 Scope Main Body. The section, Berth 207, loading platform states that, "The access trestle shall be sized to accommodate one gas pipeline (DN600), two cryogenic LNG pipelines (DN350 and DN150) and a vapour return pipeline (DN100)". The section 1.7.9 Construction of gas transmission pipeline and support system states that, "At a minimum a flow meter on the main 20" inch piping will be required and a control valves to regulate the flow; A spill-back line (estimated at 6" inch, 3 km and with its own control valve) from the 20" inch pipe back to the FSRU will be installed to protect from serge and possible over-pressure". Please confirm that, whilst provision is made for spacing to accommodate one gas pipeline, two cryogenic pipelines and one vapour return pipeline on the loading platform, the scope of this contract only requires that the one gas pipeline between the berth and the gas	2.1.2 Since the RFP for Section 56 is open to either an FSRU or an FSU solution, TNPA can receive either of the two from the Section 56 Bidders. With this in consideration, Bidders for this common-user infrastructure can use the estimates below: <u>In an event of an FSU solution</u> (1) The FSU will connect from Berth 207 through a Cryogenic line estimated at 5 km to site 1 & 2 site for re-gasification. This line will be operated at Temperature of -162 ^{0}C and average Pressure of 0.5 Bar(g). (2) From the onshore re-gasification unit, the 13 km line will be operated at Ambient temperature with a minimum of 0 ^{0}C and Pressure of maximum 85 Bar(g) <u>In an event of an FSRU solution</u> (1) Operated at Ambient temperature with a minimum of 0 ^{0}C and Pressure of maximum 85 Bar(g). TNPA recommends that bidders should separate the costs of the above options (upstream FSRU or FSU set-up), since TNPA will only appoint a single solution based on the successful Section 56 bidders. 2.1.3 TNPA has not define this at this stage as TNPA will nominate a Terminal Operator (TO) that will secure gas off-take beyond the 13 km pipeline. This TO will be responsible

			distribution hub is designed, procured and constructed? The other pipelines are not in the scope.	for transmitting the gas at sufficient process conditions for the end-user(s). This TO scope will include "the network, volumes-metering and distance compensation due to pressure losses" 2.1.4 A minimum of a single metering station will be required "**prior or upstream the gas distribution hub**". 2.1.5 Bidders to include the DN100 vapour return line as part of their submission (see updated activity schedule).
31	Commercial	25 August 2023	Local Content per Clause Z9 of the NEC Contract The contract clause states The Contractor shall meet the stipulated minimum threshold portion of local production and content as determined by the Department of Trade and Industry for ALL stipulated "designated sectors" in this contract, meaning a sector, sub-sector or industry that has been designated by the Department of Trade and Industry in line with national development and industrial policies for local production, where only locally produced services, works or goods or locally manufactured goods meet the stipulated minimum threshold for local production and content; Please confirm: 3.1. Please confirm that the list of designated goods AND their percentages are those presented by the DTIC at http://www.thedtic.gov.za/sectors-and-	Yes. The list of designated goods AND their percentages are those presented by the DTIC at

			services-2/industrial-development/industrialprocurement/ such that, for example, 100% of Steel Value-added Products such as fabricated. structural steel must be sourced from local manufacturers and verified as per the SANS processes?	http://www.thedtic.gov.za/sectors-and-services-2/industrial-development/industrialprocurement/
32	Technical	25 August 2023	Please further confirm that the list of designated goods AND their percentages are those goods and percentages applicable at the date of tender issuance and any changes to the list or percentages made after this date are not contractual obligations which can accrue penalty.	Confirmed.
33	Technical	25 August 2023	**Annexure J - Health and Safety Specifications Road Rehab** The Transnet safety specifications that are included in the tender documentation under annexure J is related to a different project. We request that the safety specifications for this project be issued to the tenderers.	There is no Health and Safety Spec and no baseline risk as there is currently no designs available, these are included as part of the bidder's scope to develop once they complete detailed design. The Annexure J was erroneously uploaded.
34	Technical	25 August 2023	**Addendum 01 final_ 08 Aug23** As per the addendum section 4 we note that the reports listed have been issued as part of the RFP for reference only and do not form part of the "Works Information" but is preconstruction information or Site Information. Ie As per NEC requirements the	The Scope of Works is detailed under section 1.7 of the Works Information, annexures and additional documents shall be read in conjunction with the Works information. If there are ambiguities between the Works Information, annexures and any documents attached to the Works Information bidders

			Works is restricted to the items listed in the Works Information contained in Section C3.1 of document Scope of Work LNG Richards Bay, specifically section 1.7. Only the reports listed in Section 13 Annexures shall be deemed to form part of the Scope of Works. Please can you provide an order of precedence for these documents listed in section 13 as there are a number of ambiguities and contradictions between these documents as well as between them and the main Scope of Works. Additionally in these documents there are recommendations and suggestions. Please can you clarify which of these constitute Scope of Work and which are for information only.	are required to raise a queries so that TNPA can provide clarity. There is no order of precedence, the documents shall be read in conjunction with the Works Information, if there are ambiguities bidders shall raise a query for TNPA to clarify. As per above, the Scope of Work is detailed under section 1.7 of the Works Information.
35	Technical	25 August 2023	**Scope of Work Document** In section 1.1, under the Scope of work it states "Construction of land Storage facilities." If the land Storage facility is included in our scope please clarify the nature of the storage facilities required in terms of :	The land storage facility is not part of the scope of the common user infrastructure RFP.

			- Location - Volume - Substance to be Stored (Liquid LNG or Gas LNG)	
36	Technical	25 August 2023	**Scope of Work Document** In section 1.7.8, under the Scope of work it states "one gas pipeline (DN600)" however clause 1.7.9.4 states "main 20" inch piping". Please confirm required pipe diameter as 24" (DN600) or 20" (DN500), alternatively advise where size change occurs.	24" DN600, see updated Works Information which will be issued as part **Addendum 02**.
37	Technical	25 August 2023	**Scope of Work Document** In section 1.7.8, under the Scope of work it states "Platform to include for Cryogenic LNG" We understand the Cryogenic LNG pipeline to be a future installation by others and the requirement only to be the installation of suitable space for this future pipeline. This will also apply to the vapour return line which will form part of the future installation. The Scope of the current project allows only for the installation of one number DN600/500 (refer point 9	The vapour return line forms part of the scope of this project and bidders are required to price for it in the activity schedule.

			above) LNG Gas pipeline of approximately 13km long.	
38	Technical	25 August 2023	**Scope of Work Document** In section 1.7.8, under the Scope of work it states "Loading arms and Manifolds" As the current Scope of work is only for the construction of the single DN600 Gas Pipeline, please confirm the number and nature of the loading arms (multiple), and manifold required in this phase of the project and space required for future (by others) equipment. It is noted that in the provided reference information it is stated that all loading arms will be located on the FSRU vessel and as such no arms will be required on the Berth. As per item **7 (35)** above please confirm order of precedence of documentation.	Refer to section 2.5 Berth 207 functional design specifications which has been added to the Works Information. The details are to be developed by the successful bidder during design phase. Refer to section 2.5 Berth 207 functional design specifications which has been added to the Works Information, loading arms are part of the scope of the common user RFP. The scope of work is detailed in the Works Information, and all documentation attached to the RFP shall be read in conjunction with the Works Information.
39	Technical	25 August 2023	**Scope of Work Document** Section 1.7.8 states "Provision has been made for foam/salt water solution, fresh water and salt water lines for fire-fighting purposes". Please indicate where these will be connected and advise on location of current infrastructure as well	Refer to Annexure B: Bulk Services study report, section 3 and 4.

			as capabilities including the number and capacity of pump sets, foam stock, flow and residual pressure in fresh water system, etc.	
40	Technical	25 August 2023	**Scope of Work Document** Section 1.7.8, only other bulk services listed are "electricity and potable water" We understand the electricity and potable- water to be for the use on the berth only and no allowance has been made to power the FSRU/FSU.	Yes.
41	Technical	25 August 2023	**Scope of Work Document** **1.7.9.1** Gas transmission pipeline, with pipe racking/pipeline support, pipe bridges, associated valves, pump rooms/compressor station super structures, metering equipment, from the berth loading manifold, to the port boundary interface. The length of this pipeline is anticipated to be 13.0km **1.7.9.3** Due to pipeline pressure losses and requirement to supply gas (to off takes) at great distance. A booster pump/compression system will be installed within battery limit (inside TNPA Ports limits); The +13 km gas pipeline from the FSRU will require pipe support (pipe racks and bridges) at pipe-length interval. The number of	1.7.9.1 Yes. 1.7.9.3 TNPA has set a minimum volume of 1 million tons per annum and a maximum of 5 million tons per annum over the years. Bidders shall determine the pressures and flow rates based on the capacity requirement.

			support/intervals will be detailed once the drawings and pipe stress analyses are completed at design. This statement indicates "pump rooms/compressor station super structures" and "A booster pump/compression system will be installed within battery limit." In order to size the required pump/compression system we required the following information: -Inlet battery limit pressure from FSRU discharge -Required outlet battery limit pressure at manifold -Required flowrates as follows: Maximum Instantaneous Flow Rate (Initial value and Future Final Value) Minimum Instantaneous Flow Rate (Initial value and Future Final Value)	
41	Technical	25 August 2023	**Scope of Work Document** 1.7.9.2 Control room that will house the Supervisory Control and Data Acquisition (SCADA) systems will form part of the scope of the pipeline. There will be expansion loops on this line at a spacing to be determined by the Contractor during detailed design stage. The pipeline will transmit between 1million to 5 million tons per annum of LNG gas to end-user.	1.7.9.2 Capacity to be catered for is 1million ton per anum ramped up to a maximum capacity 5million tons over the years

			This indicates a flowrate turndown ratio of 5:1. Please confirm the capacity to be catered for under this contract in terms of pumpsets/compressors and whether the pumps/compressors for the future capacity are to be installed now or whether only provision is to be made for them to be installed in future.	
41	Technical	25 August 2023	**Scope of Work Document** No route for the 13km pipeline is provided in the Scope of Work. We note that Annexure A and C indicate different routes for the 13km of pipeline, reference Annexure A Figure 4.2 and Annexure C Figure 3. Please clarify which is the correct pipe route in order to allow for design.	Refer to updated Works Information, Figure 2: Gas Pipeline route added. **Addendum 02** will be issued with updated Works Information
42	Technical	25 August 2023	**Activity Schedule** In the Activity Schedule C2.2 under the 10.5 Quay structure: Berth 207 all the sections of the marine facility are listed except for the Access trestle. The loading platform, mooring dolphins, berthing dolphins and access walkways are listed.	Refer to updated Activity schedule which will be issued with **Addendum 02**

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			Please provide us with an updated Activity schedule that includes the access trestle construction.	
43	Technical	25 August 2023	**Site Visit** As the Employer would appreciate this project is highly complicated in terms of access and logistics. We therefor request another physical site visit to understand all the challenges that we need to deal with. We request that this is granted for Tuesday 29 August 2023.	Bidders were afforded the opportunity for site visits (3x occasions), we will check and advise if another site visit can be arranged.
44	Technical	25 August 2023	**Q&A** Following on from item 18 above and the fact that our design teams finds it difficult to continue with designs if we do not get timeously reply on our queries, we therefor respectfully request that the turnaround time on questions and answers would be prioritized.	The project team endeavours to respond as quickly as possible to queries raised.

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<td>06 September 2023</td>
<td>Q&A
The WBHO team urgently require clarification from TNPA on the following:

<table>
<tr><td>Design Vessel</td><td>170 000 m3</td></tr>
<tr><td>Design Vessel LOA</td><td>345m</td></tr>
<tr><td>Design Vessel Beam</td><td>55m</td></tr>
</table>

Above is an extract from Addendum 2’s clarification response</td>
<td></td>
</tr>
<tr>
<td>46</td>
<td>Technical</td>
<td>06 September 2023</td>
<td>Q&A
There seems to be a misalignment with design vessel information, as per the table below
from Annexure A, a 345m vessel length and 55m vessel beam aligns to the specification of a QMax vessel and not a conventional 170 000m3 vessel.

Table 3-1: Design Vessel Parameters
<table>
<tr><th rowspan="2">Type</th><th colspan="5">LNG Carrier</th><th rowspan="2">FSRU</th><th rowspan="2">Unit</th></tr>
<tr><th>Q-Max</th><th>Q-Flex</th><th colspan="3">Conventional</th></tr>
<tr><td>Capacity</td><td>267 000</td><td>217 000</td><td>170 000</td><td>150 000</td><td>125 000</td><td>170 000</td><td>m³</td></tr>
<tr><td>Deadweight</td><td>130 000</td><td>109 500</td><td>93 152</td><td>84 300</td><td>71 684</td><td>81 624</td><td>tonnes</td></tr>
<tr><td>Length overall (LOA)</td><td>345</td><td>315</td><td>300</td><td>290</td><td>274</td><td>294</td><td>m</td></tr>
<tr><td>Beam</td><td>53.8</td><td>50.0</td><td>45.8</td><td>48.9</td><td>47.2</td><td>46.0</td><td>m</td></tr>
<tr><td>Laden Draft</td><td>12.2</td><td>12.0</td><td>12.5</td><td>12.5</td><td>11.8</td><td>12.6</td><td>m</td></tr>
</table>

1. Please confirm what design vessel be used? 170 000m3 or QMax?
2. And then, is there a typo in the bollard specification?</td>
<td>1.Design vessel is ~~170 000m3~~, Q-Max, 345m LOA

2. Yes there was an error on bollard specification, correct specification reads as follows:</td>
</tr>
</table>

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			<table><tr><td>Bollard</td><td>150t @20m interval</td></tr></table>	Berthing dolphin - TRIPLE 200t quick release mooring hooks. Mooring Dolphin - TRIPLE 200t quick release mooring hooks
47	Technical	06 September 2023	**Q&A** The team further requires confirmation on the location and size construction laydown area to erect contract management offices, concrete yard, pile welding yard.	The area allocated for the construction camp, concrete yard, laydown area etc. is located at the South Break Water section. The estimated size of this area is 83000m2, see attached sketch.
48	Technical	06 September 2023	**Q&A** The Team requires an indications of size and location of quay space including berthing area to be allocated to the contract as loadout quay area.	The allocated quay space for berthing requirements is a portion of Berth 306, size 60m long, back of quay area 32m X 25m. Bidders are to note that this is a common user facility, therefore it will be the responsibility of the successful bidder to plan and co-ordinate access with others who will be utilizing the quay.
49	Technical	06 September 2023	**Q&A** A13km vapour return line is now included in the activity schedule. A vapour return line of that length indicates it is to run from the gas distribution point	

			back to the berth. We view that this may be an error as a vapour return line is only required if there is an onshore regasification system built. This proposed site is located approximately 3km from the berth. Secondly, the onshore regasification scope has been clarified to be excluded from the scope of this tender. Lastly Clause 1.7.9.4 of the updated scope of works mentions the requirement for a, "spill-back line (estimated at 6 inch, 3km and with its own control valve) from the 24" line back to the FSRU…" Please clarify: 1.1 Is the requirement in this tender to construct a vapour return line an error as there is no regasification facility included in this project scope? Provisionin the pipe rack and other routing design considerations will howeverprovide for its construction at a future date. 1.2 If the inclusion of this vapour return pipeline is not an error and must be provided please confirm: 1.2.1 whether this is the same line referred to in clause 1.7.9.4 and	1.1 TNPA is considering two options for the LNG terminal i.e. FSRU or FSU, latter option will require regasification facility therefore vapour return line is required and is part of the scope of this project. 1.2.1 No it is not the same line, the line referred to in 1.7.9.4 is a spill back line in anticipation of potential over pressure

			1.2.2 whether it should terminate at the proposed future onshore regasification facility location (~3km from the berth) or at the gas distribution facility location (~13km from the berth)?	protection for the 13km gas pipeline and /or hydraulic protection. This can be addressed at detailed engineering/HAZOP outcomes, for this reason it is not included in the scope of this RFP. 1.2.2 The vapour return line should terminate at the regasification facility site (3km from Berth 207)
50	Commercial	06 September 2023	Section C.2.11 states as follows: "Do not make alterations or additions to the tender documents, except to comply with instructions issued by the employer, or necessary to correct errors made by the tenderer. There are some minor clarifications/corrections that we would like to make to the returnable schedules. **Popia, RFP Declaration Form,** Service Provider Integrity Pact) and we would like to suggest additions to the NEC3 ECC. Please confirm that this is allowed. In addition, would it be possible to provide tenderers with the word versions of the Returnable Schedules?	Please list any clarifications, deviations and corrections to the tender document via a deviations & clarifications schedule, highlighting your suggested additions and changes for consideration. Please complete the documentation issued electronically. This is to avoid any alterations the documentation.

51	Technical	06 September 2023	In Section 2.5 of Addendum 2 the functional design specification refers to "Bollard - 150t@20m interval". Should this not specify, "triple 200t mooring hooks to be provided on berthing and mooring dolphins"?	Correct it should read TRIPLE 200t quick release mooring hooks at berthing and mooring dolphins as detailed in Drawing No.: S2085 01 DR ST 104 S1
52	Technical	13 September 2023	1) Fire: Please find below a list of queries for the RB LNG terminal proposal. The queries and references are to the Pre-Feasibility Study Report (S2069-1-RP-GA-001): • Section 4.1 requires 12 Seawater fire hydrant and Section. • Section 4.3 requires 12 Potable water hydrants. • Section 4.1 also requires a foam fire protection system. Appendix A – Section 4.4 requires separate lines for: 1. the sea water (to supply hydrants) 2. the sea water + foam (to supply the deluge systems) 3. Potable water line (to supply potable water hydrants) We have the following queries for the fire spec: 1. 1. Why is it required to have 3 separate fire protection systems namely, sea water hydrants, potable water hydrants and a sea water foam	1.1 The reason for the separation is that: The saltwater line is a separate line as it will give us the option of carrying out cooling of the vessel/plant and firefighting

			system? Is this an LNG fire protection requirement or a Transnet requirement?	without the wastage of expensive foam. (with a single system, the foam will be supplied to all hydrants/equipment). NB, this will be driven by the same pump set. Potable water is used for the vessel as well as for minor incidents and a portable fire-fighting application.
			1.2 To what standards does the fire protection systems have to comply, NFPA, SANS, FM, Transnet Specific?	1.2 ASIB and including best practices: international safety standards for oil and gas tankers and terminals.
			1.3. To what standard does the fire pump station have to comply, NFPA, SANS, BS, ASIB?	1.3 Same above (1.2)
			1.4. What standard of foam is to be used? AFFF foam is currently being phased out in global markets to be replaced with Fluorine Free Foam, will this be required?	1.4 NB. LNG requires a different type of foam; therefore, a new foam station will be required. IE, LNG makes use of **High Expansion Foam** and with FOAM GENERATING type pourers. (various options are available generally from 1-2 % ratios for LNG
			1.5. Are there any other fuels to be considered at the berth and the quay or only LNG?	1.5 Considering that the FSRU or FSU will be anchored/positioned at Berth 207 for a tenor of 25 years it is envisaged that there will be no other fuels on Berth 207.

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			2. <u>Gas Pipeline:</u>	
53	Technical	13 September 2023	2.1 What are the conditions of the LNG coming from the FSRU? Temperature Pressure	2.1 **The** conditions below also apply to a potential land-side re-gasification outlet condition Temperature: Ambient conditions with a minimum of 0 ^{0}C Pressure: Maximum of 85 Bar(g) Please note that in an event of an FSU, there will be a Cryogenic line at Pressures unknown (assuming there will be a required pump from the FSU to land-side re-gasification) and Temperatures of – 162 ^{0}C
			2.2) Would the pipeline be designed for the 1 mtpa or the 5 mtpa?	2.2 The design for the pipeline shall be for a minimum volume of 1 million tons per annum and a maximum of 5 million tons per annum.
			2.3) What conditions should the LNG arrive at the at the boundary limit? Max/min pressure Max/min temperature	2.3 Bidders to design based on inlet conditions (i.e. at the FSRU exit or re-gasification unit exit) and minimum pressure drop from the +/- 13 km line. TNPA has not define boundary limit conditions at this stage as TNPA will nominate a Terminal Operator (TO) that will secure gas off-take beyond the 13 km pipeline. This TO will be responsible for transmitting the gas at sufficient process conditions for the end-user(s). This TO scope will include

				"the network, volumes-metering and distance compensation due to pressure losses".
			2.4) Where would we be tying into, is it the Lily line if so, are there design limits and regulations we would need to adhere to? Is it part of our scope to tie-in to the facility or pipeline past the boundary limit, or just get there? Is there an operating philosophy to follow (if we are tying into the Lily line would we follow those philosophies) in terms of: Process Design Insulation Equipment Sparing Isolation Venting and Draining Overpressure Protection Start-up and Shutdown Process Control Sectionalisation	2.4 Tie-in to existing facility is not part of the scope of this project.
			2.5) What safety systems are there on the FSRU, would we need to consider PSVs and overpressure protection?	2.5 Details of FSRU or FSU are not available at this point, this information will be provided by the terminal operator at a later stage. Therefore, safety measures can be addressed at detailed engineering/HAZOP outcomes in conjunction with the terminal operator.

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			2.6) Where will the fiscal metering be located?	2.6 A minimum of a single metering station will be required "prior or upstream the gas distribution hub". TNPA as a Ports Authority will utilities this for **Terminal Operator Performance Tracking.** TNPA would prefer the metering location to be close as possible to allocated site 1 and site 2 locations, Bidders can propose exact location base on technical design considerations.
			2.7) What are the SCADA requirements, do we need to send information to a remote operating center?	2.7 TNPA would prefer the operating centre (Control Room) to be located at site 1 and site 2 locations. This means the bidders will have to provide information transmission to the control room.
			2.8) Do we need to make provision for pig launcher and receiver infrastructure?	2.8 Yes
54	Technical	13 September 2023	**3.Structural:** 3.1 The report includes drawings with significant detail with respect to the scope for Berth 207 as defined below (except for Loading Arms and Manifolds). Does Transnet intend to provide any guidance on the provision of Loading Arms and Manifolds?	3.1 The provision of loading arms and manifolds shall be based on specified capacity requirements of minimum volume of 1 million tons per annum and a maximum of 5 million tons per annum over the years. The detailed design of the loading arms and manifolds forms part of the scope to be undertaken by the successful bidder.

			3.2 The PRDW report includes Section 5.3: Climate Change and recommends that certain design parameters be increased due to climate change, as per their recommendations. We note that the report was published in 2019 but is based on data from 2010/2014. Please confirm if any further enhancement of design factors would based on this information or the latest information if available? 3.3 Is the re-routing of Berth 208 pipelines, as outlined in Section 8.3.3 of the PRDW report, also expected to be priced into Activity Schedule Item 1.3?	3.2 The concept design for Berth 207 is based on information/data provided in the PRDW report, and TNPA does not have latest data, and therefore Bidders may use latest and credible information related to climate change factors in the design of coastal structures. 3.3 Yes re-routing of Berth 208 shall be included, it is part of the scope of the project.
55	Commercial	14 September 2023	Tender returnable document T2.2-10 "Authority to submit a Tender" refers. As we will be submitting our tender as a Consortium (an Un-incorporated Consortium) (as noted per emails dated 15th August 2023) please confirm how we should indicate that on document T2.2-10, as a Joint Venture or a Partnership	You may indicate the Consortium under the "Partnership", indicating all the relevant details as required.
56	Technical	15 September 2023	**Required Berth 207 seawater pump station** Please clarify if seawater for Berth 207 can be abstracted from the existing seawater intake structure or if a new marine structure needs to be constructed adjacent to the existing pump station, for seawater supply to Berth 207	Bidders are to design and construct a completely new fire system for Berth 207.

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57	Technical	02 October 2023	This is a grade 9 CE project that will require a design engineer partner as a subconsultant or any other form of partnership, is the design engineer experience considered for evaluation under T2.2-08?	Yes, the experience of the design engineer partner will be considered as this is a design and construct type contract, and it is expected that grade 9CE contractors will partner with the design firms, therefore the experience of the design partners will be scored according to the technical evaluation criteria. All sub-contractors are to be listed / recorded on the sub-contractor returnable schedule and the agreement between the main *Contractor* and the sub-contractor provided.
58	Technical	02 October 2023	Previous experience is only considered for the past 8 years, we believe this is a short range because there were only three projects of similar nature (Jetty) built in South Africa during that period and this will also exclude Berth 208 that was constructed in 2009 which is also a perfect fit since Berth 207 will be of similar nature. We would like to humbly request the client to widen the range of projects experience to at least 15 years to consider valuable projects that we could use for point scoring purposes.	Bidders are required to demonstrate their experience in the construction of broader marine infrastructure projects over the past 8 years, this experience shall not be limited to Jetty Construction only.
59	Technical	02 October 2023	"Returnable T2.2-08 – Evaluation Schedule Previous Experience" refers, please could you advise on the term "Traceable reference", is this a letter from the client/engineer with the previous project details (scope, value etc) or does it mean the reference	The term traceable reference requires the bidder to provide details of a contactable client and/or Engineer that can be contacted for verification of the information provided by the tenderer.

			name provided within the table column " client contact details " is contactable.	
60	Commercial	20 October 2023	<u>RFP change from CIDB PP2E to CIDB PP2B Tender Procedure</u> Table 3 of the CIDB Best Practice Guideline #A2, Engineering and construction works, makes provision for the PP2B Open Procurement for "Design by employer" tenders, but Design and build tenders (although there is no reference to an EPC type tender) requires PP2E Proposal Procedure. However, for Professional Services, Procedure PP2B Open is an allowed procedure. Therefore, please clarify that the new classification is in line with Table A3 of the CIDB Best Practise Guideline #A2 under the sub-heading "Professional Services" as "A complex or highly specialised assignment, for which it is difficult to define the precise scope of work and tenderers are to demonstrate innovation in their proposals, or, An assignment that has a high value downstream impact and requires the best available experts, or, An assignment could be carried out in substantially different ways, hence proposals will not be comparable".	Firstly, CIDB is not applicable to Consultants – it is applicable to Construction, and it includes construction where there is a "design" component. 1. Transnet uses the term "proposal" instead of tenders when this is in fact a tender. 2. Although there is a design component – the design solutions are not evaluated - therefore it isn't a proposal in the sense that the design solution is evaluated separately.

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61	Commercial	20 October 2023	<u>Revised Tender Number</u> The revised Tender Number as per Addendum 03 is: TNPA/2023/05/0004/28328/RFP. However, the Tender Number on Page 1 of 2 of the revised RFP is stated as RFP/2023/05/28328/RFP. Please clarify that Tender Number that is applicable to this tender submission is **TNPA/2023/05/0004/28328/RFP**	The tender number applicable to this tender submission is **TNPA/2023/05/0004/28328/RFP** see attached Addendum 04
62	Technical	02 October 2023	<u>Pipe Racks</u> Addendum 03 is stating very specific new details of a substantial pipe rack, never envisaged in the RFP. 1. C3 Scope of Work Paragraph 1. requires that allowance should be made for 24 pipes varying from 100mm diameter to 600mm diameter, all carrying types of "liquid petroleum gas". Please clarify "liquid petroleum gas" as the structural design of such a rack (mostly for future use) will be highly dependent on the weight of the product in the pipelines at any time, and there is obviously a huge difference in weight between a liquid and a gas. Paragraph 2. requires the bidder to allow, for the structural design of the pipe rack, for all 24 pipes to	Liquid petroleum gas refers to different types of commodities that will be carried in the pipes on the pipe racks, the commodities will include the following but not limited to, as the Port develops there might be interest in other products: 1. Jet Fuel 2. Bunker Fuel 3. LPG 4. LNG 5. Hydrogen 6. Petroleum Products (Petrol, Diesel, IK etc) 7. Chemicals and Acids

			be 600mm diameter pipes, presumably full of "liquid petroleum gas". This will most likely result in the requirement to redesign the access trestle, the loading platform, all pipe rack foundations, and the requirement to design and provide pipe rack bridges over roads, rail lines and over the river without being able to support the pipes from existing structures. The mere increase in requirement of the pipe rack structure, and its effect on ancillary structures, may add hundreds of millions of rands costs and substantial additional time (even considering that only Tier 1 will be constructed for this Project). The revised foundations changed access trestle, and the construction of the complete pipe rack structure for areas crossing wetlands, streams, rivers, rail lines, and roads will substantially increase the cost for this Project. Please clarify: - that your instruction under this item 2. stands (read in conjunction with the clarification required under item 1), or - The pipe rack requirement can be reduced to lesser pipes. - That lesser diameter pipes can be considered for load requirements. - The contents of the pipelines for loading purposes - The pipe rack requirement can be reduced to lesser pipes.	- The additional design scope issued in addendum no.3 stands. - The pipe racks requirements are outlined in addendum no.3 and shall not be reduced. - Addendum no.3 states that bidders shall design for maximum capacity i.e., 600mm diameter. - The bidder refers to content of the pipes, we assume this refers commodities carried in the pipe which we have listed in response above "paragraph 1". - The pipe racks shall be designed as per the functional design specification issued in addendum no.3. Yes, the pipe racks shall branch off at site 14 +- 3km from berth 207 and site 5 +- 5km from berth 207. The first tier of the pipe racks will run from berth 207 branch off at sites 14 and 5 as state above and terminate at the Port boundary limit which is +- 13km from berth 207.

			- The pipe rack size and loading can be reduced as from a specific point/point along the route. Please clarify whether a bidder needs to allow for the pipe rack to branch off to areas 14 and 5 as per Figure 2 of Addendum 03. If so, please clarify the length of such branches into/up to each area. Please clarify that the pipe rack will run up to the fence of the Port east of the Alusaf area (13,3km, excluding expansion loops) or for a length not exceeding 13km, including expansion loops.	
63	Technical	20 October 2023	<u>Pipe Route</u> Please clarify that the pipe route indicated on Figure 2 of Addendum 03 is now the revised route for tender purposes. Please clarify that the lengths of gas pipeline and return gas pipeline (and pipe rack) is: • Limited to 13km • Limited to end at the fence line near the Port entrance (the distance from the loading platform of berth 207 to the Port fence at that point is approximately 13,3km, excluding expansion loops)	The pipe route has not changed, Refer to updated Works Information, Figure 2: Gas Pipeline route of Addendum 02. The purpose of Figure 2 of addendum 03 was to show sites 14 & 5. Pipe lengths have been provided, refer to clarification register item 62. The pipeline scope for this RFP ends at Port boundary. The pipe route has not changed as stated above, access road to the pipeline route will be as per figure 2 of addendum 02.

			• Limited to the end of the pipe route west of the Alusaf site (the distance from the loading platform of berth 207 to the point west of Alusaf is approximately 15,3 km, excluding expansion loops)
			
			Please confirm whether the pipeline to the west of the fence line, crossing the Alusaf property, is part of the scope of work or not.
			
			Please clarify whether a bidder must, in this tender, include for an access road along the new alignment, along the pipe rack where the route as per Figure 2 is no longer next to an existing road?
			
			• If so, please clarify the requirements i.e. width, surfacing.
			• The pipeline route seems to be crossing a number of wetland areas. Please clarify the requirements for crossing these:
			  ○ Fill through the wetland.
			  ○ Elevated pipe rack bridges over the wetlands, constructing those from the new permanent service road through the wetland.
			  ○ Elevated pipe racks and without a permanent access road next to it
			  ○ Access to the pipe rack over water, rail lines, and roads will be in the form
				The limitations for over or underpasses shall be based on technical design considerations and shall conform to railway safety regulator standards for rail crossings and also conform to engineering and design standards.
				
				Pipeline servitude will not be fenced off and will not require lighting and cameras as this is within the Port and such services are in place in certain areas.
				
				As indicated above, the revised pipe racks design will run in the same servitude as the previous design and will not be fenced off and service road is not required.

			of a single walkway attached to the pipe rack. • The newly specified pipe rack will crossroads and railway lines in a number of locations requiring substantial over or underpasses. Please clarify any limitations for overpasses versus underpasses over or under the existing infrastructure Please clarify the requirement for the servitude of the pipe rack to be fenced off on either or both sides. • With security fencing • With electrical fencing • With security light • With a security system (camera's) installed. • Will a service road be required, and if so, will it be within the fenced servitude? Please provide a typical cross section (as for the previous pipe rack design) of the new pipe rack, service road, fencing, etc, as the revised pipe rack will require a substantially different servitude	
			<u>Loading Arm/s</u> The PRDW Marine Facilities Study Report Rev 00 dated 5April 2019 states in 8.2.1 that all loading arms and	Clarification register item 38 "response" is aligned with Annexure C – LNG Terminal Technical Engineering Report,

64	Technical	20 October 2023	associated equipment will be positioned on the FSRU vessel. In Annexure C - LNG Terminal Technical Engineering Report dated 22 September it is stated that the loading platform must make provision for the installation of 5 loadings arms. Clarification Register Item 38 requires that to be superseded by Section 2.5 Berth 207 functional design specifications. Clarification Reregister Item 54 states that the detailed design of the loading arms form part of the scope of work and shall be based on the specified capacity requirements of a minimum volume of 1 million ton per annum and 5 million tons per annum. The RFP is however silent on the split in specified capacity requirements between LNG and gas. It is assumed that that 2 of the arms will be for LNG and NG respectively, and others for vapour returns as the Employer wants to retain flexibility. Please clarify whether a bidder should therefore allow for the loading arms for both LNG and NG to be able to individually deal with a minimum of 1 million tons per annum and a maximum of 5 million tons per annum, of both products respectively. Please also clarify that supply and installation of the 3 other loading arms are also included in the scope of work and will be for gas return lines and provide	both specifies provision of 5 loading arms. Can the bidder elaborate further what they are querying? TNPA's Section 56 RFP requested 1 loading arm: either a (1) FSU **or** (2) FSRU solution. Common-user infrastructure bidders are to note that during their quotation that either a **single** loading arm for LNG will be required for an FSU solution **OR** a **single** loading arm for Gas will be required for an FSRU solution. Only one of these solutions will be constructed/implemented by TNPA. Bidders must quote for both LNG and Gas loading arm considering that the preferred solution has not been announced yet by TNPA. Bidder must note that the vapor return line is there for handing excess gas and will be connect back to the FSU or FSRU For the 3 **other loading arms**, they are for common user infrastructure and are part of the scope of this RFP.

			details on the products and flow rates of those in order for a bidder to allow for it in ite design and cost. If not the case, please clarify the capacity requirements for each type (product) loading arms.	
65	Technical	20 October 2023	<u>Control Room/s</u> Clarification 53 (2.7) states that "TNPA would prefer the operating centre (Control Room) to be located at site 1 and site 2 locations". Figure 2 of Addendum 03 indicates a new area defined as 1 but there is no more references to sites 1 and 2 (sites 1 and 2 were defined in Addendum 1, point 4 on drawing RBH 81-A-219. Figure 2 of Addendum 03 now refers to the regassification sites collectively as 14 and the storage site as 5. Please clarify the preferred positions of the control room/s. No detail was provided about any possible control room requirements at the delivery end of the gas line in the vicinity of the Port entrance, please confirm that there is no requirement for a control room at, or near the delivery termination point. Please clarify the requirements of each control room to meet the Employer's operational intentions: • How many operators will man each control room?	Site 1 and site 2 indicated in clarification 53 (2.7) "response" is the same location as site 14 in addendum 03. The control room location will remain at site 1 and site 2 or site 14. There is no requirement for a control room at termination point. The requirements for the control room forms part of the scope for detailed engineering and design which the bidders are required to submit their proposals.

			• How many display panels will be required per control room? • Storeroom at each? • What SCADA and control system/software systems should be allowed for incorporation into existing Transnet technology • The ablution requirements at each • Standby electricity at each (generator) • Solar power requirements at each • Security system at each • Fencing requirements at each • Guardhouse/access control at each • Standard of roads and parking at each • Area lighting at each	
66	Technical	04 October 2023	<u>Vessels</u> The RFP makes various statements about vessel types and sizes although it remains clear that there is a requirement to provide the Employer with the option to operate either a FSRU or LNG Carrier (FSU). Please clarify that a bidder should allow for the option of the operation of a FSRU and, as alternative, a Q-Max size FSU in berthing and mooring capacities. Please clarify whether allowance needs to be made for all the specified LNG Carriers to be able to berth next to the FSRU? In other words, does the FSRU option also need to allow for berthing of a Q-Max vessel next	The design vessel is Q-Max, 345m LOA whether the selected option is FSRU or FSU. The berthing vessel next to the FSRU or FSU shall also be a Q-Max. The simulations will be done with mixed vessel but mostly concentrating on design vessel (vessels list to call shall be established). The runs will be determined when the contractor is on board. The intension will be to run fast pace runs on desktop and full bridge simulations at SAMTRA informed by fast pace runs.

			to it? Or can the size of the LNG Carriers, for berthing next to an FSRU be limited in the proposal for an FSRU option? Please clarify the requirements for vessel simulations. Does a vessel motion analysis need to be performed for every possible vessel configuration? If so, please specify all possible configurations. If not, please specify which arrangements require vessel motion analysis to be performed.	
67	Technical	04 October 2023	<u>Pipeline Metering and Flow Control</u> Please provide the number and positions of the metering stations in relation to the new pipe route, the areas defined as 14 and 5 as per Figure 2 of addendum 03. The RFP documentation refers to three different types of metering stations. 1. Flowmeter and control valve for control of flowrate in the NG pipeline 2. Flowmeter for the measurement of gas flow to end users (number and flow to each to be defined) 3. Flowrate measurement of LNG to the on-land terminal operator	The issue of the pipe route has been clarified above and the route has not changed. For position of the metering station, refer to clarification register item 53 (2.6) response. TNPA requires a single metering & control valve station on Natural Gas Pipeline (this is the +/- 13 km pipeline). As per previous comment, the prepared location will be closest as possible to Site 1 & 2/site 14 and this will be used by TNPA for Terminal oversight. For other flow meters: Any Liquefied Natural Gas (Cryogenic pipeline) will form part of the Terminal Operator scope; and Different end-users or off-takes will form part of the Terminal Operator scope of work

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			Please clarify which metering stations are required under which scenario and which will be for process control and which will be for custody transfer. Please clarify the following: • Standby electricity at each (generator) for domestic power • Security system at each • Fencing requirements at each • Standard of roads and parking at each • Area lighting requirements at each	The requirements for the metering station including related building works forms part of the scope for detailed engineering and design which the bidders are required to submit their proposals.
68	Technical	04 October 2023	<u>Pigging</u> A request was made for pigging facilities. In order to understand the requirement for this please clarify: • Is it for purposes of initial cleaning the NG pipe? • Is it for regular cleaning of the NG pipe? • Is it for product separation? It is normal for by-passes to be provided around installed valves and meters, Please clarify whether meter and valve by-passes will need automated valves to allow for automated routing of the pigging around installed valves and meters, or whether this will be manually operated.	Considering that NG is a fairly clean medium, pigging will be required for regular maintenance and/or inspections (whether statutory or not). The operator will determine the frequency of such maintenance and inspection cycle. By-passes on control valves and flow meters are necessary and required to allow maintenance of these equipment without disturbing operation. The issue of automated by-passes can be further addressed or discussed at detailed design/HAZOP phase where the operational philosophy will be clearer.

Clarification Register 08 -27 October 2023

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69	Technical	20 October 2023	Request Substantial changes have been introduced in the latest information to bidders, which might have significant implications on the design and pricing of the work. It might also require significant rework of the Schedule, Activity Schedule, Approach Paper, and many other parts of the submission documentation. It is also clear that the scope of work is getting more defined as time goes. We therefor request that you urgently address the clarifications seeked, in order to allow bidders time to rework their designs, pricing, and documentation within extremely tight time limits.”	Clarifications have been addressed.