
**REQUEST FOR INFORMATION: INDEPENDENT POWER
PROVIDER FOR TRANSNET PIPELINES**

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1. DISCLAIMER

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This Document is provided solely for the purpose set out herein and is not intended to form the basis of any investment decisions by the Respondent. Each Respondent must make its own independent assessment of the information provided.

2. TRANSNET PIPELINES BACKGROUND

Transnet Pipelines (TPL), a division of Transnet SOC Ltd, is responsible for the high-pressure transportation of petroleum products over a network that spans more than 3,800 kilometres across South Africa. In alignment with Transnet's Environmental Sustainability Strategy and national climate goals, TPL has committed to achieving net-zero carbon emissions by 2040, primarily by decarbonizing its electricity use, which represents a significant share of its Scope 2 emissions, which are indirect emissions from the generation of purchased electricity consumed in operations. Energy is a critical input in TPL's operations, particularly electricity consumed by large-scale pump stations and depots dispersed across five provinces.

As part of its decarbonization journey, TPL is initiating a Renewable Energy Implementation Program aimed at transitioning its energy supply to sustainable sources while improving energy security and reducing long-term operational costs. This Request for Information (RFI) serves as a market-sounding instrument to invite experienced Independent Power Producers (IPPs), energy solution providers, technology innovators, and financiers to provide non-binding responses that will help shape TPL's renewable energy procurement strategies.

TPL seeks to gain insights into market capabilities, delivery models, financial structuring options, and the technical feasibility of implementing wheeled renewable energy solutions tailored to its operational footprint.

3. PROJECT BACKGROUND

Transnet Pipelines (TPL) operates 40 geographically dispersed sites, including pump stations, booster stations, metering stations, Terminals and workshops, currently powered by Eskom and various municipal utilities. The existing energy supply is predominantly fossil fuel-based, increasingly expensive, and subject to reliability challenges.

An internal review has identified escalating electricity tariffs, complex municipal billing structures, and ongoing supply uncertainties as significant operational risks. In contrast, renewable energy technologies have become more cost-competitive and dependable.

To address these issues, TPL is actively exploring clean energy options suitable for its extensive operations. As part of this initiative, TPL has already implemented three grid-tied, rooftop solar plants at its workshops and is planning to extend this rollout to various other facilities.

4. PURPOSE OF THE SCOPE

The purpose of this RFI is specifically to gather input from Independent Power Producers (IPPs) capable of supplying renewable energy to TPL through wheeling mechanisms. IPPs are expected to own, operate, and maintain off-site renewable generation assets and supply TPL's energy needs via the national or municipal grid. TPL will not consider proposals involving the construction or ownership of generation assets on its premises. Respondents are encouraged to propose wheeled energy supply models capable of serving critical infrastructure across the five provinces.

This initiative aligns with Transnet's Energy and Environmental Sustainability policies and supports the broader goal of achieving net-zero carbon emissions by 2040. Insights gained from the RFI will guide the development of TPL's renewable energy roadmap and inform future procurement strategies.

5. TRANSNET PIPELINES NETWORK

- 5.1 TPL operates 40 sites across South Africa, comprising pump stations, booster stations, metering stations, delivery stations, terminals and workshops. These sites are supplied with electricity by Eskom and various local municipalities.
- 5.2 The network, as shown in Figure 1, includes a mix of high-demand operational sites that have been identified as candidates for renewable energy integration through Independent Power Producer (IPP) partnerships.
- 5.3 These selected sites operate at various supply voltages, ranging from 6.6kV to 132kV, reflecting their significant energy demand profiles. Details of these sites, including location, supply authority (Eskom or Municipality), and demand characteristics, are provided in the tables below for information only

TRANSNET'S PETROLEUM AND GAS PIPELINE SYSTEM

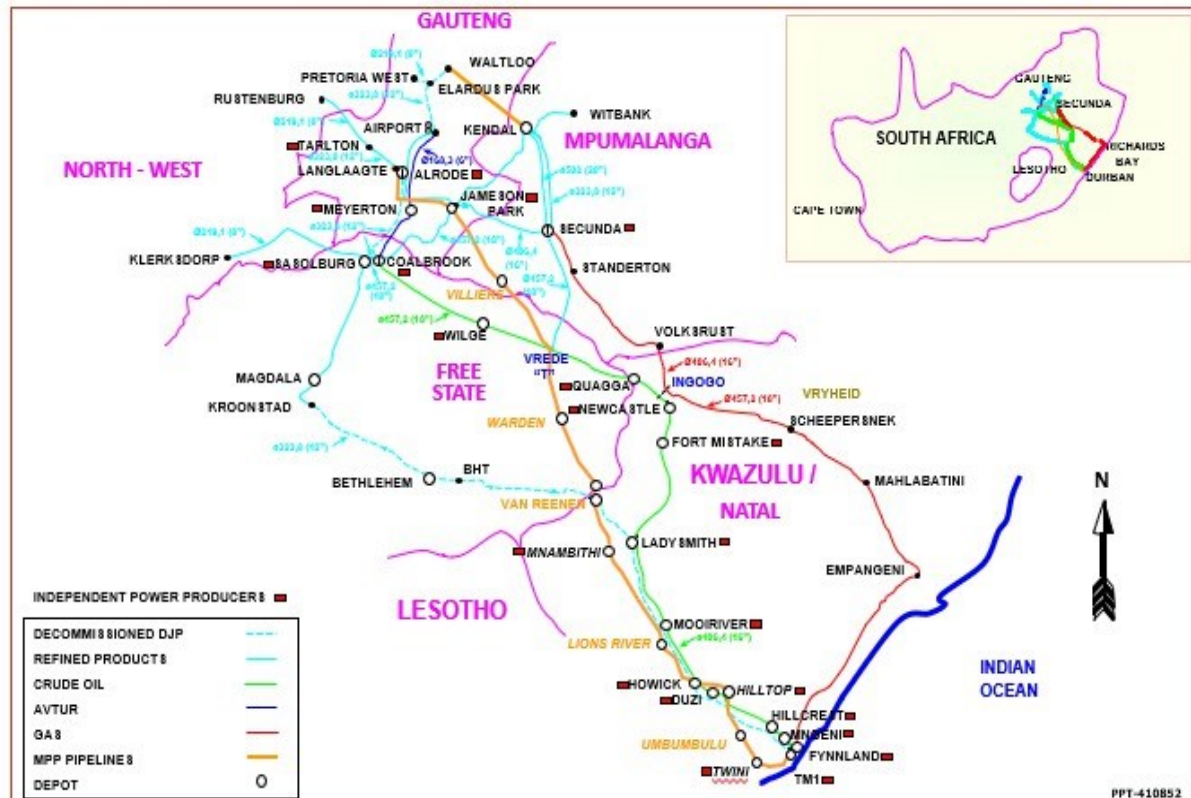


Figure 1: Transnet pipeline’s existing network

Table 1 below shows an overview of each site's electrical energy supply and demands.

Table 1 : TPL Sites supplied by Local Municipality

Pump Station	Location	Supply Municipality	Supply Voltage	Tariff Structure	NMD (kVA)	Average Max Demand (kVA)	Highest Monthly Consumption (kWh)
Fynnlands	Durban	eThekwini	11kV	Bulk TOU	3646	3171	1 483 928
Hillcrest	Hillcrest	eThekwini	11kV	Bulk TOU	3060	2785.20	2 367 464
Mngeni	Westmead	eThekwini	11kV	Business & General – Scale 1	N/A	N/A	696 000
Island View	Durban	eThekwini	11kV	Bulk TOU	8000	1599	1 464 900
Twini	Umbongintwini	eThekwini	11kV	Bulk TOU	4485	3745.33	1 603 440
Hilltop	Pietermaritzburg	Msunduzi	132kV	Non-Standard TOU	7500	2598.4	1 462 967
Ladysmith	Ladysmith	Alfred Duma	11kV	Seasonal TOU	3841	2884.80	1 255 600
Newcastle	Newcastle	Newcastle	11kV	Industrial Tariffs	2399	2000	1 221 000
Alrode	Alberton	Ekurhuleni	6.6kV	Tariff D	N/A	2015.03	471 144
Witbank	Witbank	eMalahleni	6.6kV	Commercial Three Phase	N/A	234.97	22631

Table 2 : TPL sites supplied by Eskom

Pump Station	Location	Eskom Supply Voltage	Tariff Structure	NMD (kVA)	Average Max Demand (kVA)	Highest Monthly Consumption (kWh)
Duzi	Pietermaritzburg	11kV	Ruraflex Interval	1500	1169.2	385 949.65
Mooi River	Mooi River	11kV	Ruraflex Interval	1500	1203.17	323 307.50
Fort Mistake	Fort Mistake	22kV	Ruraflex Interval	1500	1119.36	357 255.00
Howick	Howick	88kV	MiniFlex Interval	3013	2500.61	1 338 041.00
Mnambithi	Ladysmith	132kV	Megaflex	7000	2954.63	1 223 992.80
Quagga	Volk rust	88kV	Miniflex Non-interval	2800	2678.07	1 319 800.00
Wilge	Frankfort	22kV	Ruraflex Interval	1900	1408.28	360 794.72
Meyerton	Meyerton	11kV	Ruraflex Interval	800	538.38	279 160.34
Coalbrook	Sasolburg	88kV	MiniFlex Interval	2250	1324.76	417 567.84
Sasolburg	Sasolburg	11kV	MiniFlex Interval	1800	1130.85	316 139.00
Tarlton	Krugersdorp	11kV	Ruraflex Interval	1500	343.19	130 584.71
Secunda	Secunda	11kV	Ruraflex Interval	2000	2441.79	571 261.50
Kendal	Kendal	11kV	Ruraflex Interval	200	29.32	14 969.16
Jameson Park	Heidelberg	88kV	Megaflex	15 000	4322.49	1 294 963.50

6. RENEWABLE ENERGY WHEELING STRATEGY

Given the geographically dispersed nature of TPL’s operations, spanning across KwaZulu-Natal, Gauteng, Free State, North West, and Mpumalanga, renewable energy wheeling is the only option that TPL will consider.

TPL explicitly excludes the installation, development, or ownership of renewable energy infrastructure on any of its premises. All energy supplied under this RFI must be wheeled from offsite generation sources operated by the IPP.

Respondents are encouraged to:

- Present technical and commercial models for wheeling electricity across provincial and municipal boundaries.
- Ensure that their proposals are compliant with relevant wheeling frameworks and regulatory requirements applicable to Eskom and/or municipal distributors.
- Outline grid access requirements and interface protocols with Eskom and municipalities
- Describe applicable metering, billing, and settlement mechanisms in the current regulatory context.
- Highlight potential barriers to wheeling and propose practical mitigation measures.
- Indicate their capabilities of how much power they can generate per site

6.1 Wheeling Pricing Structure Table

Respondents are required to complete Table 3 below, providing proposed wheeling tariffs (in R/kWh) for each TPL site. The rates must be based on the estimated distance from the generation source, applicable network usage charges, and any other relevant cost assumptions.

Important: Completion of this table is compulsory as part of the submission.

Note: Proposed generation facilities must not be located on any existing TPL site, as these sites have limited space and are not available for the development of energy generation infrastructure.

Table 3: Wheeling Pricing Structure

TPL Site	Location	Distance from Generation Site (km)	Proposed Wheeling Tariff (R/kWh)	Comments / Assumptions
Fynnlands	Durban			
Hillcrest	Hillcrest			
Mngeni	Westmead			
Island View	Durban			
Twini	Umbongintwini			
Hilltop	Pietermaritzburg			
Ladysmith	Ladysmith			
Newcastle	Newcastle			
Alrode	Alberton			
Witbank	Witbank			
Duzi	Pietermaritzburg			
Mooi River	Mooi River			
Fort Mistake	Fort Mistake			
Howick	Howick			
Mnambithi	Ladysmith			
Quagga	Volkstrust			
Wilge	Frankfort			
Meyerton	Meyerton			
Coalbrook	Sasolburg			
Sasolburg	Sasolburg			
Tarlton	Krugersdorp			
Secunda	Secunda			
Kendal	Kendal			
Jameson Park	Heidelberg			

7. RENEWABLE ENERGY REQUIREMENTS

Respondents are invited to submit detailed information on renewable energy solutions that are technically feasible, financially viable, and suitable for Transnet Pipelines' (TPL) operational footprint. Submissions must include the estimated generation capacity per proposed site, specifying how much power (in kW or MW) can be reliably wheeled to each TPL location based on generation potential, grid accessibility, and technology configuration.

The response should include, but is not limited to, the following:

- **Solution Overview:** A high-level summary of the proposed renewable energy system, including the technology type (e.g., solar PV, battery storage, hybrid), total capacity, scalability, and expected performance.
- **Generation Capacity Per Site:** A breakdown of the estimated generation capacity (in kW or MW) that can be wheeled to each TPL site, taking into account the proximity of the generation source, grid limitations, and supply reliability.
- **Implementation Approach:** A method statement outlining the delivery model, key project milestones, roles and responsibilities, and estimated implementation timelines.
- **Licensing and Compliance:** A summary of applicable regulatory requirements, licensing obligations, and alignment with national and local standards or policies.
- **Operation:** Proposed service level agreements (SLAs) for the operation, monitoring, and maintenance of the generation and wheeling infrastructure.
- **Grid Integration:** Details on interconnection requirements, grid access procedures, wheeling arrangements, and metering infrastructure (including compatibility with Eskom and municipal systems).
- **Wheeling Cost-Benefit Analysis:** A comprehensive analysis demonstrating the financial viability of the proposed solution, including estimated wheeling tariffs, projected savings relative to existing tariffs, and long-term benefits.

8. TECHNICAL REQUIREMENTS

Transnet Pipelines (TPL) invites respondents to provide technical information on the design, integration, and maintenance of the renewable energy wheeling solution that address TPL's operational needs across its national footprint.

The following requirements must be addressed:

- 8.1. **System Integration:** The proposed solution must clearly outline how the renewable energy supply will be integrated into TPL's existing electrical infrastructure across various sites. This includes:
 - a. Interface with existing supply points.
 - b. Integration with current or future Embedded Generation (EG) plants without disrupting existing generation.
 - c. Interconnection with site meters and utility billing systems.

8.2. **Energy Offset and Performance:**

Respondents must demonstrate:

- a. The expected contribution of the proposed system toward reducing each site's Notified Maximum Demand (NMD).
 - b. Estimated reduction in energy cost per kWh relative to current utility tariffs.
 - c. Seasonal energy generation profiles and the percentage of TPL's demand the solution can meet across different periods.
- 8.3. **Metering and Billing:** Solutions must describe the metering strategy, including how metering data will be used to allocate costs between TPL and utilities in the event of excess energy exported to the grid.
- 8.4. **Site-Specific Considerations:** While many sites share similarities, bespoke design and equipment planning may be required. Proposals must allow for site-specific adaptations subject to approval by TPL Operations.
- 8.5. **Equipment Standardization:** Respondents should align with TPL's objective to standardize equipment where feasible to minimize spare part inventory and streamline operations and maintenance. Existing compliant installations may be used as a reference.
- 8.6. **Demonstration and Evaluation:** TPL reserves the right to request live demonstrations, proof-of-concept presentations, or site visits to evaluate previously installed solutions. These engagements will be at the respondent's cost.

9. **CLIMATIC**

- 9.1 Unless otherwise specified, all control equipment, peripherals and ancillary equipment shall be capable of operating in an uncontrolled environment, and at ambient temperatures, which vary between -10 degrees Celsius and 50 degrees Celsius.
- 9.2 Bidders must state the heat, power and environment requirements for all equipment offered in the tender.
- 9.3 The equipment must operate satisfactorily between sea level and 2000 metres above sea level.

10. REFERENCE DOCUMENTATION

10.1 STANDARDS AND SPECIFICATIONS

- 10.1.1 The requirements of the materials, design, installation, commissioning, examination, inspection and testing of equipment and facilities on these sites shall be in accordance with the relevant sections of the below mentioned codes.
- 10.1.2 Where Government, Local authorities and other statutory body's regulations, laws and requirements are more stringent than those specified hereunder, the aforementioned regulations, laws and requirements shall take precedence.
- 10.1.3 Where no specific rules, regulations, codes or requirements are contained in this specification nor covered by the below mentioned codes, the respondent shall, in consultation with TPL, adhere to internationally accepted engineering practices or original manufacturers specification.

For the purpose of understanding these Standards, the following abbreviations apply.

SANS - South African National Standards
SABS - South African Bureau of Standards
IEC - International Electrotechnical Commission
IEEE - Institute of Electrical and Electronics Engineers
NRS - National Regulatory Standards

GENERAL:

TITLE	SABS	IEC	OTHER
Code of Practice for Wiring of Premises and incorporated standards	SANS 10142-1		
Protection against lighting: Physical damage to structures and life hazard	SANS 10313		
Protection against lighting	SANS 62305		
Protection against lighting (EMI)	SANS 61312		
Basis of structural designs and actions for buildings and industrial structures	SANS 10160		
Grid interconnection for embedded generation: Small-scale embedded generation (Utility interface)			NRS 097-2-1
Grid connection code for renewable power plants (PPR's) connected to the electricity transmission system (TS) or the distribution system (DS) in South Africa			NERSA

TITLE	SABS	IEC	OTHER
Grid interconnection for embedded generation: Small-scale embedded generation (Simplified utility connection criteria for low-voltage connected generators)			NRS 097-2-3:
Quality of supply part 4: Application guidelines for utilities			NRS 048-4
Quality of supply part 2: Voltage characteristics, compatibility levels, limits and assessment methods			NRS 048-2
IEEE Standard for interconnecting distributed resources with electric power systems			IEEE 1547
Crystalline silicon terrestrial photovoltaic (PV) modules – Design qualification and type approval		IEC 61215	
Conditions of Contract			NEC

11. DOCUMENTATION AND DRAWING REQUIREMENT

- 11.2 Drawing in an A3 PDF format (3 copies) and Auto CAD format shall be provided.
- 11.3 The drawing should be in accordance with TPL standards and written in English.
- 11.4 The following documentation shall be provided ie datasheets and detailed design documentation (Electrical, Mechanical and Civil).

12. DETAILED COMPANY PROFILE

- 12.1 Company profile and experience designing and implementing similar projects. Information to be included Company Profile:
- Brief project description
 - Values of the respective projects
 - Planned completion period and actual completion period.

