



mineral resources  
& energy

Department:  
Mineral Resources and Energy  
REPUBLIC OF SOUTH AFRICA

**NAME OF APPLICANT: Solium Energy (Pty) Ltd**

**REFERENCE NUMBER:**

## **PROSPECTING WORK PROGRAMME**

SUBMITTED FOR A PROSPECTING RIGHT

APPLICATION WITHOUT BULK SAMPLING

AS REQUIRED IN TERMS OF SECTION 16 READ TOGETHER WITH  
REGULATION 7(1) OF THE MINERAL AND PETROLEUM RESOURCES  
DEVELOPMENT ACT (ACT 28 of 2002)

### **STANDARD DIRECTIVE**

All applicants for prospecting right are herewith, in terms of the provision of Section 16 and in terms of Regulation 7(1) of the Mineral and Petroleum Resources Development Act (MPRDA), directed to submit a Prospecting Work Programme, strictly under the following headings and in the following format together with the application for a prospecting Right.

## **1. REGULATION 7(1) (a): The full particulars of the applicant.**

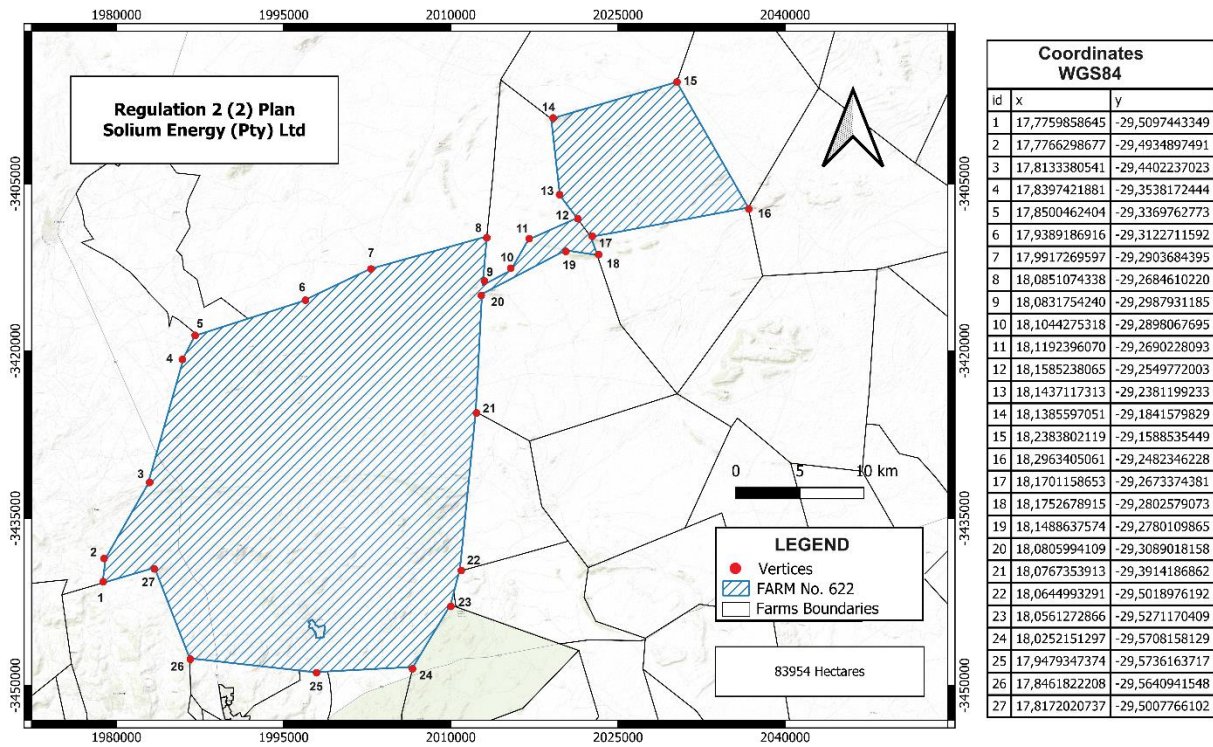
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### ***South Africa***

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**2. REGULATION 7(1) (b): The plan contemplated in Regulation 2 (2), showing the land to which the application relates.**



**3. REGULATION 7(1) (c): The registered description of the land to which the application relates specifying the farm name and subdivision.**

**FARM No. 622**

Farm Name : Farm

Farm Number : 622

Parcel Key : N067C053000000000622000000

Magisterial District : Namaqualand

Province : Northern Cape

**4. REGULATION 7(1) (d) and (e): The mineral or minerals to be prospected for and a geological description of the land substantiated by geological map.**

***Minerals to be prospected.***

Type of Mineral(s)	: Uranium Ore
Locality	: 20km north of Springbok Town
Extent of the area required for Prospecting	: 83 954 Hectares
Geological Formation	: Namaqualand Metamorphic Complex

***Geology***

Foliated granites, granitic orthogneisses and late- to post-tectonic granites are extensively represented in all the metamorphic zones (Geology Map below), including the high-T granulite-facies (aged 1033 Ma, 1200 Ma, 1060 Ma and 1030 Ma). Heat produced during radioactive decay in these rocks was largely responsible for their metamorphic conditions, especially where granulite and charnockite formation was promoted by the circulation of U–Th–REE-rich, H<sub>2</sub>O-deficient fluids and melts. Hosts granulite-facies granitic plutons with the highest concentrations of heat-producing elements (K, U and Th). There are also numerous late-stage smaller intrusions of U-rich leucogranite that may constitute potential resources of uranium.



**5. REGULATION 7(1) (f): A description of how the mineral resource and mineral description of the prospecting area will be determined.**

**AND**

**REGULATION 7(1) (h): All planned prospecting activities must be conducted in phases and within specific timeframes.**

**AND**

**REGULATION 7(1) (i): Technical data detailing the prospecting method or methods to be implemented and the time required for each phase of the prospecting operation.**

The Table 5.1 below incorporates the information required in respect of Regulation 7(1) (f), (h) and (i).

**Table 5.1: Activities, skills and schedule required – The Prospecting Right is requested for a period of 5 years.**

<b>Phase</b>	<b>Activities</b>	<b>Outcomes</b>	<b>Schedule (Timeframe)</b>	<b>Skills and Qualified Persons</b>
1	Desktop Study – Obtain and interpret historic data	Gather information about historic mines and mineralisation in the area, and characterise geological features	Month 1 to 12 (12 Months/1 year)	5-year experienced Geologist
2	Reconnaissance site visit, surface Mapping and Radiometric survey	Understand the regional geology and generate ore deposit target	Month 13 to 24 (12 Months/1 year)	5-year experienced Geologist/Geophysicist
3	Target drilling of 15 boreholes to a depth of 500m	Define the ore deposit in 3D and estimate the mineral resources	Month 25 to 36 (12 Months/1 year)	5-year experienced Geologist/Resource Geologist
4	Infill drilling of 10 boreholes to a depth of 500m	Increase confidence of mineral resource estimates	Month 37 to 48 (12 Months/1 year)	5-year experienced Geologist/Resource Geologist
5	Pre-feasibility study/Feasibility Studies	Economic evaluation of the mineral resources	Month 49 to 60 (12 Months/1 year)	5-year experienced Geologist/Mineral Economist/Mining Engineer

## **6. REGULATION 7(1) (g): A description of the prospecting method or methods to be implemented.**

### ***Non-Invasive***

#### **Phase 1 – Desktop Study**

The geological desktop study will be conducted within the applicable area and entails requesting data from relevant stakeholders (Council for Geoscience, Universities, etc.). The aim is to establish if there has been historic mapping, surveys, drilling and/or mining activities within the farm. If data is found an initial database creation will commence to comply with mineral resources reporting codes (SAMREC/JORC/NI 43-101). The desktop study will also be used to generate additional ideas on how to generate target in the area based on potential mineralisation (U, REE, Sn, etc.) reported.

#### **Phase 2 – Reconnaissance visit, field mapping and geophysical survey**

The initial site visit is aimed at establishing relationships with the locals and evaluating the terrain in detail to locate areas of priority in relation to mapping and geophysical targeting.

Field mapping is aimed at identifying surface outcrops and compiling regional surface geological map of the area.

Geophysical survey is aimed at studying the potential natural radioactive decay variabilities and generate radioactive anomalies either by ground or airborne gamma-ray radiometric surveys.

### ***Invasive***

#### **Phase 3 – RC and/or Diamond Drilling**

The initial drilling will be targeting areas identified as having potential mineralisation, based on historic data, mapping data and radioactive data. Reverse Circulation (RC) and Diamond (Core) drilling program will be implemented to visualise the mineral resource in 3D and have a grade and tonnage estimates.

Drilling of 15 boreholes entails, geological logging, sampling, database and QAQC protocols implementation, 3D geological modelling, resource block modelling/estimation and resource evaluation. All geological samples will be analysed locally in South Africa as required by the Mining Charter.

***Invasive...***

**Phase 4 – RC and/or Diamond Drilling**

Drilling of 10 boreholes entails targeting areas of high grades and yielding mining potential. The aim is to update the geological models with details and increase the confidence of resource estimates from inferred to indicated and measured. This will allow for potential economic evaluation of the mineral resource as defined by most mineral reporting codes.

***Feasibility Studies***

**Phase 5 – Pre-feasibility Study**

The pre-feasibility study will entail development studies, which are not limited to environmental, social and governance studies, determining mining methods, infrastructure design, metallurgical test work and costs versus throughput studies. Feasibility Studies will entail detailed economic evaluation, revenue and profits projections – completion of all studies required for developments, and may include bulk sampling (application will be made in terms of Section 20 of the MPRDA)

**Commitment to provide addendums in respect of additional prospecting activities**

I herewith commit to provide the Department of Mineral Resources with an addendum in respect of both the EM Plan and Prospecting Work Programme regarding any future in-fill prospecting required but not described above, prior to undertaking such activities. The addendum will cover all the Regulations as per the Prospecting Work Programme.

I agree that the addendums will provide for similar activities only and if the scope changes. I would be required to apply in terms of Section 102 of the MPRDA for an amendment of the Prospecting Work Programme.

Accepted (X)



**7. REGULATION 7(1) (k): A cost estimate of the expenditure to be incurred for each phase of the proposed prospecting operation.**

**Table 9.1: Yearly cost estimates for a period of 5 years.**

Activities	Year 1	Year 2	Year 3	Year 4	Year 5
	Cost (R)	Cost (R)	Cost (R)	Cost (R)	Cost (R)
<b>Phase 1:</b> Desktop Study	200 000				
<b>Phase 2:</b> Reconnaissance , mapping and survey		1 000 000			
<b>Phase 3:</b> Target drilling of 15 boreholes to a depth of 500m			13 000 000		
<b>Phase 4:</b> Infill drilling of 10 boreholes to a depth of 500m				9 000 000	
<b>Phase 5:</b> Pre-feasibility study/Feasibility Studies					10 000 000
<b>Annual Total</b>	200 000	1 000 000	13 000 000	9 000 000	10 000 000
<b>Total Budget (R)</b>					<b>33 200 000</b>

**8. REGULATION 7(1) (j) (i): Details with documentary proof of the applicant's technical ability or access thereto to conduct the proposed prospecting operation.**

The parent company ROPA Investments Limited to Solium Energy (Pty) Ltd employs several technically competent persons. Attached is a resolution undertaken by management and a CV of one the Competent Persons (>5-year experience) appointed for the project.

**9. REGULATION 7(1) (j) (ii): Details and documentary proof of a budget and documentary proof of the applicant's financial ability or access thereto.**

The parent company ROPA Investments Limited to Solium Energy (Pty) Ltd is a Group company based in London, it is essentially a diversified holding company with a focus on strategic mineral exploration, development, and processing. Along with major interests in several ASX/TSX companies, we privately operate over 20 projects across Scandinavia, Africa, and LATAM, including globally significant lithium, titanium, uranium, and iron ore projects. We are one of the largest shareholders of rare earth developer, Lindian Resources (ASX: LIN), among other various lithium/copper/zinc developers listed in Australia. Attached is a resolution undertaken by management/board of directors and an audited financial statement indicating enough assets/funds to finance all requirements of prospecting activities as stipulated in the Prospecting Work Programme.

**Budget of R 33 200 000.00**

**10. REGULATION 7(1) (m): An undertaking, signed by the applicant to adhere to the proposals as set out in the prospecting work programme.**

Herewith I, the person whose name and identity number are stated below, confirm that I am the Applicant, or the person authorised to act as representative of the Applicant in terms of the resolution submitted with the application, and undertake to implement this prospecting work programme and adhere to the proposals set out herein.

**Full Names and Surnames : Lesetja Charles Pheeha**

**Identity Number : 9201305540085**