Project Description:

Notsi PV (Pty) Ltd intends to develop an up to 100 MW photovoltaic solar facility and associated infrastructure on the Farm Welgeluk No. 1622, Registration Division Boshof, Free State Province situated within the Tokologo Local Municipality and the greater Lejweleputswa District Municipality. The town of Dealesville is located approximately 13km to the northeast of the proposed development (refer to Figure A and Figure B for the respective locality and regional maps).

The total development footprint of the project will approximately be 255 hectares (including supporting infrastructure on site, however excluding the main grid connection infrastructure to connect to the national electricity grid) as assessed as part of the Basic Assessment process. The design within the development footprint considered the placement of the project infrastructure in environmentally appropriate locations through the avoidance of sensitive environmental features which may be present. The facility will include specific infrastructure, namely:

- PV Panel Array;
- Battery Energy Storage System (BESS);
- Inverters;
- On-site facility substation (132/33kV) and underground cabling (up to 33kV);
- Permanent supporting infrastructure including site administration office, switch gear and relay room, staff lockers and changing room, security control building, operations and maintenance building and warehousing;
- Roads (main access and internal roads);
- Fencing; and
- Temporary laydown areas and site camp during construction (to be rehabilitated afterwards).

It must be noted that a separate Basic Assessment (BA) process will be undertaken for the grid connection infrastructure to be developed to enable the evacuation of the generated electricity from the facility to the national grid. The development will be known as the Notsi Grid Connection and will include a grid connection corridor in which the placement of a new 132kV power line and switching substation(s) will be assessed and Environmental Authorisation sought for.

General Site Information:

Aspect	Description
Description of affected farm portions (information to be used for the respective project as relevant)	Farm Welgeluk 1622 Farm Ebenhaezer 1623
Province	Free State Province
District Municipality	Lejweleputswa District Municipality
Local Municipality	Tokologo Local Municipality
Ward numbers	3
Closest towns	Approximately 13 km southwest of the centre of Dealesville in the Free State Province
21 Digit Surveyor General codes	F00400000000162200000 F00400000000162300000
Type of technology	Photovoltaic
Structure Height	PV Panels: up to 4.5m Battery Energy Storage System (BESS): ≤ 8m Buildings: up to 4m On-site Facility Substation: < 30m
EIA footprint (area assessed for the placement of the development footprint)	195ha
Structure orientation	Tracking PV with mono- or bi-facial panels. Bi-facial panels with single axis tracking is preferred over fixed-axis or double axis tracking systems and mono-facial panels due to the potential to achieve higher annual energy yields whilst minimising the balance of system (BOS) costs and maximizing the efficiency of land use, resulting in the lowest levelized cost of energy (LCOE). The preference for single axis tracking is also based on the economic viability, water requirements, land requirements, efficiency and potential environmental impacts of the proposed solar panel mounting types. The development of the PV facility will take into consideration during the final design phase the use of either mono-facial or bi-facial PV panels as well as tracker vs fixed-tilt mounting structures. Both options are considered feasible for the site.
Generation capacity	Up to 100MW per PV facility

Technical Details for the Proposed Facility:

Component	Description / dimensions
Height of PV panels	Up to 4.5 meters
Area occupied by inverter / transformer stations / substations	On-site Facility Substation: Up to 4ha Eskom Portion of the Substation: up to 5ha BESS: 2 ha
Capacity of the on-site substation	33kV / 132kV
Area occupied by both permanent and construction laydown areas	Up to 4 hectares
Area occupied by buildings	Up to 3ha: • Administration Office (~500m²); • Switch gear and relay room (~400m²); • Staff lockers and changing room (~200m²); • Security control (~60m²);
Width of internal roads	Between 6 and 8 meters
Height of fencing	Approximately 2 meters

Coordinates

Coordinates			
Development Footprint	A	28°45'26.04"S	25°39'22.70"E
	B	28°46'19.67"S	25°38'39.62"E
	C	28°46'21.15"S	25°38'44.19"E
	D	28°46'19.32"S	25°38'52.36"E
	E	28°46'24.56"S	25°38'54.95"E
	F	28°46'34.26"S	25°39'24.06"E
	G	28°46'3.05"S	25°39'58.29"E
	H	28°45'35.26"S	25°39'51.31"E
	I	28°45'25.28"S	25°39'25.37"E
On-site Substation	A	28°45'31.14"S	25°39'17.67"E
	B	28°45'29.10"S	25°39'14.99"E
	C	28°45'31.76"S	25°39'12.71"E
	D	28°45'33.83"S	25°39'15.48"E
Battery Energy Storage System	A	28°45'31.14"S	25°39'17.67"E
	B	28°45'29.10"S	25°39'14.99"E
	C	28°45'32.98"S	25°39'12.10"E
	D	28°45'34.40"S	25°39'14.88"E
Proposed Access Road (bend-points)	1	28°45'40.47"S	25°38'4.24"E
		28°45'41.98"S	25°38'12.73"E
		28°45'46.37"S	25°38'17.06"E
		28°45'45.54"S	25°38'24.14"E
		28°45'39.50"S	25°38'28.09"E
		28°45'29.32"S	25°39'6.75"E
		28°45'34.48"S	25°39'10.64"E
		28°45'33.03"S	25°39'11.61"E
		28°45'36.46"S	25°39'13.13"E