

ENERGY DEPARTMENT THEMBISA DEPOT

30 September 2026

OLIFANTSFONTEIN SUBSTATIONS

Industrial area is supplied by these key Substations at approximately demand of 95 MVA

- Consol 11kV Switching Station.
- Clayglass 11kV Switching Station: Supplies Baksteen, ABI and Clay Ext 43 11kV Switching Stations.
- Clay Four 6,6 & 11kV Switching Station: Supplies Clay Ext 7 6,6kV Switching Stations.
- Cullip 6,6 & 11kV Switching Station: Supplies Clay Ex13 and Douglas 6,6kV SS and ERWAT 11kV SS.
- Hippo Quarries 11kV Switching Station
- Sub E 3 x 20MVA 33/11kV Substation: Supplies Hospitals

ELECTRICAL NETWORK



- Thembisa Depot: responsible for Operations & Maintenance of electrical infrastructure;
- Day to day repairs and operations and customer interaction;
- Network upgrades and new connections;
- Refurbishment projects;
- Metering and billing; and
- Streetlights repairs.

NETWORK PERFORMANCE



- Recent Power dips

Measurement Point Name	DIP Date/Time	Phases	Max Dept	Max Duration (ms)	Overall Class (New)	Fault Origin	Equipment
Clayglass 88/11kV	15/12/2025 17:38:49	RWB	100	3867	MO	CLAYVILLE FOUR 88/11/6.6kV Substation	CLAYVILLE FOUR / REPUBLIC ALUMINIUM 1 6.6kV Rack-out Breaker
Clayglass 88/11kV	22/12/2025 12:43:39	RWB	100	3874	MO	CLAYVILLE FOUR 88/11/6.6kV Substation	CLAYVILLE FOUR / TRFR 2A 6.6kV Rack-out Breaker
Clayglass 88/11kV	26/12/2025 15:17:07	RWB	100	3893	MO	CLAYVILLE FOUR 88/11/6.6kV Substation	CLAYVILLE FOUR / TRFR 2A 6.6kV Rack-out Breaker
Clayglass 88/11kV	27/12/2025 16:53:40	RWB	100	8057436(2.24hrs)	OT	Consol/Clayglass	Consol/Clayglass
Clayglass 88/11kV	04/01/2026 16:03:44	RWB	36,9	139	X1	Transmission Line	Fordsburg - Jupiter No1 275kV Line Trip and L/O
Clayglass 88/11kV	04/01/2026 16:19:27	RWB	37	136	X1	Transmission Line	Fordsburg - Jupiter No1 275kV Line Trip and L/O
Clayglass 88/11kV	04/01/2026 16:28:29	RWB	100	10313700(2.84hrs)	OT	Consol/Clayglass	Consol/Clayglass
Clayglass 88/11kV	16/01/2026 20:35:32	RWB	31	239	S	CLAYSTEP DS 88/44kV Substation	CLAYSTEP DS / TRFR 2 44kV BKR
Clayglass 88/11kV	18/01/2026 15:02:24	WB	44,3	106	X2	ESSELEN 275/132/88kV MTS Substation	ESSELEN / CLAYSTEP 2 88kV BKR
Clayglass 88/11kV	20/01/2026 21:38:11	RWB	100	14256303 (3.96hrs)	OT	Customer	Consol/Clayglass

NETWORK PERFORMANCE



- Recent Power dips

Measurement Point Name	DIP Date/Time	Phases	Max Depth (%)	Max Duration (ms)	Overall Class (New)	Equipment	Fault Cause	Description
Cullip 44/6.6kV	05/05/2026 03:05:03	RWB	82	1612	Z2	Esselen, Transformer No12 275/88kV Tripped	Equipment Failure	Trfr tripped
Clayglass 88/11kV	05/05/2026 03:05:03	RWB	64,9	1610	Z2	Esselen, Transformer No12 275/88kV Tripped	Equipment Failure	Trfr tripped
Cullip 44/6.6kV	05/05/2026 03:05:09	RWB	28	986	Z1	Esselen, Transformer No12 275/88kV Tripped	Equipment Failure	Trfr tripped
Clayglass 88/11kV	05/05/2026 03:05:09	RB	26,8	986	Z1	Esselen, Transformer No12 275/88kV Tripped	Equipment Failure	Trfr tripped
Cullip 44/6.6kV	05/05/2026 03:05:12	RWB	100	1808	Z2	Esselen, Transformer No12 275/88kV Tripped	Equipment Failure	Trfr tripped
Clayglass 88/11kV	05/05/2026 03:05:12	RWB	100	1719	Z2	Esselen, Transformer No12 275/88kV Tripped	Equipment Failure	Trfr tripped

NETWORK PERFORMANCE



- Recent Power dips

Measurement Point Name	DIP Date/Time	Phases	Max Depth (%)	Max Duration (ms)	Overall Class (New)	Fault Origin	Equipment	Fault Cause	Description
Clayglass 88/11kV	12/08/2026 06:46:18	RWB	46,4	412	S	Distribution 88 kV Line	ESSELEN / HARTEBEEFONTEIN 1 88kV BKR	Storm Related	adverse weather conditions
Clayglass 88/11kV	12/08/2026 06:46:21	RWB	45,1	758	Z2	Distribution 88 kV Line	ESSELEN / HARTEBEEFONTEIN 1 88kV BKR	Storm Related	adverse weather conditions
Clayglass 88/11kV	12/08/2026 06:49:24	RWB	45	753	Z2	Distribution 88 kV Line	ESSELEN / HARTEBEEFONTEIN 1 88kV BKR	Storm Related	adverse weather conditions

NETWORK PERFORMANCE AND RECENT PROJECTS



- MV Cable theft – 31 July 2026 (affected Clay Four Substation, cables and equipment).
- Early warning devices – Installation on hotspots, will start in October 2026

Projects

- Spanner Road MV cables were re-routed (due floods) – last financial year.
- 33kV Switchgear upgrade project at Sub E (Outage to commission – end of September 2026).
- Switchgear upgrade on two substations currently on concept stage: Clay 13 & Baksteen.

NETWORK PERFORMANCE AND PROJECTS



Sub E, 33kV switchgear and control panels upgrade – during commission

ADDITIONAL INFORMATION:



- For SSEG applications: www.apply.sseg.org.za
- For capacity upgrades/downgrades: Ayanda.Jacobs@ekurhuleni.gov.za
- For Billing: CoE has an online metering system where LPU customers can register and view their electricity consumption. Nokuthula.Mapipa@ekurhuleni.gov.za
- For Protection & Metering queries: Albert.Rabedzwana@ekurhuleni.gov.za
- For Power outages: CoE Call centre & Selelo.Mulamula@ekurhuleni.gov.za
- Any other queries: Nkosiyethu.Sithole@ekurhuleni.gov.za

Thank you