January 2024

Komati Power Station

R&R status update
Komati History and Rampdown
The largest and first transition of a coal plant site is currently under way at Komati

Transition predicted to create many jobs during the next 5 years (both temporary and sustainable)

Environmental benefits to improve quality of life of community members

Unlocks new industries and business opportunities
During ramp-down **limited investment** was done on plant.

**Plants were used for spares** to support running units and other stations

Boiler tube leak prevention strategy implementation discontinued, and Risk based inspection program was halted

Aug 2018–stopped all preservation of plant.

**Strategy**

**Since 2018**

- Various spares/plant equipment removed/ transferred to other Generation stations for utilisation (coal plant feeders, cooling water pumps accessories, mill gearboxes, generator metering systems and electrical equipment)

- **Auxiliary plant** was shutdown with no further intervention for re-use.

- **Service contracts were terminated**, and contractors demobilised site

- **Employees redeployed** to other Generation business units.
Current Manpower Numbers (30 September 2023)

Permanent Employees (162)
- 167 employees required for the Interim period until all projects executed (4 year)

ERI (17)
- Ash dam operations and maintenance

Service Providers (218 contractor employees)
- The number varies month to month as contracts lapse, and new contracts are placed.
- Maintenance: WTP, Civil, Electrical, CnI, Compressors, Scaffolding, Lifts, Lubrication
- Services: Horticulture, Station cleaning, Office cleaning, Security, Catering, ERT, Aux plant operations, Waste management, QC
Upskilling/Reskilling status

➢ Eskom Employees:
  o July 2023:
    o 2 employees (ETDP), current trainers in fossil energy, are being upskilled/reskilled as renewable energy trainers in Wind technology at SARETEC (7 months duration), as part of the KTF initiative
  o Feb 2024
    o 4 employees (ETDP), current trainers in fossil energy, will be upskilled/reskilled as PV/Solar Technology trainers at Saretec
  o Projects:
    • 13 Eskom employees seconded to GCD, being upskilled in project and construction management fields
    • 3 employees being upskilled in Hydroponic/Aquaponics farming
    • Agrivoltaics O & M training provided in Sep 2023 for the selected staff to operated and maintain the plant after handover.

➢ Community: 19 Community members involved in Agrivoltaics project construction
Overall Approach to Repurposing and Repowering
Komati Repurposing and Repowering project consists of 3 main components

**OPPORTUNITIES**
Support for workers and contractors

Komati Training Facility, AgriVoltaics pilot plant, Containerised Microgrid assembly, Stakeholder engagements and Community Development

**REPOWERING and REPURPOSING (2 phases)**

150 MW Solar PV, 150 MW Battery Energy Storage, 70 MW Wind Turbines & 3 Synchronous Condensers

**DECOMMISSIONING & Rehabilitation**

Rehabilitation of Komati Coal-Fired Power Plant Site
Component C (support for workers and communities):
- Agrivoltaics and Aquaponics

AgriVoltaics, a combination of agriculture and PV (solar panels positioned directly above agricultural land or produce)

- Agrivoltaics project status
  - Mounting and Installation of PV Panels complete
  - Mechanical and Electrical inspections complete on 08 Nov 2023, addressing defects before final commissioning and handover

- Fencing project status
  - Award EPC (Engineer, Procure and Construct), awarded was awarded.
  - Projected completion: May 2024

- Hydroponics
  - Contract awarded - execution start 29 November 2023
  - Estimated completion mid Dec 2023
  - Final commissioning Feb 2024
Component C (support for workers and communities):
- Containerised Micro-Grids (CMG)

**Distribution project**

- The Repowering and Repurposing program includes the conversion of existing infrastructure and workshops at the power station site to assemble containerised microgrids.
  - 2 Containerised Micro-Grids (CMG) installed in the Northern Cape (Upington-Swartkopdam) during Dec 2022, 49 houses were electrified on 23 Dec 2023
  - 1 Container configured for Electric vehicle charging, displayed at the E-Festival in Cape Town
- Planning and approval to set up of assembly line in progress
Component C (support for workers and communities):

- Training

Establishment of the Komati Training Facility (KTF) to reskill/upskilling permanent Eskom employees and qualifying community members in renewable energy technologies.

- **Refurbishment project managed by SARETEC**
  - Contract awarded, Expected start Dec 2024
  - Estimated completion April 2023

- **Courses planned for the next 12 - 18 months**
  - Solar PV Installer Short Course and Solar Photovoltaic Service Technician (Mounter)
  - WTST Training Program
  - Battery Energy Storage Systems
  - Micro-grid utilities
  - Aquaponics and mushroom project training
  - Soft Skills Training :project & Utilities related
  - Entrepreneurship short course
Component C (support for workers and communities):

- **Training conducted**

- **Introduction course** for all employees presented late 2022 and again in Oct 2023 (Saretec).

- **Train the trainer program**
  - Wind technology: commence in July 2023 at Saretec (2 ETDP for 7 months)
  - PV Technology: Training will commence in Feb 2024 (4 ETDP for 7 months)

- **Full scale training activities** will commence as soon as centre has been refurbished.

- **Fast tracking** of community activities
  - Eskom Academy of Learning - professional skill courses, training commenced in Aug 2023 (11 courses complete, average of 17 learners per course)
  - SARETEC - professional skill courses, training commenced in Sep 2023 (13 courses complete, 130 learners attended)
  - PV installer course, 2 cohorts of 10 each, 18 learners trained
  - EAL/Komati initiative: Establishment of welding training facility in progress, readiness estimated mid Jan 2024
Component C (support for workers and communities):
- Alien Vegetation (partnership initiative)

**Objective:**
Addressing soil and water requirements for farming

**Driven by:**
- Impact catalyst

**Associated Opportunities:**
- Farming on Koornfontein mine land, using treated water for farming
- Alien vegetation removal within a 50Km radius – Farming options near Hendrina
- SMME development

**Training**
- train and employ 200 youth for 2 years +

**Progress:**
- Ground truth study completed
- Call out sent, 350 responses received, 200 individuals identified
- Induction meeting 5 December 2023
Component C (support for workers and communities):
- Implementation Agent

The different initiatives and opportunities to support workers and communities, requires the appointment of an Implementation Agency to manage and implement mitigation measures for the socio-economic impacts resulting from the closure and repurposing of Komati Power Station.

- Expression of interest process complete (03 June – 26 September 2023).
- Initial costing for interim social projects to be presented to the WB.
- Prioritization exercise to rank social project completed.
- Plan to appoint before January 2024.
Repowering at Komati
Repowering

- **Phase 1:** Outer Areas (estimated 182 ha)
  - 100 MW Solar PV
  - 150 MW Battery Energy Storage
  - 50 MW Wind Turbines
  - 1 x Generator conversion to a Synchronous Condenser

- **Phase 2:** Komati power plant and Ash dams (estimated 123 ha):
  - 50 MW Solar PV
  - 20 MW Wind Turbines
  - 2 x Generator conversion to Synchronous Condensers
  - Timelines are depended on Component A execution

- OE Engineer, contract awarded 5 October 2023, kick off meeting held 13 October 2023.

Focus will be on skills transfer from the Owners Engineer to Eskom staff aimed for similar future initiatives
Component A & B high level status

OE Engineer:

Site walk with the consultant held on 07 Nov 2023, Consultant to provide gap analysis report on 14 Nov 2023 along with the implementation schedule.

Short Term Milestones:

- Lidar Unit Installation – 06 Nov 2023, calibration for 3 weeks, then install at Komati for 3 months to correlate data
- Component A OE contract Award – 15 Dec 2023
- PV/BESS PFMA approval – 30 Dec 2023
- PV/BESS EIA – 31 Mar 2023
- NERSA Shutdown License Approval – 31 Dec 2023
PV & Battery Energy Storage (BESS) Footprint, theoretical
Risk identified on available land-reduced MW’s (EIA)

Approximate loss of 38 ha, reduction of approx. 25 MW
Thank you