

Komati Power Station

R&R status update

January 2024



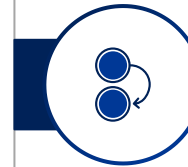
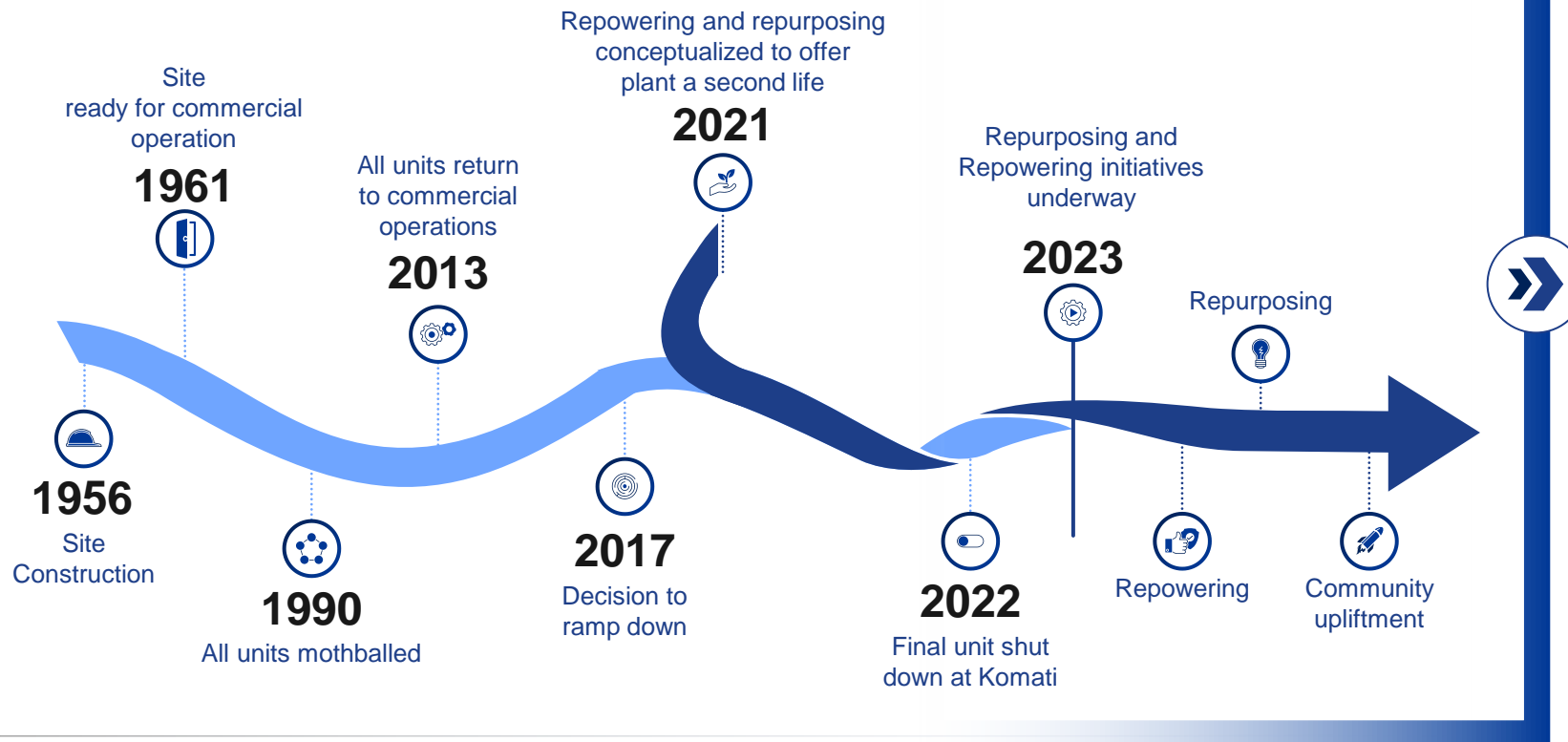
Komati History and Rampdown



The largest and first transition of a coal plant site is currently under way at Komati



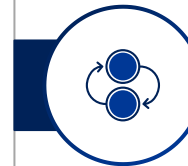
Komati site in transition



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



Strategy

- 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.



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.

Komati Manpower



*Proud of the past
Focused on the present
Ready for the future*



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, Cnl, Compressors, Scaffolding, Lifts, Lubrication
- Services: Horticulture, Station cleaning, Office cleaning, Security, Catering, ERT, Aux plant operations, Waste management, QC

➤ **Eskom Employees:**

- July 2023 :
 - 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
- Feb 2024
 - 4 employees (ETDP), current trainers in fossil energy, will be upskilled/reskilled as PV/Solar Technology trainers at Saretec
- 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



- Containerised Micro-Grids (CMG)

Distribution project

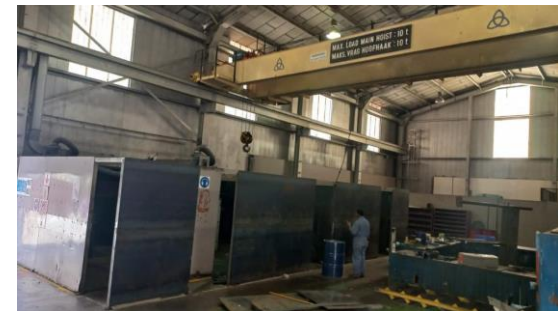
- The Repowering and Repurposing program includes the conversion of existing infrastructure and workshops at the power station site to assemble containerised microgrids.
 - 2 Containerised Micro-Grids (CMG) installed in the Northern Cape (Upington-Swartkopdam) during Dec 2022, 49 houses were electrified 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



-Training

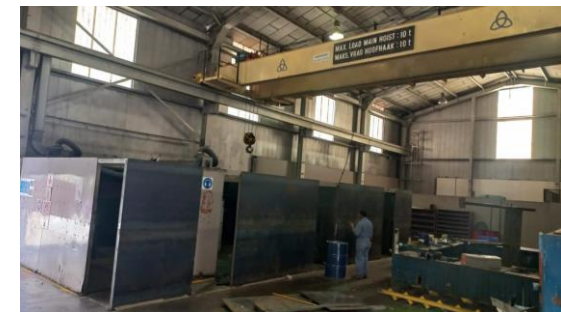
Establishment of the Komati Training Facility (KTF) to reskill/upskilling permanent Eskom employees and qualifying community members in renewable energy technologies.

- **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



-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:

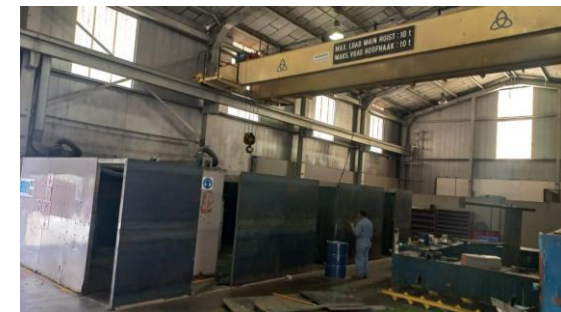
- Ground truth study completed
- Call out sent, 350 responses received, 200 individuals identified
- Induction meeting 5 December 2023

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



- **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.



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.

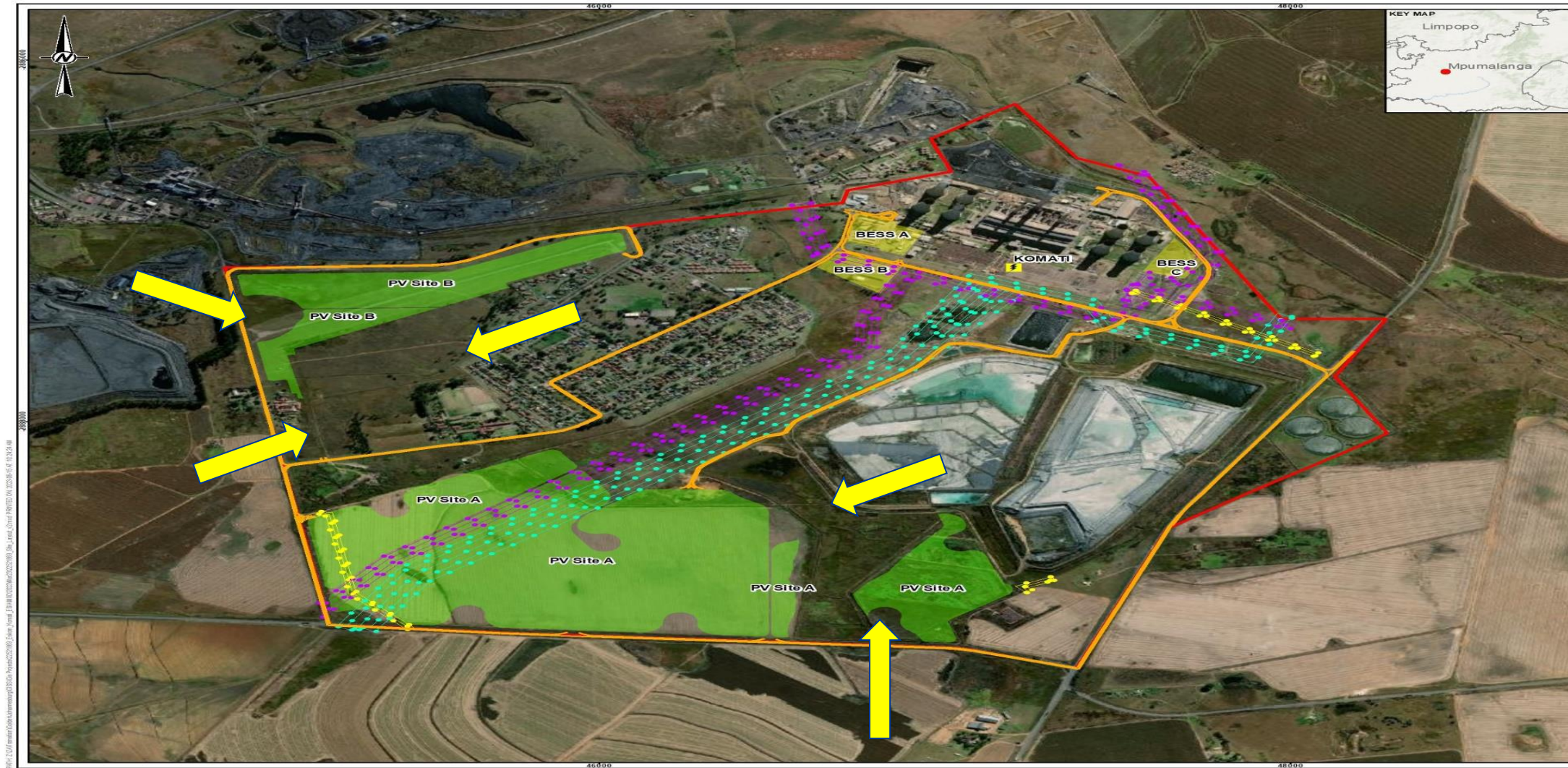
Short Term Milestones:

- 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

