

# JUST ENERGY TRANSITION SKILLING FOR EMPLOYMENT PROGRAMME (JET SEP)

## Strategic Intervention Factsheet: Transmission Talent Acceleration Initiative



Accelerating the upskilling of a specialized talent-pool needed to build **South Africa transmission & distribution grid**, a key bottleneck of the energy transition, by:



**Aligning the pace and location of training with the TDP** and factoring in project uncertainty and shifting timelines to avoid oversupply or leaving gaps



**Using local experts (retirees)** to strengthen the local skills knowledge base for well-beyond the TDP, and to ensure quality maintenance and operations



**Adapting a currently niche-curricula** to cover flexible pathways so new and existing Tx workers can ensure employability beyond TDP

### South Africa's starting point



South Africa plans to **build 14K km of transmission lines** by 2035; with only 89 km built in 2024, the country does not have sufficient skills to meet the demand



In particular, a **critical shortage** of high-voltage and grid planning experts threatens this expansion, and therefore the roll out of the renewable energy pipeline



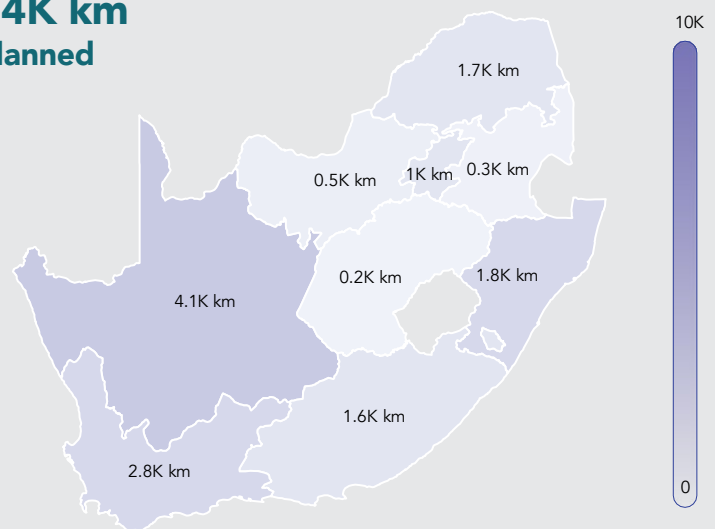
Between now and 2030, **550–900 HV electricians and 250–400 grid planners** must be trained to meet this demand



**While in the thousands, an urgent workforce investment** is essential to expand the grid and in turn unlock the broader energy transition

### Planned transmission expansion distances by 2035 (in km)

**14K km planned**



Source: NTC SA Transmission Development plan 2025-2034

### Applying global best practices to drive success locally



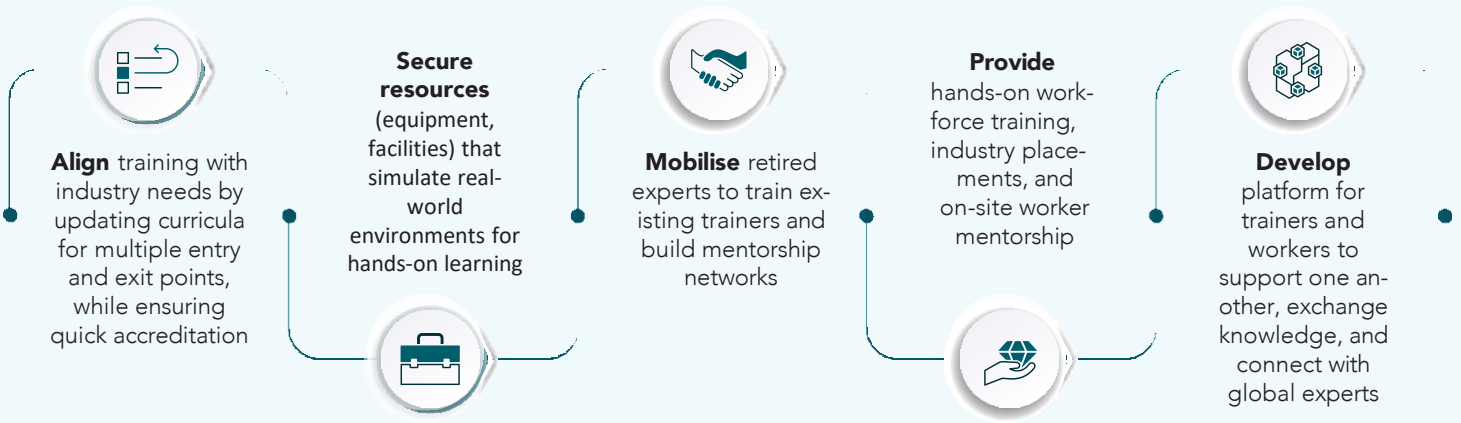
**India's National Power Training Institute** expanded the high-voltage workforce through mass, standardized, demand-led training - successfully enhancing grid efficiency and stability



**GIZ Nepal** empowered local workforces by developing self-sustaining train-the-trainer networks for solar grid integration

**JET SEP's intervention** aims to implement a train-the-trainer model to identify and mobilise 50 high-voltage (HV) and grid planning experts to support with upskilling 500 electricians and engineers in the next year

## Key next steps:



As of March 2025



## This intervention is a catalyst to realise 3 critical paradigm shifts required to drive system-level transformation



**Activating private sector** involvement by engaging retired industry experts to mentor and upskill trainers, the system can retain critical know-how and ensure a sustainable knowledge transfer within the sector through a replicable model



**Demonstrating learner-centric skilling pathways** by creating flexible curricula that accommodate different entry and exist points, enabling access for new grads or existing workers while letting them choose when to transition into the workforce



**Testing a demand-lead approach to skilling** by aligning scale, pace and skillsets covered with TDP requirements, thus avoiding skill oversupply or shortages and creating a replicable programme development model

## Support required to move forward



Technical and financial backing to refresh HV curricula and align training with modern grid needs



Funding for program design and delivery covering both HV electrician and grid planning tracks



Resources to engage retired experts for hands-on mentorship and on-the-job guidance

## Get in touch



**Noluthando Mthimkulu**

[NoluthandoM@nbi.org.za](mailto:NoluthandoM@nbi.org.za)

+27 74 120 7936

## Connect with us to



- Receive more information on strategic intervention
- Detail out what support and partnership could look like