Zimbabwe: *The Solutions*

- *Hwange 1 to 6 Refurbishment (get rid of WAPCOS)*
- *Hwange 7 and 8 synchronization to the national grid (potential sabotage by the Chinese contractor. Resolve this)*
- *Floating solar on the Kariba Dam (Hybrid of Solar and Hydro)*
- *Small-scale embedded distributed generation*
- *Solar farms (CSP and SPV), learn from UK, Germany & China*
- *Energy Storage (1) Pumped (2) Chemical (BESS) – stranded power*
- *Batoka (operationalize with Zambia), financing, skills*
- *Gas (LNG in Zimbabwe), e.g. Invictus efforts*
- *Planned & Preventive maintenance*
- *Use of AI in Asset Management (AI predictive maintenance)*
- *Metaverse (digital replicas of power plants)*

Zimbabwe: *The Solutions*

- *Type & depth of skills (Minister - Zhemu Soda (Remove this incompetent bookkeeper), Executive Chairman - Sydney Gate (Remove this old and failed manager), professionalize key managers & operatives)*
- *Required competencies (BSc, MSc, PhD): Power Systems, Power Electronics, Electrical Machines, Control Systems, Renewal Energy Engineering, Nuclear Engineering, Management, Leadership*
- *Energy Sector Supercritical skills: Scientists, Technologists, Engineers, Technicians, Artisans (Leverage the Diaspora)*
- *FINANCE: A key critical success factor; GOZ bankability, the historical record (Private Sector: balance sheet, cash flow) intensive energy users, big consumers*
- *Timelines: 3 Months Load-shedding is over; 6 Months – on the journey to Sustainable 100% availability of electricity at the world's lowest cost.*

South Africa: *The Solutions*

- *Make Installed but unavailable capacity Available*
- *Fresh coal plants*
- *Clean coal technology (though unproven)*
- *Remove diesel as fuel for baseload*
- *Nuclear power (Pros/Cons), clean but waste disposal & accidents*
- *Solar farms (CSP, SPV) Lessons from Germany, UK & China*
- *Energy Storage (1) Pumped (2) Chemical (BESS)*
- *Aluminium smelters (Review)*
- *Planned & Preventive maintenance*
- *Use of AI in Asset Management (AI predictive maintenance)*
- *Metaverse (digital replicas of power plants)*

South Africa: *The Solutions*

- *Type & depth of skills (Minister - Gwede Mantashe (Remove him), outgoing CEO -- Andre de Ruyter (A wrong appointment), Professionalize key managers & operatives)*
- *Required competencies (BSc, MSc, PhD): Power Systems, Power Electronics, Electrical Machines, Control Systems, Renewal Energy Engineering, Nuclear Engineering, Management, Leadership*
- *Current Eskom specs for the new CEO are faulty!!*
- *Energy Sector Supercritical skills: Scientists, Technologists, Engineers, Technicians, Artisans*
- *FINANCE – A key critical success factor (SA govt & Private Sector)*
- *Timeline: 3 Months Load-shedding is over; 6 Months – on the journey to Sustainable 100% availability of electricity at the world's lowest cost*

SADC Energy Strategy

- *Enable and leverage Southern African Power Pool (SAPP)*
- *Batonga & Cahora Basa*
- *14 Gorge Strategy (Hydro plants across SADC rivers, Zambezi etc.)*
- *Grand Inga Dam 70 000 MW; draw lessons - Grand Renaissance Dam 5 150 MW*

(In fact, Inga is an Africa project SAPP, WAPP, EAPP off-take)

- *Nuclear (sharing the risks from the Western threats)*
- *Gas distribution network (vast LNG from Mozambique - 2024)*
- *Commitment to the SADC NOT lip service*
- *FINANCE? Bankability? Historical record?*
- *Skills?*