

Analysis of Installed Capacity in the Case of non-compliance with MES

Currently installed generation capacity forms the starting point for the development of the Integrated Resource Plan (IRP). In this regard, plant availability and plant performance have a major impact on projected future capacity as well as supply and demand balance.

Technical simulations conducted as part of the IRP indicate that the low availability of Eskom plants together with planned early decommissioning of non-performing power plants (Grootvlei, Komati and Hendrina) will result in a constrained power system in the short to medium term (period from now to 2024). This is likely to result in Eskom running diesel peaking plant for extended periods, or manifesting in load shedding to avoid high expenditure on diesel. It is also clear that there are inadequate capacity reserves in the event of emergency plant breakdowns in the immediate term.

This risk plus the associated energy shortages gets worse when considering the non-compliance status of some Eskom plants *vis a vis* NEMA. Figure 1 below shows that there is a risk of about 10 000 MW of installed capacity coming of line if nothing is done which reduces to about 5 000 MW if further postponement is granted. This situation gets worse if Koeberg design life is also not extended.

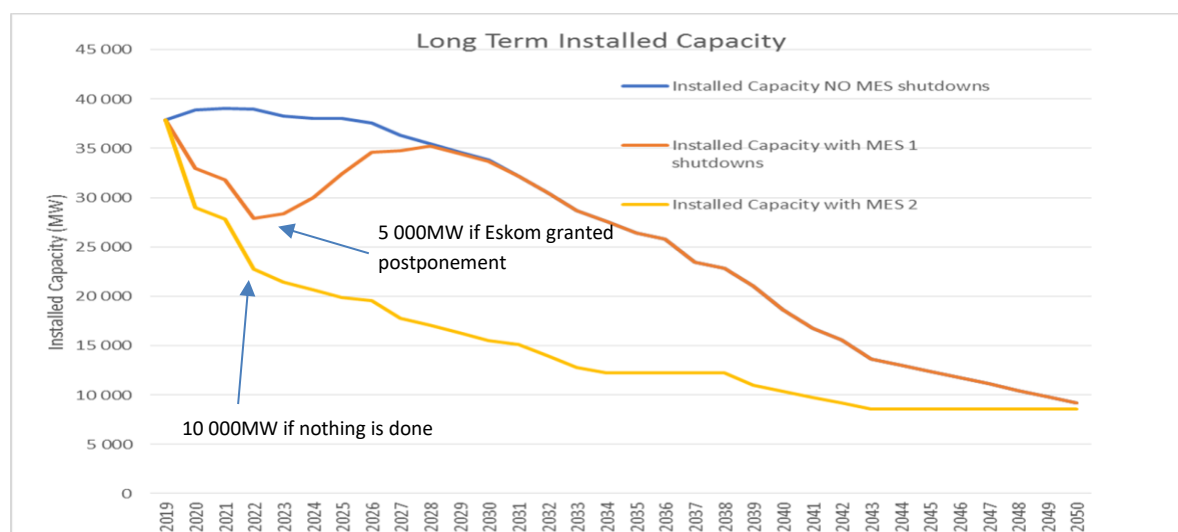


Figure 1: Eskom Installed Generation Capacity taking into account impacts of non-compliance with MES

IRP 2019 studies and recommended plan are based on the “blue line” with capacity constraints already evident. This gets worse when one takes into account plant availability due to planned and unplanned maintenance.