07 March 2025

MINERALS COUNCIL
SOUTH AFRICA

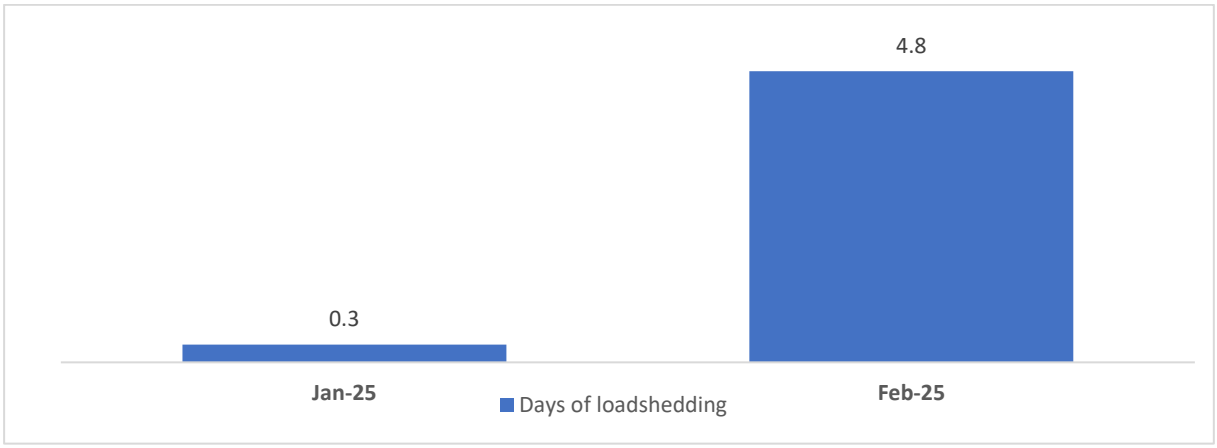
Electricity Update: **January to February 2025**

| Metric | January | February | Unit |
|---|---|---|---|
| **Energy Availability Factor (EAF)** | 57.2% | 57.4% | Percentage |
| **Loadshedding (all stages)** | 7 | 114 | Hours |
| **Open Cycle Gas Turbine (OCGT[1]) Usage** | | | Megawatt-Hours |
| **- Average** | 409 | 481 | |
| **- Maximum** | 1,718 | 1,783 | |
| **Planned Maintenance (average)** | 6,373 | 6,984 | Megawatts |
| **Unplanned Maintenance/Outages (average)** | 13,289 | 12,359 | |
| **Other Maintenance (average)** | 337 | 558 | |
| **- Total** | 19,999 | 19,900 | |

Source: Eskom & Minerals Council SA

In February[2] 2025, Eskom's average Energy Availability Factor (EAF) saw a slight improvement, rising to 57.4% from 57.2% in January. As noted in the previous update, the month began with a series of unforeseen breakdowns, which led to increased reliance on reserves. As these reserves were depleted, loadshedding became necessary. Later, at the end of February, multiple unit trips at several coal-fired power stations caused another round of loadshedding - another temporary setback. Eskom Group CEO Dan Marokane acknowledged the challenges, stating: *"There will be valuable lessons to be learned from the set of multiple unit trips that were unconnected and purely technical in nature, related to electrical and control system issues within auxiliary parts of our power stations."*
Overall, February saw approximately five days of loadshedding, while Eskom's **Summer Outlook**, published in August 2024, remains unchanged.

**Figure 1: Days of Loadshedding**




Source: Eskom & Minerals Council SA

In February, average total unplanned outages declined to 12,359 MW from 13,289 MW in January. While this downward trend appears promising, it masks the volatility seen at the end of the month.

[1] Open Cycle Gas Turbine
[2] In February, the EAF fluctuated between a low of 46.8% and a high of 62.8%, marking the widest gap between minimum and maximum dispatchable generation since September 2022.

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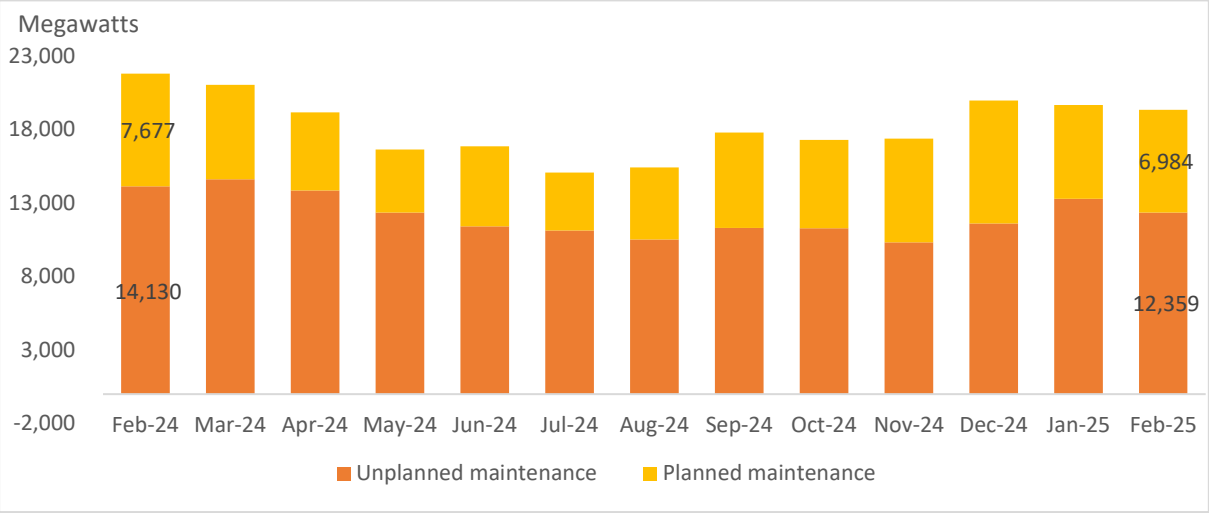
Planned maintenance remained high for most of the month, in line with the Generation Recovery Plan, reaching around 8,000 MW. By 21 February, planned maintenance was at elevated levels, but a surge in unplanned breakdowns - ranging between 12,000 MW and 17,000 MW - forced a reduction in scheduled maintenance to compensate. By 25 February, as breakdowns persisted, planned maintenance had been scaled back further. In addition to these breakdowns, there were also failures related to trips in auxiliary systems, which further contributed to loadshedding. During this period, Open Cycle Gas Turbines (OCGTs) were deployed to offset some of the lost capacity, but the shortfall remained significant, making loadshedding unavoidable.

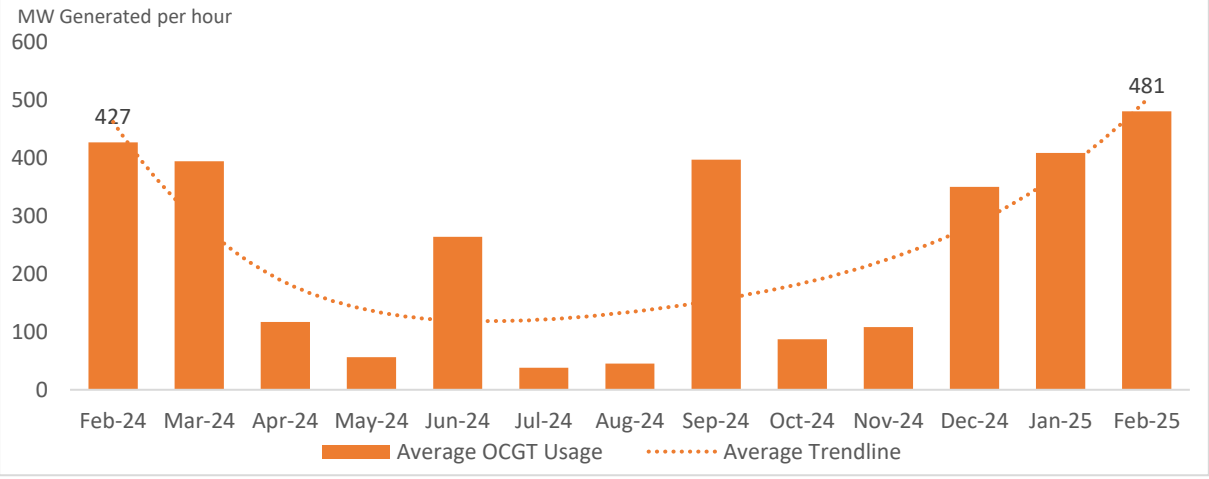
**Figure 2: Eskom Unplanned Maintenance (outages) & Planned Maintenance**




Source: Eskom & Minerals Council SA

According to data released by Stats SA yesterday, seasonally adjusted real electricity generation **increased** by **5.7% year-on-year** in **January 2025**. On a **month-to-month** basis, production **increased** by **0.4%** compared to December 2024. GDP data for 2024 revealed that the electricity sector grew by 3.5% in real terms, recovering from a 4% contraction in 2023. This positive contribution to overall GDP is largely attributed to Eskom's turnaround and improved electricity supply availability.

**Figure 3: Eskom - Open Cycle Gas Turbine Electricity Generation**




Source: Eskom & Minerals Council SA

Figure 3 above illustrates the trend in OCGT usage, which averaged 481 MW per hour in February - the highest level of utilisation since May 2023. This sharp increase was driven by extensive reliance on OCGTs at both the beginning and end of the month, when breakdowns and auxiliary system trips made their use necessary.

Lastly, it is worth noting that in February, the average electricity demand stood at 22,279 MW, an increase from the 21,556 MW recorded in January and above dispatchable generation, which averaged 21,882 MW. Peak demand for the month reached 27,084 MW, with maximum dispatchable generation at 26,380 MW.

## Conclusion

February 2025 saw a marginal improvement in Eskom's Energy Availability Factor, but persistent system constraints underscored the ongoing fragility of South Africa's electricity supply. While unplanned outages declined from January levels, the month was marked by significant volatility, with breakdowns and auxiliary system failures driving a brief period of loadshedding. The increased reliance on Open Cycle Gas Turbines, particularly during these critical periods, highlights the continued vulnerability of the grid.

One temporary setback can be managed, but when disruptions occur repeatedly, they signal a concerning pattern. The National Energy Crisis Committee (NECOM), which had anticipated that loadshedding was largely behind us, has now placed it back on their agenda as a pressing issue requiring active intervention. While improvements in electricity supply contributed positively to economic growth in 2024 and expected additions to generation capacity in 2025 bode well, recent setbacks show that the battle to sustain sufficient power provision to meet demand is far from over. Eskom's **Summer Outlook**, published in August 2024, remains unchanged, but system resilience will be critical in determining the trajectory of electricity availability for the remainder of the year.

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