

SOUTH AFRICAN ELECTRICITY SUPPLY

In January 2008, rolling electricity power cuts, or load-shedding, were introduced in South Africa due to insufficient generating capacity. The immediate impact was a suspension of mining activities at most of South Africa's platinum mines and a loss of production. Although more power was restored to the mining operations comparatively quickly and production soon restarted, they continue to receive only a portion – 95 per cent – of their normal power requirements at the time of writing (early October). While some mines will produce more refined metal, few if any companies have been able to meet their initial production plans partly due to these electricity supply issues.

THE CAUSES

A number of problems combined to cause the South African power crisis. Wet coal and low coal stocks, unexpected shutdowns and unplanned maintenance of power generating equipment were all cited as partial reasons for the mismatch between electricity generation and electricity consumption.

However, what appears to have been the most important factor is a continued underinvestment in new generating capacity under the South African Eskom utility. In support of this view, Eskom believes that demand management will be vital to the South African power industry for at least the next five years as a method of balancing supply and demand.

PRODUCTION LOSSES

A limited amount of platinum production – below 60,000 oz – was

lost directly due to the electricity supply situation in the first six months of the year. In fact, this was less than the 67,000 oz of platinum production lost due to the temporary closure of Amandelbult after the flooding of that mine in January.

Where mining was stopped in January and February, less ore was produced, with a direct impact upon refined metal output. Restrictions on power usage also impacted on smelting and refining operations at this point and later in 2008. However, many companies were able to adjust their processing by prioritising particular process steps and controlling the throughput of materials in their smelters and refineries. As a result, most producers should lose only a minimal amount of pgm output in the second half of 2008 because of power supply issues despite a 5-10 per cent drop in power availability.

Direct losses due to power problems are hard to estimate as companies took the opportunity to repair equipment that they might not have been able to power in any case - such as Anglo Platinum at its Polokwane smelter or Lonmin at its No.1 smelter. However, Anglo Platinum estimates that it will lose 30,000 oz of platinum production while Lonmin and Impala have estimated losses of 15,000 oz and 8,000 oz of platinum respectively.

To place this in perspective, Anglo Platinum lost a greater amount of production from the refurbishment of the Turffontein shaft at its Rustenburg operations than it expects to lose due to electricity problems this year. Likewise, Impala lost 12,000 oz of platinum output due to shaft shutdowns for the Presidential Safety Audits, 50 per cent more than its losses due to power problems in the first six months.

THE FUTURE

Eskom is currently developing plans to install further electrical generating capacity in the medium-term and is refurbishing previously mothballed generating capacity as well. This latter activity, combined with supply side management, has decreased the risk of power outages in the near future.

The South African government is encouraging some demand side improvements such as the use of low energy lightbulbs at domestic level and it is likely this will have some beneficial impact as will a gradual slowing of the economy. However, despite these measures, the power supply-demand gap is unlikely to be closed entirely within the next five years.

Legislation is also being enacted to control industrial power consumption. Currently, compliance with the limits on peak power usage and total power consumption is semi-voluntary. However, these new proposed rules are likely to impose punitive power costs on organisations that exceed their quota, effectively controlling electricity demand from industry.

Some mining companies are also installing some of their own generating capacity to ensure continuity of supply in emergencies and reduce the risk of production losses due to unexpected power cuts. However, the guaranteeing of power supplies for new capital projects (where these guarantees had not previously been received) is still expected to prove a major obstacle to expansion in the platinum industry over the next two to three years.

While we still expect growth in platinum group metal supply from South Africa in the medium-term, electricity is likely to continue to be a constraint in the platinum industry for the next five years.