



SYSTEM STATUS

Powering your world



Declared Emergency – 06 March 2014

- Eskom declared an emergency at 06:00 on 6 March 2014 and for the first time since 2008, implemented rotational load shedding at 08:00. The emergency was lifted at 22:00 on 6 March 2014 and load shedding stopped
- This was a painful yet necessary decision to protect the electricity power system from a total black-out. A total black-out would have significant consequences on the South African economy
- Eskom's power stations are old and the system is tight. Any event impacting >1500MW, could have a significant impact on the availability of supply
- While we are committed to provide early warning, this was the earliest we could communicate as the system status changed rapidly in the early hours of the morning of 6 March 2014
- Eskom is in a better position than in 2008 to manage the situation.
 - experience and knowledge of managing this complexity, appropriate emergency and communication protocols in place and open and transparent communication with stakeholders, including the media
- The system will remain tight up to the end of Summer and throughout Winter, until a substantial part of the build programme delivers capacity
- It remains important for all customers to maintain or achieve 10% electricity savings especially in the commercial, industrial and residential sectors.

- **Load-shedding is:**
- When there is not enough electricity available to meet the demand from all Eskom customers, it could be necessary to interrupt supply to certain areas. This is called load shedding. It is different from a power outage that could occur for several other reasons.
- It is a last resort to balance electricity supply and demand. We will only apply load-shedding when all other options have been exhausted.
- It is an effective way to avoid total collapse of the electricity supply grid (a national black-out) which will have disastrous outcomes for South Africa. If unbalances on the power is not managed this could lead to the risk of collapse of the entire power network. If this occurs, it could take more than a week to restore power to the entire country. By rotating and shedding the load in a planned and controlled manner, the system remains stable.
- Before load-shedding is applied, Eskom makes use of:
 - Gas and hydro options
 - Contracted and voluntary options with certain large customers to reduce their demand.
 - If all these measures have been exhausted and demand still cannot be met, Eskom will proceed with load-shedding.

- **Load shedding is a process whereby:**
- Eskom's National Control Centre instructs its Distribution Regional Control Centres, 126 Municipalities and Eskom's key Industrial Customers on the Megawatts to be shed.
- Eskom (Regional Distributor) and Municipalities execute these instructions by switching off individual areas for predetermined times as per published schedules
- The duration of load-shedding will depend on the specific Eskom region or on the Municipality; based on local circumstances.
- **Load-shedding will only be done as a last resort, as:**
- Eskom must continue with the planned maintenance of our Generation plant during this winter. This will enable a sustainable Generation plant going forward.
- This means that the national power system will be particularly strained during the evening peak between 5pm and 9pm in winter, and during any time of the day in the summer months
- Eskom has published the load-shedding schedules to enable our customers to be better prepared in the event of load shedding. Customers are requested to review the schedules and report any inconsistencies or concerns to our Contact Centre on 0860037566/08600ESKOM or via an e-mail by going to the [contact us](#) tab on <http://loadshedding.eskom.co.za>

- **Load shedding will be used under emergency conditions for limited periods.**
- **Three schedules have now been developed based on the possibility of risk and to ensure that it is applied in a fair and equitable manner:**
- Stage 1 allows for up to 1000 MW of the national load to be shed.
- Stage 2 allows for up to 2000 MW of the national load to be shed.
- Stage 3 allows for up to 4000 MW of the national load to be shed.
- Load shedding will be implemented in most instances in 2 hour blocks (with an additional 30 minutes for switching between blocks) during the period 05:00 to 21:30. You therefore may be without electricity for 2,5 hours **(Remark: Plus another 30 – 40 minutes for municipal switching operations)**

- **Stage 1 requires the least amount of load shedding**

- Once for two hours in a two day period (ie. you will either be on the Monday, Wednesday and Friday or Tuesday, Thursday and Saturday schedule)
- Once for four hours every 4th day in Eskom-supplied Johannesburg areas (this is to co-incide with City Power's 4 hour schedule)

- This stage is scheduled within the main load shedding period which is Mondays to Saturdays between 05:00 and 21:30. Each of the time periods has an additional 30 minutes added to allow for switching of networks in a way that will not damage the Eskom power system.

Eskom will begin load shedding customers at the start of the period (for example from 05:00), and will have all scheduled customers switched off within the first half hour (that is, by 05:30). At the end of the period, after the two hours (that is, by 07:00), Eskom will start returning power to customers and should have them all back within half an hour (that is, by 07:30).

Stage 2 will double the frequency of Stage 1, which means you will be scheduled for load shedding every day, Monday to Saturday, between 05:00 and 21:30

- Stage 3 will double the frequency of Stage 2, as well as covering the overnight period from 21:30 to 05:30, not covered by the other 2 stages. This means you should be scheduled 3 times a day, midnight to midnight, Monday to Sunday.
- If more load needs to be shed than has been scheduled in Stages 1, 2 and 3, then National Control will instruct additional, unscheduled load shedding. This means you may be shed outside of your scheduled times.

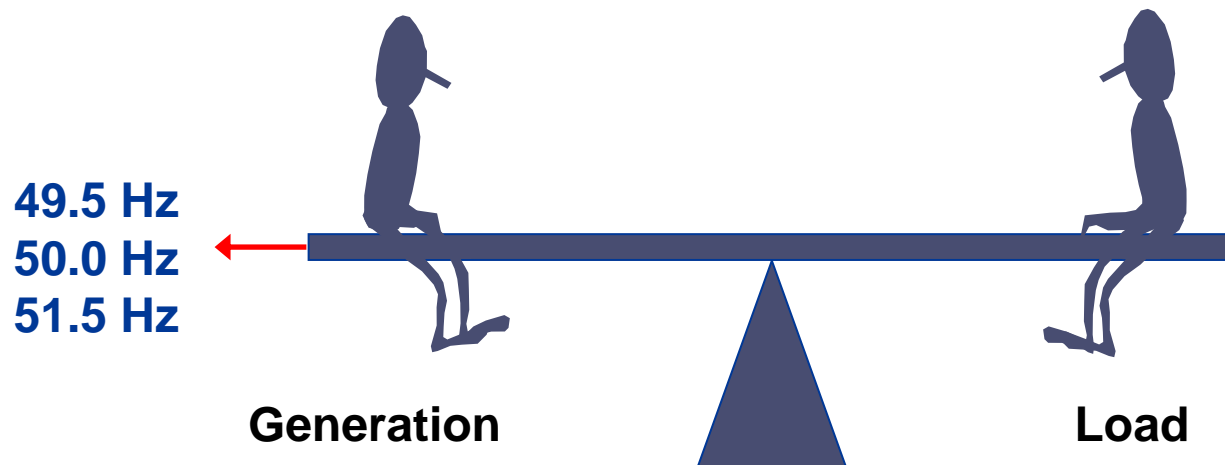
BLOCK 7 Eskom that Shed Load

ESKOM / MUNIC	Field Service Area	Substation	Feeder	Expected Load Reduction	Comments
ESKOM	Ha-Ravele TSA	Louis Trichardt	Ribola 132kV		Open first to split the network
ESKOM	Bolobedu TSA	Spencer	Giyani & Venulu 132kV's	100	Open second
ESKOM	Mooketsi TSA	Tabor	Flurian Tee		Open First to split the network - HOS to open Bkr on Temse
ESKOM	Ha-Ravele TSA	Louis Trichardt	Flurian 132kV	15	Open second - Phone KCE 082 809 2228 before shedding
ESKOM	Musina TSA	Messina	Leeudraai 132kV	5	
ESKOM	Musina TSA	Messina	Trf 1 22kV	5	

BLOCK 11 , 14 AND 16

BLOCK 11				
Eskom that Shed Load				
ESKOM / MUNIC	Field Service Area	Substation	Feeder / Transformer	Expected Load Reduction
Makhado Munic	Ha-Ravele TSA	Louis Trichardt	Transformer 1 22kV	3
Makhado Munic	Ha-Ravele TSA	Louis Trichardt	Transformer 2 22kV	3
Makhado Munic	Ha-Ravele TSA	Louis Trichardt	Transformer 3 22kV	4
BLOCK 14				
Eskom that Shed Load				
ESKOM / MUNIC	Field Service Area	Substation	Feeder / Transformer	Expected Load Reduction
Eskom	Siloam TSA	Paradise	Transformer 1 22kV	5
Eskom	Siloam TSA	Paradise	Transformer 2 22kV	5
BLOCK 16				
Eskom that Shed Load				
ESKOM / MUNIC	Field Service Area	Substation	Feeder / Transformer	Expected Load Reduction
Eskom	Musina TSA	Pontdrift	Transformer 1 22kV	10

- Electricity demand must be matched in real time.
- Any mismatch in supply and demand is reflected in the system frequency.
- Strict frequency control is required in order to ensure system security.
- This requires 24/7/365 management of the integrated power system.
- This is a primary role of the System Operator (National Control)



- On days when Eskom needs to reduce demand still further, after utilising emergency reserves, the NRS048 protocol indicates that Eskom can declare a power emergency in order to protect the system from a total blackout or collapse
- It does this by instructing key industrial customers to reduce load by 10%.
- When all options have been exhausted, and if the demand still exceeds available supply, Eskom initiates rotational load shedding.
- This is a scheduled process and is a controlled way of sharing the available electricity between all customers. By switching off parts of the network in a planned and controlled manner throughout the day, the system remains stable, and the impact is spread over a wider base of customers.

- Demand reduction is executed in Stages.
- Each stage provides a given amount of demand depending on the season and time of day.
- The System Operator (National Control) determines the capacity shortfall and instructs the relevant stage of shedding to Eskom's Top Customer division and Eskom's Distribution control rooms.
- These control rooms in turn instruct the metros and municipalities to prepare for and implement load shedding.
- Procedures are in place to engage critical loads as defined in the Code of Practice (e.g. hospitals, airports, stadiums etc). These cannot all be kept off the schedules and therefore the necessity that these services keep back-up generators

- Unlike 2008, where Eskom implemented load shedding through-out the day and for a few days at a time, load shedding will now be used only under emergency conditions for limited periods.
- For Eskom customers only, four schedules have been developed based on the possibility of risk and to ensure that it is applied in a fair and equitable manner:
- An '**All Day Schedule**' (24 hour) – Applicable during Summer and Emergencies (any time of the year)
- Three schedules for '**Peak Stages**' during (5pm to 9pm) – Applicable during Winter.

- Eskom schedules cater for Eskom supply areas only
- Customers supplied by municipalities need to contact their municipalities directly.
- Municipal load shedding is managed independently

- Mandatory demand reduction – shedding vs. curtailment**

system
emergency

Stage	Type	Reduction obtained by interrupting supply - <i>load shedding</i>	Reduction obtained by instructing reduction - <i>curtailment (pre-agreed)</i>
Stage 0 70-100 MW	Unscheduled (pre-agreed)	Ad hoc	Load offered by customers under the <i>immediate</i> curtailment option (min 25% for 2 hrs)
Stage 1 1600-2000 MW	Scheduled / Notified	Shed 5% of national non-curtailment load at peak	Curtail 10% of normal demand within 2h of <i>notification</i>
Stage 2 2500-3200 MW	Scheduled / Notified	Shed 10% of national non-curtailment load at peak	
Stage 3 5000-6300 MW	Scheduled / Notified	Shed 20% of national non-curtailment load at peak	Curtail 20% of normal demand within 2hrs of <i>notification</i>
Stage 4	Unscheduled (instructed)	Shed >20% of national non-curtailment load at peak	<i>As instructed</i> by the National System Operator at the time.



Where to locate the load shedding schedules: <http://loadshedding.eskom.co.za>



The screenshot shows the Eskom website's load shedding page. At the top, there is a navigation bar with links for 'Eskom home', 'CS online', 'Energy saving tips', and 'Power alert'. Below this is a secondary navigation bar with 'Home', 'What is load shedding?', 'Interpreting schedules', and 'Stay informed'. A search bar is prominently displayed with the text 'Quick Search for Eskom Customers' and a placeholder 'Type In Your Suburb/Village/Area For Your Schedule'. The main content area is split into two columns. The left column features a large heading 'Load Shedding Status: Stage 2' and a sub-heading 'Eskom is currently load shedding in Stage 2'. Below this is a 'Notice' section explaining that load shedding is a last resort and providing contact information for municipalities. The right column is titled 'Load Shedding Schedule Search' and contains a dropdown menu labeled 'Select a Province'. At the bottom of the page, there is a footer with links for 'Terms and conditions', 'Contact Details', and 'Eskom Holdings SOC Limited Reg No 2002/015527/06'. A small 'Local intranet | Protected Mod' watermark is visible in the bottom right corner.

Eskom home | CS online | Energy saving tips | Power alert

Home | What is load shedding? | Interpreting schedules | Stay informed

Quick Search for Eskom Customers

Load Shedding Status: Stage 2 | **Load Shedding Schedule Search**

Eskom is currently load shedding in Stage 2

Select a Province

Notice:
Eskom will only be doing load shedding as a last resort. We are however publishing these schedules to enable customers to be better prepared in the event that load shedding is required to protect Eskom's national power system. Customers are encouraged to take note of the schedule and engage with Eskom via our Contact Centre at 086 003 7566 /086 00 ESKOM or our web page.

For municipality customers click [here](#)

This information is for "information purposes" only. Whilst reasonable steps are taken to ensure the accuracy and integrity of the information, please be aware that due to the dynamic nature of our business, this information may change from time to time. In the premise, Eskom makes no representations or provides no warranties regarding the accuracy or the suitability of the contents published or that it is free from errors or omissions. Should you choose to use this information for any other purposes than its intended purpose, Eskom accepts no liability whatsoever, in respect of any claim, damages, loss or expenses, whether direct or indirect, including consequential loss or loss of profit, which may arise from such usage

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Local intranet | Protected Mod

Where to locate the load shedding schedules

Quick Search for Eskom Customers

Load Shedding Status: Stage 2

Load Shedding Schedule Search

Eastern Cape Matatiele

Combles

Schedules		
Stage 1	Stage 2	Stage 3
Up to 1000 MW to be shed	Up to 2000 MW to be shed	Up to 4000 MW to be shed
From 06:00-22:30 Monday to Saturday		24hrs from Monday to Sunday

Schedule Search Result:

Province: Eastern Cape City: Matatiele Suburb: Combles

Month: 06-03-2014 to 02-04-2014

Stage 1
 Stage 2
 Stage 3

If you are an Eskom customer and cannot find, or do not understand, your schedule, please log onto [CS Online](#) or contact us on 0860037566, to verify your load shedding schedule.

Suburb: Combles	Thursday	Friday	Saturday	Sunday	Monday	Tuesday	Wednesday
06-Mar to 12-Mar	08:00 - 10:30	-	08:00 - 10:30	-	-	08:00 - 10:30	-
13-Mar to 19-Mar	08:00 - 10:30	-	08:00 - 10:30	-	-	08:00 - 10:30	-
20-Mar to 26-Mar	08:00 - 10:30	-	08:00 - 10:30	-	-	08:00 - 10:30	-



- Saving electricity reduces pressure on the grid and cuts your electricity bill and South Africa's carbon emissions
- The power system remains vulnerable all day during Summer

1. Use air-conditioning efficiently

- Set air-conditioning at 23 degrees
- Close windows and doors to optimize air-conditioning
- Switch off 30 minutes before leaving the office

2. Continue to switch off all geysers and pool pumps from 5pm to 9pm

3. As we approach winter, use alternatives to electrical heating

4. Switch off all non-essential lighting and appliances

5. Respond to the Power Alert and Power Bulletin radio messages by switching off all appliances that are not being used



Explanation of risk associated with colors

Color	Shortfall excl. OCGT's	Implications for use of resources during the week
GREEN	Adequate capacity to meet demand and operating reserves	Normal generation required
YELLOW	Shortfall of up to 1000 MW.	Sufficient operating reserves Some OCGT's may be required but not extensively. Water utilization not an issue ILS only required to respond to low frequencies
ORANGE	Shortfall of 1000 – 2000 MW.	Operating reserves will be met with limited emergency resources Combination of water and OCGT's will be used to meet demand (neither used to full capacity on a given day). ILS only required to respond to low frequencies
RED	Shortfall of 2000 – 3000 MW (3 days)	Some operating reserves but not full 2000MW Combination of water and OCGT's will be used to meet demand. Low risk of reaching minimum gen hours at hydro stations ILS only required to respond to low frequencies
RED	Shortfall of 3000 – 4000 MW (3 day3)	Very limited operating reserves. All OCGT's required most of the day throughout the week and will be utilized over the weekend to replenish dam levels Water utilized extensively during the day, risk that by Thursday or Friday minimum gen hours will be reached ILS will be required on Thursday to meet evening peak
BROWN	Shortfall of more than 4000 MW. (2 days)	No operating reserves, short on demand All available resources required (incl OCGT's, GT's) required most of the day throughout the week and will be utilized over the weekend to replenish dam levels. Water used extensively and minimum gen hours will be reached before the end of the week. ILS will be required during peak periods, high risk that their contract time will be reached.

Thank you.