Mossel Bay
MUNICIPALITY

LOADSHEDDING

THE GOOD, THE BAD AND THE UGLY

If you have spent any number of days longer than a month in South Africa this year, you are aware of the fact that the term loadshedding is associated with controversy and highly emotional reactions.

In June 2022, Eskom first implemented Stage 6 loadshedding. This implies electricity outages of four hours at a time. Stage 6 has since been implemented on a more regular basis and in recent weeks, to the point that it has become more than just a big frustration to consumers. Mossel Bay, like the rest of South Africa, is bearing the brunt of the shortcomings of the country's national electricity supplier.

It is important to note that by all indications, the electricity supply crisis in South Africa is becoming a stark reality that may have a much greater effect than leaving households in darkness and businesses non-operational. There could in fact be a total collapse of the Eskom grid. Therefore, efforts to be pro-active is now more vital than ever.

There are several electricity scenarios that could give rise to a declared disaster which includes:

- Nuclear fall out
- Blackout
- Severe power system constraints
- Natural phenomena
- Financial collapse
- Health and environmental crises

For the purpose of this document, the ongoing loadshedding implemented by Eskom is the focus of this document.

WHAT IS THE NRS 048-9:2017 (Edition 2)?

The NRS 048 was developed to address the need for a national code of practice for real-time emergency load reduction and restoration of supply after a major system incident. The code addresses not only the power system requirement or load reduction required but how this is done and communicated in order to have the least negative impact on critical infrastructure. The need for such a code arose after the establishment of national loadshedding in South Africa in 2008.

The most critical part of the document which pertains to Mossel Bay is Clause 8.6.8 of NRS 048-9-2017:
"Refineries, fuel pipelines, associated loading and off-loading depots should be excluded from emergency load reduction requirements."
This answers the critical question of why some areas in Mossel Bay does not experience load shedding. See details further on under **LOADSHEDDING IN THE GREATER MOSSEL BAY – Pressing questions**

LEVELS OF BLACKOUT AND ITS EFFECTS

NATIONAL

•Loss of the national power system
•Requires Eskom to undertake a "blackout start" to stabilize the national power system and restore electricity supply
•Restoration of supply to all customers could take up to 2 weeks
•On-set is likely to be completely unannounced
•The return of supply to essential loads be prioritised
•Impact will be severe
•Loss of essential services (water supply and sanitation systems, transport and fuel logistics, as well as significant security issues)

PROVINCIAL

•Loss of key transmission and distribution infrastructure
•Requires Eskom to undertake restoring supply to affected areas
•General restoration could take up to several days depending on the nature of the damage
•Some areas may remain without supply, or rationed supply for several days to weeks thereafter
•On-set likely to be completely unannounced
•The return of supply to essential loads will, where possible, be prioritised
•Impact is heavily dependent on the duration of the supply loss
•Loss of essential services (water supply and sanitation systems, loss of telecommunications, transport and fuel logistics, security issues

LOCAL

•Loss of key transmission and distribution infrastructure supplying a local area (typically a loss of critical infrastructure like transformers or transmission lines)
•Eskom to undertake restore supply to affected areas in terms of its emergency preparedness plans
•Full or limited restoration of supply to the area: several hours to several days, depending on the nature of the damage incurred.
•Some customers may remain without supply or rationed supply for several days to weeks thereafter.
•Blackout likely to be completely unannounced.
•The return of supply to essential loads will be prioritised.
•Impact: severe for customers that have essential load requirements to support safety and prevent environmental damage

LOADSHEDDING IN THE GREATER MOSSEL BAY – PRESSING QUESTIONS

•WHY IS LOADSHEDDING NOT APPLIED TO CERTAIN AREAS IN MOSSEL BAY?

1. Mossel Bay is part of the Eskom loadshedding programme, with the condition that supply on the Voorbaai 66kV feeder remain secured due to the critical load to PetroSA refinery as per Clause 8.6.8 of NRS 048-9-2017. This states that refineries, fuel pipelines, associated loading and off-loading depots should be excluded from emergency load reduction requirements.

2. The need for a continuous supply of diesel to the Gouriqua Power Station, also means that the Mossel Bay Intake substation at Voorbaai is not affected during load shedding. This Eskom powerstation is located near PetroSA and has no storage facility for diesel. The unit consumes approximately 170,000 to 200,000 liter of diesel per hour to contribute 750MW to the national grid. Uninterrupted power supply to the diesel pumpstation that supplies Gouriqua powerstation therefore helps to protect the country against higher levels of loadshedding.

3. It is important to note that the embedded networks in the Mossel Bay CBD and surrounding areas by virtue of having the same source of supply (Voorbaai 66kV feeder) are not individually isolated by the municipality and are excluded from load shedding.

•WHO SWITCHES OFF THE DIFFERENT AREAS DURING LOADSHEDDING?

1. The Mossel Bay Municipality does not have a central control room to perform remote electrical switching from. Performing manual switching operations at our various substations to maximise loadshedding in all areas will involve intensive manual switching operations which will be time consuming, costly and ineffective during the relative short periods of loadshedding.

2. Apart from Voorbaai and Central Mossel Bay mentioned earlier, all the consumers in the greater municipal area get shed at the same time, both municipal and direct Eskom customers. Areas such Boggomsbaai, Nautilus Bay and Vleesbaai therefore experience loadshedding at the same times as Mossel Bay.

4. Loadshedding times are communicated on various social media platforms. Loadshedding notices are often issued by Eskom at short notice.

•WHY CAN'T MORE ELECTRICITY USERS IN THE GREATER MOSSEL BAY BE TRANSFERRED TO SUBSTATIONS THAT ARE NOT AFFECTED BY LOADSHEDDING?

1. The agreement with Eskom is that the Voorbaai feeder remains energised to comply with the NRS requirements. Any loads that are normally linked to this feeder will also remain on during loadshedding. The municipality does not do network switching to shift loads between substation just for the purpose of loadshedding.

2. The notified maximum demand of the Voorbaai, 66/11kV substation is 30MVA and the total notified maximum demand for the entire Mossel Bay electricity licenced area is 82MVA. It is therefore not possible to transfer all the customers to the Voorbaai Intake substation to avoid loadshedding.

•WHY ARE SOME USERS AFFECTED BY LOADSHEDDING NOW, WHEN THEY WEREN'T AFFECTED IN THE PAST?

1. In the past 14 years, various network upgrades were done to provide for the growing electricity demand of Mossel Bay. Four (4) of the 66/11kV substations, namely Ockert Bothma, Saunders, Sonskynvallei and South substations have been upgraded with additional power transformers and 11kV feeders. It is therefore possible that supply points to certain users and areas have changed through the years as loads have been balanced across the upgraded substation as part of normal operations.

2. Hartenbos and the surrounding suburbs were specifically affected by a network change made by Eskom and their own network. In previous years, Eskom could only keep the Voorbaai feeder energised if the Sonskynvallei feeder was also on, with Hartenbos that is supplied from the Sonskynvallei substation. In approximately October 2019, Eskom changed their network configuration so that the 66kV Voorbaai and Sonskynvallei feeders could be isolated individually, meaning that from that time, load shedding could be applied to Hartenbos.

INFRASTRUCTURE AFFECTED BY LOADSHEDDING: WHAT ARE THE POSSIBLE CONSEQUENCES?

Service at Risk	Primary Impacts
Water	• Non-provision of fresh water
Sewerage	**Failure to pump and treat sewerage** • Pollution could be caused • Contamination could arise
Transport/Traffic	**Roads** •Traffic disruptions •Congestion of critical intersections •Dysfunctional traffic lights •Capacity to transport fuel •Increased accidents **Airspace** •Disruption of airfield operations **Other** •Disruption of rail services •Disruption of seaport services
Health	**Disruption of Health Facilities** •Hospitals •Clinics and pharmacies •Support activities
Emergency Services	**Fire, Rescue and Emergency Medical Services** •Disruption of emergency call taking •Disruption of communications •Inability to coordinate resources
Communications/ Telecommunications and Information Technology	**Disruption of telecommunications** •Disruption of mobile communications •Shut down of IT systems •Disruption of public radio and TV •Disruptions of satellite networks •Late payment of accounts
Commercial Industrial Financial Markets	**Disruption of commercial enterprises** •Disruption of operations at vital installations and National Key Points •Disruption of operations of Banks (ATM's and credit card systems) •Non-functioning of commercial centres •Non-functioning of cold storage facilities •Non-functioning of municipal pay points
Law Enforcement and Security Services	**Increased Security Risk** •Increased crime •Decrease in surveillance capacity in key areas •Public disorder
Fuel Security	**Disruption of operations with high fuel demand** •Inability of movement of municipal vehicles •Inability of emergency response by emergency vehicles •Inability to fill critical emergency generators •Inability of fuel supplier to supply fuel to municipality

STOP THE SURGE

It is anticipated that loadshedding will continue for some time due to severe power system constraints which are beyond the control of Mossel Bay Municipality. This is due to a significant deterioration of Eskom's operations, lack of maintenance, ongoing break downs and sabotage.
In the event of a power outage, the municipal electrical department will only be able to restore circuit breakers at substations once the network loads have reduced. It has been experienced that especially after four hours of loadshedding at Stage 6, power outages continue due to a surge in electricity consumption. Therefore, the municipality requests residents to turn off all non-essential equipment such as:

•geysers, heaters, pool pumps, kettles, microwave ovens, etc. before scheduled load shedding, and not turning it on immediately the moment the electricity supply is restored.

•It is recommended that these appliances remain off for 30 to 60 minutes after loadshedding has ended.

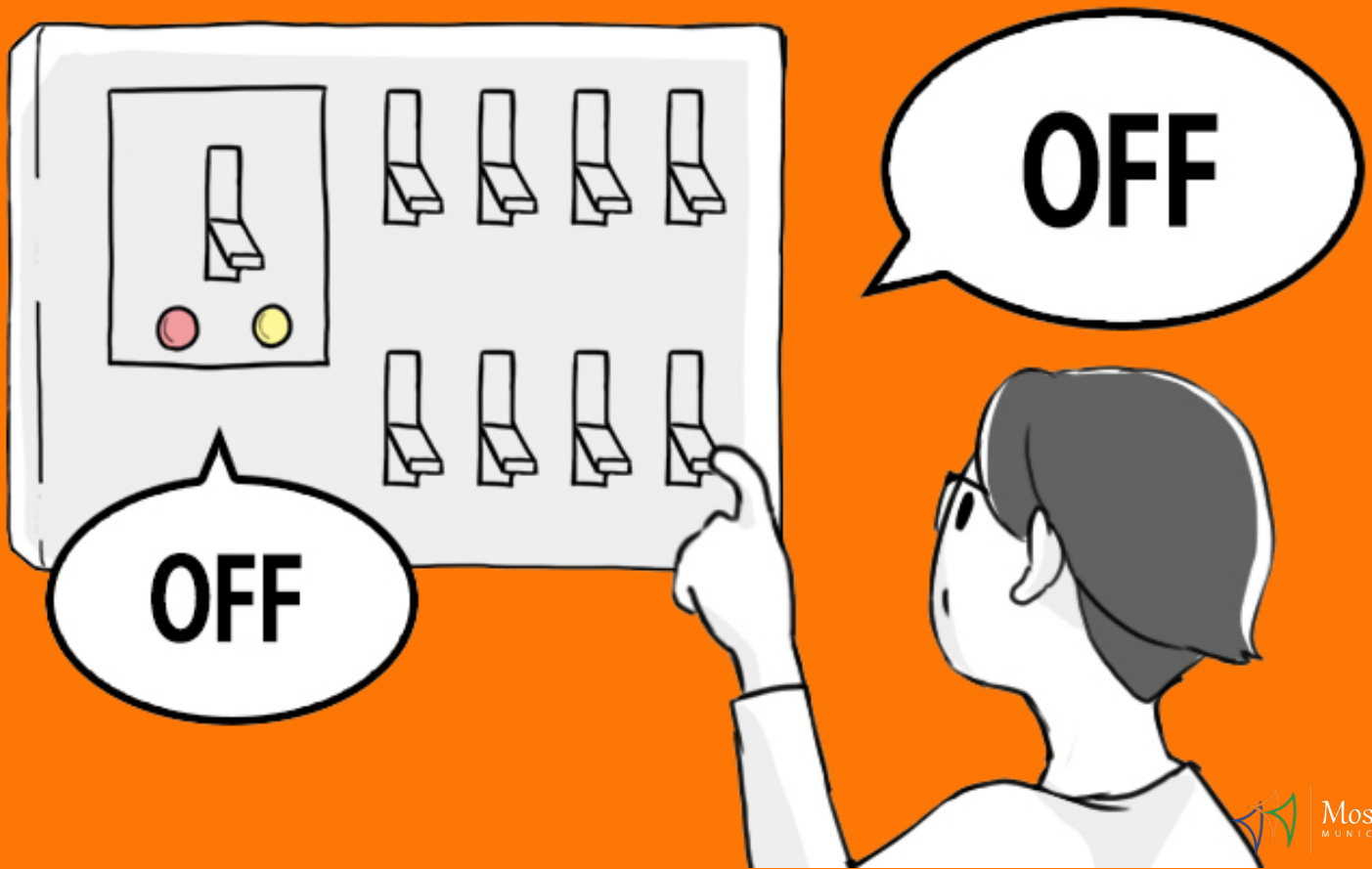
MUNICIPALITY'S READINESS: WILL SERVICE DELIVERY BE SUSTAINED?

Mossel Bay Municipality want to reassure residents that extensive contingency plans are in place should the Eskom power grid become even more under pressure.

The Mossel Bay Municipality drafted a comprehensive Contingency Plan is to mitigate any situation that could arise from the loss of key electricity transmission lines or infrastructure supplied by Eskom to the municipality in 2014. This plan is scrutinised and revised on a regular basis. The municipality will endeavour to as far as possible ensure that its business continuity is sustained through pro-active and re-active measures developed and implemented by its departments.

Detailed plans are in existence for sustainable service delivery despite a grid collapse, which includes:

- water and sanitation services,
- streets and stormwater,
- IT, data and telecommunications,
- traffic and community safety,
- supply chain management and,
- human resource management.



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A part of the contingency planning includes the activation of a Loadshedding Committee, consisting of key municipal staff to implement focal strategies, which may include ensuring that:

- adequate generators are in place to supply pumping capacity to the sewerage water treatment plants,
- adequate storage is available for raw sewerage,
- sufficient potable water is available to communities and industry, and
- if necessary, strict water restrictions is applied.

Mossel Bay Municipality successfully opened its Joint Operation Centre in August 2022, from where the contingency plans of the Loadshedding Committee will be implemented, managed and monitored.

IN CONCLUSION

The Mossel Bay Municipality is making a concerted effort to look into developments and upgrades to ensure greater stability in electricity supply to its residents. Suffice to say, that this process and some of its positive interventions will take time and at the soonest, at least six months. Recently, a panel discussion was recorded highlighting several issues relating to loadshedding and the plans for Mossel Bay to alleviate the pressure caused by this on residents and businesses. The discussion can be viewed at this link: https://www.youtube.com/watch?v=Mx9mVeIMGtk

REPORT PROBLEMS

Mossel Bay Municipality appeals to residents to immediately report service delivery problems.

The following channels are available:

- **044 606 5000** - 24h
- **44802 - SMS-line** (normal tariffs apply)
- **admin@mosselbay.gov.za** (ideal for attaching photo's, etc.)

EMERGENCY COMPLAINTS (e.g. vehicle collisions)

- **044 606 5121**
- **044 606 5107**
- **044 691 3722**

ETHICS & FRAUD HOTLINE

Mossel Bay Municipality anti-fraud hotline

- **0800 333 466 (24h)**
- **mbm@behonest.co.za**
- **49017 - SMS (normal terrifs apply)**
- **www.behonest.co.za - website/ "chat"**

Please visit The Mossel Bay Municipality Website: www.mosselbay.gov.za

The municipal social media page is not continuously monitored and service delivery complaints uploaded there by the public may not be immediately noted. The municipality responds as quickly as possible to any complaints.