

WHY DOES A CONSUMER'S MUNICIPAL ELECTRICITY ACCOUNT NOT DECREASE DESPITE LOAD SHEDDING?

There are various reasons why electricity consumption and the amount owing to the municipality for electricity do not reduce despite load shedding.

1. If a consumer has a geyser installed, the geyser will consume more electricity once power is switched on again as the temperature has decreased;
2. Freezers and fridges also play a role. If opened during load shedding, the temperature will drop and once electricity is restored the electricity demand will be higher to restore the devices to the set temperature.
3. The municipality bills the consumer for certain fixed electricity costs, which remains the same every month.

Individuals can monitor their own consumption. For example, a reading can be taken at the meter box prior to load shedding, then again at regular intervals once load shedding has ended.

The fixed municipal costs consist of a service charge (R31,61) and a capacity charge (for example R369 for 60 ampere). This is required to recover the fixed costs of the municipality to deliver the electricity service to the consumers. It is required that all property owners pay for this fixed costs, and not only those that consume kWh units of electricity. For example, a holiday owner that consumes electricity only during December must also contribute to the fixed costs on a monthly basis.

The municipality has two inclining block tariffs (0-350 kWh and >350 kWh) as it encourages consumers to use less electricity as the first block is cheaper than the second block.

WHY DOES ESKOM'S BULK ELECTRICITY ACCOUNT TO THE MUNICIPALITY NOT DECREASE DESPITE LOAD SHEDDING?

The Eskom bulk purchases account to the municipality has many tariff components. The total monthly bill of Eskom does not decrease during load shedding.

Eskom has winter tariffs (June to August) that are higher than the summer tariffs. The Eskom bulk purchases account has various tariff categories and different actual tariffs for different metering points. For some of these metering points, there are time-of-use tariffs (for example in Langebaan).

There are fixed components, demand-related components and energy-related components to the account.

- The fixed components are billed by Eskom, irrespective of the electricity use;

- The demand components are applicable to the peak demand period;
- The energy components are dependent on the actual energy usage.

The total tariff payable therefore depends on the actual load pattern of energy usage.

The load factor differs from month to month, based on the actual electricity usage.

The load factor is the relationship between the peak demand of the month (kVA) and the energy usage for the month (kWh units). The municipality would like the load factor to be as high as possible and for the previous three years, the average was approximately 64%, which is a good average.

Due to load shedding, this ratio has dropped to approximately 52% for the current financial year, with the lowest at 49% in December 2022 when the country was at Stage 6 load shedding.

Over the last three months, the municipality's bulk Eskom energy unit purchases have reduced compared to the same period last year. However, due to the increased peak after load shedding and the reduction of the load factor, the total average cost per unit has increased slightly.

It is mostly only industries that use less units of energy, provided they are not in production during the load shedding period. Their peak demand does not change since they still register at the peak during other production cycles. This is the main factor causing the reduction in load factor.

With residential customers there is almost no reduction of energy (kWh units) due to load shedding. The loss of production does not apply since the bulk of residential energy goes into heating and cooling of warm water geysers, stoves for cooking and refrigeration. These appliances consume the energy after load shedding. Electronic equipment is also charged after load shedding has ended.

The energy that is not used due to load shedding is mostly lighting. This is usually a small component because many households have energy-efficient lights.

HOW EFFECTIVE IS BATTERY STORAGE?

The effectiveness of battery storage could be as low as 80%. This means that a household or business can only use 80% of the energy that was required to charge the battery.

Those that have PV solar panels coupled with inverters with battery storage will experience this loss of energy on cloudy days and during night load shedding when the batteries are charged directly from the Eskom grid and not from their solar panels.

The luxury of having power available during load shedding therefore comes with a cost of possible energy losses.