

**NOTIFICATION OF DEMAND OR CHANGES TO NOTIFIED MAXIMUM DEMAND (NMD) RULES**

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*These rules (Rev 02) form part of Eskom’s schedule of standard prices, which in turn forms part of Eskom’s standard terms and conditions for the supply of electricity, as amended from time to time.*

**1. Notified maximum demand**

**1.1. Initial selection of notified maximum demand (NMD)**

- 1.1.1. The *NMD* will be the maximum capacity in kVA, as measured over a 30-minute integrating period, per point of delivery/premise (*POD*) that the customer will contract for Eskom to make available during all time periods. This is the maximum capacity that will then be made available for the customer's use under system normal conditions. The capacity so notified excludes any additional capacity that the customer may be permitted to use in terms of 1.1.5 below.
- 1.1.2. The *NMD* is the capacity reserved by the customer to provide for the maximum demand requirements in all time periods. The *NMD* should not, however, be exceeded unless agreed to by Eskom.
- 1.1.3. An excess network access charge will be levied for exceeding the *NMD* once the *actual maximum demand* is greater than the *NMD*, after allowing for two exceedances that are within a 5% deadband, over a rolling 12 months. To avoid the excess network access charges, a request should be submitted to Eskom to have the *NMD* increased. However, it is important to note that, Eskom cannot and does not guarantee the security of supply and therefore an increase in *NMD* is subject to capacity availability. Refer to Clause 2 and Clause 3 for the terms and conditions associated with exceedance of the *NMD*.
- 1.1.4. Where a customer has multiple points of supply connected to a point of delivery (*POD*), the *NMD* will be the sum of the maximum demands for all of the points of supply connected to the *POD*. The sum of the maximum demands may be determined vectorially.
- 1.1.5. Where customers qualify to receive the benefit of diversity across multiple points of delivery, the customer is required to notify Eskom of the maximum capacity to be provided at each individual *POD* under normal operating and loading conditions (that is, before load shifting takes place from one *POD* to another due, for example, to abnormal network conditions or the operational requirements of the customer). Customers who have been granted the benefit of diversity are permitted, in terms of the rules for diversity benefits, to exceed the *NMDs* as notified for the different *PODs*. Under no circumstances may the customer exceed the installed capacity at the different *PODs*, with due regard for the loads of other customers who may be supplied from the

same network. Eskom reserves the right to impose upper loading limits for each POD. The sum of the stated NMDs for all individual PODs receiving the benefit of diversity must be equal to or greater than the simultaneous maximum demand that will be jointly required at all of these PODs. The sum of these demands is determined by arithmetic summation.

Note: Simultaneous maximum demand (SMD) is determined by measuring the actual demand of each POD for each 30-minute integrating period, and adding together the value of the different PODs for each of the 30-minute periods in the month, i.e. the values for all PODs for the first period are added together to determine the sum of the demands for all PODs for that half-hour; the values for the second period are added together and so forth for all of the half-hourly periods in the month. The highest value of all of these 30-minute periods is the simultaneous maximum demand, which may never exceed the sum of the NMDs.

**1.2. Notification of demand for customers with own generation, active load control and power factor correction equipment**

1.2.1. Customers with their own generation, active load control and power factor correction equipment should cater, within their NMD, for the load increase arising from any credible contingency; and the loss or failure of certain or all of their equipment. The demand notified will be the sum of the normal notified (base) load plus the standby margin required to cater for probable failure or loss of own equipment (refer to Figure 1 below). In the event that the NMD is exceeded, Clause 3.4 will apply.

1.2.2. In the event that a temporary increase in demand is required, Clause 3.2 will apply.

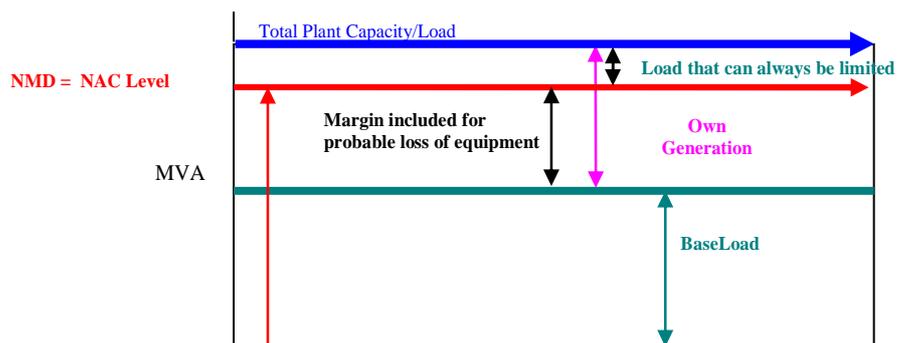


Figure 1: Notification of demand for customers with own generation or active load control

**1.3. Points of delivery not supplied under a charged demand tariff**

1.3.1. The NMD will be based on the measured maximum demand, or if demand is not measured, on the equivalent demand that is based on the installed circuit breaker size.

**2. Utilised capacity (UC) applicable to network access charge (NAC)**

2.1. The network access charge (NAC) will be based on the utilised capacity. The utilised capacity is determined as the higher of the following:

- a) The *NMD*,
- b) The *actual maximum demand (MD)* measured in kVA in all time periods during the billing month, i.e. the *monthly utilised capacity (MUC)*, which therefore changes on a monthly basis depending on the customer's actual usage.
- c) The *annual utilised capacity (AUC)*. The *AUC* is the:
  - i. highest of the *maximum recorded demand* (b), outside of the allowable 5% deadband exceeding the *NMD*,
  - ii. or the contracted *NMD*,
  - iii. and will apply for the current month and the next 11 months.

Any exceedances are subject to the following:

If b) is higher than a):

- d) the *AUC* will be reset (refer to Clause 2.1c) as the higher of the actual recorded demand registered during that billing month or the previously set *AUC*, except for the first two

events or any two events that are within 5% of the NMD, over the preceding rolling 12 months.

- i. For the two events referred to in d) above, the NAC for the month will be based on the actual maximum demand for that month.
- e) From the third event or any other event where the NMD is exceeded by more than 5%, the AUC is reset (refer to Clause 2.1c) as the higher of the actual recorded demand registered during that billing month or the previously set AUC. Note that the AUC will not be set to a lower value during the 12-month period.
- f) On the third event or for any other event where the NMD is exceeded by greater than 5%, the NAC will be charged on the MUC exceeding the NMD and for every subsequent exceedance within the rolling 12 months (starting from the first event), at; 1 x NAC for the first event, 2 x NAC for the second event, 3 x NAC for the third event, 4 x network charge for the fourth event, 5 x network charge for the fifth event, etc., until the demand is either managed or the NMD is upgraded. This means that for any event where the NMD is exceeded, the NAC will be charged, based on the AUC and the portion of the demand exceeding the NMD, the R/kVA NAC and a factor depending on the event number.

***Amount exceeded x R/kVA x event number = Excess NAC.***

- g) Any payments made for the demand exceeding the NMD shall not be deemed as an agreement by Eskom to make such higher demand available to a customer. Such agreement will be subject to negotiating new terms and conditions to modify the connection and amend the existing electricity supply agreement. Refer to Clause 3.1 for the conditions associated with an increase in demand.

## 2.2. Customers receiving the benefit of diversity

2.2.1. Where multiple PODs receive the benefit of diversity, the NAC will be payable based on the sum of the NMDs of all PODs, provided that the simultaneous maximum demand of all PODs does not exceed the sum of the NMDs. Where the simultaneous maximum demand exceeds the sum of the NMDs, this will be treated as an NMD exceedance in accordance with the above-stated principles. Therefore, the NAC will be calculated where the SMD is greater than the NMD.

2.2.2. This means that the NAC portion for diversity will be calculated differently.

The network access charge per POD is based on the greater of the NMD per POD and the apportioned NMD for the same POD during the current month and preceding 11 months. For those PODs receiving diversity benefit, the monthly apportioned NMD per POD is calculated as follows:

$$\text{POD apportioned NMD} = \text{Total SMD} \times \text{POD NMD} \div \text{Total NMD}$$

## 3. Changes to NMD (not UC)

### 3.1. Customer requests an increase in NMD

3.1.1. A request for an increase in NMD by a customer may be considered as a request for a modification of the connection and amendment to the contract. Eskom has the right to evaluate such a modification before agreeing to increase the capacity (NMD) at the request of the customer.

3.1.2. Where a customer requests an increase in NMD at a point of delivery/premise, the request should be made in writing to Eskom, after which Eskom will prepare a quotation for the new terms and conditions applicable, including the connection charges payable, and will be treated in terms of the conditions of the supply contract between Eskom and the customer.

3.1.3. A connection charge will take into account the following:

- a) Additional dedicated costs.
- b) Upstream sharing charges.

3.1.4. The provision of the new NMD is subject to the agreement by the parties of the new terms and conditions and where applicable, to any required work being completed by Eskom.

3.1.5. The new NMD shall apply from the date that the additional capacity is made available by Eskom and the customer shall not be entitled to the additional capacity until the agreed date.

3.1.6. The provision of the new NMD will be subject to the minimum contract period agreed upon between Eskom and the customer.

3.1.7. For temporary increases in NMD, refer to Clause 3.2.

### **3.2. Temporary increase in NMD agreed to in advance**

3.2.1. Temporary increases in NMD agreed to in advance, may be made available by Eskom to the customer in respect of the relevant point of delivery/premise to cover specific, short-term needs such as the commissioning of new plant, or the re-commissioning or refurbishment of existing plant prior to returning it to full service.

3.2.2. Temporary increases in NMD will not be granted for normal operational requirements, seasonal usage or any other usage of a cyclical or repetitive nature.

3.2.3. Temporary increases in NMD will be subject to obtaining prior written agreement from Eskom. Such agreement is conditional on the availability of the necessary network and generation capacity and on the increase being of a temporary nature.

3.2.4. Temporary increases in NMD will be subject to a minimum contract period as agreed between Eskom and the customer.

### **3.3. Reduction in NMD**

3.3.1. Where a customer requires a reduction in NMD at a POD for any of the WEPS, Miniflex, Megaflex and Nightsave (Urban) tariffs or where TUoS / DUoS charges are applicable, written notice of 12 months is normally required. This notice period applies also in the event of a tariff conversion between any of the above-mentioned tariffs. If the customer can motivate a downgrade sooner, such as for the reasons provided in Clause 3.3.3, permission for a shorter notice period with a minimum of 3 months will not be unreasonably withheld.

3.3.2. The reduction of NMD occurs with immediate effect after the notice period has expired.

3.3.3. A reduction in NMD to a value that is below the previous 12 months' highest recorded demand in all time periods will not be allowed, unless motivated by any of the following: change in operations, closure of plant; installation by the customer of load management equipment, the implementation of demand side management initiatives or where demand exemptions have been granted.

3.3.4. For all other standard tariffs (Nightsave Rural, Ruraflex, Landrate, Businessrate, Homepower, etc.) the current notice periods contained in the customers' contracts shall apply.

3.3.5. Eskom's approval of a reduced NMD is subject to Clause 3.3.2 above and acceptance by the customer of any revised conditions or connection charges as referred to in Clause 3.3.8.

3.3.6. The reduced NMD will be applied from the first reading date following the normal 12-month notice period, or any lesser notice period that Eskom agreed to, and the annual utilised capacity (UC) will be reset to the new lower value.

3.3.7. If, in the 12 months following any reduction of NMD under Clause 3.3.1, the reduced NMD is exceeded, the new demand level recorded will become the annual UC where the new demand exceeds the allowable 5% deadband. This will apply from the time of the reduction (i.e. it will be backdated with interest but only for those events exceeding the NMD) and the customer will be rebilled accordingly, including all excess network access charges stated in Clause 2. This shall not apply to temporary increases in demand negotiated under Clause 3.2.

3.3.8. A connection charge may be required where:

- a) equipment must be removed;
- b) upstream sharing charges were part of previous connection charge(s);
- c) an upfront capital allowance was provided, based on a higher capacity as part of previous connection charge(s).

3.3.9. Temporary reductions in NMD will not be allowed.

### **3.4. Changes following exceedance of NMD**

In the event that the metered maximum demand in a billing period exceeds the NMD for that customer in respect of the relevant point of delivery/premise, or where the simultaneous maximum demand of PODs that receive the benefit of diversity exceeds the sum of the NMDs, the following will apply:

- 3.4.1. Any exceedance of the NMD shall constitute a breach of Eskom's electricity supply contract and Eskom shall, at its election, be entitled to cancel the supply contract (subject to the customer's right to negotiate the conclusion of a new contract with Eskom in which new contract the customer's NMD shall be restated, alternatively, to apply the remedies available to Eskom under any conservation and/or rationing programme or scheme which may be introduced, adopted or implemented by the National Energy Regulator, the Department of Minerals and Energy or any other regulatory body from time to time (unless Eskom is obliged under either of such programmes to implement a specified remedy in response to the aforesaid breach). Also refer to Clause 2.1(f).
- 3.4.2. If the customer does not conclude a new contract with Eskom, Eskom reserves the right to remove any equipment surplus to meeting the contracted NMD or to provide this capacity for the use of customers who have contracted for the capacity. Also refer to Clause 2.1(f).
- 3.4.3. The tariff charges will be raised in terms of Clause 2 unless an exemption is requested and approved as described in Clause 4. The charges will be waived if the capacity is allocated elsewhere in terms of Clause 3.4.1 and the customer limits its demand to the contractual NMD.
- 3.4.4. Where the capacity of the Eskom network is inadequate to make supply available at a higher level on a continuous basis, the new demand level will apply only for the billing period in which it was established, pending the upgrading of the local network and renegotiation of the NMD. Thereafter the NMD will be limited to the available capacity of the network, as determined by Eskom, by suitable load-limiting equipment installed by the customer. The customer will be liable for all associated costs if the actual demand is still exceeded.
- 3.4.5. Under times of overall system (generation and/or network) constraints, Eskom may request the customer in breach of contract to remain within the contractual NMD. If the customer fails to heed the request, Eskom reserves the right to take appropriate action to ensure system integrity and to supply customers adequately who are not in breach of their contracts.

#### **4. Exemption for unforeseen increases in utilised capacity or chargeable demand**

Exemptions for exceeding the annual UC and/or chargeable demand due to unforeseen demand overshoots (including faults) caused by a failure in normal operations and/or technical functioning of a customer's load, or as a result of *force majeure*, will apply as follows. (Note: temporary increases agreed to in advance are covered in Clause 3.2.)

##### **4.1. Applications for exemptions**

The customer is required to submit a fully motivated written application. If approved, an exemption will be provided on the terms and conditions set by Eskom. Exemptions will be given under certain circumstances as detailed in Clauses 4.2 and 4.3. These exemptions will, however, be recorded as events in the customer's history and will be considered when establishing a new UC for the next 12-month period.

##### **4.2. Exemptions for demand overshoots attributable to Eskom and *force majeure***

In all instances where a customer's demand overshoot is caused by an Eskom electricity supply event or is due to *force majeure* (as defined in the supply agreement), the actual measured and chargeable demand will be reset to a value that would have prevailed had the event giving rise to the overshoot not taken place. This will be done within the month it occurred and the customer will pay only the demand-related charges on the demand that would have applied had the event not taken place. Neither the UC nor the NMD will be reset to the higher (actual measured) value.

##### **4.3. Exemptions for demand overshoots attributable to demand side management (DSM) strategies or demand market participation (DMP) products**

- 4.3.1. Demand overshoots above the normal NMD due to a load response from Eskom-initiated DSM strategies or DMP, will be exempted.
- 4.3.2. For demand overshoots attributable to specific short-term requirements such as commissioning refer to Clause 3.2, Temporary increase in NMD agreed to in advance.

#### 4.4. Refusal to grant demand exemption/temporary increase in demand

4.4.1. Where the customer's operation is responsible for the event leading to the NMD being exceeded, exemption will not be granted. Clause 2 allows for two exceedances within the allowable 5% deadband in a rolling 12-month period in the NMD, before the UC will be reset.

4.4.2. Typical events causing a demand which will not receive exemption, include short-term fluctuations in demand, failure or subsequent return to service of any part of the customer's plant or load control systems, including power factor correction failure, failure of own generation equipment or human error, and operational decisions of the customer not agreed to in writing (including commissioning) and in advance.

### 5. TERMS AND CONDITIONS OF CONTRACTS

These rules shall form part of all electricity supply agreements concluded by Eskom.

### 6. DEFINITIONS

Chargeable demand	The highest average demand as measured in kVA in a 30-minute integrating period, per point of delivery/premise during the chargeable time periods for the applicable tariff. The network demand charge is recovered on the chargeable demand.
Capital allowance	The capital allowance is the contribution to shared or dedicated assets included in the future tariff rates.
Dedicated equipment	Electricity assets installed for the sole usage of the customer, i.e. unlikely to be shared by other customers.
Demand market participation (DMP) product	An Eskom initiative through which customers (direct and indirect), contract to make capacity available for reduction upon instruction from the Eskom System Operator, in exchange for financial benefits.
Demand side management (DSM)	Technology or programme that encourages customers to modify their patterns of electricity usage including timing and level of consumption. This includes conservation, interruptibility and load shifting.
Non-simultaneous Maximum Demand	Highest averaged demand measured in kVA or kW during any integrating period within a designated billing period of an individual POD.
Normal notified load	The maximum load that the customer expects to purchase from Eskom, excluding all active load control or own generation.
Notice period	The period required as per the electricity supply agreement for cancellation/changes to the contract
Power Conservation Programme (PCP)	National programme is to address the current energy crisis. The PCP will consist of the Energy Conservation Scheme, the rules and processes for managing load and consumption growth and changes to tariff structures and electricity prices.
PCP Energy Conservation Scheme	Is the optimum tool to achieve a fair, quick but sustainable reduction in electricity consumption in South Africa. The Scheme will oblige all consumers to make a contribution to conserving energy through making energy efficient consumption decisions.
Probable contingency	The reasonable probability of an event taking place
Temporary or short term	A supply or capacity that is generally required for less than one year
Upstream sharing charges	These are the national average connection charges raised, apart from the tariff rates, as a contribution to the sharing of upstream costs of networks (line and capacity).

**Refer to Eskom's Tariff and Charges book at [www.eskom.co.za/tariffs](http://www.eskom.co.za/tariffs) for definitions not listed above and more information on the NMD rules.**

## 7. ABBREVIATIONS

<b>AUC</b>	Annual Utilised Capacity
<b>DSM</b>	Demand Side Management
<b>DMP</b>	Demand Market Participation
<b>DUoS</b>	Distribution Use of System Charges
<b>kVA</b>	Kilo Volts Ampere
<b>kW</b>	Kilo Watt
<b>MUC</b>	Monthly Utilised Capacity
<b>NAC</b>	Network Access Charge
<b>NDC</b>	Network Demand Charge
<b>NMD</b>	Notified Maximum Demand
<b>PCP</b>	Power conservation programme
<b>POD</b>	Point of Delivery
<b>SMD</b>	Simultaneous Maximum Demand
<b>UC</b>	Utilised Capacity
<b>TOU</b>	Time-of-use
<b>TUoS</b>	Transmission Use of Systems Charges
<b>WEPS</b>	Wholesale Electricity Pricing System