

NOTIFIED MAXIMUM DEMAND RULES

The Notified Maximum Demand (NMD) rules have been approved by the City of uMhlatuze for the inclusion in the 2010/2011 schedule of tariffs and each financial year thereafter. The NMD rules are based on the Eskom NMD rules as approved by the National Energy Regulator of South Africa and amended from time to time. Any change in the Eskom NMD rules will automatically result in a change to Councils NMD rules.

1. Notified Maximum Demand

1.1 Initial selection of notified maximum demand (NMD)

- 1.1.1 The NMD will be maximum capacity in kVA, as measured over a 30-minute integrating period, per point of delivery/premise (POD) that the customer will contract for the Municipality 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 the Municipality.
- 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% dead band, over a rolling 12 months. To avoid the excess network access charge, a request should be submitted to the Municipality to have the NMD increased. However, it is important to note that, the Municipality 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 the 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 the Municipality of the maximum capacity to be provided at each individual POD under normal operating and loading conditions. Customers who have been granted the benefit of diversity are permitted in terms of the rules for diversity benefits, to exceed 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. The Municipality 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 the half-hourly periods of 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.

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 recorded demand (b) outside of the allowable 5% dead band 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 of the previously set AUC, except for the first two events of any two events that are within 5% of the NMD, over the preceding rolling 12 months.
 - i. For the two first 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 2.1 c) as the higher of the actual recorded demand registered during that billing month of 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 with the Municipality 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.

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. The Municipality 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 the Municipality, after which the Municipality 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 the Municipality and the customer.

- 3.1.3 A connection charge will take into consideration:
- 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 where applicable, to any required work being completed by the Municipality.
- 3.1.5 The new NMD shall apply from the date that the additional capacity is made available by the Municipality 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 the Municipality and the customer.
- 3.1.7 For temporary increases refer 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 available by the Municipality to the customer in respect of the relevant point of deliver/premise to cover specific, short-term needs such as the commissioning of the 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 the Municipality. Such agreement is conditional on the availability of the necessary network and generation capacity and on the increase being of a temporary nature.

Temporary increases in NMD will be subject to a minimum contract period as agreed between the Municipality and the Customer.

Reduction in NMD

Where a customer requires a reduction in NMD at a POD 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 reasons provided in Clause 3.3.3, permission for a shorter notice period with a minimum of 3 months will not be unreasonably withheld.

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

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 the plant, installation by the customer of load management equipment, the implementation of demand side management initiatives or where demand exemptions have been granted.

The Municipality'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.

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

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% dead band. 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.

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).

Temporary reductions in NMD will not be allowed.

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 deliver/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:

Any exceedance of the NMD shall constitute a breach of the Municipality's electricity supply contract and the customer shall be entitled to cancel the supply contract (subject to the customer's right to negotiate the conclusion of a new contract with the Municipality in which the new contract the customer's NMD shall be restated.

If the customer does not conclude a new contract with the Municipality, the Municipality reserves the right to remove any equipment surplus to meeting the contracted NMD or to provide this capacity for the use of customer who have contracted for the capacity.

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.

Where the capacity of the Municipal 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 the renegotiation of the NMD. Thereafter the NMD will be limited to the available capacity of the network, as determined by the Municipality, 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.

Under times of overall system (generation and/or network) constraints, the Municipality may request the customer in breach of contract to remain within the contractual NMD. If the customer fails to heed the request, the Municipality reserves the right to take appropriate actions to ensure system integrity and to supply customers adequately who are not in breach of their contracts.

Exemption for unforeseen increases in 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)

Applications for exemptions

The customer is required to submit a fully motivated written application. If approved, the Municipality will provide an exemption on the terms and conditions as set. 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.

Exemptions for demand overshoots attributable to the Municipality and *force majeure*

In all instances where a customer’s demand overshoot is caused by a Municipal 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 been applied had the event not taken place. Neither the UC nor the NMD will be reset to the higher (actual measured) value.

Refusal to grant demand exemption/temporary increase in demand

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% dead band in a rolling 12-month period in the NMD, before the UC will be reset.

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 of 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.

Example							
	Reading	NAC	% Tolerance in access of registered NAC	Occurrence of exceeding NMD	Occurrence of exceeding dead band	Excess Network Access Charge	
01-Oct-09	458	480					
01-Nov-09	470	480	98				
01-Dec-09	485	480	101	1			
01-Jan-10	475	480	99				
01-Feb-10	507	507	106		1	1 x NAC x 27	(507 - 480)
01-Mar-10	475	507	94				
01-Apr-10	540	540	107		2	2 x NAC x 33	(540 - 507)
01-May-10	491	540	91				
01-Jun-10	475	540	88				
01-Jul-10	570	570	106		3	3 x NAC x 30	(570 - 540)
01-Aug-10	506	570	89				
01-Sep-10	508	570	89				
01-Oct-10	575	575	101	2		1 x NAC x 5	(575 - 570)
01-Nov-10	580	575	101	3		2 x NAC x 5	(580 - 575)
01-Dec-10	530	575	92				

01-Jan-11	610	610	106		44 x NAC x 40	(610 - 570)
01-Feb-11	575	610	94			
01-Mar-11	550	610	90			
01-Apr-11	499	610	82			
01-May-11	531	610	87			
01-Jun-11	545	610	89			
01-Jul-11	540	610	89			
01-Aug-11	580	610	95			
01-Sep-11	581	610	95			
01-Oct-11	604	610	99			
01-Nov-11	620	610	102			
01-Dec-11	580	610	95			
01-Jan-12	575	620	94			
01-Feb-12	579	620	93			
01-Mar-12	580	620	94			

DEFINITIONS

Chargeable demand	The highest average demand as measured in kVA in a 30-minute integrating period, per point of deliver/premise during the chargeable time periods for the applicable tariff. The network demand charges are recovered on the chargeable demand.
Dedicated equipment	Electricity assets installed for the sole usage of the customer, i.e. unlikely to be shared by other customers.
Non-simultaneous Maximum Demand	Highest averaged demand measured in kVA or kWh 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 the Municipality, excluding all active load control or own generation.
Notice period	The period required as per the electricity supply agreement for cancellation/changes to contract.
Probable contingency	The reasonable probability of an event taking place.
Temporary or short term	A supply of capacity that is generally required for less than one year.
Upstream sharing charges	Promulgated engineering tariffs.

