Proposed rationalising of Eskom tariffs to Municipalities

Customer information

June/July 2018

Introduction

- Municipalities buy their power from Eskom through 11 different tariff options and different rates
  - This becomes a wholesale electricity cost to the Municipality which is used to determine charges to their end customers.
  - This large variety of tariffs significantly adds to the complexity for municipalities to calculate their purchase costs and to determine their end-use tariffs .
  - This may result in under-recovery on what they should pay Eskom and can add to municipal debt.
- As part of the retail tariff plan submitted to NERSA in August 2014, Eskom indicated its intention to make a submission to NERSA of rationalisation of Municipality tariffs.
  - NERSA has indicated support for the rationalisation and has requested Eskom to investigate alternate options to be available to municipalities as a tariff class.
  - The intent is therefore to treat municipalities as a tariff category on its own applicable to municipal distributors.

Introduction (2)

- Eskom is proposing to rationalise municipal tariffs by reducing the number of tariff options
- Eskom submitted its proposal to Nersa in November 2017
- Nersa published Eskom's submission and a consultation paper on 6 June 2018 with the following dates

Action	Timeframe
1. NERSA received the application from Eskom	6 November 2017
2. Approval by Electricity Subcommittee (ELS) of Eskom's application, consultation paper and note the proposed timelines.	5 April 2018
3. Submission to Energy Regulator (ER) requesting publication of Eskom's application and approval of the proposed timelines	25 April 2018
4. Publication of the application and consultation paper for stakeholder comments.	6 June 2018
5. Closing date for stakeholder comments	29 June 2018
6. NERSA staff to consider stakeholder comments and further analysis of Eskom's submission	2–27 July 2018
7. Public Hearing on Eskom's application	August 2018
8. ELS panel debriefing	August 2018
9. ELS meeting to consider the Reasons for Decision (RfD)	12 September 2018
10. ER decision on Eskom's application	26 September 2018
11. Communication of decision to Eskom and key Government departments	26 September 2018
12. Publication of NERSA decision	26 September 2018

- It is to be noted that Nersa published a version of the submission that included all municipal impacts and names. Nersa made a decision not to publish the public version that Eskom provided, where municipal names were removed.

Summary of the submission

- All large power tariffs, urban and rural will be combined into a Megaflex structure version - called Municflex*
  - The following municipal tariff versions will cease to exist
    - Nightsave Urban Large and Small, Miniflex, Ruraflex, Nightsave Rural
- All small power tariffs, urban and rural will be combined into a Businessrate rate structure version - called Municrate*
  - The following municipal tariff versions will cease to exist
    - Landrate and Homepower
- The public lighting tariff will be retained
- The proposed rationalisation will result in a revenue shortfall
  - Mainly due to the removal of the rural tariffs, which will require an upward price adjustment to all tariffs to ensure revenue neutrality.
  - Eskom does not propose this to be addressed in the RCA but rather through the Eskom annual price increase adjustment (called ERTSA by Nersa)
  - No volume response has been built in as this is not known and can only be substantiated after the fact. Volume variance will therefore be dealt with on actual numbers in compliance to the MYPD rules
- The proposed restructuring is done comparing like for like i.e. based on existing tariffs and not through a new total tariff restructuring and cost of supply study which would impact all tariffs – not just municipal tariffs
  - Eskom will be submitting a tariff plan shortly with updated tariffs based on a new cost of supply, which will affect all tariffs.

*the naming of the tariffs will be subject to Eskom obtaining the trademarks

Key objectives for rationalising the tariffs applicable to municipalities

Providing three tariffs to simplify municipality tariffs in terms of the following tariff features:

- There will be one tariff for large power users.
- There will be one tariff for small power use.
- The current public lighting tariff will be retained.
- There will no longer be an urban/rural tariff differentiation for municipality tariffs.

Simplification of the sales and revenue forecasting process within both Eskom and municipalities:

- The rationalised tariffs simplify the process of determining the purchase cost for municipalities.
- Eskom also benefits in terms of its sales and revenue forecasting process, as there will be fewer tariff variations for municipalities.

Tariff signals will be retained by:

- the Megaflex tariff structure and rates and time-of-use pricing signals for large power users; and
- the Businessrate tariff structure and rates for small power users.

Compliance with Nersa requirements:

- This proposal is aligned with Nersa's objective of simplifying municipality tariffs.

The proposed changes (1)

The rationalisation of Municipality tariffs submission to NERSA contains the following proposals:

1. The number of tariff options available to municipalities will be reduced to 3 tariffs options as follows:

   a) All existing municipal points of delivery currently allocated to the existing municipal tariffs shall be reallocated to either of the two proposed tariff options based on their existing tariff and supply size.

   b) The Megaflex, Miniflex, Nightsave Urban Small and Nightsave Urban Large, Ruraflex, Nightsave Rural shall be combined into one tariff to be called “Municflex” for all municipality large power use points of delivery.

      - The Municflex tariff option shall have the same tariff characteristics as the predecessor local authority Megaflex tariff in terms of tariff structure and rates, with the exception that the tariff shall be now be applicable to points of delivery with an NMD of 25kVA and above.

   c) The Businessrate, Landrate and Homepower tariff options shall be combined into one tariff to be called “Municrate” for all municipality small power use points of delivery.

      - The Municrate tariff shall have the same tariff characteristics as the predecessor local authority Businessrate tariff structure and rates.

   d) Public Lighting tariff to remain as a non-metered tariff for existing public lighting supplies.

The proposed changes (2)

2. There shall no longer be a urban/ rural differentiation for municipality points of delivery
2. As is currently the practice, once the initial reallocation to the new municipal tariffs has been completed, municipal points of delivery between 25 kVA and 100 kVA will continue to have a choice to be on the Municflex and Municrate tariffs subject to the payment of the applicable conversion charges.
3. Any revenue impact resulting from the municipality tariff rationalisation will be recovered through the annual price adjustment.
4. Policies: All Municflex and Municrate customers shall be subject to the existing policies relating to urban customers and any other applicable policies for similar-size customers.

Tariff reallocations

Existing Municipal tariff versions	Proposed tariff versions
BUSINESS RATE	BUSINESS RATE structure (Municrate)
HOME POWER	
LAND RATE	
NIGHTSAVE Urban Large and Small	MEGA FLEX structure (Municflex)
MEGA FLEX	
MINI FLEX	
RURA FLEX	
NIGHTSAVE Rural	

Why is public lighting tariff excluded from the scope?

- **Public lighting tariff** is a non-metered electricity tariff for public lighting or similar supplies in Urban areas where Eskom provides a supply for, and if applicable maintains, any street light or similar public lighting and where, the charge for the supply and service is fixed based on the number of lights and light fixtures. This tariff is applicable only in Eskom-designated urban areas.

- No change is proposed to this tariff

- Any changes to the rates will be dealt with through future Eskom's tariff restructuring plan using an updated cost of supply study

Tariff design/allocation assumptions

1. A revenue simulation was done assuming that all local authority large power points of delivery will be allocated to Megaflex and all small power points of delivery (excluding Public lighting) will be allocated to Businessrate.

2. The revenue impacts from the tariff conversion assumptions were based on the 2017/18 budget volumes.

3. The tariff change is per point of delivery (PoD) and not per customer account.

4. The assumptions exclude:

    - Possibilities of customers changing consumption patterns as this is not known and cannot be therefore quantified; and

    - Possibility of the tariff improving bad debt.

5. The Non-local authority tariffs remain the same.

Total revenue impact (based on 2017/18 forecast and Rand values)

Tariff before conversion	No of PODs	Forecasted Sales	Tariff submission revenues		Tariff simulation revenues		Revenue difference	
Homepower 1	105	0.00 GWh	Rm	0.68	Rm	1.78	Rm	1.10
Homepower 2	65	0.00 GWh	Rm	2.51	Rm	3.14	Rm	0.62
Homepower 3	25	0.00 GWh	Rm	1.16	Rm	1.51	Rm	0.34
Homepower 4	515	0.01 GWh	Rm	9.50	Rm	18.68	Rm	9.18
Landrate 1	1213	0.01 GWh	Rm	33.25	Rm	27.63	Rm	-5.62
Landrate 2	377	0.01 GWh	Rm	21.90	Rm	19.31	Rm	-2.60
Landrate 3	254	0.01 GWh	Rm	24.24	Rm	21.91	Rm	-2.33
Landrate 4	156	0.00 GWh	Rm	3.51	Rm	2.81	Rm	-0.71
Miniflex	135	0.76 GWh	Rm	706.23	Rm	719.80	Rm	13.57
Nightsave Large	74	9.18 GWh	Rm	7 602.98	Rm	7 459.64	Rm	-143.34
Nightsave Rural	868	1.05 GWh	Rm	1 322.60	Rm	1 014.76	Rm	-307.84
Nightsave Small	45	0.08 GWh	Rm	88.08	Rm	82.09	Rm	-6.00
Ruraflex	257	0.30 GWh	Rm	349.53	Rm	329.47	Rm	-20.06
	4113	**11.42 GWh**	**Rm**	**10 166**	**Rm**	**9 703**	**Rm**	**-463**
Total Municipal	*12009*	*90.06GWh*	*Rm*	*74 393*	*Rm*	*73 930*	*Rm*	*-463*
Ratio of converted	*34%*	*13%*		*14%*		*13%*		*100%*

Municflex (as per the submission in 2017/18 Rand values)

Municflex tariff

Local authority

Transmission zone	Voltage	Active energy charge [c/kWh]												Transmission network charges [R/kVA/m]	
		High demand season [Jun - Aug]						Low demand season [Sep - May]							
		Peak		Standard		Off Peak		Peak		Standard		Off Peak			
			VAT incl		VAT incl		VAT incl		VAT incl		VAT incl		VAT incl		VAT incl
≤ 300km	< 500V	279.71	318.87	85.11	97.03	46.44	52.94	91.58	104.40	63.20	72.05	40.28	45.92	R 7.79	R 8.88
	≥ 500V & < 66kV	275.30	313.84	83.41	95.09	45.29	51.63	89.81	102.38	61.81	70.46	39.22	44.71	R 7.11	R 8.11
	≥ 66kV & ≤ 132kV	266.61	303.94	80.76	92.07	43.86	50.00	86.97	99.15	59.87	68.25	37.97	43.29	R 6.92	R 7.89
	> 132kV*	251.27	286.45	76.12	86.78	41.33	47.12	81.96	93.43	56.41	64.31	35.79	40.80	R 8.76	R 9.99
> 300km and ≤ 600km	< 500V	281.99	321.47	85.43	97.39	46.38	52.87	91.99	104.87	63.33	72.20	40.17	45.79	R 7.83	R 8.93
	≥ 500V & < 66kV	278.05	316.98	84.23	96.02	45.74	52.14	90.71	103.41	62.43	71.17	39.60	45.14	R 7.18	R 8.19
	≥ 66kV & ≤ 132kV	269.22	306.91	81.55	92.97	44.28	50.48	87.82	100.11	60.44	68.90	38.33	43.70	R 6.97	R 7.95
	> 132kV*	253.77	289.30	76.89	87.65	41.74	47.58	82.77	94.36	56.98	64.96	36.14	41.20	R 8.84	R 10.08
> 600km and ≤ 900km	< 500V	284.80	324.67	86.28	98.36	46.84	53.40	92.90	105.91	63.95	72.90	40.57	46.25	R 7.93	R 9.04
	≥ 500V & < 66kV	280.85	320.17	85.07	96.98	46.20	52.67	91.63	104.46	63.03	71.85	40.00	45.60	R 7.24	R 8.25
	≥ 66kV & ≤ 132kV	271.96	310.03	82.37	93.90	44.73	50.99	88.69	101.11	61.04	69.59	38.72	44.14	R 7.03	R 8.01
	> 132kV*	256.32	292.20	77.66	88.53	42.16	48.06	83.62	95.33	57.55	65.61	36.51	41.62	R 8.96	R 10.21
> 900km	< 500V	287.66	327.93	87.15	99.35	47.33	53.96	93.84	106.98	64.58	73.62	40.98	46.72	R 7.97	R 9.09
	≥ 500V & < 66kV	283.66	323.37	85.92	97.95	46.66	53.19	92.52	105.47	63.68	72.60	40.38	46.03	R 7.31	R 8.33
	≥ 66kV & ≤ 132kV	274.70	313.16	83.22	94.87	45.19	51.52	89.60	102.14	61.66	70.29	39.12	44.60	R 7.08	R 8.07
	> 132kV*	258.84	295.08	78.45	89.43	42.63	48.60	84.48	96.31	58.15	66.29	36.91	42.08	R 9.03	R 10.29

* 132 kV or Transmission connected

Distribution network charges							
Voltage	Network capacity charge [R/kVA/m]		Network demand charge [R/kVA/m]		Urban low voltage subsidy charge [R/kVA/m]	
		VAT incl		VAT incl		VAT incl
< 500V	R 15.54	R 17.72	R 29.45	R 33.57	R 0.00	R 0.00
≥ 500V & < 66kV	R 14.25	R 16.25	R 27.01	R 30.79	R 0.00	R 0.00
≥ 66kV & ≤ 132kV	R 5.10	R 5.81	R 9.42	R 10.74	R 12.48	R 14.23
> 132kV / Transmission connected	R 0.00	R 0.00	R 0.00	R 0.00	R 12.48	R 14.23

Voltage	Ancillary service charge [c/kWh]	
		VAT incl
< 500V	0.36	0.41
≥ 500V & < 66kV	0.35	0.40
≥ 66kV & ≤ 132kV	0.33	0.38
> 132kV / Transmission	0.31	0.35

Customer categories	Service charge [R/account/day]		Administration charge [R/POD/day]	
		VAT incl		VAT incl
> 1 MVA	R 177.48	R 202.33	R 80.00	R 91.20
Key customers	R 3 477.93	R 3 964.84	R 111.07	R 126.62

Reactive energy charge [c/kVArh]			
High season		Low season	
	VAT incl		VAT incl
12.49	14.24	0.00	0.00

Electrification and rural network subsidy charge [c/kWh]	
	VAT incl
6.91	7.88

Municrate (as per the submission in 2017/18 Rand values)

Municrate tariffs

Local authority

	Energy charge [c/kWh]		Ancillary service charge [c/kWh]		Network demand charge [c/kWh]		Network capacity charge [R/POD/day]		Service and administration charge [R/POD/day]	
		VAT incl		*VAT incl*		*VAT incl*		*VAT incl*		*VAT incl*
Municrate 1	**95.77**	*109.18*	**0.36**	*0.41*	**13.27**	*15.13*	**R 19.04**	*R 21.71*	**R 16.30**	*R 18.58*
Municrate 2	**95.77**	*109.18*	**0.36**	*0.41*	**13.27**	*15.13*	**R 32.10**	*R 36.59*	**R 16.30**	*R 18.58*
Municrate 3	**95.77**	*109.18*	**0.36**	*0.41*	**13.27**	*15.13*	**R 55.47**	*R 63.24*	**R 16.30**	*R 18.58*
Municrate 4	**257.71**	*293.79*	**0.36**	*0.41*	**13.27**	*15.13*				

Financial implications

- The revenue impacts from the tariff reallocation assumptions was based on the 2017/18 budgeted sales which is more realistic view of sales volumes.
  - There is an estimated revenue difference of -Rm 463 and this will require an upward price adjustment to all tariffs to ensure revenue neutrality. Eskom does not propose this to be addressed in the RCA
  - No volume response has been built in as this is not known and can only be substantiated after the fact. Volume variance will therefore be dealt with on actual numbers and in complication to the MYPD rules
- Urban Municipality tariffs
  - Depending on load factor (LF) and size of supply, the customer can save or pay more in any of these tariff options.
- .Rural Municipality tariffs
  - Rural tariffs are more expensive than urban tariffs due to higher costs of supplying rural customers. However, this classification of rural to Municipalities causes dissatisfaction and disputes.
  - The removal of rural tariff categorisation for Municipality tariffs will in most cases result in an initial benefit, except for those with very low load factors – high NMD and low consumption - this is due to the higher network charges on Megaflex. Will need to evaluate if NMDs are incorrect
- SPU tariffs
  - Businessrate tariff is more cost reflective and includes fixed charges
  - Low consumption PODs on Homepower tariffs will see an increase, as the benefit previously realised through the low rate on IBT tariff will fall away.
- It is advised that the models provided are used to assess the overall impact on the municipality - look at all the effected points of delivery, as for some tariffs the effect may be a negative impact and for other a positive impact.

Tariff impact models

- Eskom will provide a summary of the impact for each municipality so they can effectively engage with the submission.
- Eskom has also developed a model, where actual consumption data can be used. This model is updated with 2018/19 tariffs
- The large power version (COMPARISON MODEL MUNICFLEX 2018/19) is as follows
  - Select existing tariff, voltage, Transmission zone and size of supply
  - Insert NMD/UC and then chargeable demand, reactive energy and kWh consumption in peak, standard and off-peak periods, per month

Customer name/POD ID:	xxxx						
Original tariff	NIGHTSAVE URBAN LARGE	Select original tariff					Lookups
Supply voltage:	≥ 66kV & ≤ 132 kV	Note: Choose > 132 kV for direct Transmission connected even if voltage is lower					Inputs
Rural or Urban	URBAN						Selection
Transmission zone	≤ 300 km	TOU periods and Tx map'!A1					Output/calculation
Customer segment/size	Key customers						Output or input
NMD/UC kVA	30,000						

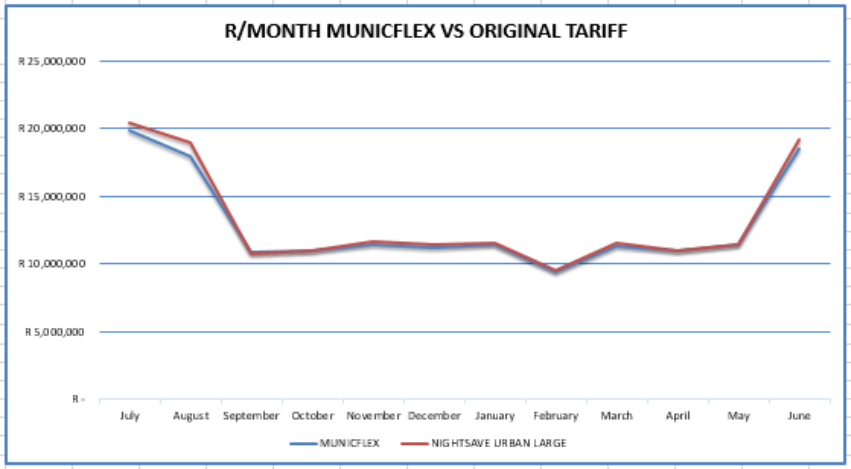
Total energy consumption and demand			July	August	September	October
Consumption information	No. of days in billing month	Unit	31	31	30	31
	NMD/UC kVA	kVA	30,000	30,000	30,000	30,000
	Chargeable demand	kVA	29,654	26,746	25,075	29,194
	AUC	kVA	30,000	30,000	30,000	30,000
	Reactive energy	kVArh				
	Total energy consumed	**kWh**	**17,310,341**	**16,223,520**	**14,839,498**	**14,860,906**
	Peak energy	kWh	3,131,386	2,646,254	2,728,162	2,668,094
	Standard energy	kWh	7,731,077	6,925,229	6,479,098	6,508,243
	Off-peak energy	kWh	6,447,878	6,652,037	5,632,238	5,684,568

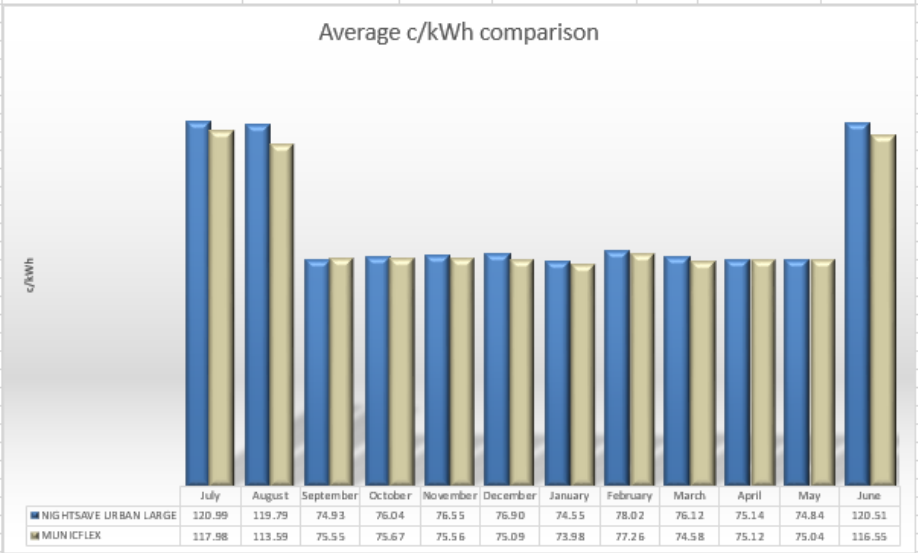
Original tariff | Municflex | Comparison | Tariff charges | TOU periods and Tx map

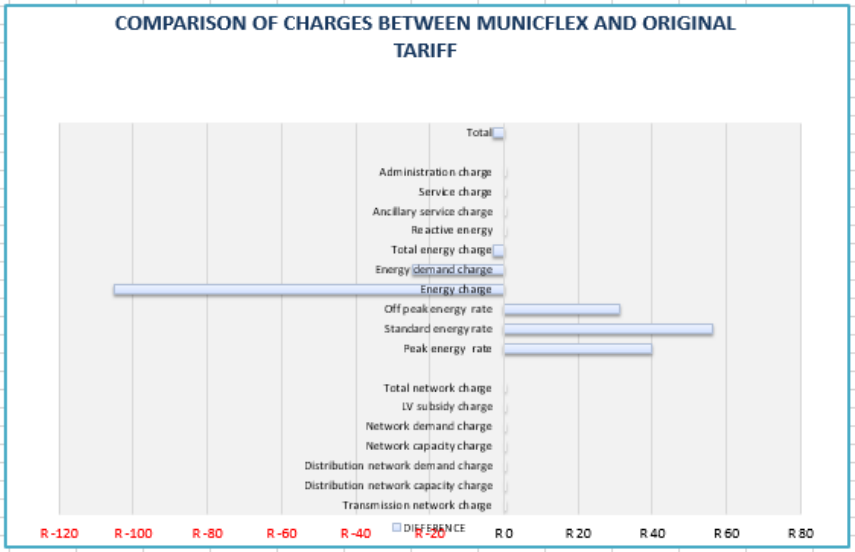
Tariff impact models

Model provides a comparison worksheet

Customer name/POD ID:		zzzz					Load Factor	76%
Comparison		NIGHTSAVE URBAN LARGE	c/kWh		MUNICFLEX	c/kWh	DIFFERENCE	% Difference
Transmission network charge	R	2,828,583	1.57	R	2,828,583	1.57	R 0	
Distribution network capacity charge	R	1,969,200	1.09	R	1,969,200	1.09	R 0	
Distribution network demand charge	R	3,404,336	1.89	R	3,404,336	1.89	R 0	
Network capacity charge	R	-	0.00	R	-	0.00	R 0	
Network demand charge	R	-	0.00	R	-	0.00	R 0	
LV subsidy charge	R	5,097,541	2.83	R	5,097,541	2.83	R 0	
Total network charge	**R**	**13,299,660**	**7.38**	**R**	**13,299,660**	**7.38**	**R 0**	**0%**
Peak energy rate	R	-	0.00	R	39,603,245	21.97	R 39,603,245	
Standard energy rate	R	-	0.00	R	56,154,839	31.15	R 56,154,839	
Off peak energy rate	R	-	0.00	R	31,045,108	17.22	R 31,045,108	
Energy charge	R	105,130,421	58.32			0.00	R -105,130,421	
Energy demand charge	R	24,561,441	13.62			0.00	R -24,561,441	
Total energy charge	**R**	**129,691,862**	**71.94**	**R**	**126,803,191**	**70.34**	**R -2,888,671**	**-2%**
Reactive energy							R 0	
ERS charge	R	13,376,759	7.42	R	13,376,759	7.42	R 0	
Ancillary service charge	R	630,979	0.35	R	630,979	0.35	R 0	
Service charge	R	1,362,366	0.76	R	1,362,366	0.76	R 0	
Administration charge	R	43,508	0.02	R	43,508	0.02	R 0	
Total	**R**	**158,405,134**	**87.87**	**R**	**155,516,463**	**86.26**	**R -2,888,671**	**-1.82%**





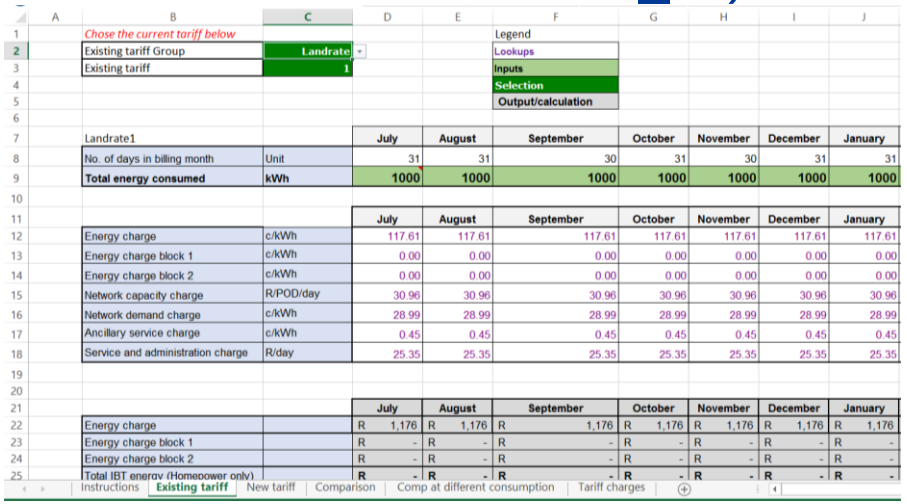


Original tariff | Municflex | **Comparison** | Tariff charges | TOU periods and Tx map

Tariff impact models

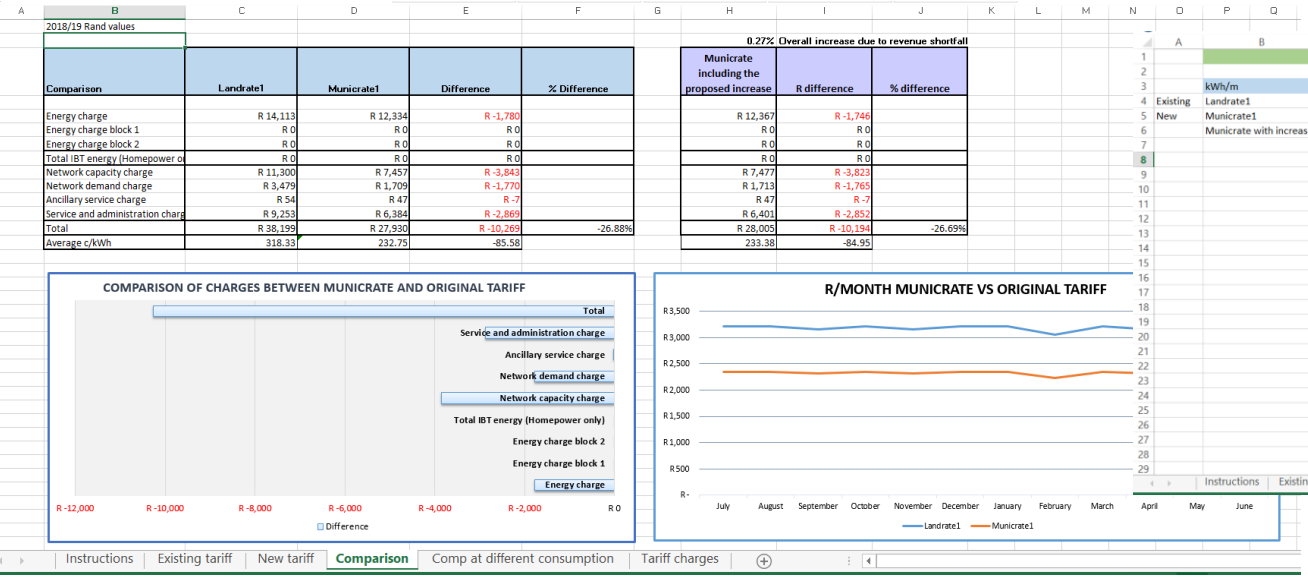
Small power version (COMPARISON MODEL MUNICRATE 2018_19)

- Select existing tariff and supply size
- Insert monthly consumption
- Comparison worksheets provided



	Chose the current tariff below					Legend				
	Existing tariff Group		Landrate			Lookups				
	Existing tariff		1			Inputs				
						Selection				
						Output/calculation				
	Landrate1		July	August	September	October	November	December	January	
	No. of days in billing month	Unit	31	31	30	31	30	31	31	
	Total energy consumed	kWh	1000	1000	1000	1000	1000	1000	1000	
			July	August	September	October	November	December	January	
	Energy charge	c/kWh	117.61	117.61	117.61	117.61	117.61	117.61	117.61	
	Energy charge block 1	c/kWh	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	Energy charge block 2	c/kWh	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	Network capacity charge	R/POD/day	30.96	30.96	30.96	30.96	30.96	30.96	30.96	
	Network demand charge	c/kWh	28.99	28.99	28.99	28.99	28.99	28.99	28.99	
	Ancillary service charge	c/kWh	0.45	0.45	0.45	0.45	0.45	0.45	0.45	
	Service and administration charge	R/day	25.35	25.35	25.35	25.35	25.35	25.35	25.35	
			July	August	September	October	November	December	January	
	Energy charge		R 1,176	R 1,176	R 1,176	R 1,176	R 1,176	R 1,176	R 1,176	
	Energy charge block 1		R -	R -	R -	R -	R -	R -	R -	
	Energy charge block 2		R -	R -	R -	R -	R -	R -	R -	
	Total IBT energy (Homepower only)		R -	R -	R -	R -	R -	R -	R -	

Instructions | Existing tariff | New tariff | Comparison | Comp at different consumption | Tariff charges

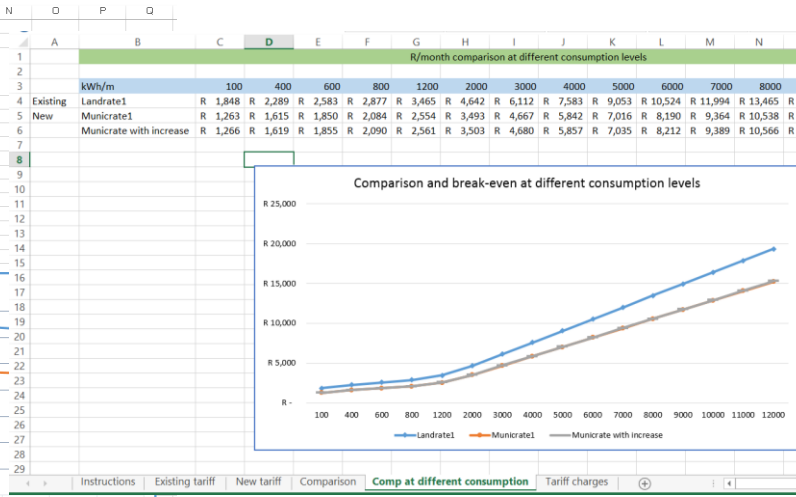


2018/19 Rand values

0.27% Overall increase due to revenue shortfall

Comparison	Landrate1	Municrate1	Difference	% Difference	Municrate including the proposed increase	R difference	% difference
Energy charge	R 14,113	R 12,334	R -1,780		R 12,367	R -1,746	
Energy charge block 1	R 0	R 0	R 0		R 0	R 0	
Energy charge block 2	R 0	R 0	R 0		R 0	R 0	
Total IBT energy (Homepower o	R 0	R 0	R 0		R 0	R 0	
Network capacity charge	R 11,300	R 7,457	R -3,843		R 7,477	R -3,823	
Network demand charge	R 3,479	R 1,709	R -1,770		R 1,713	R -1,765	
Ancillary service charge	R 54	R 47	R -7		R 47	R -7	
Service and administration charg	R 9,253	R 6,384	R -2,869		R 6,401	R -2,852	
Total	R 38,199	R 27,930	R -10,269	-26.88%	R 28,005	R -10,194	-26.69%
Average c/kWh	318.33	232.75	-85.58		233.38	-84.95	

Instructions | Existing tariff | New tariff | Comparison | Comp at different consumption | Tariff charges



R/month comparison at different consumption levels

	kWh/m	100	400	600	800	1200	2000	3000	4000	5000	6000	7000	8000
Existing	Landrate1	R 1,848	R 2,289	R 2,583	R 2,877	R 3,465	R 4,642	R 6,112	R 7,583	R 9,053	R 10,524	R 11,994	R 13,465
New	Municrate1	R 1,263	R 1,615	R 1,850	R 2,084	R 2,554	R 3,493	R 4,667	R 5,842	R 7,016	R 8,190	R 9,364	R 10,538
	Municrate with increase	R 1,266	R 1,619	R 1,855	R 2,090	R 2,561	R 3,503	R 4,680	R 5,857	R 7,035	R 8,212	R 9,389	R 10,566

Instructions | Existing tariff | New tariff | Comparison | Comp at different consumption | Tariff charges

Implementation issues

- Implementation date: 1 July 2019, subject to Nersa approval and may be subject to Eskom's proposed tariff restructuring plan 2019/20 still to be submitted to Nersa
- Contracting
  - Existing contracts will not be amended
  - Eskom's schedule of standard prices (referenced in all contracts) shall include the cessation of the tariffs that fall away as a Nersa approved amendment.
  - All customers initially moved to the proposed tariffs shall be regarded to have been moved to the successor tariff as per Eskom's schedule of standard prices. The move is NOT a tariff conversion.
  - Notices shall be completed for all customers allocated to the proposed tariffs
  - New customer agreements shall reference the new tariffs.
- Customer readiness and customer impact assessment tools
  - Because the Eskom submission was in 2017, the rates shown in the submission are still in 2017/18 Rand values. Eskom has also developed 2 models for your use, where you can input actual consumption data to assess the impact in 2018/19 Rand values

Thank you