Time to hone your Homelight skills

As the end of the month approaches, it is important to remember that since August 2020, Evergreen switched to a Homelight tariff for prepaid electricity. This note will explain what you need to know about Homelight, how it works, and most importantly, how you should use it to make sure you buy your electricity at the lowest possible price.

Homelight is the name given to a tariff for prepayment customers in an Eskom licensed area of supply. Evergreen buys electricity in bulk from Eskom and resells it to its residents via vendors like Meterman or Smartmatter, which use prepayment meters. This allows residents to pay a simple one or two block price which over a year or so evens out to roughly the same cost of electricity which Evergreen pays for its bulk supply. It is the most inexpensive system for distributing network electricity to small users.

Each prepayment meter is registered and has its own account with a vendor (like Meterman or Smartmatter). Each account automatically keeps track of how many units are bought at what price for a particular meter. The vendor collects this data and the money paid by the customers and renders a full account of who bought what and for how much each month. After deducting its own commission, it pays the money over to Evergreen, which uses it to pay part of the monthly Eskom bill. Part of the remainder is recovered from third party users and the rest (communal use) is paid for from the levies.

Prepayment meters must always be in credit to prevent them from being cut off. It is advisable to have some reserve units on a voucher handy should your meter unexpectedly run empty. Buy a voucher for about 100 units (that will cost R160 or so at present) and store it in a safe place against unexpectedly being left in the dark. Simply fold a voucher and slip it securely behind the meter. It is also good practice to regularly read your meter and load more units if it runs low.

The Homelight tariff has two purchase “Blocks”. Block 1, which applies to purchases of up to 600 units (or, if you prefer, kWh) per month, costs R1.58 per unit at present. Block 2, which applies to any number of units over 600 bought during the same month, costs R2.69 per unit. Users of more than 600 units per month put a greater demand on the network, resulting in higher costs in the long run.

All the prepaid meter accounts (note: not the meter itself, only the account) with Meterman and Smartmatter are reset at midnight on the last day of each month. Prepayment meters only add units (which it translates from the code you tap in from your voucher) and subtract the units used. These meters have no way of telling (or caring) what the price of those units was, or when they were bought.

The Homelight tariff is normally adjusted once per year. For Eskom customers like Evergreen, it runs from 1 April (no fool) to 31 March the following year. Confusingly, the municipal electricity year is different; it usually runs from 1 July to 30 June the following year, but this affects us not at all.

How do you use all these bewildering facts to ensure that you can buy your electricity at the best possible price? To illustrate how a simple formula could be used, refer to the two tables attached.

The first table imagines a high-use resident, and the second a medium-use one. The average high-use resident uses nearly 5 800 units per year, the medium user about 4 000. Each table covers a whole year from the end of August this year to the end of July next year, for example. Note that each month is marked either H or L, depending on whether Eskom regards it as a high-use month or low-use month.

For each month-end, five numbers are displayed: First, in column A, are the units (kWh) used during each month. Column B shows the cumulative units used so far. Next, column C shows the units bought at the end of each month, and column D the cumulative total of all the units bought. The last column shows the difference of column D – column B, which is called the buffer (column E).

This buffer is important when using Homelight. It is the accumulated number of units bought, but not yet used so far this annual cycle. It is your buffer against the risk of having to buy more expensive Block 2 units. The examples start off by assuming that there was only a small buffer left at the start of August. (You should normally always have some buffer units saved in your meter or on a voucher).

The first table illustrates how a high-use resident might apply the formula below to prevent having to pay more than the lowest possible Block 1 price. Suppose this resident uses about 5 800 units in a year, which equates to just under 480 units per month on average, in spite of the fact that during July, she uses 750 units per month and during three more months all marked H, she uses 500 units or more.

Here is a simple formula our imaginary high-use resident prefers to use (which you may wish to modify for your own use) to determine how much electricity to buy at the end of each month:

She buys 1½ times the units she used during the month which is just about to end, less the number of units displayed on the meter at that time and the number of units on any vouchers she has not yet put into her meter, except if this total exceeds 600 units. Then she buys only 600 units.

To illustrate how this formula might work for our imaginary high-use resident, please refer to the first attached headed table "*Honing your Homelight skills for high-use*".

Let's assume our high-use resident buys electricity at each month-end when she settles all her bills. She has not bought any electricity during August as yet. At the end of July (midnight on 31st), the meter's account (note: not the meter itself) was reset, which means she can buy up to 600 units again at the low price at any time during August.

Suppose that at the end of August, she checks her meter and sees that of the 600 units her meter displayed at the end of July (i.e the beginning of August), it now shows just 10 units left. She has no unused vouchers. I would not recommend that, but it can happen. This means that she used 590 units during August and she buys the full 600 units as our formula suggests and taps the voucher code into her meter.

Our resident is at risk because of her low buffer (only 10 in the example, which is a bit extreme). Still, she did not buy more than 600 units, because every 6 extra units would have cost her the equivalent of 10 low-price units. Besides, she has no way of knowing how much electricity she will use during September.

Since her meter's account for September has been reset at month-end, she could buy up to 600 units at the lower Block 1 price at any time during September. If she did, she would not be able to buy a full 600 units at the end of September, extending her risk into October. On the other hand, it would have been unnecessary expensive for her to have bought more than 600 units at the end of August.

If September turns out to be a bad month and she finds herself over the Block 1 limit, she will be forced to buy extra expensive units. In that case, she should never buy more than she could possibly use until the month-end and only in small quantities at a time because the meter will load all the units a voucher.

But the example assumes our high-use resident was lucky and used only 550 units in September, so that she did not have to buy any extra units during the month. According to the formula, she again buys 600 units on the last day of September and starts building her buffer with 60 units. Not great, but seeing that spring has sprung, better than nothing.

She takes a break in October with the family and only uses 350 units at home. So she buys only 480 units at the end of October and her buffer increases to a more respectable 180 units. In November her use increases again, and with it her unit purchases and she builds up a 250 unit buffer. By then, the risk that she will run out of sufficient buffer units becomes very small until next winter.

In July next year, suppose it's a cold winter, and our high-use resident's consumption shoots up unexpectedly to 750 units. Brr! Her buffer takes a knock down to 100 units to start the next annual cycle, which is still better than the 10 she started with this year. As a matter of fact, our high-use resident, by following the formula (but perhaps adjusting it a bit to suit her own particular circumstances), could use 100 units a month more on average than in the example, and could pay a cent more than the lowest possible Block1 price all year round.

An example for a medium-use resident, who uses say 4 000 units a year (or just over 300 units per month), is shown in the second table. He follows the same formula a our high-use resident. He buys up to 600 units before the end of August (taking into account what he has already bought during the month) and because he used only 400 units in August, he is able to start with a solid 200 unit buffer.

Because of this easier start than our high-use resident, our medium user can maintain a healthy buffer without ever having to come close to buying 600 units in a single month again this year. In fact, by next July, when the cold winter really sets in, he still has a handsome (though smaller) buffer and is never running the same risks the high-use resident does. But he he should beware of relaxing his vigilance.

This illustrates the wisdom of keeping a close eye on your electricity consumption throughout the year. Although there is no reason not to use electricity in extreme weather conditions (cold or hot), or to help you wash, dry or clean, etc., there is no good reason to waste it, either. There there is a lot of advice on electricity saving on the internet (the Eskom website, for instance). It could reward you handsomely.

Also of note are the results over the annual cycle. In our example, the high-use resident uses 5 800 units and buys 5 900; the difference is of course in the buffer. The medium-to-low user found he buys more and ends up with a higher buffer. But this is never lost and is a bonus because it was probably bought at a lower price than today's. The same applies to low-price units bought before a price increase.

The formula should only serve as a guideline and should never be prescriptive. There are probably more elegant strategies, but beware of making it too complex. For instance, you could improve the formula by adjusting “1½ times” to a higher or a lower fraction, or you could shift your annual cycle to start in April (when the price goes up), rather than August, or use excess units in your buffer first (or last) by deliberately buying less (or more) than the formula suggest. Not all users fit nicely into high-use, low-use or any other category. Experience will show you how to make the most of it.

If you have any suggestions, queries or problems or if you would like a working copy of the spreadsheet with cell formulas, please drop me an email at ljm@wowweb.co.za

LJM 2020-08-21

Honing your Homelight skills for high use

End of month	H or L	A < kWh USED > Used this month	B Cumul used so far	C <kWh BOUGHT> Buy at end of month	D Cumul bought so far	E Suggested Buffer = Cumulative Bought-Used
Aug 31st	H	590	590	600	600	**10**
Sep 30th	L	550	1140	600	1200	**60**
Oct 31st	L	360	1500	480	1680	**180**
Nov 30th	L	500	2000	570	2250	**250**
Dec 31st	L	400	2400	350	2600	**200**
Jan 31st	L	350	2750	325	2925	**175**
Feb 28th	L	400	3150	425	3350	**200**
Mar 31st	L	400	3550	400	3750	**200**
Apr 30th	L	400	3950	400	4150	**200**
May 31st	L	500	4450	550	4700	**250**
Jun 30th	H	600	5050	600	5300	**250**
July 31st	H	750	5800	600	5900	**100**
Sum kWh/yr		5800		5900		
Average kWh		483		492		

Honing your Homelight skills for medium use

End of month	H or L	A < kWh USED > Used this month	B Cumul used so far	C <kWh BOUGHT> Buy at end of month	D Cumul bought so far	E Suggested Buffer = Cumulative Bought-Used
Aug 31st	H	400	400	600	600	**200**
Sep 30th	L	350	750	325	925	**175**
Oct 31st	L	300	1050	275	1200	**150**
Nov 30th	L	250	1300	225	1425	**125**
Dec 31st	L	300	1600	325	1750	**150**
Jan 31st	L	300	1900	300	2050	**150**
Feb 28th	L	300	2200	300	2350	**150**
Mar 31st	L	300	2500	300	2650	**150**
Apr 30th	L	300	2800	300	2950	**150**
May 31st	L	350	3150	375	3325	**175**
Jun 30th	H	400	3550	425	3750	**200**
July 31st	H	450	4000	475	4225	**225**
Sum kWh/yr		4000		4225		
Average kWh		333		352		