

STUDENT LIFE ENVIRONMENTAL SUSTAINABILITY PROJECT FOR RESIDENCE LIFE

Approved by the Emergency Power Response Team on 07 March 2024.

1 Introduction

The Student Life Environment Sustainability Project for Residence Life (hereafter referred to as *the project*) is conceptualised in the context of the [Environment Sustainability Policy](#) of the NWU, with a specific focus on achieving the policy statement and goals contained in paragraphs 3.3.2 and 3.3.5 of the Policy. The project further aims to contribute towards the Policy focus areas, Programme 1 (para. 7.1.2) and Programme 3 (para. 7.1.3), in reducing the NWU's carbon footprint and creating education and awareness amongst the student community relating to environmental sustainability.

2 Scope and nature

The project is considered to be continuously evolving, and will in future expand to include a wider range of environmental sustainability projects within University Residences. For the first phase of the project, a focus will be placed on reducing the consumption of electricity within University Residences through awareness programmes and targeted incentives that reward group behaviour and collaborative efforts in reducing consumption.

3 Data sources

The data on the electricity consumption of University Residences across the three campuses of the NWU will be extracted from the overall electricity usage of the campuses. The data used is maintained by the Facilities and Infrastructure Management Department, and further categorised by Business Enterprise and Development.

4 Establishing Consumption Targets and Incentives

4.1 Consumption Targets

- 4.1.1 The average consumption of each university residence during the 2023 year period will be used as the baseline target on which the consumption targets and incentives will be calculated.
- 4.1.2 For the remainder of the 2024, an overall year target will be set for each university residence, which will indicate ranges in which each university residence is requested to reduce their consumption.
- 4.1.3 For the remainder of 2024, monthly targets contributing towards the annual target will be identified, determined in relation to seasonal fluctuations in electricity consumption.
- 4.1.4 The historic consumption and future consumption targets are reported under addendum A.

4.2 Incentives

- 4.2.1 Each university residence will be eligible to receive an incentive based on a proportional calculation of the reduction in electricity consumption – i.e. using less electricity for a specific period and achieving the set consumption target.
- 4.2.2 The incentive will be a monetary allocation towards the third-stream income of a university residence, and will be allocated on a quarterly basis.
- 4.2.3 Rules on the usage of the incentives are provided under paragraph 5 below.

4.3 Calculating Incentives

4.3.1 The following calculation informs the consumption of electricity:

4.3.1.1 Targets are set for each residence (or grouping of residences as per the electrical meter setup) based on the number of beds as per the official Unique Bed Number (UBN) count.

4.3.1.2 Kw/H units are allocated as follows per bed per calendar day:

Kilowatt per hour	Month period	Number of months
5 x Kw/H	January-April September-December	8 Summer months
7 x Kw/H	June-August	4 Winter months

4.3.1.3 Actual electricity usage for a calendar month is recorded and supplied by NWU Electrical Engineering by the 10th working day of the month following the measured month.

4.3.1.4 Actual consumption includes Kw/H units produced by Escom, Municipalities and generators.

4.3.1.5 Actual consumption will be evaluated against the targets on bi-monthly intervals, therefore:

Evaluating date	Months considered as part of evaluation	Score
10 March	January - February	Score 1
10 May	March – April	Score 2
10 July	May – June	Score 3
10 September	July - August	Score 4
10 November	September – October	Score 5
10 January	November - December	Score 6

4.3.2 The monetary incentive for each university residence or grouped university residences will be calculated as follows:

4.3.2.1 The overall saving on the allocated number of Kw/H per target will be translated into a monetary value by multiplying the number of units saved with the relevant electricity tariff used by NWU Electrical Engineering.

4.3.2.2 Thereafter, 50% of the monetary value of the calculated saving will be allocated to the relevant university residence whereby:

- i. 50% of the amount receivable will be allocated to the university residence's third-stream income fund, and would be used for co-curricular activities; and
- ii. 50% of the amount receivable will be added to the accumulated fund, receivable at the end of the year.
- iii. Should a university residence exceed the consumption for a particular period, 100% of the overconsumption on the target will be deducted from the accumulated fund.

4.3.2.3 An example of the calculation is attached as Addendum B.

5 Rules on Incentives Awarded for Achieving Consumption Targets

5.1 Funds generated through incentives may not be allocated to individual students.

5.2 Expenditure using the funds generated through incentives must be utilised for the benefit of the university residence as a whole, i.e., not only for the benefit of an individual member.

5.3 Expenditure from the incentive must align with the objectives of the Residence Life programme, and must be done in compliance with the University's existing financial policies and rules.

5.4 Expenditure of the funds generated through the incentives must be approved by the relevant House Parent.

HISTORIC CONSUMPTION AND FUTURE CONSUMPTION TARGETS

Historic Consumption and Related Statistics

Measured Electricity Consumption in NWU Owned Residences

Residences	Sep'23			Oct'23			Nov'23		
	Escom Power	Generator	Total	Escom Power	Generator	Total	Escom Power	Generator	Total
MC	708 875	176 061	884 936	769 503	40 593	810 096	606 844	107 341	714 185
PC	857 860	167 070	1 024 930	872 739	49 875	922 614	724 789	85 790	810 579
VC	594 163	40 376	634 539	510 162	12 688	522 850	253 347	21 294	274 641
Total	2 160 898	383 507	2 544 405	2 152 404	103 156	2 255 560	1 584 980	214 425	1 799 405

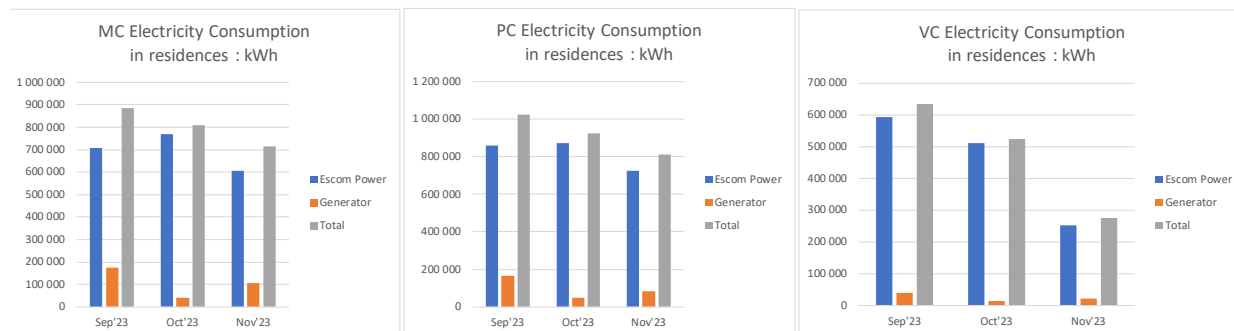
Number of Students in NWU Owned Residences

MC	4714	4714	4714
PC	5159	5159	5159
VC	1386	1386	1386
Total	11259	11259	11259

kWh Consumption per student

MC	187.73	171.85	151.50	5.050099
PC	198.67	178.84	157.12	5.237313
VC *	457.82	377.24	198.15	6.605123
Total	225.99	200.33	159.82	5.327309

Note: An error was found at Faranani on VC and corrected since Nov 2023



Future Consumption Targets



EXAMPLE OF INCENTIVE CALCULATION

University Residence	UR A1		Jan. - April	June - Aug.	Sept. - Dec.		
Number of Bed	100	Kw/H	5.00	7.00	5.00		
	Jan. - Feb.	March - April	May - June	July - Aug.	Sept. - Oct.	Nov. - Dec.	Year Total
Consumption Target (Kw/H)	30000.00	30500.00	42700.00	43400.00	30500.00	30500.00	207600.00
Actual Consumption (Kw/H)	21000.00	29000.00	45000.00	45000.00	29000.00	25000.00	194000.00
Saving in Consumption (Kw/H)	9000.00	1500.00	-2300.00	-1600.00	1500.00	5500.00	13600.00
Electricity Tariff	R 2.6335	R 2.6335	R 2.6335	R 2.6335	R 2.6335	R 2.6335	
Monetary Value of Saving	R 23,701.50	R 3,950.25	-R 6,057.05	-R 4,213.60	R 3,950.25	R 14,484.25	R 35,815.60
Sub-total Value Recei. by UR (50%)	R 11,850.75	R 1,975.13	-R 6,057.05	-R 4,213.60	R 1,975.13	R 7,242.13	R 12,772.48
50% Allocated 3rd Stream of UR	R 5,925.38	R 987.56	R 0.00	R 0.00	R 987.56	R 3,621.06	R 11,521.56
50% Alloc. Accum. Fund of UR	R 5,925.38	R 987.56	-R 6,057.05	-R 4,213.60	R 987.56	R 3,621.06	
Sub-total on Accumulated Fund	R 5,925.38	R 6,912.94	R 855.89	-R 3,357.71	-R 2,370.15	R 1,250.91	R 1,250.91
Total received by UR							R 12,772.48