

SDG.7.2.3

1. In accordance with “Energy Conservation Action Plan of government agencies and schools” issued by the Executive Yuan, NUK will reduce the annual electricity consumption by at least 1% every year. At the beginning of each year, it regularly fills in the non-production industry energy verification network reporting system and uses the system to analyze and understand the main carbon emissions of the school.
2. NUK's carbon emissions decreases yearly. Its carbon emissions are published in the annual sustainability report and on the webpage (<https://sustainability.nuk.edu.tw/>) for public viewing. The summary is as attached.

Statistics of electricity consumption

Year	Total electricity used (kWh)	Total electricity used (GJ)	Electricity saving PCT	EUI
2015	14,201,510	51,084.57	-	59
2016	14,528,086	52,259.30	-2.27%	60
2017	14,090,386	50,684.84	0.81%	36
2018	12,884,463	46,346.99	9.27%	33
2019	12,970,796	46694.89	8.67%	33
2020	12,733,420	45,840.31	10.28%	32.6
2021	11,292,628	40,620.97	20.43%	28.9

EUI=Total electricity used (kWh)/NUK Total floor area

2015 was selected as the base year for the implementation of the Central Four-Saving plan.

Solar panels



List of solar photovoltaic power generation equipment

Item	Site	(kwp)Total installed capacity (kwp)	Mode of operation
1	College of Law	26.4	REC
2	Admin. BL	10.0	REC
3	College of Engineering	209.45	FIT
4	Motor-and-Bicycle Parking Lot	246.62	FIT
5	Library & Info BL	348.395	FIT
6	College of Management	93.81	FIT
7	1st General BL	154.875	FIT
8	Admin. BL	57.525	FIT
9	Student Dorm	56.64	FIT
10	Staff Dorm	50.445	FIT
Total		1,254.16	

FIT: Feed-in Tariff;
REC: Renewable Energy Certificate

4-4.2 Gasoline Saving Measures

- (1) Regular maintenance and inspection of official vehicles on campus to maintain high fuel efficiency.
- (2) Replace old official vehicles, and purchase new vehicles with high efficiency and low fuel consumption.

Statistics of gasoline consumption

Year	Gasoline (L)	Diesel (L)	Total oil consumption (L)	Oil saving PCT (%)
2015	3,672.00		3,672.00	-
2016	1,612.66	1,955.90	3,568.56	2.82%
2017	6,236.45	4,373.36	10,609.81	-188.94%
2018	5,489.40	1,326.30	6,815.70	-85.61%
2019	5,227.26	880.41	6,107.67	-66.33%
2020	4,774.51	1,424.93	6,199.44	-68.83%
2021	5,690.06	847.16	6537.22	-78.03%

*2015 is the base period for calculation; there are no separate statistics for gasoline and diesel in 2015.

4-4.3 Carbon Emissions

Based on the government regulations, NUK set 2015 as the base year. Since then it has self-estimated greenhouse gas emissions annually to fully understand the current status. The total carbon emissions in 2019 decreased by 4.19% compared to 2015, mainly due to the implementation of energy-saving measures such as replacing old air-conditioners and using energy-saving light fixtures.

Carbon emissions

Year	Carbon Emissions (CO2e ton)	Reduction compared to 2015 (%)	Carbon Emissions per person (CO2e/pp ton)
2015	7,400.630	-	1.41
2016	7,617.742	-2.93	1.23
2017	7,438.977	-0.52	1.17
2018	6,754.273	8.73	1.06
2019	7,090.454	4.19	1.10
2020	6,786.914	8.29%	1.07
2021	5,732.896	22.54%	0.85

*Carbon emissions are self-estimated, activity data are collected from electricity bills, and carbon emissions are directly quoted from electricity bills.

* 2015 was selected as the base year for the implementation of the Central Four-Saving plan.

6.2、能源CO₂排放量平衡圖 (本項由系統自動演算無須申報)

報表↓

1.電力 CO₂ 排放量百分比%

設備名稱	排放量(噸 / 年)	比例(%)
空調設備	2911	51.35
照明設備	938.2	16.55
冷凍冷藏設備	0	0
事務設備	421.8	7.44
送排風設備	572	10.09
給水污水設備	570.9	10.07
電梯設備	24.4	0.43
其他設備	230.7	4.07
電力 CO₂ 排放量(噸 / 年)	5668.9	100

2.熱能 CO₂ 排放量分佈百分比%

熱能種類	排放量(噸 / 年)	比例(%)
燃料油	0.0	0
液化石油氣	0.0	0
天然氣	0.0	0
汽油	0.0	0
柴油	0.0	0
熱能 CO₂ 排放量(噸 / 年)	0	0

3.實際用途分佈百分比%

熱能種類	實際用途	排放量(噸 / 年)	比例(%)
合計		0.0	0

註 1. 若貴單位有其它主要用電設備項目，請填入其它欄位，如“其它：(電台發射器、水處理設備、鍋爐泵及風車、電熱水器) 等