

## O. DIRECTOR, PHYSICAL PLANT AND PROPERTIES DEVELOPMENT AND MAINTENANCE OFFICE

### 1. REFERENCE

- a. **Appointment:** The Director of the Physical Plant and

## ORGANIZATION OF SAINT MARY'S UNIVERSITY

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Properties Development and Maintenance Office (PPPDMO) is appointed by the University President in consultation with the Advisory Board, subject to the confirmation of the Board of Trustees.

- b. **Qualifications:** The Director of the Physical Plant and Properties Development and Maintenance Office (PPPDMO) must:
  - i. be a registered Civil or Electrical Engineer or Architect. But in case there is a dearth of candidates, a person with training or experience in safety, pollution control, or Hazard Identification, Risk Assessment, and Control measures (HIRAC) may be considered as head with the support of a technical consultant.
  - ii. have at least two years industry experience; and
  - iii. be of good moral character.
- c. **Term of Office:** The term of office is one year for the initial appointment, renewable for terms of two years each, provided that such appointment shall not be beyond 60 years old, unless the University President extends it on a yearly basis, but not beyond the mandatory retirement age of 65.

- 2. FUNCTIONS AND RESPONSIBILITIES:** The Director of Physical Plant and Properties Development and Maintenance Office is directly responsible to the University President and is mandated to perform the following:
- a. is responsible for the supervision of housekeeping and upkeep of physical plant and facilities, including the regular inspection, planning, repair, maintenance and remodeling if needed, of property, plant and equipment;
  - b. develops and implements the preventive maintenance program for all University properties, plants and equipment;
  - c. is responsible for regularly inspecting, identifying
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## Chapter Two

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- and correcting defects in all buildings and structures;
- d. takes charge of planning, developing and monitoring of the real properties of the University;
- e. supervises and evaluates the performance of contractors; conducts periodic inspections, monitors and certifies that contracted jobs are performed in accordance with the contract specifications. He/She may be held accountable for his/her certification if the project is found to be wanting of the expected output;
- f. evaluates the need for training programs and arranges training schedules or conducts training to upgrade PPPDMO workers' skills;

- g. acts on approved requests for major and minor repairs, renovations, improvements in offices, buildings or properties of the University;
- h. seeks professional opinions of other experts regarding physical plant concerns when needed;
- i. supervises, assists and coordinates preparation of facilities needed for University activities;
- j. submits the required monthly/quarterly reports on accomplished projects to the University President;
- k. keeps a copy of campus layouts, lot plans, building plans, electrical plans, certificate of occupancy, updated fire and safety maintenance reports and other related documents of all University properties;
- l. oversees the General Services Supervisor;
- m. obtains Construction Occupational Safety and Health (COSH 2) or BOSH 2 certification; and
- n. Performs other related tasks that may be assigned by the University President.





## Renewable Energy Sources in SMU Campus

  	  	 
<p>Roof Mounted Solar Panels – JVD Building</p>	<p>Roof Mounted Solar Panels – AT Building and H Building</p>	<p>Roof Mounted Solar Panels – Sacred Heart Center, Debuscherre Bldg and Apo Pilo Bldg</p>



**SAINT MARY'S UNIVERSITY**  
BAYOMBONG, NUEVA VIZCAYA, PHILIPPINES

**SAFETY AND POLLUTION CONTROL OFFICE**

## **PHOTOVOLTAIC SOLAR PANEL 219.7 kWp SYSTEM SIZE**



**SAINT MARY'S UNIVERSITY** invested and installed a 219.7 kW Photovoltaic (PV) Solar Panel on February 2018 that partially supplies power to its building facilities which;

- 1. can generate around 299,500 kWh of solar power annually**
- 2. can offset 285,498.63 pounds or 129.5 metric tons of carbon dioxide emission annually**
- 3. is equivalent to 55,160 liters of fuel fossil consumption annually**
- 4. is equivalent to 49.8 hectare of forests for sequestering carbon annually**
- 5. is equivalent to planting 500 fruit-bearing trees in approximately one hectare of land in the same period**
- 6. can help combat greenhouse gas emissions and reduces collective dependence on fossil fuel**

As the world continues to transition towards cleaner energy solutions, the use of solar panels have become more energy efficient and can provide a clean, sustainable, and renewable energy source, contributing to the reduction of pollution, greenhouse gas emissions, and the overall environmental impact associated with conventional energy sources.

[smu.edu.ph](http://smu.edu.ph)





# Solar PV Rooftop Performance Report SMU Bayombong

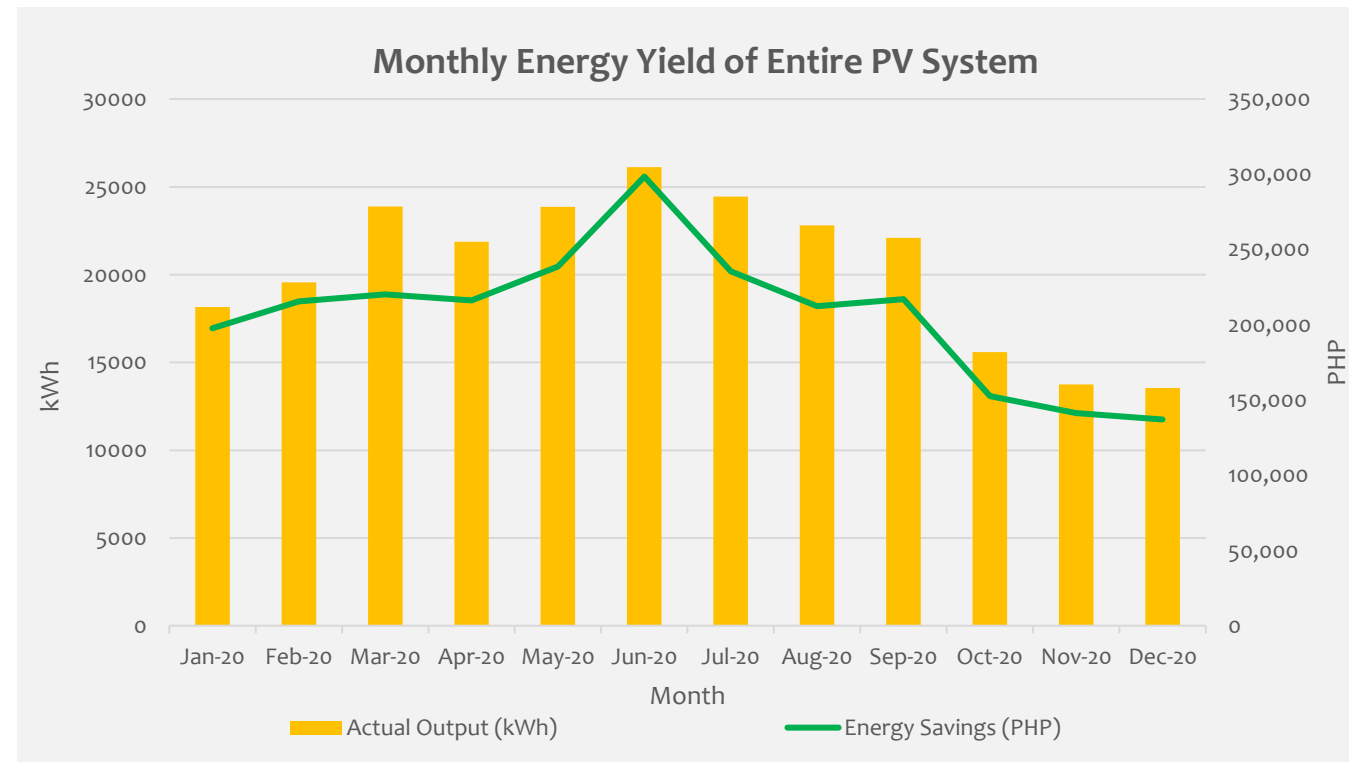
## Savings Report for 2020 - 2024

Philippines, August 2024



# Achieved Savings of **PHP 2,482,810** in 2020!

**Total Clean Energy Generated: 245,708 kWh**



*\*Savings calculated based on assumed average electricity tariff paid by client is at 10 PHP/kWh (per NUVELCO'S bill from Jul'16 – Jun'17)*

Period: 01 January 2020 – 31 December 2020

# Total Emission Savings in 2020

Total RE generated



**245,708**  
kWh



**102**  
Houses  
Powered  
Annually  
(200kWh/month)



**4,200**  
LED Lights  
Powered  
Annually  
(20W, 8h/day)



**421,620**  
km Driven  
Annually



**6,762,520**  
Smart Phones  
Charged Annually



**1,120**  
Ceiling Fans  
Powered  
Annually  
(75W, 8hrs/day)

Equivalent  
to:

Total CO<sub>2</sub> savings



**111**  
tons



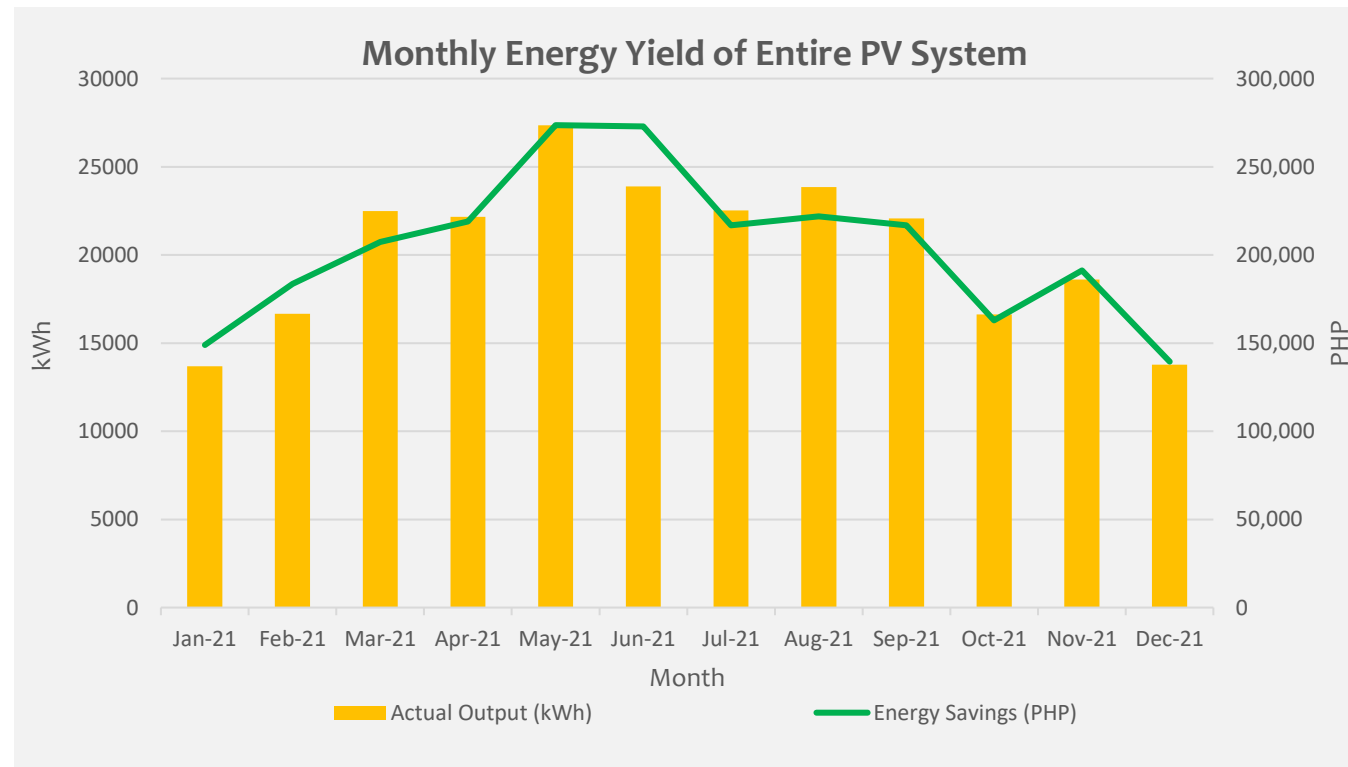
**43**  
ha Forest Carbon Sequestered

\* CO<sub>2</sub> savings calculated based on average CO<sub>2</sub> emissions of the Philippine national grid



# Achieved Savings of **PHP 2,455,045** in 2021!

**Total Clean Energy Generated: 243,714 kWh**



*\*Savings calculated based on assumed average electricity tariff paid by client is at 10 PHP/kWh (per NUVELCO'S bill from Jul'16 – Jun'17)*

Period: 01 January 2021 – 31 December 2021

# Total Emission Savings in 2021

Total RE generated



**243,714**  
kWh



**100**  
Houses  
Powered  
Annually  
(200kWh/month)



**4,170**  
LED Lights  
Powered  
Annually  
(20W, 8h/day)



**418,200**  
km Driven  
Annually



**6,707,640**  
Smart Phones  
Charged Annually



**1,110**  
Ceiling Fans  
Powered  
Annually  
(75W, 8hrs/day)

Equivalent  
to:

Total CO<sub>2</sub> savings



**110**  
tons

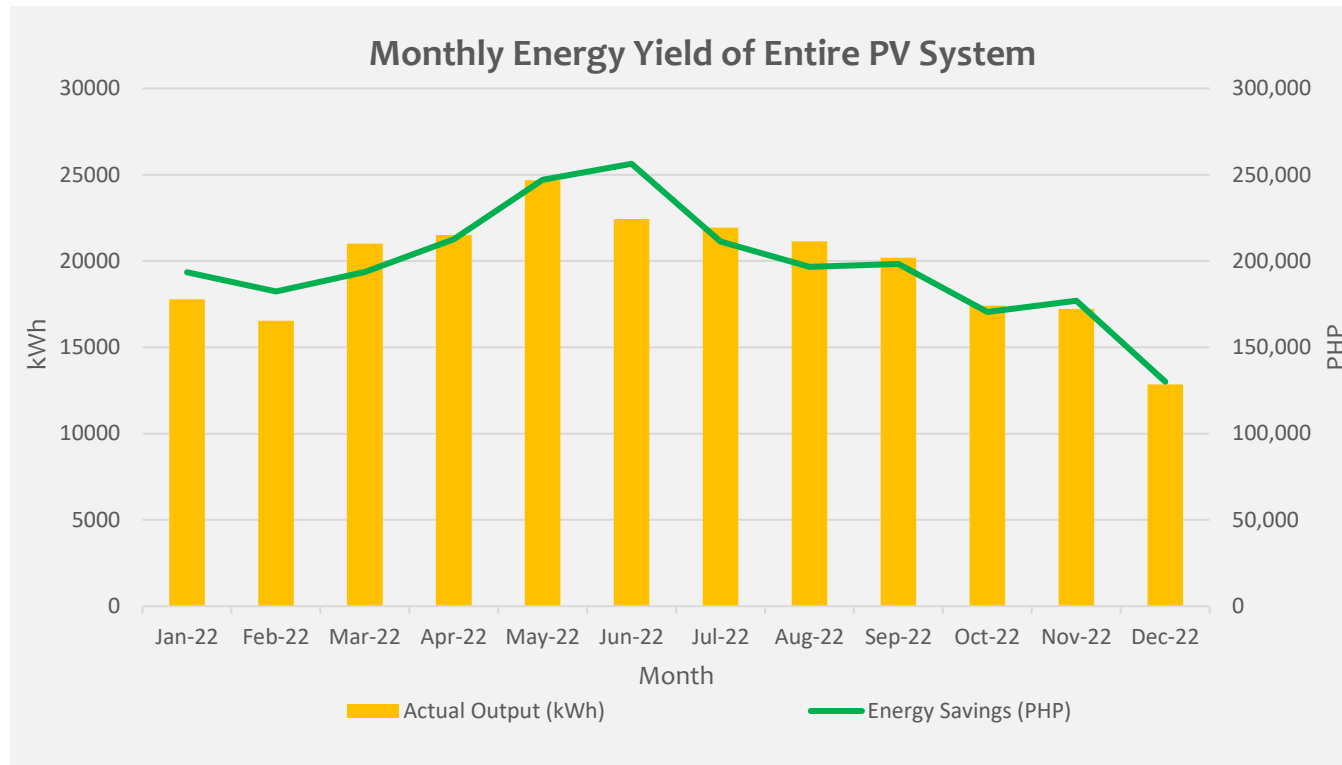


**42**  
ha Forest Carbon Sequestered

\* CO<sub>2</sub> savings calculated based on average CO<sub>2</sub> emissions of the Philippine national grid

# Achieved Savings of **PHP 2,369,495** in 2022!

Total Clean Energy Generated: 234,716 kWh



*\*Savings calculated based on assumed average electricity tariff paid by client is at 10 PHP/kWh (per NUVELCO'S bill from Jul'16 – Jun'17)*

Period: 01 January 2022 – 31 December 2022



# Total Emission Savings in 2022

## Total RE generated



**234,716**  
kWh



**98**  
Houses  
Powered  
Annually  
(200kWh/month)



**4,020**  
LED Lights  
Powered  
Annually  
(20W, 8h/day)



**402,760**  
km Driven  
Annually



**6,459,995**  
Smart Phones  
Charged Annually



**1,072**  
Ceiling Fans  
Powered  
Annually  
(75W, 8hrs/day)

Equivalent  
to:

## Total CO<sub>2</sub> savings



**106**  
tons

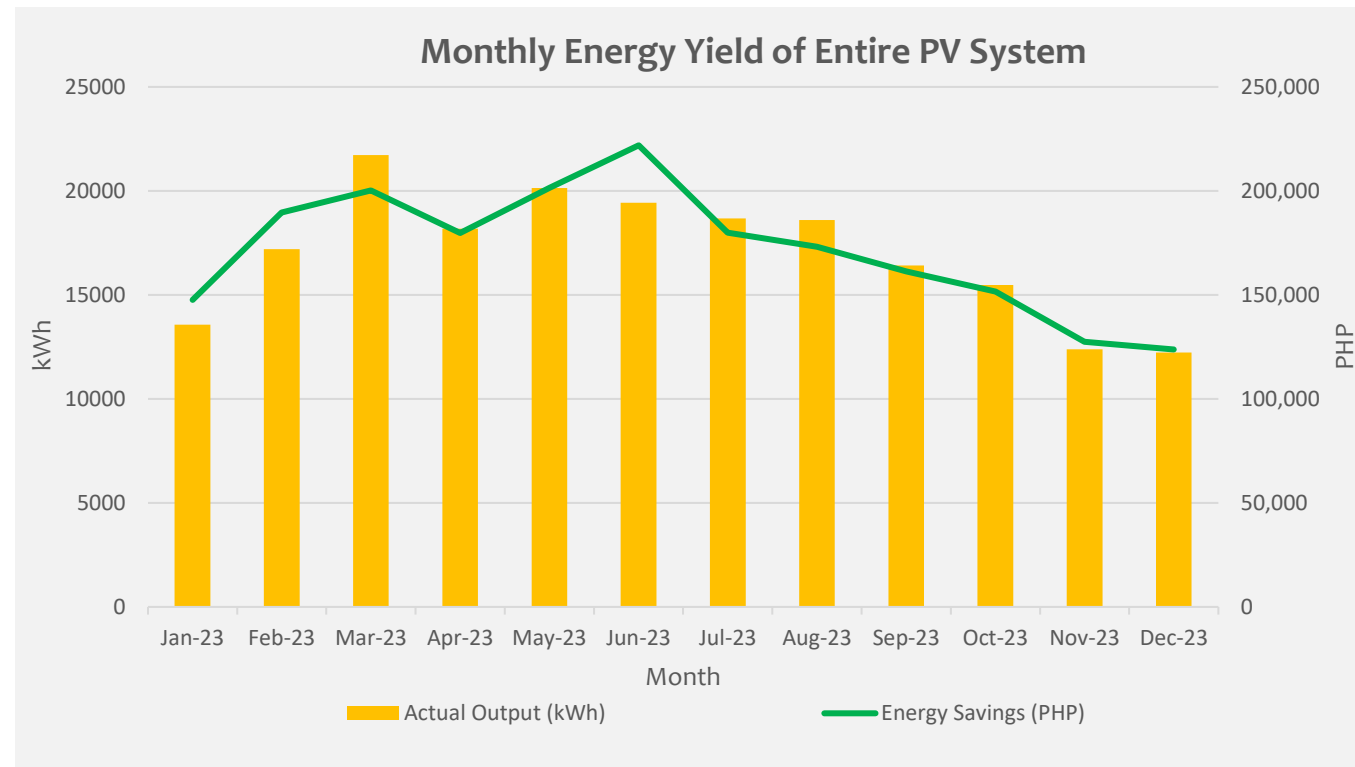


**41**  
ha Forest Carbon Sequestered

\* CO<sub>2</sub> savings calculated based on average CO<sub>2</sub> emissions of the Philippine national grid

# Achieved Savings of **PHP 2,057,800** in 2023!

Total Clean Energy Generated: 204,044 kWh



*\*Savings calculated based on assumed average electricity tariff paid by client is at 10 PHP/kWh (per NUVELCO'S bill from Jul'16 – Jun'17)*

Period: 01 January 2023 – 31 December 2023

# Total Emission Savings in 2022

## Total RE generated



**204,044**  
kWh



**85**  
Houses  
Powered  
Annually  
(200kWh/month)



**3,494**  
LED Lights  
Powered  
Annually  
(20W, 8h/day)



**350,135**  
km Driven  
Annually



**5,615,822**  
Smart Phones  
Charged Annually



**932**  
Ceiling Fans  
Powered  
Annually  
(75W, 8hrs/day)

Equivalent  
to:

## Total CO<sub>2</sub> savings



**92**  
tons



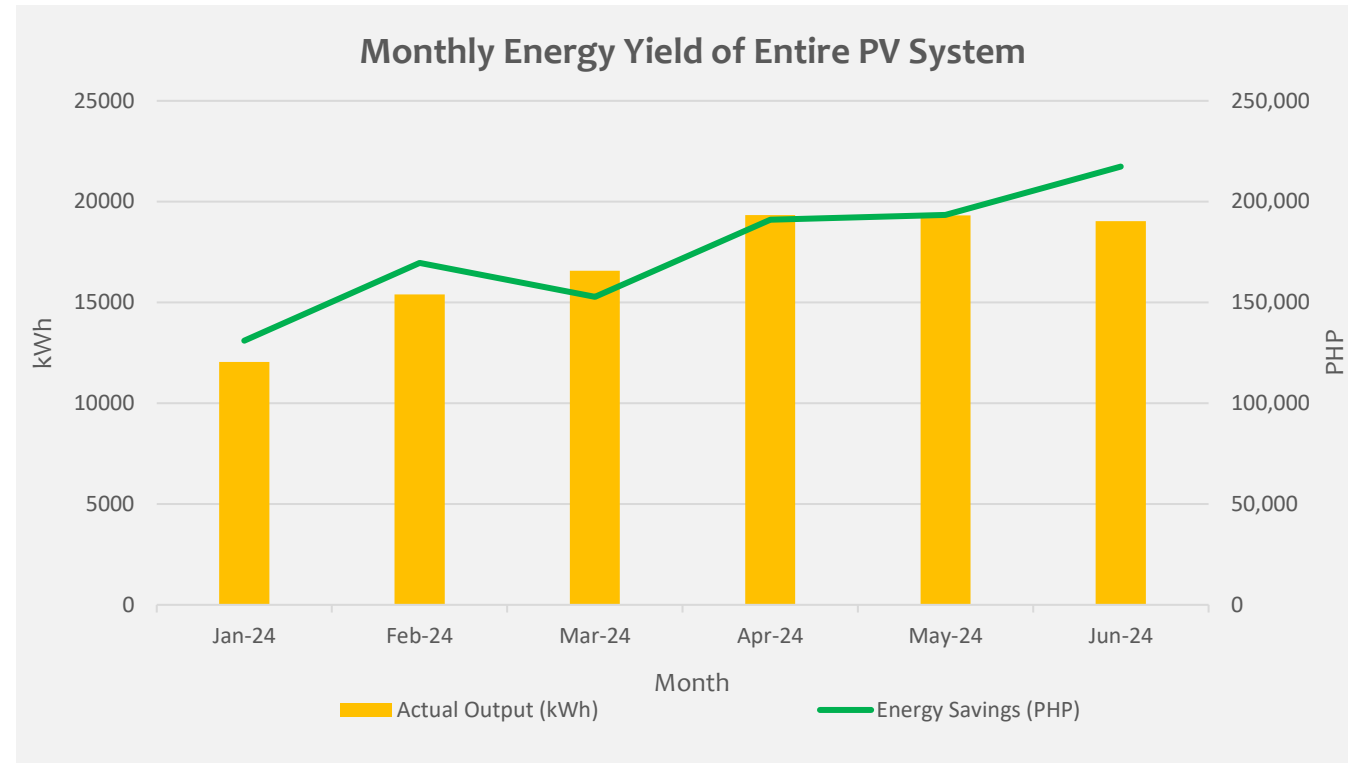
**35**  
ha Forest Carbon Sequestered

\* CO<sub>2</sub> savings calculated based on average CO<sub>2</sub> emissions of the Philippine national grid



# Achieved Savings of **PHP 1,054,990** in 2024!

**Total Clean Energy Generated: 101,655 kWh**



*\*Savings calculated based on assumed average electricity tariff paid by client is at 10 PHP/kWh (per NUVELCO'S bill from Jul'16 – Jun'17)*

Period: 01 January 2024 – 30 June 2024

# Total Emission Savings in 2024

## Total RE generated



**101,655**  
kWh



**42**  
Houses  
Powered  
Annually  
(200kWh/month)



**1,740**  
LED Lights  
Powered  
Annually  
(20W, 8h/day)



**174,438**  
km Driven  
Annually



**2,797,810**  
Smart Phones  
Charged Annually



**465**  
Ceiling Fans  
Powered  
Annually  
(75W, 8hrs/day)

Equivalent  
to:

## Total CO<sub>2</sub> savings



**46**  
tons



**18**

ha Forest Carbon Sequestered

\* CO<sub>2</sub> savings calculated based on average CO<sub>2</sub> emissions of the Philippine national grid

# Summary – PV System Performance

<i>Year</i>	<i>2020 (Jan - Dec)</i>	<i>2021 (Jan - Dec)</i>	<i>2022 (Jan - Dec)</i>	<i>2023 (Jan - Dec)</i>	<i>2024 (Jan - June)</i>
<i>Actual (kWh)</i>	245,708	243,714	234,716	204,044	101,655
<i>Estimated (kWh)</i>	290,662	289,209	287,763	286,324	150,915

\* The yearly yield values of 2020 (Jan – Dec) to 2024 (Jan – June ) shows a difference from estimated to actual yield value due to performance difference of the inverters . We would like to recommend for the performance maintenance operation including checking of all the inverters for any alarm/fault, cleaning of PV panels, tree trimming that impose shading on the PV panels and also to upgrade the monitoring systems to SynaptiQ to have a regular remote monitoring of the PV plant.



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# SAINT MARY'S UNIVERSITY

BAYOMBONG, NUEVA VIZCAYA, PHILIPPINES

## OFFICE OF THE VICE PRESIDENT FOR ADMINISTRATION

VPA Circular No. 2023-9  
AY 2023-2024

DATE: 16 OCTOBER 2023  
TO: SMU EMPLOYEES AND STUDENTS  
RE: GUIDELINES ON USE OF AIRCON UNITS AND ELECTRICAL EQUIPMENT

The University has installed aircon units in several faculty rooms, offices and some laboratory rooms as part of ensuring a conducive working atmosphere. But the recent data shows our electricity expense has reached 984,000 pesos a month, which is projected to total 12 million pesos for the year, unless we can all contribute to reduce this expense with the judicious use of the aircon units and other electrical equipment.

The University hereby updates the guidelines on the proper use of aircon units and other electrical gadgets in campus as follows.

1. The aircon units and fans should be switched on only when absolutely necessary to reduce heat in the office or room. The aircon units are normally put on after 9:30AM and put off at 4:30 PM. During the summer period (March, April, May, June, July) when the temperature is extremely hot, the aircon can be switched on earlier at 8:30AM. During colder days, avoid using the aircon and rely on natural ventilation or electric fans.
2. The manufacturer-recommended temperature setting of aircon in offices and rooms is 22 degrees Celsius to balance energy savings and comfort. In big venues with plenty of people like the Fr. Tonus Gymnasium, Sacred Heart Center, Aula Maria, St. Therese Hall, and San Pedro Calungsod Hall, the temperature can be set lower at 18 degrees Celsius.
3. The aircon units, electric fans and lights should be shut off when there are no persons in the room or area and should be re-checked before leaving at the end of the day.
4. The aircon units, fans and computer units should be put-off after a power interruption. When power returns, wait for at least three (3) minutes before re-starting the aircon.
5. Only authorized employees of the PPDMO/ General Services Office are allowed to switch on the aircon units in the gymnasium and function halls.
6. Unit heads must monitor adherence to the guidelines and violators will be meted the corresponding penalties and fees corresponding to the per hour rate of consumption.

Let us help reduce our electricity expense and minimize wastage as part of our CHSF Environment Program and in support of Pope Francis' exhortation in *Laudato Si* to care for our common home.

  
JOHN G. TAYABAN, PHD, RPlm, RPsy  
Vice President for Administration

  
JOHN OCTAVIOUS S. PALINA, PHD  
University President

Strategic Outcomes	Strategic Programs/ Projects	Area	Units Responsible	Y1	Y2	Y3	Y4	Y5	KPI	Budget
	9) Replacing small water tanks with bigger tanks.	PFRM	Advisory Board, PPPDMO	5	5	5			2.2.3.9. At the end of year 5, 15 small water tanks have been replaced with bigger tanks.	
	10) Installing solar street lights.	PFRM	Advisory Board, PPPDMO	30 College	20 Grade School and Junior HS				2.2.3.10. At the end of year 5, 50 solar lamps have been installed to replace electric-powered campus lights.	
	11) Installing additional rooftop photovoltaic solar panels.	PFRM	Advisory Board, PPPDMO				219 kwp		2.2.3.11. At the end of year 5, additional 219kWp solar panels have been installed in the college campus.	
	12) Renovating the Junior High School main entrance and façade.	PFRM	Advisory Board, PPPDMO			100%			2.2.3.12. At the end of year 5, the Junior High School façade and main gate entrance has been completed.	
	13) Furnishing the incubation facility at the Technology Transfer and Business Development Office.	PFRM	Advisory Board, PPPDMO TTBDO	100%					2.2.3.13. At the end of year 5, the incubation facility has been renovated and fully furnished.	
	14) Installing a giant image of	PFRM	Advisory Board, PPPDMO	100%					2.2.3.14. At the end of year 5, a giant image of the Patron Saint,	





**SAINT MARY'S UNIVERSITY**  
Bayombong, Nueva Vizcaya

**BUDGET FOR SUSTAINABILITY EFFORTS**

SUSTAINABILITY EFFORTS		AY 2021-2022	AY 2022-2023	AY 2023-2024	AVERAGE	CONTRIBUTION TO SUSTAINABILITY
<b>Setting and Infrastructure</b>						
1	Agency personnel costs for campus security	3,250,000	5,980,000	5,265,364	4,831,788	Maintain safe environment, safety of human and natural capital
2	Maintenance, calibration of laboratory apparatus, equipment	300,000	500,000	700,000	500,000	Reduces energy use and carbon emission
3	Community Development (Partnerships)	142,513	147,163	285,388	191,688	Community participation and sustainable communiity
4	Wellness Program	300,000	300,000	400,000	333,333	Good health and wellbeing
5	Salaries and benefits increase, promotions, awards		6,411,055	16,814,349	11,612,702	Decent work, social, human and economic growth
6	Property insurance	1,040,000	1,090,000	1,140,000	1,090,000	Dealing with risk, uncertainty, safety of human and natural capital
7	New facilities, restroom and facilities renovation	6,400,000	15,584,630	59,350,000	27,111,543	Continuous improvement
<b>Energy and Climate Change</b>						
1	LED bulbs	200,000	300,000	500,000	333,333	Reduces energy use and carbon emission
2	Solar lights (campus walkways, athletic field)	100,000	200,000	300,000	200,000	Reduces energy use and carbon emission
3	Solar panel (219.7 KWp rooftop photovoltaic solar panel)	2,330,900	2,330,900	2,330,900	2,330,900	Reduces energy use and carbon emission
4	Replacement of frequently-repaired assets:					
	- Airconditioning units		125,000	250,000	187,500	Reduces energy use and financial resources
	- Orbit and exhaust fans		150,000	300,000	225,000	Reduces energy use and financial resources
	- Vehicles		3,500,000	1,500,000	2,500,000	Reduces carbon emission and financial resources
	- Computers, printers		9,100,000	1,400,000	5,250,000	Reduces energy use and financial resources
5	Internet Subscription, Linode, Vultr, Zoom, Jotform,	3,488,788	4,941,365	6,417,960	4,949,371	Reduces use of paper and other resources

6	Network maintenance, personnel costs					Reduces use of paper and other resources
	Core switch, network cabling, server and peripherals	3,000,000		1,550,000	2,275,000	Reduces use of paper and other resources
	Google Workspace subscription for employees and students		1,053,360	1,053,360	1,053,360	Reduces use of paper and other resources
7						Reduces use of paper and other resources
8	Community Development (Partnerships)	142,513	147,163	285,388	191,688	Community participation and sustainable communiity
<b>Was</b>						
<b>te</b>						
1	Agency personnel costs for campus housekeeping	3,549,000	4,485,000	4,485,000	4,173,000	Maintain clean environment
2	Garbage bags, garbage collection fees	360,000	480,000	540,000	460,000	Waste management and propery recycling
3	Waste bins for waste segregation	200,000	300,000	500,000	333,333	Waste management and propery recycling
4	Communication (telephone, mobile phones)	618,400	745,460	1,211,522	858,461	Reduces use of paper and other resources
<b>Wat</b>						
<b>er</b>						
1	Community Development (Partnerships)	142,513	147,163	285,388	191,688	Community participation and sustainable communiity
2	Drinking fountains	225,000	150,000	150,000	175,000	Clean water and sanitation
<b>Education and Research</b>						
1	Researches on Sustainability	1,163,850	1,520,320	3,294,610	1,992,927	Quality Education
2	Community Development (Hunger Alleviation, Knowledge Tranfer)	142,513	147,163	285,388	191,688	Community participation and sustainable communiity
<b>TOTAL BUDGET FOR SUSTAINABILITY EFFORTS (in Php)</b>		27,095,988	59,835,740	110,594,615	65,842,114	
<b>Exchange Rate as of July 31</b>		49.99663	57.20934	54.73400	53.97999	
<b>A. TOTAL BUDGET FOR SUSTAINABILITY EFFORTS (in US Dollars)</b>		<b>\$541,956</b>	<b>\$1,045,909</b>	<b>\$2,020,583</b>	<b>\$1,202,816</b>	
Total University Operating Budget		208,095,272	248,319,552	277,124,009	244,512,944	
Total University Capital Expenditures Budget		9,400,000	28,459,630	67,800,000	35,219,877	
<b>TOTAL UNIVERSITY BUDGET (in Php)</b>		217,495,272	276,779,182	344,924,009	279,732,821	
<b>Exchange Rate as of July 31</b>		49.99663	57.20934	54.73400	53.97999	
<b>B. TOTAL UNIVERSITY BUDGET (in US Dollars)</b>		<b>\$4,350,199</b>	<b>\$4,838,007</b>	<b>\$6,301,824</b>	<b>\$5,163,343</b>	

**C. (A/B) PERCENTAGE OF BUDGET FOR  
SUSTAINABILITY EFFORTS TO TOTAL UNIVERSITY  
BUDGET**

12%

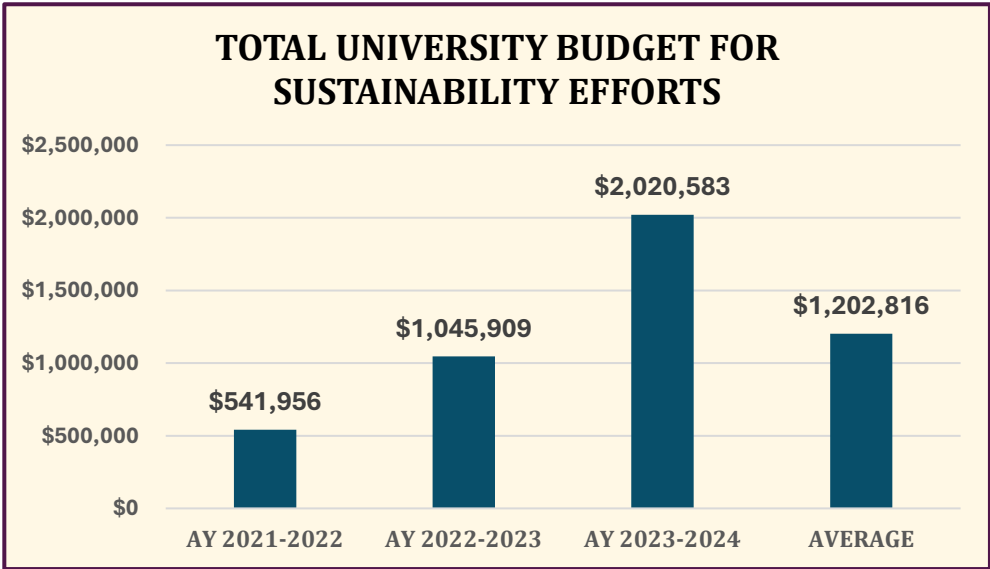
22%

32%

23%

**PERCENTAGE OF UNIVERSITY BUDGET FOR SUSTAINABILITY EFFORTS (In US Dollars)**

	AY 2021- 2022	AY 2022- 2023	AY 2023- 2024	AVERAGE
<b>TOTAL UNIVERSITY BUDGET FOR SUSTAINABILITY EFFORTS</b>	<b>\$541,956</b>	<b>\$1,045,909</b>	<b>\$2,020,583</b>	<b>\$1,202,816</b>
<b>TOTAL UNIVERSITY BUDGET</b>	<b>\$4,350,199</b>	<b>\$4,838,007</b>	<b>\$6,301,824</b>	<b>\$5,163,343</b>



## EXCHANGE RATE AS OF JULY 31, 2021

# 49.99663 PHP

Visit Philippine Peso (PHP) to US Dollar (USD) on 31 Jul 2021 (31/07/2021). Saturday 31/07/2021 1 USD = **49.99663 PHP**

US Dollar(USD) To Philippine Peso(PHP) on 31 Jul 2021 (31/07/20...

[www.fx-exchange.com/usd/php-2021\\_07\\_31-exchange-rates-history.html](https://www.fx-exchange.com/usd/php-2021_07_31-exchange-rates-history.html)

## EXCHANGE RATE AS OF JULY 31, 2022

1.00 **US Dollar** = 57.20 9341 Philippine **Pesos** 1 PHP = 0.0174797 USD

1 USD to PHP - US Dollars to Philippine Pesos Exchange Rate - Xe

[www.xe.com/currencyconverter/convert/?From=USD&To=PHP](https://www.xe.com/currencyconverter/convert/?From=USD&To=PHP)

## EXCHANGE RATE AS OF JULY 31, 2023

### US Dollar (USD) To Philippine Peso (PHP) Exchange Rate History for July 31, 2023

View US Dollar to Philippine Peso exchange rate history for 2023-7-31 as well as high, low and average USD/PHP exchange rates for 2023.

 USD to PHP Currency Converter for 2023-7-31

Invert

Calculate exchange rates between the US Dollar and the Philippine Peso as of 2023-7-31.



1

=



54.734

as of 2023-7-31