



ENERGY AND CLIMATE CHANGE SUSTAINABILITY REPORT

Renewable Energy Performance Report

Reporting Period: May 2025 – May 2026

The University of Negros Occidental-Recoletos (UNO-R), Incorporated advances its commitment to environmental stewardship through strategic investments in renewable energy and sustainable campus development. Guided by its mission to educate responsible global citizens and steward creation, the University recognizes sustainability as an institutional responsibility that integrates environmental protection, operational excellence, financial stewardship, and community leadership.

UNO-R has demonstrated its commitment to sustainability and renewable energy through the deployment of rooftop solar photovoltaic (PV) systems across campus facilities. The initiative supports the University's efforts to reduce greenhouse gas emissions, lower dependence on grid-supplied electricity, and enhance long-term energy sustainability.

Beyond its environmental benefits, the solar PV program generates electricity cost savings that may be redirected toward academic programs, campus infrastructure improvements, student services, and other institutional priorities.

During the reporting period of May 2025 to May 2026, UNO-R operated 801.04 kWp of rooftop solar photovoltaic (PV) systems across nine campus buildings and facilities. These systems generated 644,430.98 kWh of renewable electricity and Solar energy supplied 25.16% of the University's electricity demand. This significantly reduced reliance on grid-supplied electricity and avoided approximately 454.28 metric tons of carbon dioxide equivalent (tCO₂e) emissions.

As of June 2026, the University has expanded its installed solar capacity to approximately 1.0 MWp, further demonstrating its long-term commitment to clean energy and climate action. While only 801.04 kWp was operational during the reporting period, the additional installations position UNO-R to further reduce emissions and energy costs in succeeding years.

Sustainability Highlights (Solar Statistics)

Indicators	Performance
Reporting Period	May 2025 – May 2026
Operational Capacity during the reporting period	801.04 kWp
Total installed capacity as of June 2026	~1.0 MWp
Renewable Electricity Consumed from Solar	644,430.98 kWh





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Renewable Energy Source	Rooftop Solar Photovoltaic (PV)
Electricity from Grid (Negros Power)	1,917,060 kWh
Solar Share of Electricity	25.16%

Electricity from Grid vs. Electricity from Solar

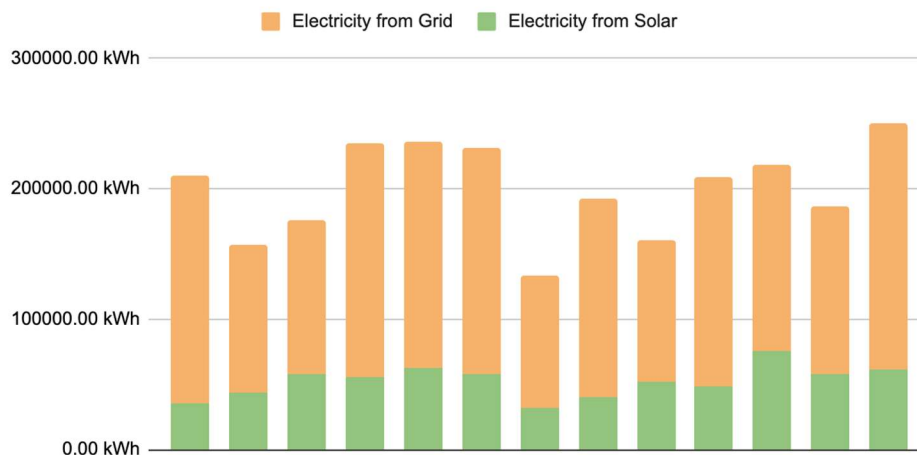


Figure 1.0 Electricity from Grid Vs Solar - UNO-R

Using the Philippine Department of Energy (DOE) National Grid Emission Factor (NGEF) for solar and wind projects in the Luzon-Visayas Grid for the period 2019–2021 of 0.7058¹ tCO₂/MWh, the University's solar PV systems avoided an estimated 454.28 metric tons of carbon dioxide equivalent (tCO₂e) during the reporting period. This contribution supports UNO-R's commitment to reducing greenhouse gas emissions, promoting clean energy adoption, and advancing sustainable campus operations.

Computation:

$$644,430.98 \text{ kWh} \div 1,000 = 644.431 \text{ MWh}$$

$$644.431 \text{ MWh} \times 0.7058 \text{ tCO}_2/\text{MWh} = 454.28 \text{ tCO}_2\text{e avoided.}$$

Alignment with the Sustainable Development Goals

UNO-R's solar energy initiative directly contributes to several United Nations Sustainable Development Goals.

SDG 7 – Affordable and Clean Energy





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The University's investment in rooftop solar photovoltaic systems increases the share of renewable energy use in the campus operations while reducing dependence on fossil fuel-generated electricity. This initiative also supports energy security and helps hedge or manage long-term electricity costs.

SDG 11 – Sustainable Cities and Communities

Renewable Energy such as solar to power campus building promotes more sustainable and resilient infrastructure. The University also provides a practical example of how educational institutions and surrounding communities can adopt cleaner energy technologies.

SDG 13 – Climate Action

Avoiding approximately **454.28 tCO₂e** demonstrates measurable climate action through emissions reduction and renewable energy deployment.

This report is organized around four strategic pillars of energy sustainability:

Pillar 1: Powering a Greener Tomorrow

Pillar 2: Rooftops With Purpose

These pillars demonstrate how UNO-R integrates sustainability into infrastructure, operations, governance, and institutional leadership.

PILLAR 1: POWERING A GREENER TOMORROW

Transitioning to Renewable Energy

UNO-R continues to diversify its energy portfolio through the deployment of rooftop solar photovoltaic systems that provide clean, renewable electricity for campus operations.

The University's operational solar capacity of 801.04 kWp generated 644,430.98 kWh during the reporting period, accounting for more than one-quarter of total campus electricity consumption.

This renewable generation reduced dependence on conventional electricity supplied through the local distribution utility while strengthening campus energy resilience.

The initiative delivers multiple institutional benefits:

- Reduced greenhouse gas emissions
- Accounted for the projected increase in electricity consumption resulting from the construction and operation of new buildings.
- Improved long-term energy security





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- Greater resilience against electricity price volatility
- Increased use of locally generated renewable energy
- lower electricity expenditure for entire campus operations

Climate Impact

Using the Philippine Department of Energy National Grid Emission Factor (NGEF) for the Luzon-Visayas Grid of 0.7058 tCO₂/MWh, UNO-R's solar generation avoided:

Calculation: 644,430.98 kWh ÷ 1,000 × 0.7058 tCO₂/MWh = 454.28 tCO₂e avoided

This reduction represents a measurable contribution to the University's climate mitigation efforts and supports national renewable energy and decarbonization goals.

Renewable Energy Performance

During the reporting period:

- Renewable Electricity Generated: 644,430.98 kWh
- Electricity Purchased from the Grid: 1,917,060 kWh
- Solar Contribution: 25.16% of total electricity consumption

The University's solar installations generated more than a quarter of its total electricity requirement during the reporting period. This reduced the amount of electricity UNO-R needed to purchase from the local distribution utility, lowered associated indirect greenhouse gas emissions, and contributed to cleaner, more resilient, and more sustainable campus operations.

PILLAR 2: MAXIMIZING ASSET SPACE: EVERY ROOFTOP COUNTS

Turning rooftops into clean energy assets

Solar panels transform existing rooftop space into a productive asset by generating clean electricity, eliminating the need for additional land while improving the value and efficiency of the building.

Sustainable Operations

Renewable energy has become an integral component of UNO-R's daily operations.

Electricity generated by campus solar systems directly supports academic buildings, administrative offices, libraries, laboratories, student facilities, and other operational requirements.

Beyond environmental benefits, renewable electricity contributes to operational efficiency through lower energy expenditures.





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Savings generated through reduced electricity purchases may be redirected toward:

- Academic programs
- Student services
- Campus improvements
- Research initiatives
- Future sustainability investments

The integration of renewable energy into campus operations demonstrates responsible resource management while enhancing institutional resilience.

Energy Performance

The University's electricity mix illustrates continued progress toward cleaner operations.

Source	Electricity (kWh)	Share
Solar PV	644,430.98	25.16%
Grid Electricity	1,917,060	74.84%

Building Name	Status	Photo	Details
Admin Building	Operational		Size: 222.58 kWp Panels: 359





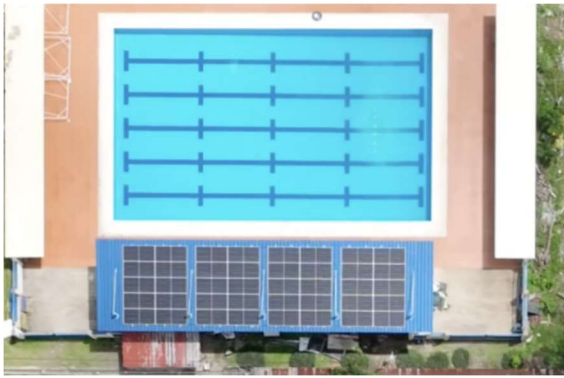
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Library	Operational		Size: 99.82 kWp Panels: 161
Gymnasium	Operational		Size 99.82 kWp Panels: 121
IT	Operational		Size: 33.48 kWp Panels: 54
La Consolacion Building	Operational		Size: 62.62 kWp Panels: 101





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Powerhouse	Operational		Size: 24.80 kWp Panels: 40
Integrated School	Operational		Size: 207.70kWp Panels: 335
OVY College of Allied Medical Health and Science	Installed June 2026		Size: 133.12 kWp Panels: 208
Covered Court	Operational 50.220 kWp Installed June 2026 71.68 kWp		Size 121.90 kWp Panels 193

While the campus continues to rely primarily on grid electricity, solar generation now provides a significant proportion of operational energy needs.





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The continued expansion of installed solar capacity is expected to further increase the University's renewable energy share in succeeding reporting periods.

This distributed approach allows renewable energy generation to be integrated into everyday campus operations while maximizing available building assets.

PILLAR 3: OPERATING WITH PURPOSE, LEADING BY EXAMPLE

Institutional Leadership in Sustainability

UNO-R recognizes that universities play an essential role in advancing sustainable development through education, research, operations, and community engagement.

The University's renewable energy program demonstrates leadership by translating sustainability commitments into measurable institutional action.

The deployment of campus-wide solar infrastructure:

- Demonstrates responsible environmental stewardship
- Supports national renewable energy adoption and decarbonization objectives
- Encourages awareness among students, faculty, staff, and stakeholders
- Strengthens institutional resilience against future energy challenges

The University's continued investment in renewable energy reflects a long-term commitment to environmental responsibility and responsible governance.

PILLAR 4: BUILDING A RESILIENT FUTURE

Expanding renewable energy and sustainable campus operations

UNO-R remains committed to expanding renewable energy generation and strengthening sustainable campus operations.

With approximately **1.0 MWp** of installed solar capacity as of June 2026, future reporting periods are expected to demonstrate:

- Increased renewable electricity generation
- Higher renewable energy penetration
- Greater reductions in greenhouse gas emissions
- Enhanced operational savings





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- Continued progress toward institutional sustainability goals
The University will continue integrating sustainability into infrastructure development, operational planning, and institutional governance to create lasting environmental, social, and economic value

Future expansion beyond the University's existing approximately 1.0 MWp installed solar capacity will further strengthen the sustainability performance of its campus infrastructure. The University plans to add at least 200 kWp of solar capacity per year, increasing its installed capacity to approximately 1.2 MWp by the end of 2026 and progressively reaching 2.0 MWp by 2030.

The projected output of the future 2.0 MWp system was estimated using the actual performance of the University's existing 801 kWp solar installation. Based on its recorded annual generation of 644,430.98 kWh, the current system produces approximately 804.53 kWh per installed kWp. Applying the same performance factor to a 2.0 MWp installation results in an estimated annual renewable energy generation of approximately 1,609,066.12 kWh.

By 2030, the University's annual electricity consumption is projected to reach approximately 3,137,298.13 kWh, assuming an average annual growth rate of 5.2%.¹ This growth rate is based on the Philippine Department of Energy's Power Development Plan 2023–2050, which projects that the country's peak electricity demand will increase at an average annual rate of 5.2% from 2022 to 2050. The DOE projection was adopted as the basis for estimating the University's future electricity demand.

Based on these projections, the planned 2.0 MWp solar capacity is projected to generate electricity equivalent to approximately 51.29% of the University's forecast annual electricity consumption by 2030.% of the University's total electricity requirements. This expansion would allow the University to source about half of its electricity from its own on-site renewable energy system, reduce dependence on grid-supplied electricity, and improve the long-term sustainability and resilience of campus infrastructure.

