



Template for Evidence(s) UI GreenMetric Questionnaire

University : Maejo University
Country : Thailand
Web Address : www.mju.ac.th

[2] Energy and Climate Change (EC)

[2.5] Renewable energy produced on campus per year

Description:

The production of renewable energy

Table 2.3 illustrates the production of renewable energy compared in kWh/year. Biogas production systems with 653 m³ capacity compensate for 2,517.90 kWh/year of electricity usage, as well as biomass and ORC power plant can replace 144,000 kWh/year. The biodiesel production system, has produced 3,132 liters of biodiesel/year which can secure 24,114.52 kWh/year of electricity usage. Solar sources including solar power systems and solar collector systems are the most electricity production generating at 2,066,499.56 kWh/year. Furthermore, Wind power systems produce 11,869.80 kWh/year generating electricity and light. Therefore, the summary of the renewable energy produced on campus is around 2,249,424.98 kWh/year. Table 2.4 shows the electricity production of solar power annually from September 2022 to August 2023. Appendix 3 eventually depicts the energy compensation calculation of the renewable energy sources on the campus.

Table 2.3 Electricity Compensation from renewable energy sources at Maejo University in 2021

Sources	Place(s) where the system is installed	Capacity of the system(s)	Electricity Compensation in kWh/year
Biogas	Biogas production system at the Faculty of Animal Science	650 m ³	2,174.60
	Biogas production system at School of Renewable Energy	3 m ³	766.50
	Total	653 m ³	2,941.10
Biodiesel	Biodiesel production system at School of Renewable Energy	150 Liters	24,114.52
Biomass and ORC	Biomass Power Plant at School of Renewable Energy	20 kW	57,600.00
	ORC Power Plant at School of Renewable Energy	20 kW	86,400.00
	Total	40 kW	144,000.00
Solar Power	President's Office	110 kW	113,100.00
	Inthanin Stadium's Stand	40 kW	41,726.00
	Solar Tracking Station at School of Renewable Energy	660 kW	436,476.00



	Udomslip Female Dormitory (11th Dorm)	80 kW	77,804.00
	Faculty of Economics	20 kW	15,533.00
	Umnuay Yodsuk	300 kW	412,400.00
	Total	1,210 kW	1,097,036.51
Solar Collector	All dormitories	1,313 sq.m.	910,779.72
	International Education and Training Center	84.60 sq.m.	58,683.33
	Total	1,397 sq.m.	969,463.05
Wind Power	Street Light system at School of Renewable Energy	35 x 100 w	10,731.00
	Wind Power Plant	10 x 1 kW	1,051.20
	Wind Power Plant	1 x3 kW	87.60
	Total	16.5 kW	11,869.80
Sum of Total			2,249,424.98