







Universitas Padjadjaran

**[2.1] Energy Efficient Appliances Usage**

Emergency response plan	Fire fighting system
<p style="text-align: center;"><b>Internet of Things (IoT)</b></p> <p><b>AC Monitoring</b></p>  <p>Monitoring ruangan seperti penggunaan listrik, kontrol AC dan deteksi pergerakan ruangan.</p> <p style="text-align: center;">MONIC Dashboard</p>	<p style="text-align: center;"><b>Internet of Things (IoT)</b></p> <p><b>Energy Monitoring</b></p> 
	
<p>Shifting to Solar panel usage for several appliances</p>	

**Description:**

Padjajaran University is committed to becoming a green campus through programs and concrete actions, including conservation and energy efficiency. The action taken is the use of energy efficiency equipment

Appliance	Total Number	Total number energy Efficient appliances	Percentage
LED Lamp	19,771	1720	8,70%
fan	427	323	75.64%
AC-AC inverter	2912	455	15,63%
		Average Percentage	29,90%

Based on the table above, it is known that the efforts made by Padjadjaran University to implement the use of energy-saving equipment. In 2021 Padjadjaran University succeeded in implementing up to 29,90% percent of energy Efficient appliances. The use of LED lights, AC inverters are some of the equipment used. There are two types of ac inverter used, split and cassette / standing. Shifting to use energy efficient appliances will continue to be carried out for all existing equipment at Padjadjaran University. We are also starting to switch to using more renewable energy, solar panels, for some equipment like water pumps and lighting.

Research has also been carried out regarding solar water pumps

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"Pengembangan Ilmu dan Teknologi Pertanian Bersama Petani Lokal untuk Optimalisasi Lahan Suboptimal"*

### **Kajian Pemanfaatan Pompa Air Tenaga Surya untuk Kebutuhan Irigasi di Lahan Pertanian**

#### *Study of Solar Water Pump Utilization for Irrigation Requirements in Agriculture Land*

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#### **ABSTRACT**

Irrigation water requirements in agriculture land particularly rice field area on summer tends to increase, meanwhile its availability is relatively constant. Those are causing farmers use diesel pump to fulfill irrigation water requirements. At the pump diesel user farmers number increase, the consumption of fuels will increase. Therefore, at Desa Balingbing, Kecamatan Pagaden Barat, Subang has been installed one unit solar power water pump. This research was intended to understand the performance of solar power water pump at the site. The method used on this research was descriptive exploration method. The results showed that the average water discharge was 0,7 liter/second, the average electric power was 150,87 Watts, the average water power was 47,04 Watts, the average specific power was 32,25 Watts/m<sup>3</sup>, combined pump efficiency was 31,07%, and the average value of solar panel efficiency was 6,14%. The land area which can be irrigated was 1 ha/day with 0,7 liter/second water discharge and the average irrigation water requirements at 0,44 liter/second/ha.

Keyword: irrigations, solar water pump, agricultural land, water discharge