

Solar Land...



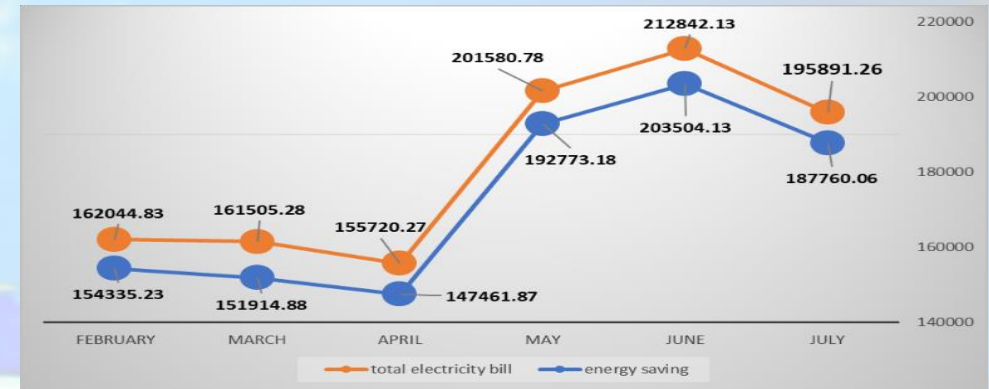
Energy is accounted as one important of living. It is a challenge to reduce climate change and a key influencing factor in solving the issue of greenhouse gases. Renewable energy by trapping heat from sunrise is generated by energy production from burning fossil fuels to produce electricity such as coal, fuel oil and gas contribute the most to global climate change. They account for more than 75% of global greenhouse gas emissions and nearly 90 percent of all carbon dioxide emissions as fuels, oil, and gas are non-renewable resources that take hundreds of millions of years to form. When burned to produce energy, fossil fuels cause harmful greenhouse gas emissions such as carbon dioxide.

Renewable energy is energy derived from natural sources such as Sunlight and wind that are constantly replenished as a source is plentiful and all around us. Renewable energy generates low levels of carbon emissions than burning fossil fuels. The transition from fossil fuels is now the key to tackling the climate crisis. The solar panel is becoming cheaper in many countries. In addition, the cost of producing solar panels has dropped dramatically over the past decade. It makes it affordable and compact size also It has a service life of about 30 years.

To achieve the mission, SEAFDEC/TD has the desire to reduce our reliance on fossil fuels and invest in Solar sources that are clean, accessible, affordable, sustainable, and reliable. Solar energy sources are available in abundance all around us, compared to fossil fuels, which still account for more than 70 percent of global energy production. Green energy sources about 30 percent of electricity currently come from renewable sources. Therefore, solar energy technology is one plan of action for SEAFDEC in the sustainable long term.

In early 2022, an On-grid Solar Roof System of 20 kW on the rooftop of the Training Department under JTF support within the budget of 583,150 Baht.

The result of electricity saving costs by data collection of from February to July 2022 illustrated by the graph as follows:



- 1)The average monthly electricity savings, the cost is approximate 8,639.2 Baht/month.
- 2)The earning cost of a year, SEAFDEC/TD can save electricity costs of approximately 103,670.40 Baht/year.
- 3)The investment cost of installing an On-Grid solar roof system of 3 Phases of 20 kW for 583,150 Baht. Under warranty of inverters and electric equipment within 10 years. With the effective cost of power-saving, by reducing electricity payment in an estimated 5 years and 8 months. The estimated service life for 20 years of solar panels.
- 4)The research study and data collection between every month's solar panel cleaning and non-cleaning found that IR radiance efficiency affecting the solar panel will decrease by 3% with the average light intensity of 498 watts/m².



Concerning environmentally responsible, utilizing clean energy in the climate change crisis based on GHG gas or CO₂ emissions. Referring to the data collection, within 6 months the photovoltaic systems produce electric power supplied to the Training Department 9,620 kWh amounting to CO₂ emission of 11.07 Tons or equivalent to 16 tons of trees and/or amount of coal 9.32 tons used to generate electricity.

