

Light Up Myanmar Project 2022

By Thae Thae Han Thu

Myanmar's electricity and military coup

- ▶ Most of Myanmar's electricity (74.7%) is produced by hydroelectricity. The rest is from fossil fuels, with gas as the main fuel (20.5%) followed by coal and oil. In 2017, Myanmar had an installed electricity generation capacity of about 5 gigawatts (GW).
- ▶ It was okay but since the population is rising, Electric consumption in Myanmar is projected to rise by 15 per cent annually, meaning the country will need another 4,530 megawatts of electricity by the 2020-2021. more than 66 per cent (7.178 million) of households in Myanmar do not have regular access to electricity. (said Minister for Electrical Power Khin Maung Soe in 2016)
- ▶ But now is 2022, about 30 million of households do not have access to electricity especially in rural areas and war zones. People from cities also don't get regular electricity assess. The electricity went out at least once a day in most cities including Yangon.



Myanmar's electricity and military coup

- ▶ Since the military coup, they cut down the electricity and internet access every now and then. Capture the innocence citizens using that darkness.
- ▶ Ask for unrealistic electricity, internet and phone bills. To raise their military funds by force. If the citizens can't pay, they destroy the power cables to make citizens suffer in dark.
- ▶ Such unfair oppression is unacceptable when citizens are already suffering from the rising inflation and at their lowest. Half of the population lost their jobs.

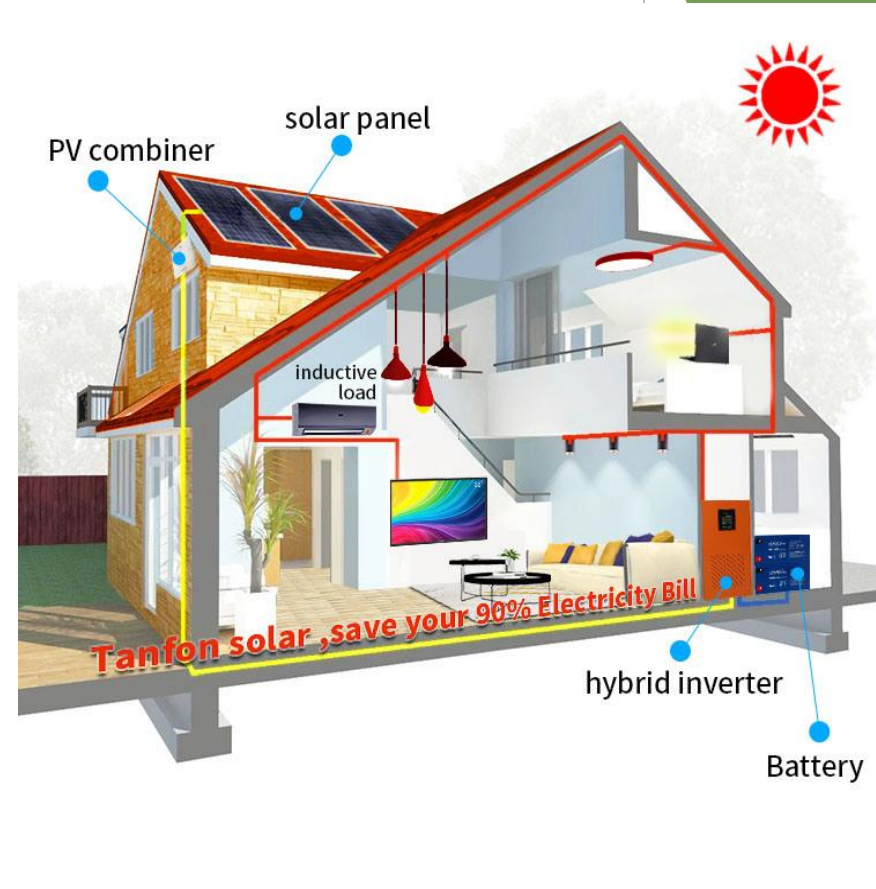


WIFI, internet, e-commerce and covid

- ▶ Covid in 2020 causes everyone to stay at home. People do business on online more. Social media, online classes and online shopping gets trendy. Overall e-commerce sales raised.
- ▶ Over the last seven years, digital buyers worldwide increased from 1.32 billion in 2014 to 2.14 billion this year, according to Statista. Because of this and other factors, there are good reasons to believe that 2022 will be a year of continued retail digitization.
- ▶ But without internet or WIFI access, people can't do anything because we do everything online due to covid and military coup. Hurts people's businesses and waste the youths time due to delayed online classes. For the reason that we can't go to school anyone our education and entertainment depends online classes and knowledges.

Solar Power comes to rescue

- ▶ The only unlimited electric power source that we can own. Nature's gift. Light up the rural areas. Noise free.
- ▶ Cut the military funds to buy weapons.
- ▶ Will improve the agriculture by many. Such as protect the crops from light-related damage.
- ▶ Sustainable for earth and can be 80% recycled. Reducing energy use, saves money, increases our energy security, and reduces the pollution that is emitted from non-renewable sources of energy. They usually last for 20-60 years based on quality.
- ▶ The 24/7 WIFI and electricity. Nobody can take that away from you. You don't have to beg the military. Don't have to wait in darkness with mosquitos.



The problems and its solution

- ▶ People in Myanmar won't use it because
 - They don't understand well about this product.
 - They are expensive for middle class families.
 - Unaffordable for lower class families.
 - most in Myanmar market are from China and bad quality. Low efficiency rate(only 10%).
 - Most people don't use it. It is not a trend.
- ▶ They get more expensive because of shipping fees, taxes, low efficiency (have to buy a lot of panels to run the household. We have China factories running here for raw material such as purifying the silicon, the most important material in manufacturing solar panels. Get from rocks, sands, clay and soil. Myanmar is already rich in raw materials.

General explanation of how is it made

▶ Solar panels are made of monocrystalline or polycrystalline silicon solar cells soldered together and sealed under an anti-reflective glass cover. Once light hits the solar cells, the photovoltaic effect starts, and electricity is created. The five key steps in making a solar panel are:

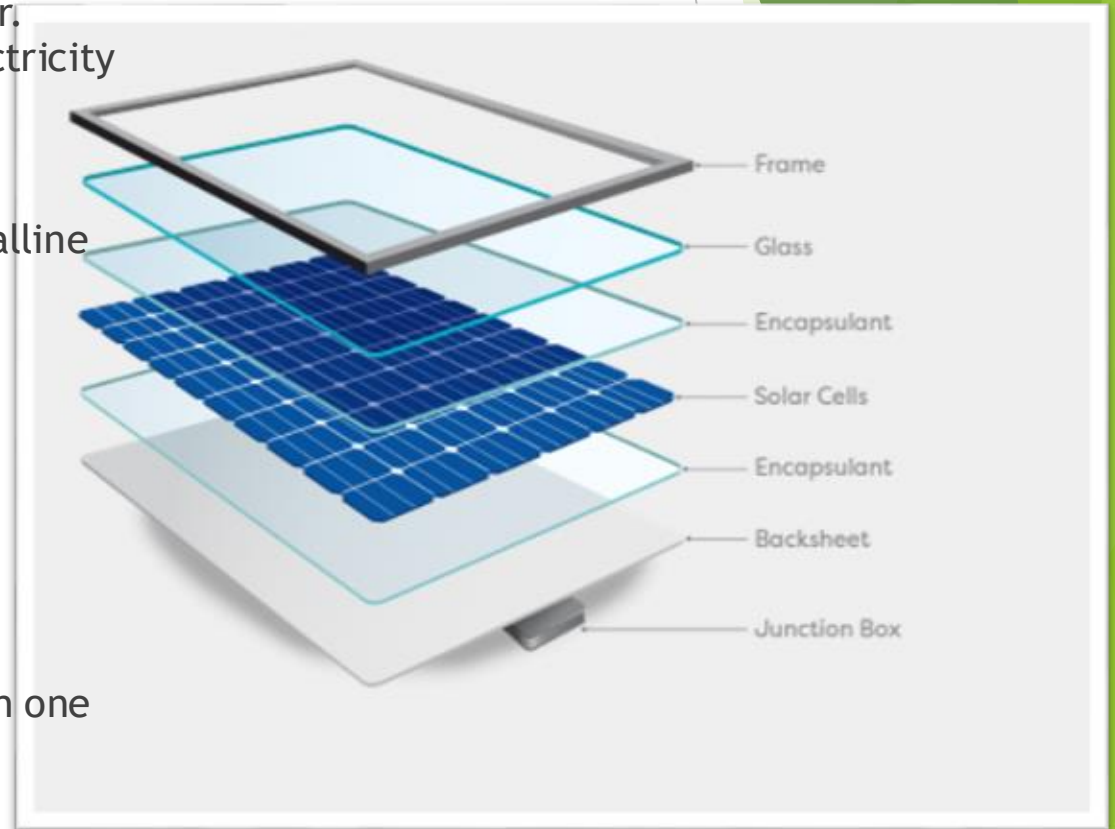
▶ 1. Make the solar cells(P-type or n-type solar cells are a mix of crystalline silicon and either gallium or boron to create silicon ingot.)

▶ 2. Solder solar cells together to create a panel.

▶ 3. Install a back sheet, front glass layer, and frame. Mostly glass.

▶ 4. Install a junction box, has bypass diodes that keep power flowing in one direction and prevent it from feeding back to the panels

▶ 5. Quality testing for efficiency and sustainability.



The Increasing Energy Market of Thailand and Asia

- ▶ Solar power in Thailand is targeted to reach 6,000 MW by 2036. In 2013 installed photovoltaic capacity nearly doubled and reached 704 MW by the end of the year as well as In 2021, the world's largest hybrid solar-hydropower project, the Sirindhorn floating solar farm, commenced operations.
- ▶ They have many manufacturing factories. The advanced technology.
- ▶ Thailand has fast-increasing electricity demand and it has very high sun irradiation levels. Thailand solar power market, is estimated to be 2.7 GW in 2017, and is projected to grow to 5.4 GW by 2024, at a CAGR of 12% percent.
- ▶ The government's support and encouragement to set up solar system.
- ▶ The Southeast Asia solar energy market is expected to grow at a CAGR of around 2.5% during the 2022-2027 based from international renewable energy agency.
- ▶ 200 thousand Thai Bahts for average household.(around 11 million in mmk).



Help Save lives! They deserve better life

- ▶ The market demand is already high since this is inclusive produce need for all households. Most people want to stand against military, don't want oppressions. We crave security and comfort. We can fight off Chinese domination in clean energy area.

- ▶ If only we can reduce the costs and taxes a little bit and give people affordable options, increase the solar panels efficiency.

- ▶ If only we can introduce the solar energy to Myanmar market and market it right to get trendy.

- ▶ If only we can learn and bring back the technology from Thailand and manufacture the solar panels in Myanmar. We only need funds for machinery and technology.

- ▶ We can save lives)(eg. Covid patients who need oxygen 24/7), saves planet (reduce waste and pollution), educate people (kids from rural areas) and help the innocence lives in war zone.



Together to the brighter days

- ▶ My idea is to bring the advanced technologies from Thailand and use it in Myanmar to help the people in need since this technology is not available in Myanmar. Up to 25% efficiency is in Thailand markets.
- ▶ We'll be planting two trees in Vacant land spaces (especially in lands which are most likely occur flood and landslides) after reaching every 5 sales.
- ▶ In the end of every year, we will be donating the solar setups to suitable rural areas which don't have electricity access.
- ▶ With the more affordable solar system we will get 24/7 electricity, better WIFI or internet connection, fight against military oppressions. It will provide jobs to people in need. Pull the Myanmar's economy up.
- ▶ If this incubation social enterprise project get chosen and get in shape later, I will be uploading this in startup project in investor finder websites and promote on mainstream social media to raise funds from citizens along with people who want to take part in this charity project.
- ▶ We'll also be building the partnership for this community-based product with local enterprises.