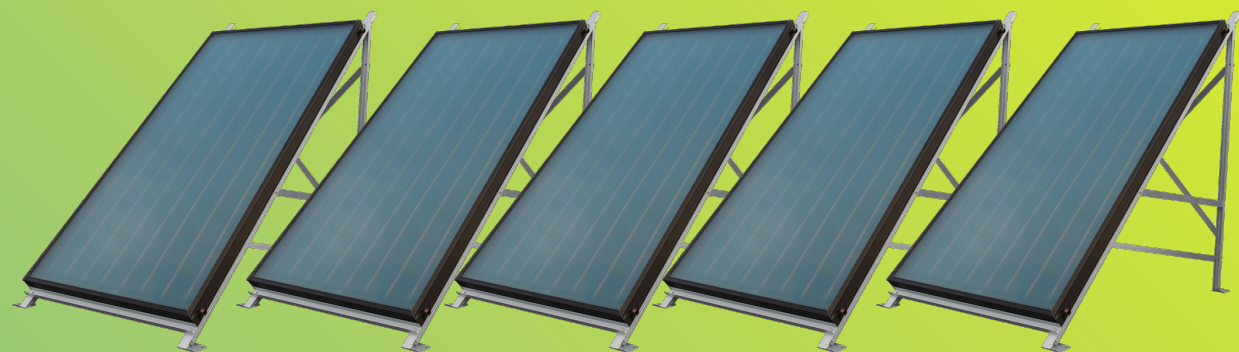
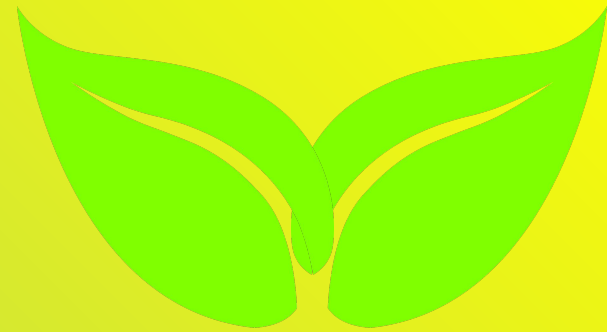


THE SOLAR PANEL STORY



Theo

HOW IT STARTED

Theo



in september 2018 we started learning about renewable energy. Renewable energy is better for producing power, example solar, wind and hydrodams. Gisborne had our Annual Science Fair. Our group Liam, Theo, Ambar and Christabel made a solar sign model with LED lights on it to put on our bike track. We came 2nd place at the Science Fair. We were very proud of ourselves.

Our group got together and did some research about what we wanted to do for our project so we came up with an idea to do something about solar power. We all wanted to do something about solar on the bike track and we made, a solar sign that says give way it worked there was a few ups and downs, we got there in the end. Then we made another solar sign because the other one that we made was successful, and wanted solar panels in real life so we could save money for the school, the group asked mr swann and showed him what we did on the solar panels/ our board that we made. We raised the money by fundraisers and discos, BBQs, Movie days, crazy hair day, helicopter day it where we bring a gold coin to school. We fundraised the money for the materials to build it.

Large variety of projects

FROM PAGE 1

Ms Hannah said there was an increase in the number of projects completed in Te Reo Maori.

There was a large variety of projects, including creating hydro-power, environment-friendly skateboards and drones made by recycling.

Kids also investigated the properties of honey and coffee grinds, challenged the five-second rule and asked whether wifi affects plant growth.

With more than \$2000 in prizes up for grabs, and trophies and certificates to be won, the fair provides high levels of motivation for both schools and students.

The fair opened last night and is open to the public from Saturday to Monday from 9am to 3pm at the Showgrounds Event Centre.

Entry is free.

Prize-giving will be at 5.30pm on August 28 at Gisborne Boys' High School.



SOLAR SAFETY: Nine-year-old Liam Spence of Makaraka School wants to keep our roads safe and found his solar-lit signs worked a treat.

GRASS GRASS GRASS: Eight-year-old Bella Swann and nine-year-old Kaycee Andrew from Makaraka School experimented by making bio-grass and found compost worked best.

Pictures by Rebecca Grunwell

Liam

Our Solar Project is in the background. This is 2018. We spoke to Mr Swann and the Board of Trustees who thought it was a great idea. We got the panels installed in October 2020. Good things take time, but it is great we were here to see it.

WHAT WE PLAN TO DO

We have achieved a few of our enviro school goals one of them was going solar it is better for the environment. The school Solar can save around \$400 dollars every month. Solar can work even without full sunlight so if it is cloudy and there is a little bit of sunlight they will still power the school.

SUSTAINABLE COMMUNITIES

Sustainable communities and renewable energy relate because renewable energy is sustainable because it's sourced by the sun.

Makaraka School is a role model for our Community to follow. Our students can talk to family about solar energy being better than fossil fuels that put Carbon into the atmosphere.

HOW DID WE GET THE SOLAR PANELS

For the past 2 years our school has been saving money and getting funding to buy 36 solar panels to efficiently use the sun's rays to power our school instead of using normal power.

Why?

We got solar so we wouldn't use as much fossil fuels and solar is better for the planet.

And Solar and renewable energy is a lot cheaper than normal electricity.

Liam



THESE ARE SOME PHOTOS ABOUT OUR SOLAR PANELS



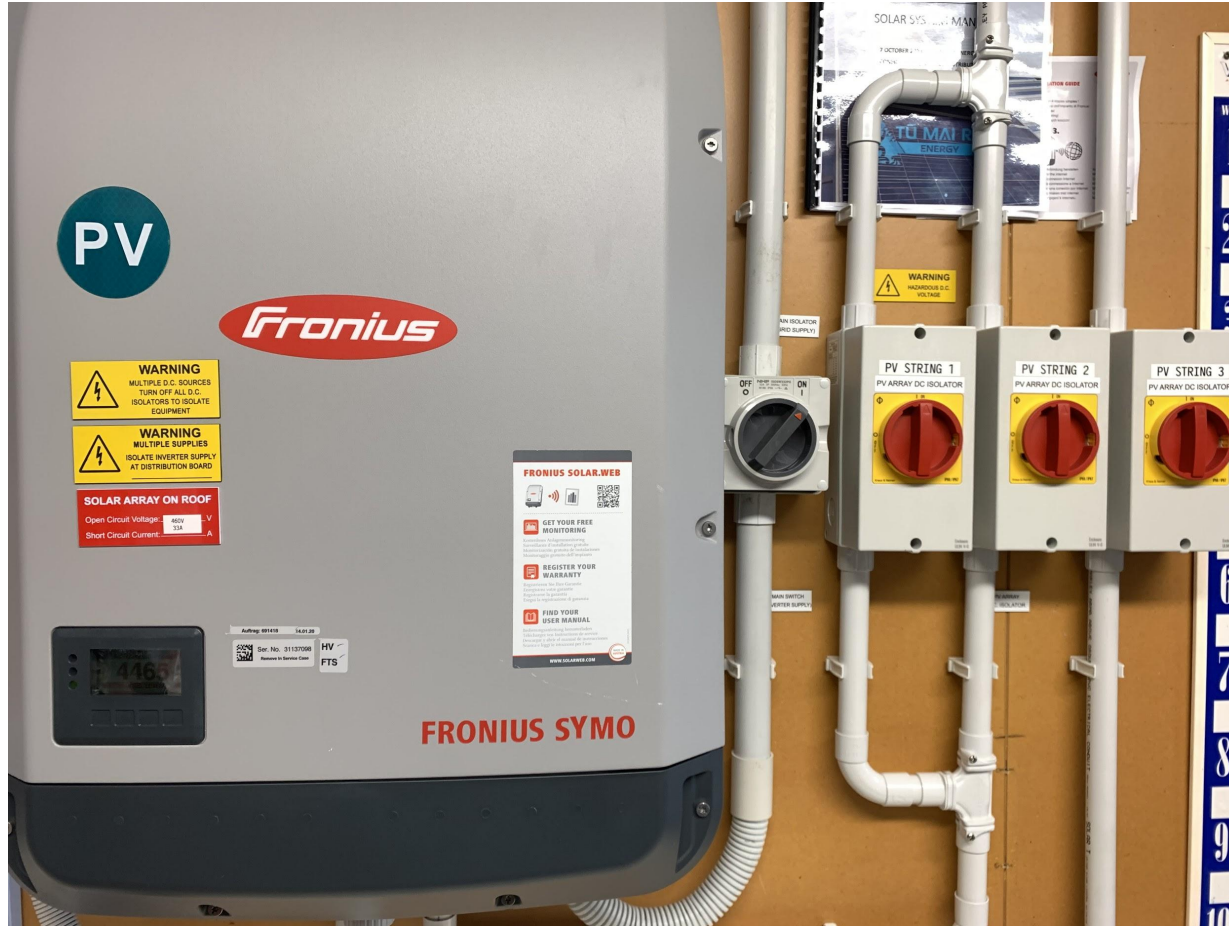
The Solar Panels are on Rooms Tawhirimatea and Tane Mahuta because they face the North East direction which gets the most Sun during a day.



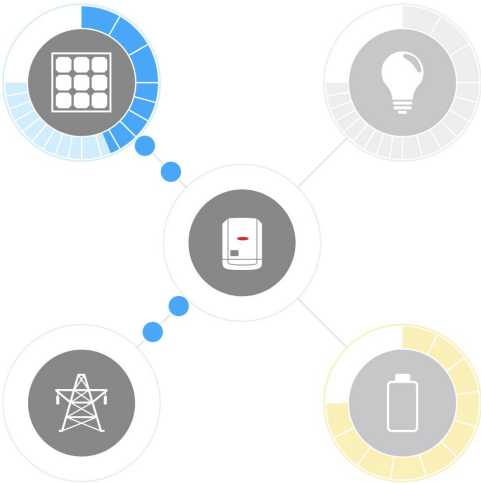
Ambar






The Solar Panels are fixed to brackets on the roof and can be changed if they get broken. They should last 25 years. They cost \$30,000 and should pay for themselves in about 6 years.

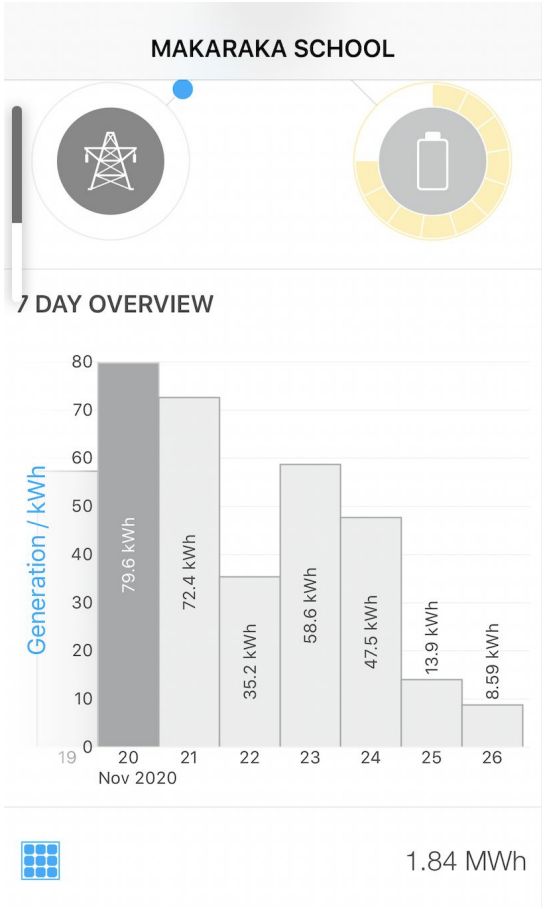
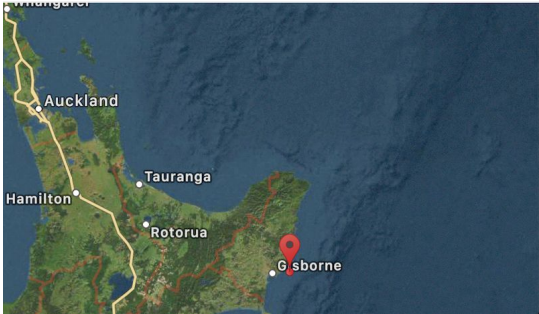
This is the Inverter which collects the power off the roof and sends it to the National Grid. We supply power to the country including ourselves.



This is the Solar App. It shows how much power is being produced. This was a cloudy day so it wasn't going at full capacity. It shows how much the school is saving the environment. The days with strong sunlight produce more power, the days with rain like 25th Nov produce less.



MAKARAKA SCHOOL	
	1.84 MWh
	\$220.96
	976 kg
	6,506 km
	25
Last update: 26/11/20, 10:08 AM	



FACTS ABOUT SOLAR PANELS

One hour of sunlight equals one year worth of energy .

California Is the biggest proponent of solar energy in the USA .

Panels can produce power without direct sunlight.

The United States of America has the most sunlight in the world.

A solar powered home can reduce co2 emissions by 100 tons within 30 years.
The Two Types of Solar Energy. One type The sun directly converts sunlight into electricity. Solar thermal technology harnesses its heat. These different technologies both tap the Sun's energy, locally and in large-scale solar farms.