

Renewable Energy Car Race

INDUSTRY FOCUS AREA:	New Energy
VICTORIAN CURRICULUM LINKS:	Science, Digital Technologies, Personal & Social Capability, Critical & Creating Thinking
TECHNOLOGY USED:	Renewable Energy, Rapid Prototyping
YEAR LEVEL:	Year 7 - 9
DURATION:	1 Day
LEVEL:	Beginner
MAX STUDENTS:	30

Introduction

The face of energy in the Gippsland region is undergoing change. This has been seen with the closure of the Hazelwood Power Station and the increase in solar, wind, and geothermal energy generation. There is also world-wide pressure to reduce emissions and move towards a greener future. Iceland, Costa Rica, and Uruguay have already achieved over 90% of their energy being generated by renewable sources. Closer to home, the Victorian government has set a target of 25% renewable energy production by 2020, increasing to 40% by 2025³.

Program Summary

Through the day students will be introduced to different types of renewable energy. They will investigate the advantages and disadvantages of solar and wind energy. They will then use this learning to design, build, and test a car powered by renewable energy. The program will conclude with a race between students' designs and a reflection on their learning.

Taking part in this program, students will collaboratively:

- Conduct experiments to understand different types of renewable energy
- Learn advanced manufacturing techniques (3d printing, laser cutting)
- Design, build, and test a prototype
- Reflect on learning

Career Links:

Artisans: machinery operators, electricians, carpenters

Designers: architects, product testers, draftspersons

<https://www.fya.org.au/wp-content/uploads/2016/11/The-New-Work-Mindset.pdf>

³ <https://www.energy.vic.gov.au/renewable-energy/victorias-renewable-energy-targets>

