Power Challenge
Energy transformation

Video transcript
Kia ora koutou, my name's Lewis. And I'm Cha Cha We hear you've started learning about energy. And that's great, cause energy is awesome! We both work for Transpower. Which means we deal with energy all the time!
Energy is defined as the ability to do work. Simply put, energy makes things happen. Every time we do anything, we use energy!
Energy comes in loads of different forms. Forms like: Gravitational potential energy See this balloon stretching, that's elastic potential energy. There's light energy that helps us see the things around us. Sound energy. And this is kinetic energy – the energy of motion. And the form of energy that lights up our towns? Say it with me… electrical energy!
Now, the total amount of energy in the universe will always stay the same. So, you can't just create new energy out of nowhere. And you also can't destroy it. But what you can do, is transform it or transfer it.

Huh?
Title: Energy transformation and transfer
Energy transformation is when one form of energy is transformed into another form! Energy transfer is when energy moves from one place to another, or one object to another.
Let's start with energy **transformation**. Picture a wind turbine. A wind turbine relies on wind energy to power our homes, right? But, if you try and turn on your lights with wind on its own – you won't have much luck
Here's where energy transformation comes in handy. The wind turbine works by **transforming** wind energy, into a more useful form of energy – electrical energy. Now this is a form of energy we can use to turn the lights on!
So, our turbine has now transformed wind energy into electrical energy. But we have one problem – the energy is in the wrong place! That's where **energy transfer** comes in. To get the electrical energy to our homes and hapori, it is **transferred**, or moved over long distances, all over Aotearoa!
You got it? Ka rawe! Now it's time for you to test some everyday energy transformations for yourself. Let's charge on.