ENERGY BIKE SYSTEM INFORMATION
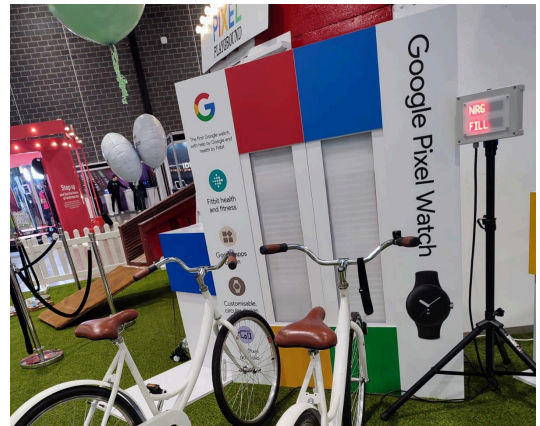
How does it work?
- One or two bikes are connected to the control box.
- The control box controls one tall rectangular light display per bike so that when someone cycles on the bike(s) the displays 'fill' from the bottom to the top with light. This represents the energy supplied from the cyclist.

- We can set the amount of energy required to 'fill' the displays with lights from 1Wh (which takes about 30 seconds of pedalling) to 10,000Wh (which takes about 40 hours) and anything in between!
- Most clients choose around 1Wh which takes around 30 seconds of pedalling.

What happens?
1. User presses a button on a remote control to start the 'go'.
2. The countdown timer displays 3, 2, 1, GO, then starts timing - counting up from 1 second.
3. Cyclist starts pedalling and the lights on the display 'fill' from the bottom to the top, the faster and harder the person pedals the faster the lights fill up.
4. When the cyclist has filled the lights the 'go' ends - the display flashes and the countdown timer stops at that time.

If two bikes are used then the 'go' ends when the lights controlled by the first bike reach the top and the display for that bike will flash while the other will be dimmed

Optional alternative mode 1 - Countdown
As well as setting the amount of energy required to fill the display (e.g. 2Wh we can also set an amount of time that each 'go' is limited to - for example 1 minute.

In this mode, after displaying 3, 2, 1, GO, the countdown timer counts down from, for example, 1 minute. The 'go' ends either when the display has filled with lights or the time has run out (whichever happens first) in both cases at the end of the 'go' the light display flashes.

Optional alternative mode 2 - One bike, two light displays
One light display shows each 'go' (as explained in standard mode or alternative mode 1)

The other light display is set to a different (larger) amount of energy required to fill it and shows the cumulative amount of energy generated by all the 'go's' combined.

This mode was used with Vitality, with the cumulative display showing the amount of charge that we had put into their battery powered ground sweeper as part of the 'Go Green Game' cricket match between England and New Zealand.

Generator Stands
Our standard adult stands are grey although we also have yellow ones available for extra cost
The stands for childrens bikes are black
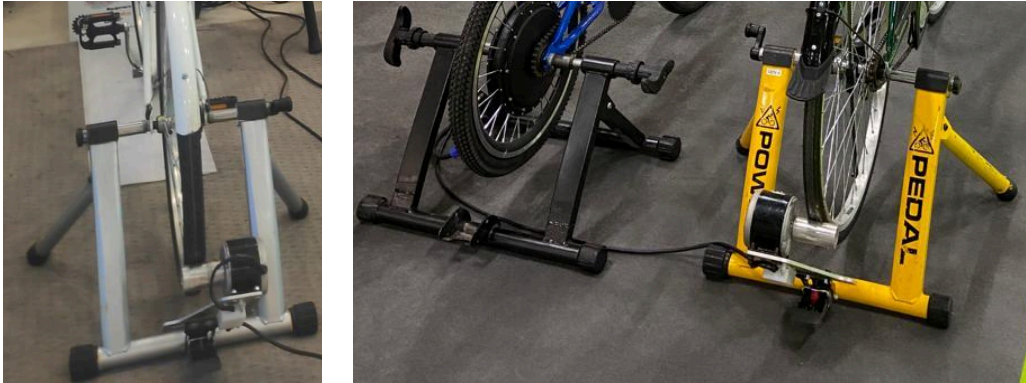
The Bicycles
We have as standard the bikes listed below. These all work with the system and can be mixed and matched if desired. We can also supply other types of bikes for additional costs.
Clients can use their own bicycles if they have certain characteristics (see FAQs at bottom of doc)

- X2 blue kids bicycles (as per photo on right)

- X2 white adult bicycles (as per the Google photo on next page)
- X1 purple adult bicycle (as per the WEX conference photo on next page)
- X2 green adult bicycles (as per TE photo on next page) *these are not always available or cost extra
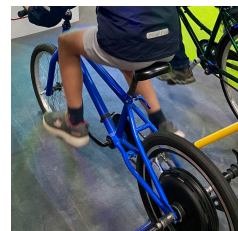
Display/Graphics

Our Standard Graphics on our Frame
We can supply our graphics as standard as per photos below.

Included are info arrows which show how long common appliances would be powered for with the energy generated by the bike. These include: Kettle, toaster, TV, laptop, light bulb, phone charger. We can print more custom arrows for a fee by request.

Client Created Graphics on our Frame

Clients can design and print their own graphics to fit on our frames if desired. Info on dimensions, information etc for this in *Energy Bike Custom Graphics / Frame PDF*

Examples of client graphics:

Client Created Display Frame & Graphics

It is also possible to use the light displays built into a custom frame. Info on dimensions, information etc for this in *Energy Bike Custom Graphics / Frame PDF*

Example of client created custom display frame:

Requirements
- Wet weather cover, such as gazebo etc.
- Access to a power socket (240V AC, <1A, 200W max) is very preferable. We can do it without but need to know in advance and factor into our quote.

Supervision
- The equipment requires someone to supervise the activity at all times it is in use to ensure the bikes are used safely (and to press the reset button on the remote control (if applicable)). We can provide someone to do this for extra cost, or most clients do it themselves (it's very simple). If a client supervises themselves we will stay nearby to provide support if needed.

Notes
- The LED displays seem very dim when in direct sunlight so best to avoid this with some form of cover or sun shield.

FAQs

How noisy is it?
The generators work by the back wheel of the bike pressing on a roller which spins as the wheel rotates. This does create a small amount of noise, not a lot though, it is roughly similar to a boiling kettle.

Can we brand it?
You can brand the bikes with stickers.
You can create graphics for the display (see 'display' section).

Can we have a leaderboard?
The system times each go but it does not have an automatic way of making a leaderboard, the client can make a leaderboard themselves if they want to :-)

How much space does it take up?
This depends on the number of bikes & displays used.
Length (the way the bikes are 'pointed') x Width

X1 bike & X1 display
- 300cm x 120cm

X1 bike & X2 displays
- 300cm x 120cm (display centre piece only)
- 300cm x 150cm (display centre & one wing)
- 300cm x 200cm (display centre & both wings)

X2 bikes & X2 displays
- Minimum (space to get on/off bikes on one side only) - 300cm x 180cm - centre piece & up to one wing possible
- Ideal (space to get on/off bikes either side) - 300cm x 250cm - centre piece and up to both wings

Can I use other/my own bikes

Yes with the following specifications

- The nuts on the back wheel need to be old skool or a particular type of quick release nut
- The tyres are slick or hybrid, not big knobbly & chunky mountain bike ones
- The wheel size is minimum 26'' to 28''/700C
- We find that using ladies bikes with a drop frame helps with people safely and easily getting on and off but this is not essential.

THESE ARE OK

THESE ARE <u>NOT</u> OK
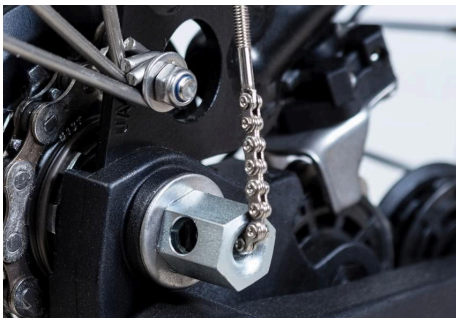
THESE SORTS ARE OK

THIS IS <u>NOT</u> OK

Usage/Safety Guide

<u>Check</u>
That the bike on the stand feels stable. If the back wheel feels loose tighten the generator stand onto the back wheel of the bicycle using the black turn-handle. Ensure the lock-nut is used and tightened.

The bikes on the generator stands may 'migrate' forwards. Keep an eye on this and move back if necessary as it may strain the cable

Saddle height. It is best to set the saddle height to one level and ensure it is tight. Avoid adjusting this during an event. If the saddle is not tightened correctly then it may drop during a game.

Tyre pressure. Check that the back tyre pressure is reasonably high as this ensures good traction of the tyre on the roller.

Roller adjustment. Check the roller is touching the back tyre enough to not slip, but not too tight that it deforms the tyre too much (as that will be harder to pedal).

<u>Usage</u>
Be <u>very careful</u> of the spinning back wheel. Keep everyone away from it!

Sit while pedalling (don't stand).

Users should get onto the bikes from the side away from any cables.

Make sure nothing (hair, bags, clothes etc) can get tangled in the back wheel.

Do not use if there are health conditions that mean that strenuous exercise might be dangerous.

Do not use if under the influence.

Do not use the bike if users feet cannot reach the pedals properly.

Do not use if younger cyclists do not have the strength to turn the pedals properly as the pedals can slip and hurt the cyclist.