POWERING SUSTAINABLE CHANGE

PPL PWR Services 2018

The PPL PWR Team shares their knowledge and expertise through hands-on workshops, building installations and creating spaces for public events.

They deliver talks and demonstrations to share cutting-edge research, promote renewable technologies and engage the public and education sector in sustainable practices. The aim is to connect & inspire people and organisations to innovative ways to do more with less.

Instagram - @PplPwrOrg
Facebook - @PplPwrOrg

Demos - Table Top

Thermo-Electric Hand Generators
Did you know, you can create electricity from just *the heat of your body?* Race your friends and family to see who's hottest, with this thermo-electric demo and see who lights their LED the fastest.

Self-Watering Plants
Ever been on holiday, only to come back to a kitchen full of dead plants – cry! What if your plants could *water themselves?* With just a few off the shelf components and a few lines of code, your plant sense when it's getting dry and pump water to feed its thirsty roots.

Pollution Sensors/Air Monitoring System
There's all this kafuffle in the news – nitrogen dioxide, carbon dioxode, smog – but we can't see it! *What gets measured gets managed*, with PPL PWR's particle sensor.

Solar Table
Think solar is some distant tech in the future? Did you know you can solder together your own solar cells and make your own phone charger, in a table? Get hands on and see what it takes to make your own solar panel – and top up the charger on your phone at the same time!

Demos - Standalone Pieces

Solar Tea Shop
Harnessing the power of the sun to make the Nation's favourite beverage – the stuff of nonsense? Not any more! Stripping back a solar-thermal (sun-heating) system from a house, the sun's radiation is focused in a series of tubes to heat up the water needed for a nice cuppa.

DIY Wind Turbine
With a thorough understanding of wind turbines, but only the junk lying in his grandmother's garden, Adam turned a treadmill, washing line and down pipe into a electricity generating masterpiece.

Learn about the issues around wind-powered generation, the science behind blade dynamics and test your own plastic bottle wind turbine designs in our test rig.

DIY Reclaimed Furniture
One man's waste is another man's treasure – or should that be furniture? Collecting materials from the street, artist and designer, Molkie turns useless junk into useful furniture for events to create the informal discussions zones for renewable technology conversations.

Wander Inn - The Off Grid Lab
Possibly the UK's first off-grid science lab, the Wander Inn is powered entirely by the sun. Converted from an old carpet truck into a campervan-turned lab, the Wander Inn offers 3D printing, bringing this exciting technology right into the heart of events.

Talks (20 - 45 minutes)

High on Hydrogen
- Josh, UCL PhD Researcher on Hydrogen Fuel Cells (and former head of Cell)

Hydrogen buses in London are getting the stamp of approval from Sadiq Khan, Japan's residential homes and California's transport network are in the process of switching to hydrogen, so what's next for hydrogen, in this country and across the world? Josh will deliver an update on the research conducted at the Electrochemical Innovation Lab at University College London and more generally on the progress in hydrogen production, storage, and uses from hydrogen for heating to fuel cell electric vehicles.

Do-It-Yourself Renewables
- Adam, Mechanical Engineer

Ever wanted to know how to build your own wind turbine? Maybe you'd like to know more about the world of water and how it can be used to create energy? Adam "Can-Do" Cane is ready to talk about all things renewable, from DIY projects he has developed himself, through to his recent MSc project in Renewable Energy, centred on high-altitude wind turbines turning high speed wind efficiently into green electricity. Ask away!

Getting Off-Grid
- Molkie, Creative Freelancer

Wander Inn projects wants to help you think about all things off-grid. Molkie has recently converted his van into a mobile home, replete with solar panels, battery storage and a beautifully insulated interior. Come hear more about what appliances you might want off-grid, what power this likely entails and how to size your solar array!