

Taking the power back!

15 November, 13:00 – 17:30 and 18:30 – 21:00

Devonport Guildhall, Plymouth

Agenda

Join us for an energy jamboree about social justice and making our energy system work better for us. We'll be exploring how our energy system is changing and the opportunities for communities to innovate, collaborate, and democratise the smart flexible energy revolution. Leading community energy group PEC and PECR will share their inspiring stories from the past year, and will be unveiling a hard-hitting photo exhibition commissioned to shine a spotlight on the impact of fuel poverty. Enjoy some wine and settle in for an evening of inspiring speakers who'll be talking about fuel poverty, climate change, social economy, and taking local action.

During the day, we will examine the rapid transition to a smart, decentralised and flexible energy system. We'll explore the opportunities for community energy groups to innovate and play a leading role, engaging communities and developing new business models for local supply and storage, and ensuring the energy revolution is low-carbon and democratic. It's about learning, collaborating, finding solutions and getting inspired.

This is followed by the PEC AGM, exhibition launch and an impressive line-up of inspiring evening speakers.

13:00 Registration, lunch and networking

13:30 Welcome and introductions from chair

Jodie Giles, senior project manager, Regen

14:00 Smart and flexible energy network innovation for communities

Our changing electricity network and the transformation from DNO to DSO means there are opportunities for community groups to innovate and build new partnerships, find out how you can engage in our new smart and flexible energy system and work with WPD to balance supply and demand, and connect more low carbon generation to the network.

Steven Gough, Innovation and Low Carbon Networks Engineer, Western Power Distribution

Q&A

15:00 Refreshment break and networking

15:30 Local supply and storage

National insight on the art of the possible and a detailed look at new business models emerging for local supply and storage being tested by community energy groups now.

Tamar Bourne and Tim Crook, senior project managers, Regen TBC,

Q&A

16:15 Community energy innovation – stories from the front line

Find out about PEC healthy homes case study

Alistair Macpherson, CEO, Plymouth Energy Community

Creating, catalysing, collaborating. Saving Lives and more with solar

Anthony Walters, Chase Community Solar and South Staffs Community Energy

Q&A

17:00 Networking drinks

17:30 - 18:30 Plymouth Energy Community AGM

18:30 - 19:00 Private view and photo exhibition launch

19:00 – 21:00 Key note speakers including PEC

Taking the Power Back

As our energy system changes, people are increasingly aware of the amount we pay, the carbon impact and their opportunity to have more control of how they generate and use energy. The seismic shift from centralised fossil fuel generation to decentralised renewables, perhaps the biggest change since the arrival of that national grid, is a huge opportunity to rethink the energy system.

The government wants us all to become savvy consumers and switch our energy suppliers, but we can do better than that. The community energy movement is proving that communities can take a leading role, generating clean green energy locally, preventing people from dying of cold, and partnering on innovation projects with the established energy industry.

Innovation projects involving communities are an exciting opportunity to rethink the energy system from the bottom up, and there's plenty of interest, over 100 people joined us for our [Taking the Power Back](#) event in Plymouth a few weeks ago, hosted by Plymouth Energy Community (PEC), Western Power Distribution (WPD) and Regen. Alistair McPherson was our metaphorical scout master leading us through a fun filled energy jamboree which included photography, delicious food and wine, and inspirational speakers to keep us motivated. We have the power to change our energy system and make it lower carbon, more democratic and fair. First we need to learn how, and then we can get on with the transformation.

Here's some top tips from Taking the Power Back on getting involved in our changing energy system in a meaningful way, that will bring real value to the communities in which we live.

1. **Join a local community energy group** like Plymouth Energy Community (PEC) or South Staffordshire Community Energy (SSCE). Both groups shared their stories of their ground-breaking community energy and fuel poverty projects.

Paul from PEC told us there are 15,000 people in fuel poverty in Plymouth. Of the Plymouth residents helped by PEC's Energy Team in the first year, 60 percent had a long-term illness or disability. PEC wanted to reduce the impact of fuel poverty and cold, damp homes on residents who have existing health condition, so they ran a [healthy homes](#) project in 2016 that helped 123 vulnerable low-income people with their energy. Curiously, even just having a conversation and some advice, made participants feel happier. Nearly half (46 percent) suffered from depression or anxiety, so this was a big win from one conversation, 50 percent reported visits to GP were less frequent, and 38 percent reported their general health had improved. Public health England thought the methods used 'demonstrate the cumulative benefits of taking a holistic approach to fuel poverty', but it's not easy working with an overstretched healthcare service. Paul concluded with a slightly leading question, "if only there was some kind of organisation that was trusted, really good at talking to people, and had experience of helping households with energy issues? Community energy groups please step forward."

Anthony Walters from SSCE talked about how his group are literally [saving lives with solar](#). They have installed solar panels on 8 of their local hospital buildings and wanted the community fund to have more impact than giving away a few LED light bulbs. They are working with the hospital and a charity called Beat the Cold to tackle the 106 excess annual winter deaths in Stoke and keep the "frequent fliers"

out of A&E. These are people who repeatedly return to A&E with cold related respiratory diseases due to poor housing and fuel poverty. In this trust alone, there are 1187 frequent fliers who cost the NHS £4.5 million a year. It costs £228 for an ambulance trip and £2000+ to keep a patient with respiratory problems in hospital overnight. Conversely, a home visit from Beat the Cold costs just £120. Tracing a person through the healthcare system has enabled SSCE to demonstrate the impact of the solar community fund, and how much money they have saved the taxpayer. This has encouraged the big six vulnerable customer teams and the council to get on board and support them.

If you don't have a community energy group near you could always start your own. These examples clearly show that data is key if you want to demonstrate impact and access further partnerships and support, putting things in economic terms and qualifying the wider savings to our society is very powerful when talking to big organisations like the NHS.

2. Knowledge is power - Learn about local supply, storage and innovation in our energy system.

Tamar and Tim from Regen have been working with community groups for the past year as part of our democratic local energy project (funded by the Friends Provident Foundation) to look for new community energy business models and unlock barriers in our complex energy system. For community energy groups to continue extracting value from our energy system, we need to understand the detail of the emerging business models and potential opportunities.

Tamar talked about this and some work she has been doing in Cornwall looking at [innovative local supply models](#). Accessing value for communities from our complicated energy market is not as simple as it might seem. We had a detailed look at the most promising models including local generation tariffs, microgrids, peer-to-peer trading and aggregation. All these models involve partnerships, working with tech companies, suppliers, DNOs and more. So, for communities wanting to find ways of supplying energy locally, we need to understand the regulation and barriers, and build partnerships. Have a look at our [3rd edition local supply paper](#) if you want to find out more.

Tim talked about [community scale storage](#) and some work he has been doing with PEC to help communities with existing energy generation assets to evaluate whether batteries are a good idea for their sites. He described storage as less of a silver bullet, more an octopus, with multiple messy legs all potentially doing different things, including maximising onsite generation, bypassing network constraints, electricity price arbitrage (price time shifting) etc. Some of these can generate revenue or value for community energy groups but we'd need a reduction in battery prices of around 25-30 percent for this to be viable at small scale (100s of kW). For stand-alone kilowatt scale storage projects co-located on site, batteries are still too expensive for most 'import avoidance' applications, but prices are tumbling so this could change quickly. Aggregators are increasingly interested in decentralised storage units and how these could be used in emerging flexibility markets. Frequency response (Enhanced Frequency Response, EFR and Firm Frequency Response, FFR) active storage markets are beyond the reach of

most community energy groups because they are short term, risky and require 24/7 monitoring and immediate response. High energy users will be watching the targeted charging review closely, as ever, this critical group will be in demand from flexibility market suppliers.

3. Have dinner with your Distribution Network Operator (DNO) - conversations are free.

WPD have been proactively engaging with communities for the past four years by working with our communities' network and running community energy [events](#). They also offer connection surgeries, and a comprehensive [website](#) with loads of tools including guides and [films](#) about how our energy system is changing. Their latest event on Tuesday 12 December includes a muddy winter walk and site visit to the Castle Drogo hydropower and biomass projects, followed by a festive community energy feast. Over 40 community energy champions and supporters will be sitting down for dinner with their DNO, a great opportunity to build partnerships, talk about possible innovation projects and making connections easier for communities. This is a good example of a DNO making themselves available to community energy groups for a natter. If your DNO hasn't invited you to dinner yet, then invite them to yours and offer them some tea and cake, perhaps before launching into your latest energy innovation idea!

4. Join an innovation project like OpenLV

At Taking the Power Back, Steve Gough from WPD explained the shift in the energy system and what that means for them as a DNO. As they connect more local generation, smart technology and manage two-way flows of electricity, they are managing the complex power flows on the system more closely, and are interacting with customers more. Steve talked about the WPD innovation projects that involve communities, and how the learning from these is used to make successful trials into business as usual. It takes a while for the learning from trials to be adopted on the ground, because WPD must maintain a consistent approach across network areas. We are starting to see roll out from earlier trials, like active network management (ANM) being offered. Their current trials include [Electric Nation](#), the world's largest electric vehicle trial, which is about managing charging patterns and understanding demand from electric car owners. They are involved in the Cornwall local energy markets trial, [Plugs and Sockets](#), which is about creating a platform to share flexibility and enabling people to manage energy locally, through peer to peer trading. The [OpenLV](#) project is making electricity data from the low voltage network 'open access' for the first time ever, this is a great opportunity for smart thinking and innovation. WPD and CSE are inviting people to come up with novel ideas for using this data, either in the form of an app or in any other way. It's open now so if you are interested have a look at the [OpenLV](#) website.

WPD are always open to new project ideas so speak to their innovation team if you want to partner on a trial with them. Remember, to get funding from Ofgem, WPD must demonstrate the project has benefit to the network and users, and it must be a new idea. WPD can offer advice and guidance if you want to replicate an idea that's already been trialled, but it will be harder to fund.

To find out more about energy network innovation for communities, have a look at the presentations from [Taking the Power Back](#), the ENA [guide](#) we wrote, or visit the WPD [website](#).