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Next Generation case study: Crew Energy – enabling heat pump installations in London November 2020

The Devas club in Battersea where CREW will be installing community-funded heatpumps

About Crew Energy:

CREW Energy is a not-for-profit cooperative made up of south-west Londoners who care about making London a more resilient and sustainable community. We help community groups and individuals in London – and particularly in the boroughs of Wandsworth, Merton and Lambeth - access low-carbon solutions.

The initial aim of the Next Generation Innovation model was to develop a financially sustainable model for installing and maintaining heat pumps in public sector or commercial buildings as well as housing estates, with install costs funded through a community share offer. The intention was that revenue would be generated through Renewable Heat Incentive payments as well as potentially flexibility payments through Demand Side Response services. It was also intended that support would be offered to private sector householders to facilitate the installation of heat pumps.

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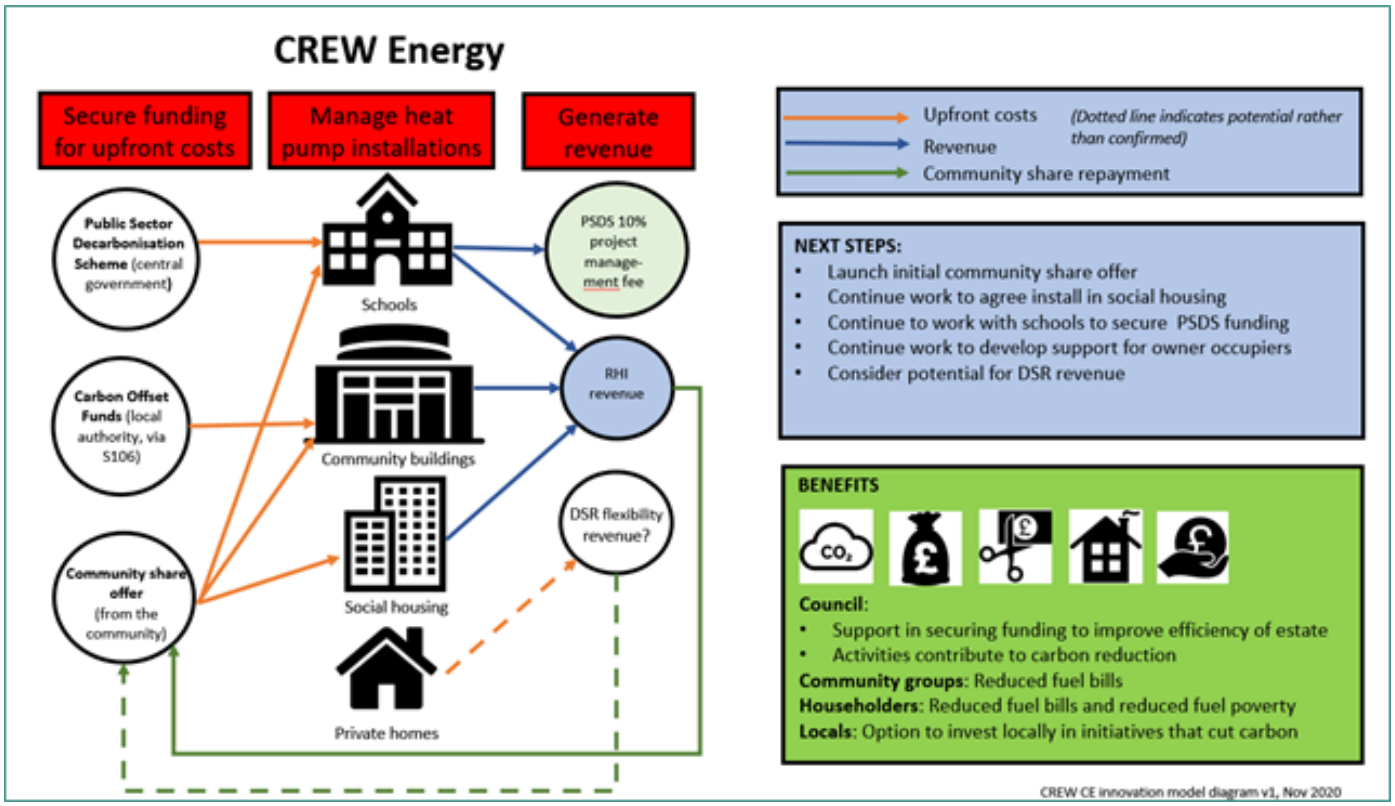
Key points for Community Energy groups:

- Engaging **councils** can be slow but there is a lot of scope to work with them on carbon reduction initiatives, including:
- Supporting them in accessing Public Sector Decarbonisation Funds for their schools. Timeframes are tight and councils don't have direct control over the school. We would act as project manager and would be funded by a 10% project management fee.
- Working with them to support local charities to access community funding raised through carbon offset payments made by developers, under London's planning system.
- **Charities** require a lot of handholding and processes are similarly slow, but there is scope to support them in installing heat pumps and other energy saving technology and to raise the installation costs through community share offers (the latter as yet untested; at the time of writing (December 2020) the first community share offer has just been launched).
- There are many challenges with installing heat pumps in **private homes,** particularly in London where the 1m boundary rule can make it challenging to site units in an unobtrusive position.

Overview of the project

We are slightly changing direction with our plans as we have discovered some alternative promising models for delivering decarbonisation initiatives locally, utilising a number of different separate funding sources. This is summarised in the following diagram with further detail provided below.



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Sources of upfront funding

a) **Carbon offset funds:** There is scope for us to partner with one or more London local authorities to support access to their carbon offset fund by local community groups. London Local Planning Authorities (LPAs) are required by the Mayor to set up carbon offset funds to collect payments from developers to meet any carbon shortfall from new development. These funds need to be spent on cutting carbon projects, which we can help to deliver. For example, in Wandsworth, the council has asked us to work with charities in a specific part of the borough to find out what can be done to make their community building more sustainable. We have held initial discussions along similar lines with Enfield Council.

b) **Public Sector Decarbonisation Scheme (PSDS)**: this is a scheme, launched in October 2020, which allows public sector bodies to apply for a grant to finance up to 100% of the capital costs of energy-saving projects that meet the scheme criteria. There is scope for us to help schools and local authorities access these funds. Schools in particular often lack the time and expertise to submit applications and deliver projects in this area. We are currently in discussions with seven schools in Wandsworth and Kingston, whilst Islington and Enfield councils are also looking for schools to work with us. PSDS funding could also be used to install heat pumps into libraries or other public sector buildings. This could combine PSDS funding with a community share offer. We hope to be able to launch a share offer for libraries in the next few months.

c) **Community share offers**: these can be developed with a local authority or with a school or community group. The funding raised could be used to further support projects that are part-funded by carbon offset funds or PSDS funding, or for separate stand-alone projects. At present, we have just launched a community share offer to fund measures in the Devas building – a community centre in Battersea. We also hope to be in a position to launch a similar share offer in the near future for the Polka Theatre in south London as well as the above-mentioned share offer for libraries. The share offers would be repaid through the RHI tariff.

We had also planned to offer support to private sector households who wish to install a heat pump. This is currently on hold, but is something we hope to pick up again in the near future. At the moment, this market is very busy due to the Green Homes Grant, and the RHI will be stopping in March 2021 for private homes (to be replaced by the Clean Homes Grant which is paid upfront rather than over several years). We have therefore chosen to focus on other areas for the moment but are in the process of developing an offer for larger homes which we hope to pilot once London is out of Tier 3.

Our learning so far:

Scope for working with councils on improvements to council buildings and schools

As outlined previously, there is a lot of interest from councils and schools in CREW helping them to secure PSDS funding. Key learnings include:

- Schools not under the control of the council lack time and skills to secure PSDS funding and to deliver projects.
- We can charge a 10% project management fee of the total PSDS grant which should cover our costs.

Scope for working with councils on improvements to social housing

We had hoped to partner with a council to install a shared ground loop heat pump array in electrically heated flats. Our calculations suggested that tenant bills could be halved and that it would make a viable community share offer. We have had promising conversations with one council, but it has been complicated by finding out that, on one site, tenants were being charged for more heat than their property's deemed demand. Proposals have become highly sensitive and have not progressed. Learnings include:

- Council property teams are generally quite cautious and would like to see a technology demonstrated on a civic building before it is installed in council properties.
- Implementing projects in blocks of flats presents a number of challenges. As well as the technical side (preparing an EPC for each property and carrying out heat loss calculations), there is also a need to engage with stakeholders and make tenants comfortable with what's proposed. Community energy groups such as CREW are well suited for this role, as we typically have people who are qualified to undertake the EPC assessments and can also go in and talk people through the plans. We can also offer fuel poverty advice, help with switching providers and help with clearing debt on a meter. *"We can do the whole chain: the outreach, assessment, raising finance, project delivery. The piece we still need to get the council comfortable with is our ability to raise the necessary finance."* - Toby Costin
- Tapping into other benefits for communities (e.g. reduced fuel poverty) can help to get councils on board.

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Scope for working with community groups

Good progress has been made with community/civic organisations and our first community share offer will be with a community group. However, some of this work has been hampered by Covid; for example, we were due to undertake a joint project with a theatre, but that work has been delayed due to the pandemic.

Scope for working with private sector householders

A key challenge for installing heat pump in London is that planning requires heat pumps to be 1m away from boundaries. In many London properties this makes it difficult to site a heat pump unobtrusively.

Revenue generation

In terms of creating a financially sustainable model, we anticipate revenue coming from:

- RHI tariff payments for the heat pump installations on public sector or community buildings (only available for schemes commissioned by March 2021) and domestic flats (available for schemes commissioned by Marc 2022).
- A 10% project management fee for PSDS installations
- Potentially some revenue from demand side services (e.g. STOR[1]). We are in the process of investigating the feasibility of this and are considering trying a buffer tank in combination with a heat pump, to see how viable it would be to generate an income stream this way.

What we're doing next:

- We have just launched a community share offer any moment now, with the objective of raising £50,000 to install heat pumps in the Devas building, with installation hopefully taking place in January 2021.
- We hope to launch a second share offer with the Polka Theatre – also likely to be £50,000.
- We also hope to launch a share offer to install heat pumps in libraries.
- We are progressing projects with a number of schools.
- In terms of social housing, we are in ongoing discussions with a London borough to see if we can find a suitable, electrically-heated property, into which we could install a shared ground-loop.

If you want to know more:

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[1] STOR - short-term operating reserve is one of a number of schemes run by the National Grid to help keep the electricity network in balance. It involves accessing sources of extra power or managing demand reduction when demand is greater than forecast.

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