



Annual Report 2017

In 2017 Brixton Energy Solar 3 successfully delivered its objectives of generating local renewable energy, engaging with the local community and inspiring others.

Generating renewable energy

For the period, January to December 2017, the four BES3 solar arrays combined generated a total of 24,350 kWh of electricity, enough to power 7.9 average UK homes for 1 year. This represents a system efficiency of 471 kWh per installed kW peak per year compared to 737 in 2016.

The lower output is due to technical faults and issues with data collection during 2017. Few issues to note are

- There was a fault on the landlord supply at Fairview which stopped generation from September 2017 to March 2018. Although the issue was raised in September 17 it took the estate management 6 months to resolve.
- Output was intermittent at Hyperion due to issues with the solar panel cable connectors.
- Due to meter access issues with Warnham data was not collected during 2017.

The above issues have been resolved and new remotely readable meters are now fully up and running to improve monitoring and data collection and alert us of faults as soon as they occur.

Since commissioning BES3 renewable energy output avoided 13.2 tonnes of CO₂ emissions.

Engaging with the local community

It has been a busy year delivering a range of activities to benefit residents of the Roupell Park Estate. We have also developed a strong partnership with Roupell Park Estate Resident Management Organisation (RMO). We continue to work closely with our partners Repowering who provide management support and help secure additional funding to enhance the community fund. Our activities focus on our priorities of providing training and education opportunities for young people and address fuel poverty in Brixton and the Roupell Park Estate as outlined below

Brixton Energy Training Programme

Repowering London delivered a training programme for 20 young people living in Brixton. The programme was funded by Power to Change and took place during the spring of 2017. The young people gain an insight and experience into the world of low carbon and green economy through solar panel making, visits to renewable technology sites, discussions with

industry figures, community engagement and surveying, social media and brand building, co-operative business models and marketing.

The Repowering training programme is also AQA accredited giving the trainees an opportunity to have their achievements formally recognised with a certificate issued by AQA. More than half of the interns earned 4 or more certificates.

Feedback from the young people was very positive. Survey results showed a significant increase in confidence in all areas, especially 'knowledge of renewable energy' and 'finding work in the environmental sector'. When asked about their future ambitions this is what the young people had to say –

'deterred from working with fossil fuels', Ciaran Coyne, 17

'There's more to life than my estate, I can be anything I want to be', Melek Gentles, 19

'Yes, I want to work in renewable energy', Jake Howlett, 17

Following the success of the first training programme Repowering has secured additional funding from Bank of America to deliver a second training programme in 2018. Do visit our blog page <https://brixtonenergy.co.uk/blog/> to read about past and current trainees' experiences.

Energy surveys

We continue to listen to the needs, challenges and concerns of residents through regular door knocking and events on the Roupell Park estate. This is to inform and shape our activities so it is tailored for the benefit of the community. We completed 49 surveys that highlighted a third of residents surveyed suggested that being able to afford gas and electricity is a concern for them.

Home Energy Audits

We offered free home energy audits to help residents living on the estate to lower their energy bills and improve the warmth and comfort of their homes during the winter. A total of 7 residents living on the Roupell Park Estate benefited from in-depth energy audits of their homes and advice on switching energy providers.

Energy efficiency drop-in sessions

We ran some energy efficiency drop-ins at Roupell Park's over 55s coffee morning meet-up on 2 occasions. The first gave residents attending the drop-in to learn about the things they could do at home to save energy and lower their energy bills. The second saw the team play an energy efficiency-themed game of Bingo with residents.

Energy Efficiency Workshops with Brixton Energy Trainees

In November, we held two energy efficiency workshops with some of our trainees. These focussed on providing the young people with a broad understanding of fuel poverty as a concept and the ways in which it can be tackled. We covered topics such as the things to consider when switching energy supplier, grants/benefits available for reducing energy costs, and improving the energy efficiency of existing housing stock.

Inspiring Others

Brixton Energy Solar 3 and our sister co-operatives Solar 1 and Solar 2 are grateful to Power to Change who have funded the development of new business models for community energy in Brixton over the last couple of years. The development of the projects is being led by Repowering London with our support and we will be taking the following innovative projects to the next stage of development

- **Brixton Energy Local** is a local electricity supply model that has been developed by Energy Local. This model is being delivered in partnership with Repowering, Roupell Park Estate RMO, and the charity 10:10 and Energy Local to develop a way to enable residents living at the site of BES3, to benefit from the cheaper energy generated by the solar panels installed on the buildings. The model will see the formation of an 'Energy Club' made up of up to 30 residents living on the Roupell Park estate. By then shifting more of their electricity usage to the times of day when the solar panels are generating energy, they will be able to reduce their electricity bills. At the same time, this will ensure that the BES3 community fund will receive more income for energy generated. In December, Repowering held a Christmas-themed event for local residents to attend and learn about the Energy Local project.
- **Small scale Anaerobic Digestion at Loughborough Junction Works** that will be the UK's first community-owned Anaerobic Digestion (AD) project in an urban area. The system will convert local food waste to energy and organic fertilizer. We will establish a 40m3 digester, with a 9kW CHP engine which would produce in region of 100MWh heat and 60MWh electricity per year, which is equivalent to the annual demand of 20 typical households.
- **Local electricity supply model 'CommUNITY'** is another model that is being delivered in partnership with EDF, Electron and UCL. This project has been successfully approved for Ofgem's regulatory sandbox (<https://www.ofgem.gov.uk/about-us/how-we-engage/innovation-link>). There are only two other projects that have been approved by Ofgem in the UK. CommUNITY includes trialling a peer to peer local energy trading platform that will allow residents of Elmore House to use the solar electricity generated from the roof and trade that energy with their neighbours, increasing self-consumption of low carbon energy and reducing overall energy costs.
- **Lambeth Community Solar (rooftop solar)** – despite the significant cuts in the Feed-in-tariff Repowering continues to develop rooftop solar projects in Brixton. Potential sites include Loughborough Junction Works and Brixton Windmill. We are also exploring the expansion of solar on Roupell Park Estate.

Financial accounts and shareholder payments

The financial accounts which accompany this report show that:

- The co-operative received an income of £4,726 (2016: £6,241) from the electricity generated by the array from the feed-in tariff and deemed export tariff.
- Direct sale of electricity to the Roupell Park Estate RMC for powering the community office and Hyperion House community centre was £241 (2016: £853). This is significantly lower than the previous year because of technical faults with the meter configuration that makes it difficult to calculate onsite consumption.
- The total income for the year was £4,967 as compared to £7,019 in 2016. The technical issues highlighted above is compounded with manual data collection that does not alert us of system failures. This results in prolonged faults and significant loss of income.

To address the above issues, we made investments of £1,688 to upgrade the meters so that they are remotely readable. We are also in the process of installing an export meter at Fairview to maximise income from the onsite demand and sale of electricity through a PPA. Analysis of the investments show that with the increased revenues BES3 will be able to recover costs in four years.

Due to the reduced revenues and investments made during the year BES3 is reporting a small loss of £456. However, this does not mean that BES3 is at risk as we have healthy provisions in the account. We have met the costs for the investments through the provisions that have been set aside every year for such circumstances. Directors are confident that we will see a positive balance in following years.

After meeting operating and administration costs it is proposed that the surplus income of £2,320 is split as 80% to pay shareholders interest and 20% to the Community Energy Efficiency Fund (CEEF). This equates to an interest rate on share capital of 3% for the year (£1,856)

The CEEF will get a contribution of £464 from the Co-operative and a further £17 from 2 shareholders who have waived their interest payments in favour of CEEF. At the end of the year, including these amounts, the CEEF stands at £2,115.

Share capital of £3,000 was repaid in 2017 and the total share capital as at 31st December 2017 is £61,850.

Any questions?

If you have any questions about this report and the accompanying accounts, please email info@brixtonenergy.co.uk.

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