



# Annual Report 2021

## 1. Generating renewable energy

### Brixton Energy Solar 1

Brixton Energy Solar 1's system consists of 37kW of solar panels, two inverters, one generation meter, an export meter, and, since 2020, a battery at Elmore House. Income is generated by the 'Feed in Tariff' paid by Good Energy for the generation of renewable electricity, and from the sale of electricity exported to the grid via a Power Purchase Agreement currently held with EDF. No electricity is sold to the LEMB or Lambeth Council. The battery is on standby pending control upgrades discussed in the agenda item on potential capital investments.

In terms of performance, Brixton Energy Solar 1 hasn't performed well in 2021 because of a fault with one of the inverters during the summer. The average yield was 513kWh/kW, which compares to an average of 728kWh/kW across all the sites managed by Repowering London in 2021.

Total generation was 18,987kWh, which while an improvement on the 15,424kWh in 2020 is still a significant underperformance compared to the 2019 yield of 26,460kWh, and has caused a small net loss for the year.

The energy generated is equivalent to the electricity consumption of 8 average UK homes, with a carbon saving of over 4 tonnes, based on 2021 emissions factors.

While the inverter fault has been rectified by Repowering London, it was not identified immediately as there is not a remote monitoring system in place since the temporary system provided by Repowering for the CommUNITY project with EDF has been decommissioned. This is discussed in the agenda item on remote monitoring.

### Brixton Energy Solar 2

Brixton Energy Solar 2's five systems consist of 9kW of solar panels per block, each with an inverter and generation meter. Income is generated by the 'Feed in Tariff' paid by Good Energy for the generation of renewable electricity along with 'deemed' export payments from Good Energy, under the Feed in Tariff provisions for small generators. There is no export meter so there is no contract for selling 'exported' electricity to the grid, and no electricity is sold to LEMB or Lambeth Council.

Brixton Energy Solar 2's performance in 2021 was good, with an average yield of 796kWh/kW, which compares well to the average of 728kWh/kW for all sites managed by Repowering London in 2021. Like Elmore House, there is no remote monitoring system, which does increase the risk of faults not being identified outside of quarterly meter readings.

Total generation was 35,816kWh, compared to 40,057kWh in 2020 and 38,209kWh in 2019. This is within 10% of the long-term average yield and largely reflects variation in weather.

The energy generated is equivalent to the electricity consumption of 14 average UK homes, with a carbon saving of over 8 tonnes, based on 2021 emissions factors.

## Brixton Energy Solar 3

Brixton Energy Solar 3's have different metering arrangements and revenue streams:

- The systems on the Community Office (8.25kW), Hyperion House (9kW) and Warnham House (10kW) all have meters for recording both the generation and 'on-site' usage of solar electricity within the communal parts of the building. Revenue is received from the Feed in Tariff, deemed export payments, and the sale of solar electricity to Roupell Park RMO.
- The system on Fairview House (24kW) has a generation meter and an export meter for recording electricity exported to the grid, which is sold via a Power Purchase Agreement with Octopus Energy. Revenue is also received from the Feed in Tariff through payments from Good Energy.

The performance of the different systems is variable but with an overall average of 538kWh/kW, which is below the Repowering London portfolio average of 728kWh/kW. The underperformance has been monitored using the remote metering and is due to the following factors:

- Regular tripping of the inverter at Hyperion at times of peak production. Following an engineer's assessment we recommend that the inverter is replaced and have obtained quotes for this work.
- The community office suffers heavily from shading. This is a longstanding problem but could be mitigated by a reconfiguration of the 'strings' of panels and through the installation of 'optimisers' on each panel. This is also considered in the agenda item on capital investments.
- The system at Fairview was shut down for two months during the installation of the export meter due to the requirements of the different contractors involved.

The total generation was 28,333kWh, compared to 37,546kWh in 2020 and 36,522kWh in 2019. The energy generated is equivalent to the electricity consumption of 11 average UK homes, with a carbon saving of 6 tonnes, based on 2021 emissions factors.

The impact of the low generation has been mitigated financially by the high prices for electricity sold to Roupell Park RMO and to Octopus Energy.

### General notes on performance

While 2020 was a sunnier year than 2021, there is a clear trend across the BES sites of falling yield even where systems are functioning normally. This is likely to be due to the accumulation of dirt on the panels and Repowering London are looking at ways of cleaning the panels cost-effectively and safely. We will update the board with options in the next quarter.

## 2. Engaging with the local community

### Brixton Energy Solar 3 – Energy Local innovation trial

As mentioned in previous reports BES3 is part of the innovative local electricity supply model 'Energy Local Roupell Park' that has been developed by Energy Local CIC. The first stage of the trial which was described in last year's report was completed in November 2021 and was featured on BBC4's ['Positive Thinking' with Afsheen](#). The first stage confirmed that participants would save c20% on their electricity bills depending on how much electricity they used and whether it coincided with periods of solar generation.

The second stage is now underway and will run for 12 months from January, with 16 participants currently signed up with Octopus Energy who facilitate the scheme with Energy Local. Thanks to Brixton Energy Solar 3, participants benefit from solar electricity at 6p/kWh and grid electricity on a fixed contract which is currently below market rates.

We hope that other suppliers will adopt the Energy Local model and it can be offered to other sites on a long term basis.

### 3. Community Fund

During 2021, the co-ops didn't spend any Community Fund. Brixton Energy Solar 1 and 2 received two expressions of interest for their Community Fund in 2022 – one from Platform Café and one from Repowering London to fund slow cookers.

The directors have investigated how to get more Community Fund applications by sharing and discussing engagement ideas and other existing projects. It is agreed that face-to-face connections are key to engage with residents, such as events to raise awareness.

The co-ops' impact and engagement through the Community Fund during the pandemic was crucial, and the CommUNITY project with EDF at Elmore House gave residents the opportunity to benefit from the solar panels.

### 4. Financial accounts and shareholder payments

#### Brixton Energy Solar 1

The financial accounts which accompany this report show that:

- In 2021 the Society received an income of £5,538 from the sale of electricity (24% higher than the income received in 2020).
- The Directors propose to maintain our shareholder and Community Fund payments as per previous years. This equates to an interest rate on share capital of 3% for the year (£1,724) and a contribution of £431 towards the Community Fund.
- As a result, BES1 will report a net loss of £324 for 2021.
- The Community Fund now stands at £9,612.
- During 2021, no shares were withdrawn from the Society and a total of 57,450 shares are repayable after 25 years.

#### Brixton Energy Solar 2

The financial accounts which accompany this report show that:

- In 2021, the Society received an income of £7,976 from the sale of electricity, an amount similar to 2020.
- After meeting direct operating and administrative costs, and corporation tax, the Society made a net profit of £1,532.
- The Directors propose to maintain our shareholder and Community Fund payments as per previous years. This equates to an interest rate on share capital of 3% for the year (£1,565) and a contribution of £400 towards the Community Fund.
- The Community Fund now stands at £8,173.
- During 2021, 4,000 shares were repaid, leaving a total of 53,300 shares that are repayable after 20 years.

#### Brixton Energy Solar 3

The financial accounts which accompany this report show that:

- In 2021, the Society received an income of £6,759 from the sale of electricity. This is lower than the income received in 2020 (£9,060).

- The Directors propose to maintain our shareholder and Community Fund payments as per previous years. This equates to an interest rate on share capital of 3% for the year (£1,842) and a contribution of £461 towards the Community Fund.
- As a result, BES3 will report a net loss of £149 in 2021.
- The Community Fund now stands at £3,280.
- During 2021, no shares were withdrawn from the Society and a total of 61,400 shares are repayable after 20 years.

## 5. Our partner, Repowering London

### Development of micro AD at LJ Works in Brixton

While the development of this project is being led by Repowering London, we wanted to give members an update as the project is located close to the Brixton Energy Coops and we have provided updates in previous reports. Members who live near the Loughborough Estate may be aware that the first phase of construction at 'LJ Works' (next to Loughborough City Farm) are complete.

Repowering London are continuing to work on the development of a Micro Anaerobic Digestion (AD) system at LJ Works, which will enable local food waste collection and provide an additional source of low carbon heat as well as sustainable fertiliser which can support the growing activities on the farm. This is a trial project to test the feasibility of this technology in urban areas.

Following the community consultations in 2020 and 2021 and a redesign of the system location, a planning application was submitted in December 2021 and we are awaiting a determination by Lambeth Council planning department.

### The Repowering London family of Co-ops

The Brixton Energy Solar Coops are proud to be part of the Repowering family of energy co-ops. The Repowering coops have collectively:

- Raised £710,000 to install 707 kWp of solar panels on schools and community buildings
- Generated 654 MWh of electricity annually
- Saved 139 tonnes of Greenhouse gases from being emitted in the atmosphere annually
- Allocated £196,500 for Community Funds to benefit local causes
- Provided employment to three locally rooted community champions in Lambeth, Kensington & Chelsea and Aldgate
- Supported an empowered network of 30 volunteers and 677 investor members
- Participated in two local electricity supply trials developing new and more democratic ways to deliver renewable electricity locally
- Distributed £5,000 of community funds to local groups to provide essential supplies of food and fuel vouchers to support residents through the pandemic

**This work is only possible with your support. Thank you for investing in our vision of community energy, and for being part of the change.**

## 6. Any questions?

If you have any questions about this report and the accompanying accounts, please email [info@brixtonenergy.co.uk](mailto:info@brixtonenergy.co.uk).

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