

Clay Park Community Solar & Microgrid

RCEF: Stage 2



Key Facts

Community Benefit	Reduce residents energy bills.
Microgrid	Maximise onsite use of local solar electricity.
EV Charging	12 charge points for cars and bikes.
39 Eco-houses	60% affordable (shared ownership and rental)

Key Figures

Energy Generation	160 kW Solar PV
Technologies	Solar PV, Microgrid, Centralised Heating Control, EV charging
Private finance leveraged	Community Share-offer for £266,580
CO2 savings	45 tonnes equivalent
RCEF grant	Stage 2 £79,710

Further Notes

LEP area: South West

Link for further info:
Swenergyhub.org.uk

The Story

Clay Park is a progressive Socio-Eco-Housing Development, in between Totnes and Dartington, and owned by Transition Homes Community Land Trust (THCLT). They have planning permission for 39 energy-efficient eco-homes (and a community building with community laundry, 60% of which are designated affordable rents, and shared ownership for local people in housing need). It has invited TRESOC to become the energy supplier, own the renewables and operate the microgrid.

TRESOC and the CLT intend to maximise on-site use of solar PV and minimise residents' bills, by providing green electricity at a reduced rate. This, and the use of the on-site thermal storage, will enable residents to optimise their use of local renewable electricity (at a subsidised, below-market-rate cost) over grid imported electricity. This will be particularly significant for any low-income residents living in affordable housing. TRESOC will buy wholesale electricity from a green energy supplier at such times when solar PV is unable to meet demand. Any surplus electricity will be directed to electric vehicle charging or sold to the grid.

Challenges & Risks

The project has suffered significant delays due to issues with planning, Covid and the volatile price of electricity, which has made it extremely difficult to model the economic viability of the project (as the modelling considers energy prices over the next 20 to 30 years). The volatile energy market continues to be a problem, as it is difficult to raise finance without offering a fixed return on investment.

One of the biggest project risks going forward is the relationship between the retail market and the commercial price for energy. Imported electricity, needs to be sold to residents at less than the market rate for the model to work, but if the market price is greater than the retail price the energy will be sold to residents at a loss to TRESOC, which is not economically viable.