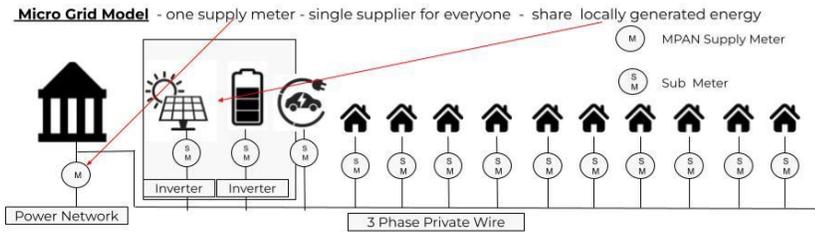


Village Green Wilsford

RCEF Stage: 1



The Wilsford Community Land Trust Microgrid

The Story

Wilsford Community Land Trust Ltd (WCLT) was formed in 2013 to help bring affordable homes to rent to the Village. As a consequence, we are the owners of the land the Village Hall is built on and the land LincsRural's 10 neighbouring affordable homes are on for which we receive a small annual ground rent. WCLT supported the Village Hall Committee and submitted on their behalf a successful Lottery bid to refurbish the hall including extensive insulation. The next step was to find a green energy solution to replace the oil-fired boiler and explore the possibilities for additional zero-carbon solutions for the neighbouring properties and potentially the whole village. The Nottingham Rural Energy Hub encouraged us to look at a microgrid and the resultant study involves an innovative scheme with ground source heat pumps behind the hall, solar panels on the hall roof and atop an 8-bay EV parking canopy on land opposite the affordable homes. These shared resources would all be connected by a private wire from an energy centre with battery storage in the village hall and connected to the neighbouring homes. There would be an additional fast charge EV point at the Village Hall. There could be savings of 75% on the expenditure for the homes alleviating fuel poverty and 35% on heating costs for the Village Hall. This would be a local energy marketplace, so the proposal includes setting up a billing system WEnergy which could make a 20% margin for the service. Eight parking spaces with EVs would be available to use by anyone in the village particularly important as there are many terraced homes. The Socioeconomic benefits from this project will be the most rewarding and come from having more value in the community and creating community cohesion which comes from sharing the responsibility for achieving these energy goals.

Challenges & Risks

The challenges included stakeholder engagement involving WCLT, the Parish Council (PC), the Village Hall Committee and LincsRural Housing. Having previously co-operated in developing affordable homes this was successfully established. The site visit clarified that the Village Hall has space for an Energy Centre and importantly uses a three-phase supply. During the Hall refurbishment and following the Consultant site visit it was agreed to replace the Hall radiators with ones that would work with both the old and new system. It was agreed that land behind the hall could take ground source heat pumps without needing to use the Playing Field which was of some concern to the PC. The homes were assessed as suitable for a Private wire connection from the rear. Other challenges could be Planning permission for the parking canopy, and establishing the legal entity for WEnergy. These were to be part of the next stages of the RCEF Grant which has unfortunately been withdrawn.

Lessons Learned

The current barriers for us moving forward are to find the funds to develop the business plan now the RCEF grant has been withdrawn. On our behalf Pure Leapfrog have applied to the Energy Saving Trust - the energy redress scheme - but were not successful. However they are continuing to look. LincsRural (our Housing Association) are working with us to help find funding and their Communications Specialist designed our logo and a news leaflet to distribute to the village. The intention being to seek their opinions on expanding the scheme to include more homes which could enable us to bid for funding from the Green Heat Network Fund.

Key Facts	
Micro-grid with ground source heat pump	80 kW
Solar PV EV charging	38 kW
Battery	50 kW
Community Benefits	Annual fuel savings for each affordable home and the Village Hall. 9 EV charging points for use of the whole village .Socio-economic as more value in local community

Key Figures

Project size:	£620,312
Tech type	Solar, EV, Ground source and Battery
Energy Generation	80 kW
Private finance leveraged	
CO2 savings	32.24kGCO2
RCEF grant	£32658.24

Further Notes

LEP area: Lincolnshire North Kesteven District Council

Link for further info:
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