



New Business Models for the Community Energy Sector

Ben Dodd Director of Green Fox Community Energy Co-operative

Summary

What does community energy mean

Overview of Green Fox Community Energy Co-operative

The old community energy model

The State of the Sector Report - community energy sector in England, Wales and Northern Ireland

Emerging innovation and business models

Q&A

Community Energy

Community energy refers to the delivery of community led renewable energy, energy demand reduction and energy supply projects, wholly owned and controlled by local communities. This is often achieved through partnerships with commercial or public sector partners.

It is a different model and approach involving the local community in a real and meaningful way. It is democratic with one vote per member irrespective of the value of their shares.

The capital for the low carbon infrastructure is typically raised through a public share offer, with investors becoming the Members of the organisation.

Mitigating Climate Change through Community Action

Community energy can create a foundation for the significant infrastructural and cultural change, if we are going to meet the ambitious CO2 targets both nationally and locally.

e.g. Leicester City Council and Leicestershire County Council have declared climate emergencies and will require new models to deliver their reduction targets.

Delivering Sustainable Development

Environmental Benefits

Tangible reduction in green house gas emissions

Specific project benefits e.g. the management of woodland and increased biodiversity, or the reduction of local vehicle emissions

Economic Benefits

Not for profit organisations such as Co-operatives or Community Benefit Societies

The creation of a community benefit fund

Interest payments to Members – money kept as local as possible

Tangible monetary saving for organisations hosting renewable energy installations

Specific project benefits e.g. job creation

Social Benefits

Local community involved and Members can stand for the Board

The local community learning about renewable energy

Members allocate the community benefit fund locally

Specific project benefits e.g. electric car clubs – not a fixed asset as such

Creating new local partnerships

Community Energy – all about people and locality



YnNi Teg Cyf
(Welsh for Fair Energy)



Chesterfield



Donside Hydro,
Aberdeen



Springbok Co-op
Biomass



Assel Valley Scotland



Energise South



Plymouth Community
Energy



Harborough Energy

Local organisations delivering community energy projects

Together raising over £1 million in community shares



Green Fox Community Energy Co-operative

- Established in 2012
- Leicester and Leicestershire's very own community energy co-operative
- Best known for supplying 1MW of renewable heat to a local secondary school
- It is the largest community energy heat project in the UK and annually saves 500 tonnes of CO₂



Harborough Energy

- Established in 2015
- Harborough's very own community benefit society
- Best known for installing 170kW of community owned solar PV
- It is the largest community energy solar PV project in Leicestershire

Hinckley Academy

Formally John Cleveland College



Secondary school with 1,700 students. A large campus including a swimming pool, with school buildings dating from 1960 to 1974





- The boilers were over 20 years old
- The school was heated by oil
- An energy bill of £200,000 per year on fuel alone
- The school like so many, did not have the finances to install new boilers and associated equipment

June 2013

share offer document

for John Cleveland College Community
Woodheat Co-operative

www.greenfoxcommunityenergy.coop



Share Offer

To facilitate the project at Hinckley Academy Green Fox set up another co-operative.

Through the share offer the co-operative raised £600,000 and 200 people invested and became Members.

At the time this was difficult and the raise took 6 months.

The average age of the investor was in their fifties and 52% of investors lived locally.

Now the ability to access funding by community share offer is relatively easy with organisations typically raising £100,000's to £1m but there are some that raise much more.



The Boiler Room

Local installers Myriad Plantroom Services installed the 800kW boiler and other equipment



Green Fox Community Energy Co-operative

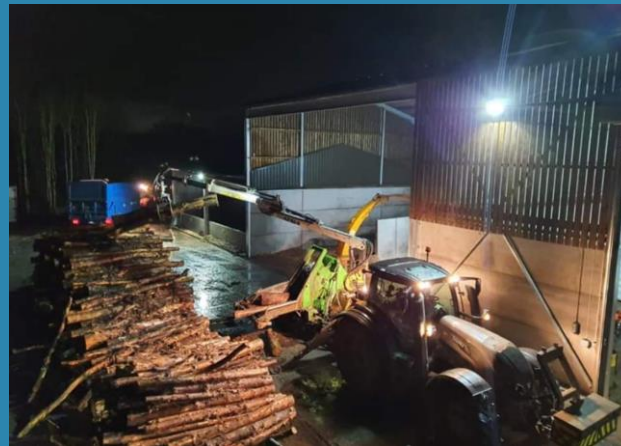


- The project launched in 2014
- It benefitted from the Renewable Heat Incentive (RHI)
- It supplies sustainable heat to the school
- Saving the school approximately £80,000 per year in energy bills alone
- It has won local and national awards

Working in Partnership

It was always the intention of using locally sourced wood chip from the National Forest. Initially this was not economically possible.

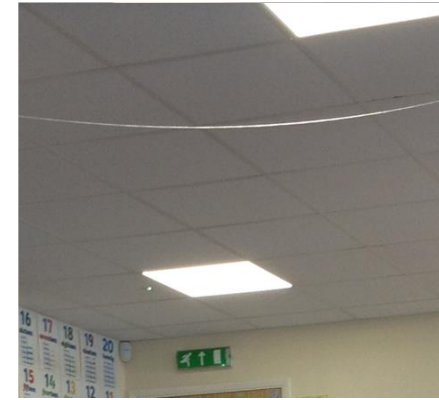

In 2018 Green Fox Community Energy Co-operative worked in partnership with Milner Forestry to secure a £40,000 grant from ERDF to establish a wood processing plant. With Hinckley Academy purchasing £30,000 of wood chip per year, this has allowed Milner Forestry to employ local people.





Community Benefit Funds

Some of the community benefit funds generated through the Hinckley Academy project, have reduced emissions even further by installing LED lighting at Barwell Infants School and Westfield Infant School - both of which are near Hinckley Academy.





Thornton Lane Solar Farm in Stanton under Bardon

The annual community benefit fund is managed by Green Fox which led to the installation of a 6kW battery and PV system at the village hall

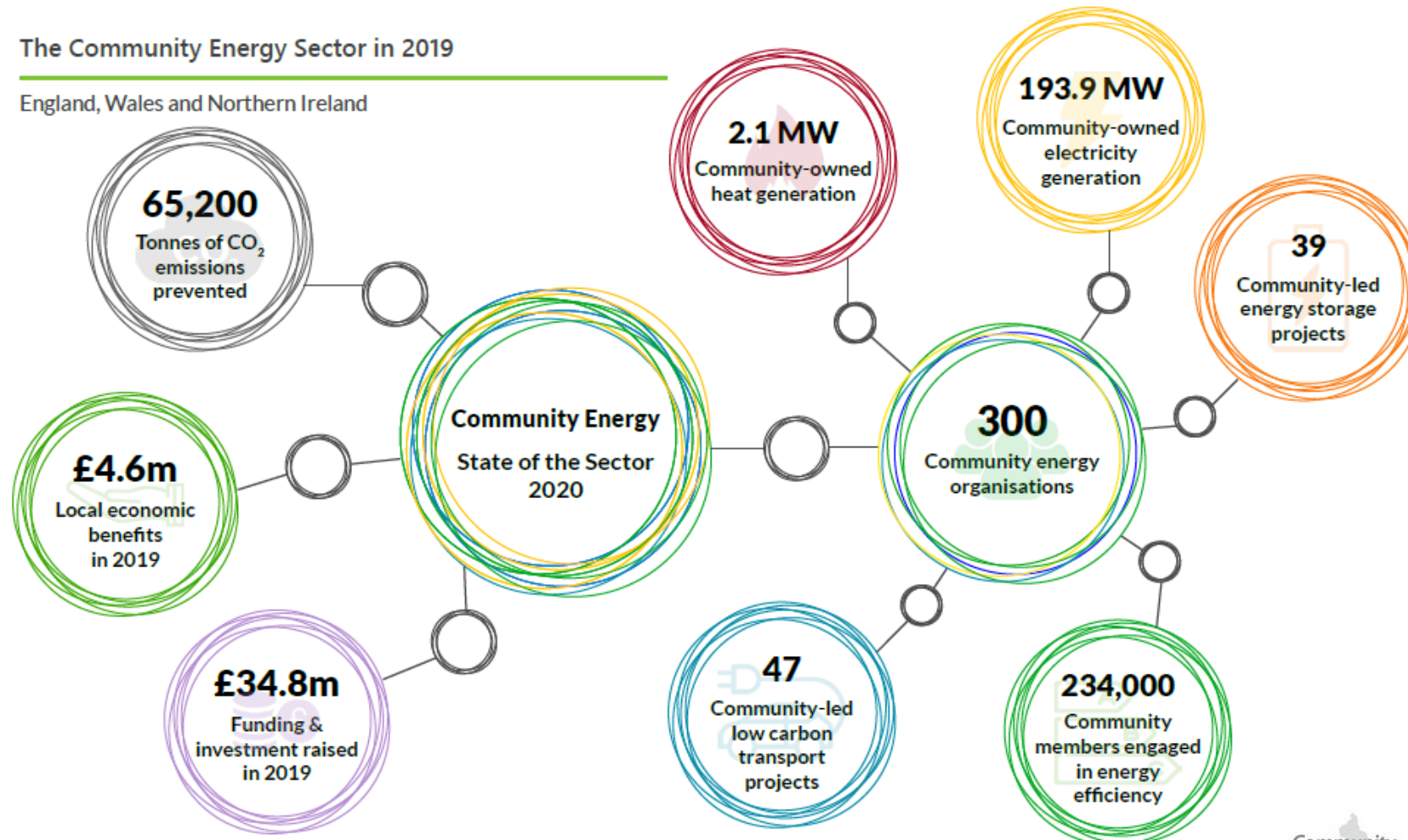
However....
in the past the
community energy
business models
have been based
on subsidies from
generating
renewable
energy....how will
they evolve in the
future?



Community Energy where we are now

The Community Energy Sector in 2019

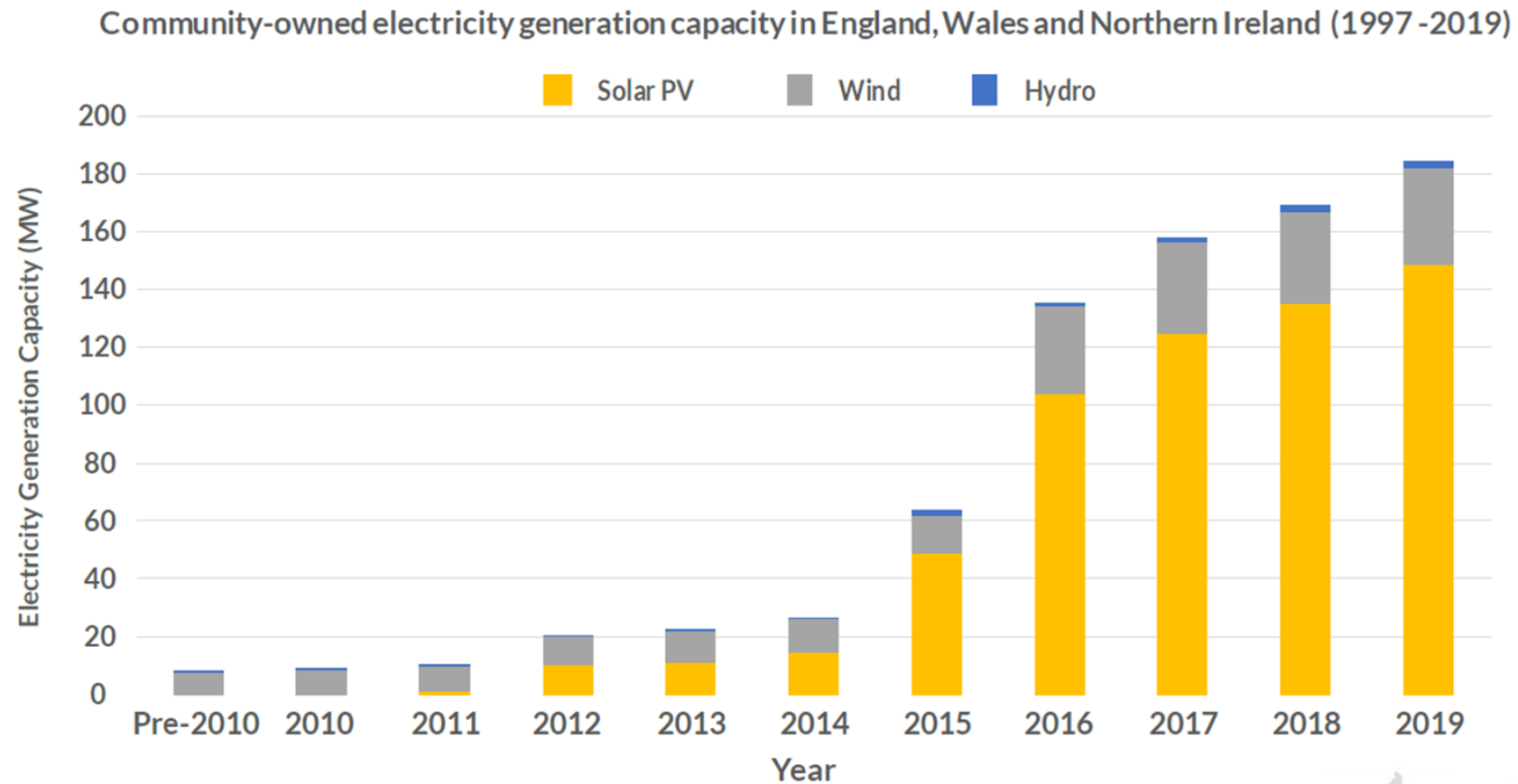
England, Wales and Northern Ireland



2019: a year of change...

Electricity Generation Timeline

England, Wales and Northern Ireland

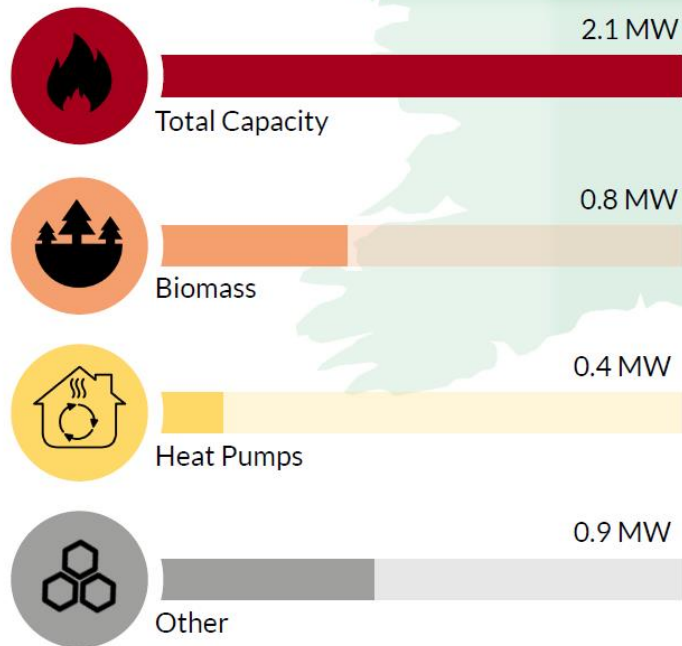


Heat Generation



Heat Generation in 2019

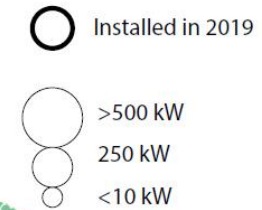
England, Wales and Northern Ireland



Community
Energy
England

Ynni
Cymunedol Cymru
Community Energy
Wales

SCENE



Community
Energy
England

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Community Energy
Wales

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Funding and Finance

Funding & Finance in 2019

England, Wales and Northern Ireland





Next Generation Community Energy Programme

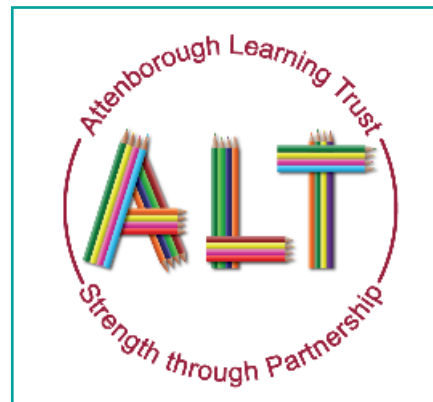
Is a £1million grant fund and expert support programme, created by Power to Change to pioneer innovative community-led energy projects and business models.

Award grants of up to £100,000 to 10 community energy businesses, alongside a support programme of research and analysis.



Zero Carbon Business Model for Multi- Academy Trusts

Next Generation
Community Energy Programme



The Innovative Business Model

replicable and subsidy free

The zero-carbon business model for multi academy trusts is built around the assumption that Green Fox would take responsibility for paying and managing the energy bills of the Trust over several years.

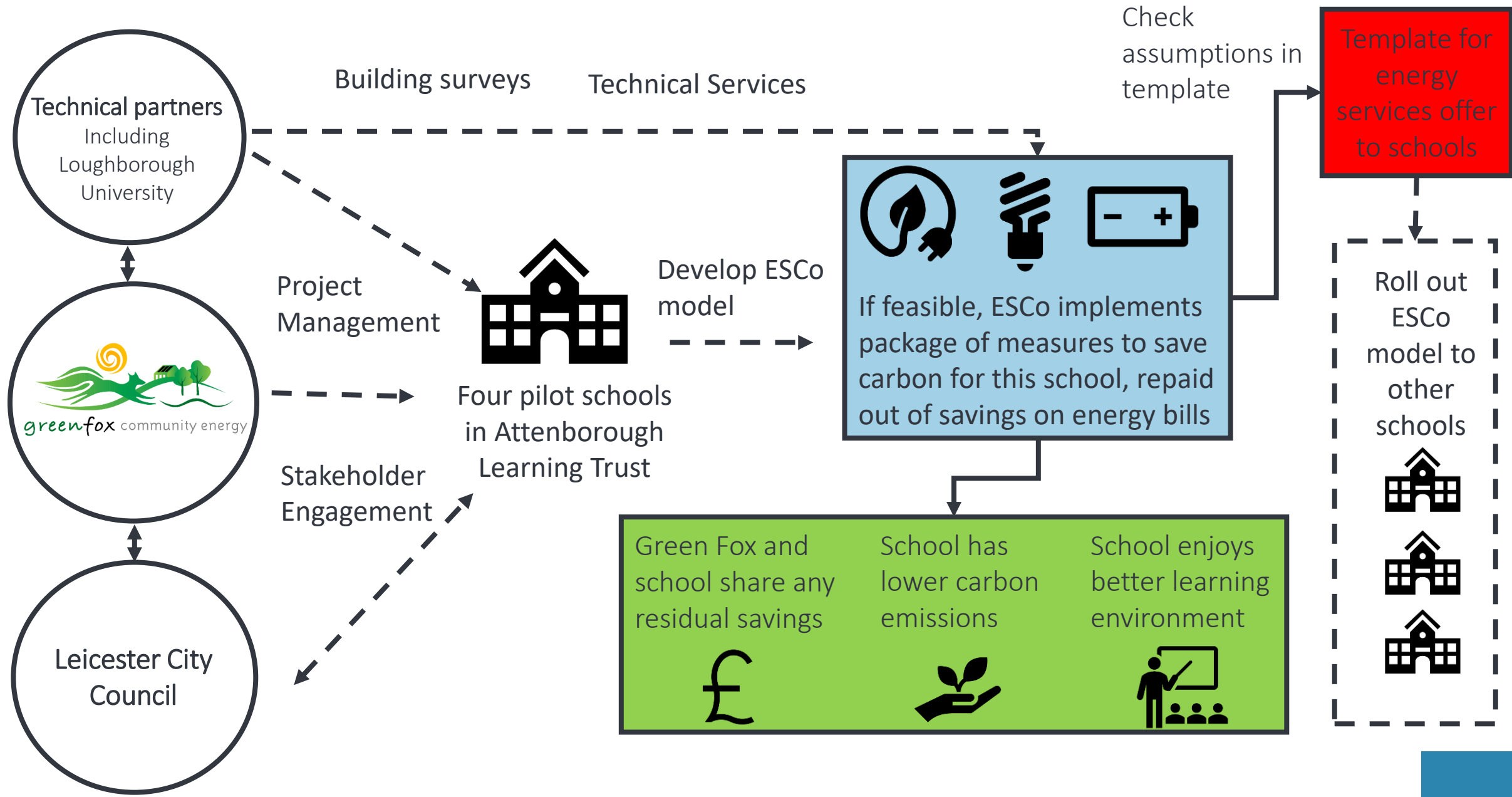
Green Fox would launch a share offer to pay for the installation of a suite of low carbon technology which reduces the energy bills and generates income into the model.

Both Green Fox and the Academy Trust are financially incentivised to reduce energy consumption with the end goal of zero-carbon schools.



Successfully launched in November 2019

Green Fox Community Energy Co-operative : Zero Carbon Schools



Two Model Approach

Base Model

energy services for schools

Energy Services Contract

- Sustained behaviour and education programme
- Management and initial optimisation of energy use and supply purchasing
- Delivering efficiency improvements
- Delivering integrated onsite energy generation (Solar PV)

Base Model Plus

optimised energy services

Additional revenues

- Optimised control
- Storage
- Aggregation (energy cluster)
- Demand side response and flexibility services
- Peer-to-Peer-trading

Next Steps

The project has been affected by Covid 19 in terms of the work within the four Leicester Primary Schools.

However the data modelling is progressing and should be complete by December 2020 with the financial modelling soon after.



Q&A

Happy to take questions

If you are squeezed for time my contact details can be circulated





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