

Next Generation practical learning guide 4: managing risk in innovative business models



Summary of key points:

- Emerging business models in the community energy, many of which are innovative, often involve a step-change in complexity and risk compared to earlier subsidy-supported renewable generation projects.
- It's important for community energy groups to recognise this and think explicitly about how to manage risks.
- This doesn't mean never taking risks but it does mean thinking before you jump – and making sure that you're holding on to a rope!

Learning from the Next Generation programme:

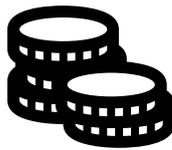
Lower risk projects:

Community energy investments are not without risk, even when supported by ongoing Feed-in-Tariff (FiTs) or Renewable Heat Incentive (RHI) payments. For example, for a community-owned solar farm, changes in the inflation rate applied to FiTs payments, failure of the energy company offering these payments, unforeseen outages in production and unanticipated changes in maintenance or inverter replacement costs can have an impact on covering finance costs or maintaining returns on community shares at the level that shareholders expect.

Despite some level of risk in FiTs-supported projects, subsidy payments have historically provided a sufficiently secure income stream for many community energy groups to launch community share offers for FiTs-supported renewable energy projects.

As FiTs subsidies are no longer available for new projects, community energy projects have to be de-risked in other ways. The examples shown in the text box are lower risk because of secure income from other subsidy schemes or because of predictable savings from energy efficiency projects.

Power Purchase Agreements (PPAs) can provide another way of de-risking renewable generation projects, providing a secure income without need for subsidies. Direct PPAs involve sales of electricity to a client located on or close to a generation site. 'Sleeved' or 'synthetic' PPAs can enable a more remote client (e.g. a private firm or local authority) to purchase electricity (or carbon credits) from a generation site. Secure future income streams from PPAs can help to de-risk and support investment in renewable generation by community energy groups.



In the Next Generation programme, [CREW Energy](#) ran a community share offer for a large heat pump project backed by the Non-Domestic RHI, before closure of that subsidy scheme. [Gloucestershire Community Energy](#) has been investigating the scope for a domestic heat pump, solar PV and battery scheme, backed by Domestic RHI, although it is not clear that this will be delivered in time to benefit from the subsidy. And [Chester Community Energy](#) hopes to run a share offer relating to the delivery of credit-backed energy efficiency measures in community buildings, subject to obtaining accreditation from the Financial Conduct Authority. Beyond the Next Generation programme, [Carbon Co-ops](#) have recently launched a community share offer for their 'People Powered Retrofit' project.

For more learning on local authority PPAs, see **Next Generation Practical Learning Guide 2** on partnership working with local authorities. For more learning about community share and bond offers, see **Next Generation Practical Learning Guide 5** on raising funds for community energy activities.

Higher risk projects:

However, the experience of the Next Generation innovation programme suggests that many innovative post-FiTs business models are significantly more complex, involve more partners and involve considerably more **financial risk**. It is generally not desirable to finance higher risk investments through community share offers. For example:

- [Brighton Energy Co-op](#) is currently investing in electric Vehicle (EV) charge points linked to solar PV installations. A challenge for the group is that it is difficult to predict the number of hours per day that charge points will be used and to what extent their use will coincide with PV generation. The charge point running costs vary considerably depending on whether the vehicle is being charged from onsite renewable generation or from imported grid electricity. Payback periods will be considerably better where on-site generation is used, and ideally used regularly and for several hours per day. Owing to the uncertainty of the business model, Brighton Energy Co-op's board haven't yet run a share offer linked to EV charge points. Instead they have sought grant funding from sources including the European Regional Development Fund and Power to Change.



- [Nadder Community Energy](#) has invested in a rural EV car club in Tisbury. To cover car club running costs and overheads, the cars need to be regularly used. Car usage depends on the number of users in the car club and when and how regularly they use the club's vehicles. Owing to uncertainty about the nature of demand, Nadder decided to use funds from the Next Generation programme to purchase the EVs because funding the vehicles via a share offer might have put returns to shareholders at risk. Nadder CE also considered creating a different legal entity (or 'Special Purpose Vehicle') for the car club, to ring fence the relatively risky car club from the other, lower risk activities undertaken by the community energy group, but decided that this would be unnecessarily costly.
- [Burnside Community Energy](#) and [Plymouth Community Energy](#) have both been investigating the potential for innovative community-led energy systems in new housing developments, while [Green Fox Community Energy](#) has been investigating the delivery of community-led energy services to help schools achieve Net Zero, and [Lockleaze Loves Solar](#) has investigated the potential for domestic-scale solar on the roofs of lower income households. The planning process for these projects involved multiple partners and considerable discussion about which party should carry different elements of risk. There were large numbers of 'what ifs' questions in these projects: what if capital costs were higher than expected, what if energy prices rose, what if usage was lower or higher than expected, what if regulations precluded certain activities, what if interest rates rose, what if a partner went bust, what if customer take-up was lower or later than expected and so on. These projects undertook desk-based assessment of these business models: some are not suitable for implementation at this stage but learning on the business models will be shared in final reports by each project.



For more insights on how to finance for riskier projects, see **Next Generation Practical Learning Guide 5** on raising funds for community energy activities.

As well as financial risk, innovative business models can expose community energy groups to other types of risk. For example, getting involved in innovative projects (like domestic demand flexibility) can expose community energy groups to **reputational risk** if things don't go according to plan.

- [Bath & West Community Energy](#) (B&WCE) are running simulation trials with their 'Flex Community', in partnership with Western Power Distribution and Stemy Energy, supported by the Next Generation Programme. The 'Flex Community' is a group of households that have a heat pump, EV charge point or electric water heater that can offer flexible demand. By signing up to B&WCE's Flex Community, households agree to have their demand managed at certain times, to help Western Power Distribution balance the local grid. While the project so far has involved simulations only, the concept is that the community energy group will support local consumers to engage with Stemy's cloud-based platform, eventually generating flexibility revenues (from WPD or National Grid) which will be shared between the households, technology partners and the community energy group. The project will also help to build local supply chains around the installation of new 'smart' equipment that can offer flexible demand. B&WCE have been able to identify households who were interested in participating, because of their extensive community

network and their trusted reputation. But they soon realised that they had to make sure they protected households (and the group’s reputation) by ensuring that the Flex Community only took on households that were appropriate for the project. The focus on working with householders as clients provides a significant shift in approach for BWCE from previous renewable energy projects. This has presented challenges and learning for the organisation around ensuring high quality customer service and protection.



How to manage the risks involved in innovative business models:

Some suggestions, from community energy groups already working with riskier projects, include:

- Undertake formal risk assessments of new projects, covering financial and other risks, so that you can take action to mitigate significant risks.
- Develop and maintain a project risk log.
- Consider to what extent you need, or wish, to protect the return you offer community shareholders.¹
- Update and review the risk management process as the project proceeds.
- Check contractual arrangements with partners before you sign, to make sure they don’t expose your group or your shareholders to unacceptable risks.
- If you need legal advice, try approaching local lawyers to see whether they would be willing to provide some pro-bono or low cost help to your community energy group, as part of their commitment to the Climate Emergency or their Environmental, Social and Governance goals.
- Bring on board a director or trustee with experience of managing project risks.

How to do a formal risk assessment:

Formal risk assessments often involve a rating of the likelihood of the risk occurring and the level of impact of the risk does occur. The matrix below illustrates the type of assessment made. Assessment of likelihood and impact are usually made subjectively, based on your judgement, supported by evidence where possible.

	Likelihood of hazard occurring				
Impact of hazard	Very unlikely	Unlikely	Possible	Likely	Very likely
High					
Medium					
Low					

¹ A recent survey of community energy group members, presented in a Next Generation case study, found that – assuming that bank rates remained low - 83% of community investors in the sample expressed interest in investing in community shares again. Of those who would be prepared to purchase shares again, over half (51%) stated that they would be prepared to have a return of 1-2%.

Having identified and classified substantial risks, you can then develop, implement and manage mitigation strategies. If risks are unacceptable, you can decide not to proceed. The table below gives a couple of examples of mitigation strategies.

Risk	Likelihood	Potential impact	Risk rating before mitigation	Mitigation strategies	Risk rating after mitigation
Vulnerable customers recruited, unsuitable for trial	Possible	High		Develop screening process for potential customers	
Poor quality installation of heat pump	Possible	High		Include independent quality check on each installation	

Further guidance is available from the [Association of Project Management](#).

To find out more:

- See **Next Generation Practical Learning Guides 1-3** on partnership working.
- See **Next Generation Practical Learning Guide 5** on raising funds for community energy activities.
- Visit www.next-generation.org.uk or contact Will Walker at Power to Change to find out more about the Next Generation programme
- You can find out more about the Next Generation innovation projects [here](#).
- The Association of Project Management has created a useful [guide](#) to 'Project Risk Analysis and Management' (PRAM) which sets out risk management processes in more detail.