

Angus Climate Action Hub

Community Energy Options Appraisal

March 2024

Report prepared by Joe Smee

Contents

Introduction	3
Background	3
What is community energy?	3
Review	4
Support for community energy in Scotland	4
Consumption	5
Fuel Poverty	6
Support for households on energy efficiency	6
Community and third sector mapping	7
Angus Council	8
Commercial renewables projects	10
Challenges and Opportunities	10
Challenges	10
Opportunities	11
Options Appraisal	12
Rooftop Solar PV on Third Party Buildings	12
Project Model Overview	12
Opportunities in Angus	13
Positive Impacts	14
Challenges, barriers and risks	14
Stakeholders and partners	14
Case study	15
Project activities	15
Community Street Lighting	16
Project Model Overview	16
Opportunities in Angus	16
Positive Impacts	17
Challenges, barriers and risks	17
Stakeholders and partners	18
Case study	18
Project activities	18
Other potential projects	18
Community Buildings Retrofit	18
Domestic Energy Advice	18
Medium-Large Scale Renewable Generation Projects	19

Introduction

Background

The Angus Climate Action Hub has secured funding from the Scottish Government to develop a hub to support a range of community-led climate action projects. The community energy sector in Angus is relatively underdeveloped with a limited number of planned or active projects and energy has been identified as an area requiring additional support. The work outlined in this report has been carried out in order to understand the opportunities in community energy and identify potential projects that community groups in Angus could develop. The overall aim is to identify deliverable projects that could act as foundations and replicable models for broader development of community energy in Angus.

What is community energy?

Community energy is a broad, diverse and thriving sector. It can be defined as being about people and communities taking democratic control over their energy future, by understanding, generating, using, owning and saving energy in their communities, as well as working together across regions and nationally. Examples of types of projects include:

- Local advice on energy use
- Insulation services
- Decarbonised heat installations
- Decarbonising local transport
- Active travel networks and related projects
- Community energy plans
- Energy generation

The wide variety of projects and actions communities take on energy issues is reflective of the differing challenges faced and opportunities and resources available to them. While for some communities in Scotland there will be a strong focus on reducing fuel poverty and helping households to reduce their energy bills, others may have opportunities to install large renewable energy generation projects that provide an income to fund local development projects, and others still will be active in other areas. Understanding what challenges you are trying to address and what opportunities and resources you have available is therefore an essential first step in assessing what kinds of projects to progress.

This report therefore sets out to carry out a high-level review of the challenges and opportunities relating to energy facing communities in Angus, and from this identify and appraise potential projects that could be taken forward by local communities.

Review

The review process is aimed at developing an informed high-level picture of the challenges and opportunities for community energy projects in Angus, which will help to define the types of project that could be developed and feed-in to an options appraisal of specific potential projects.

The review has focused on the following:

- Existing support for the sector
- Broad energy consumption data
- An overview of fuel poverty and domestic energy efficiency
- Currently available energy advice and support for households
- Mapping community organisations that are active or interested in energy issues
- A summary of Angus Council's actions on net zero and opportunities for community involvement
- A snapshot of commercial renewables projects in Angus

Support for community energy in Scotland

The Scottish Government's **Community and Renewable Energy Scheme (CARES)** is delivered by Local Energy Scotland and is the main source of support for community energy in Scotland. CARES offers a range of financial support and advice to community groups to get local energy projects up and running:

- free, expert and impartial advice from local development officers
- free online resources including toolkits and project guides to help you identify what might work for you
- technical support through their framework contractors – for example, to complete a feasibility study or develop a renewable energy project
- access to project managers with the right experience to develop your project
- mobilisation support for capital projects – design review, costs, and procurement support
- ongoing support with project development and delivery
- mentoring and community online discussion in a Facebook group
- funding through grants and no/low interest loans to develop projects.

If the Hub or any other community organisation in Angus decides to take a community energy project forward it is recommended to get in touch with Local Energy Scotland at an early stage.

Community Energy Scotland is a member-led, independent organisation focused on increasing community resilience and enabling its members to play a significant role in an equitable energy transition. They work with communities and partners to support, promote and represent the community energy sector by providing technical assistance, knowledge sharing & championing the role of community-led action in the transition to a low-carbon future.

Home Energy Scotland is the Scottish Government programme that offers a wide range of energy efficiency and fuel poverty services, from practical in-home support to referrals for funding. The service is delivered nationally by the Energy Saving Trust and locally by SCARF, and a number of schemes are available in Angus for those who seek to improve the energy efficiency rating of their home, with the schemes offering either full or part funding toward the measures. Although primarily focused on support for individual households, HES also works with community organisations to increase their reach and tailor support to local communities.

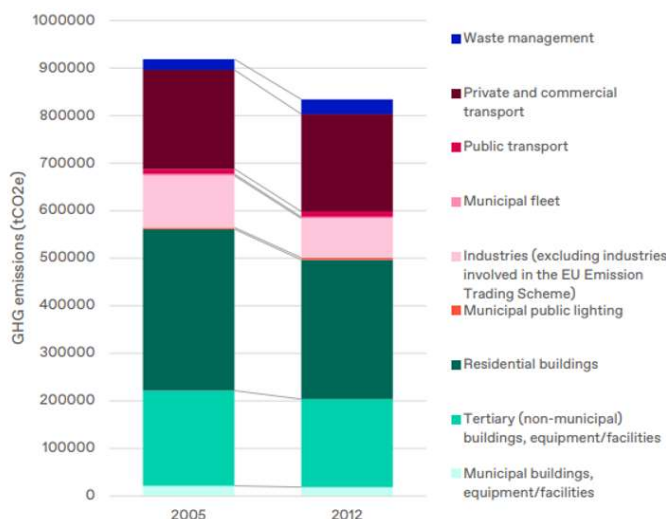
The **Energy Redress Scheme** is an Ofgem fund that supports projects across England, Scotland and Wales that support vulnerable energy customers and carbon emission reduction initiatives. The

scheme was launched in 2018, has funded over 500 projects and awarded a total of over £100 million. According to their website, there has only been one successful application in Angus: a 2022 grant to Angus Housing Association to install a range of energy-saving improvements in the Kirkbank estate in Auchmithie. In other parts of the UK many local groups have been successful in accessing Redress funds to develop local energy advice and energy efficiency support projects that support vulnerable consumers, and in Scotland these are commonly carried out in partnership with other local services such as HES.

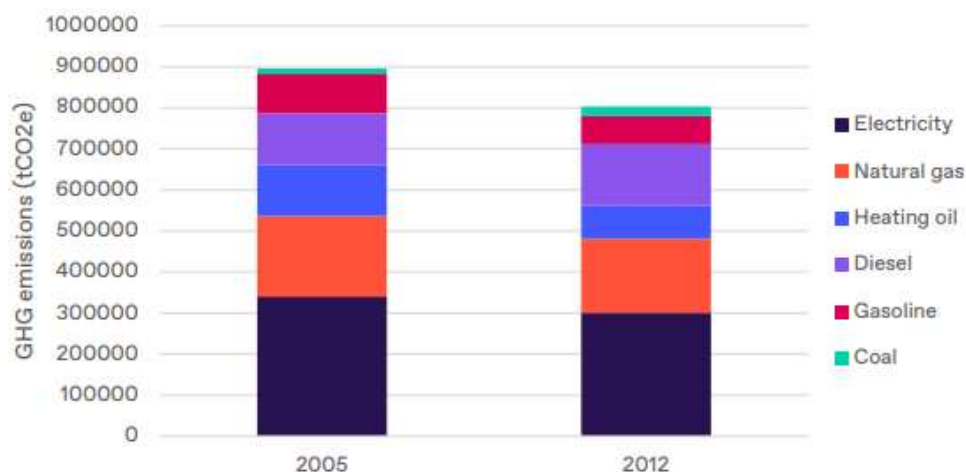
Consumption

The Angus Sustainable Energy and Climate Action Plan (SECAP) was published in 2021 and contains data on energy consumption and greenhouse gas emissions that can be used to demonstrate broad trends and may form part of the rationale for areas of focus for community energy.

The SECAP references a 2017 Baseline Emissions Inventory (BEI) that tracks emissions from different sectors between 2005 and 2012. While there are important limitations and exclusions in these figures (discussed further below) they demonstrate that the largest sectors in terms of emissions were private and commercial transport and heat and power for buildings (both residential and non-residential). The chart below shows that there was a reduction of approximately 9.2% in total emissions in the period covered, with almost all sectors recording reductions in that time.



The BEI also tracks emissions from different fuel types, showing reduced emissions from electricity, natural gas, gasoline and most significantly from heating oil. Emissions from diesel and coal both increased.



It is important to note that since 2012 UK grid electricity has been significantly decarbonised as renewable energy generation has increased, and this is particularly relevant in Scotland where

emissions from our overall energy supply have reduced by almost two thirds in that time, with coal almost entirely phased out. While data specific to Angus is not available, it is likely therefore that this will have had a significant impact on the emissions from electricity referenced above. Furthermore, the data in the BEI excludes emissions from industrial processes, agriculture and land use which are likely to play a significant role in the data for Angus.

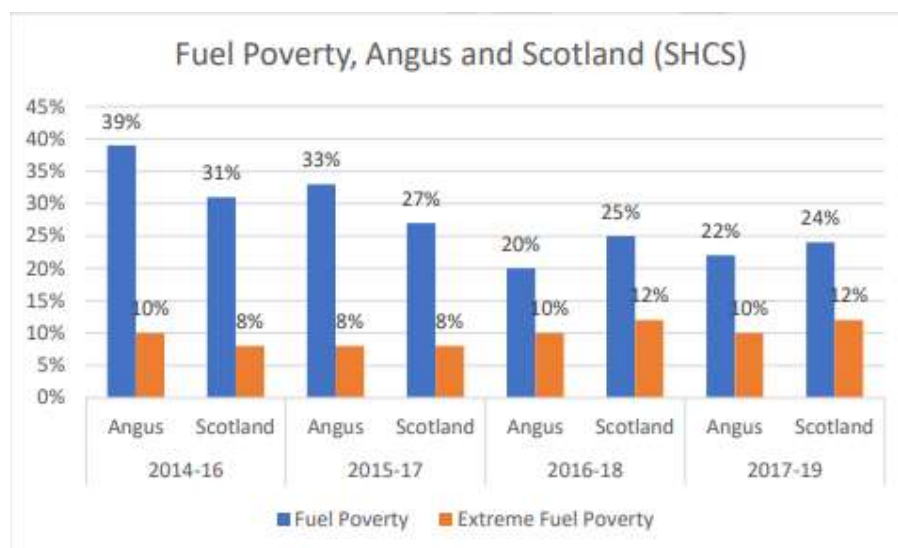
From an emissions perspective, this data suggests that transport on the one hand, and heat and power in buildings on the other, are the areas requiring most significant action to decarbonise.

Fuel Poverty

The Scottish Government has established a two-part definition whereby a household is considered fuel poor if:

- after housing costs have been deducted, more than 10% (20% for extreme fuel poverty) of their net income is required to pay for their reasonable fuel needs; and
- after further adjustments are made to deduct childcare costs and any benefits received for a disability or care need, their remaining income is insufficient to maintain an acceptable standard of living, defined as being at least 90% of the UK Minimum Income Standard.

According to statistics from Angus Council, the latest data shows that 22% of households experience fuel poverty and 10% experience extreme fuel poverty. The chart below demonstrates a significant reduction in fuel poverty, nationally and in Angus, between 2014 and 2019. However, as there have been delays in publishing updated figures since 2019, it is broadly accepted that these are likely to have increased following the impact of the Covid-19 pandemic and cost of living crisis.



These figures therefore suggest that existing government and third sector action on fuel poverty has had a demonstrable impact on fuel poverty in Angus up to 2019. However, a fuel poverty rate of 22%, especially given the expected additional impact since 2019, may highlight a need for additional community-led action in this area.

Support for households on energy efficiency

Support for households on energy efficiency, fuel poverty and retrofit is provided by a range of overlapping schemes run by Home Energy Scotland, SCARF and Angus Council. In addition to the overall support and services through Home Energy Scotland, the following are delivered specifically in Angus:

- **Angus Home Energy Advice Team (HEAT):** The Angus HEAT offer tailored advice and practical support, visiting homes where necessary to guide households as to how they can save energy and manage their home. Operating for a number of years they have obtained some positive results for local households.
- **Home Energy Efficiency Programme for Scotland (HEEPS):** The HEEPS fund is an area-based scheme run throughout each local authority area in Scotland, targeting homes with poor energy efficiency and aiming to reduce fuel poverty. Funding is allocated each year and used by the local authority to focus on particular areas.
- **Warm Homes Fund:** The Warmer Homes Scotland fund helps people in need make their homes warmer and cost less to heat by changing homes to use energy more efficiently. The scheme is one the main funds to which SCARF/HES will refer eligible households. It is open to private sector housing and households must also meet qualifying criteria in order to qualify for assistance worth up to around £5,000 to make their home warmer and more energy efficient.
- **Eco Flex:** The Council recently launched their Eco Flexible Eligibility (Eco 3) Pilot Scheme following delays due to the pandemic. The funding for the scheme derives from Energy Company Obligation (Eco), where the large UK energy suppliers are obligated to promote and cover all or part of the costs of measures that improve the ability of low income, fuel poor and vulnerable households to heat their homes.
- **Responding to the Fuel Price Crisis:** Since early 2022 there have been a number of ad-hoc schemes funded and launched by the Scottish Government in response to the fuel price rises. Both schemes were administered by Scarf, applying household eligibility criteria (low income and/or health reasons) to access vouchers ranging from £100 to £250 per household.

As in Scotland generally, there is a significant amount of support available for households on energy efficiency, bill reductions, retrofit and other forms of domestic energy action. However, it is common for support schemes to be impacted by a number of factors that reduce take-up, including confusion about the range of schemes available, lack of resource for marketing and engagement, and limited capacity for delivery. There may therefore be an opportunity to explore options for community organisations to partner with relevant delivery bodies to increase the uptake of these schemes and/or offer supplementary and complementary services. An approach was made to SCARF as part of the work for this report, and while they were enthusiastic to discuss such opportunities it has not been possible to arrange detailed discussions to date.

Community and third sector capacity

The Angus Climate Action Hub co-ordinates a network of around 70 active community and third sector organisations, led by Montrose Community Trust. Engagement with the hub co-ordinator, hub members and desktop research has highlighted a small number of organisations with an active interest in developing community-led energy projects, and these are listed here. It should be noted that the below only represents a snapshot of active community organisations in the Hub's network who were able to actively engage in the development of this report. Further engagement with the wider network and communities at large will be necessary to fully develop a picture of local priorities and identify groups to take projects forward.

Montrose Community Trust (MCT)

MCT is lead partner in delivering the Angus Climate Action Hub, and has a focus on the development and delivery of an extensive range of community-benefitting programmes that seek to improve the lives of those living in Montrose and the Mearns. Discussions with the Trust indicate that they are keen to access support in decarbonising their sports centre and reducing their fuel bills, which will enable them to focus more resource on delivering their important work locally. More broadly there are opportunities for engaging MCT and other football club trusts across Angus (Forfar Community

Football Trust, Arbroath Community Trust and Brechin Community Football Trust) to explore options for working together on energy related projects in their communities.

Sustainable Kirriemuir (SK)

SK has a mission to lead their community to learn, teach, adapt and share the skills, knowledge, activities and practices to enable healthy and happy people and a healthy planet. SK published a climate action plan in 2020 that highlights potential work in four energy related areas that align well with the scope of this report:

- Signposting for energy efficiency/fuel poverty schemes
- Energy efficiency in community buildings
- Bulk purchase for residential solar panels
- Research into bigger energy projects

East Haven Together (EHT)

EHT was formed to protect and promote natural heritage, protect and enhance the natural environment, promote the needs and interests of East Haven and its residents, protect wildlife and to develop and maintain a sustainable community. A meeting with EHT highlighted three areas of potential interest in working on energy related projects:

- Some early-stage investigations have previously been carried out by the community into the feasibility of community-owned wind turbines on agricultural land adjacent to the village.
- Work has been carried out to investigate options for refurbishing the community managed public toilets, which included an energy assessment and recommendation of solar panels and battery storage.
- EHT successfully delivered community-owned solar powered street lighting in the village in 2022/23 following Angus Council's decision to stop maintaining street lights on unadopted roads.

Wester Derry Wind Co-op

Wester Derry is a not-for-profit co-op which owns a wind turbine on the border of Angus and Perthshire. The wind turbine was built in December 2014 primarily as a partnership between the landowner and Sharenergy, a company who support co-operatively owned renewable energy projects, financed by the issue of community shares. Income generated by the turbine is used to pay rent to the landowner, interest to investors and for distribution to a community fund. Engagement with Wester Derry Farm, as landowner and principle developer of the project, is recommended and could provide useful local experience and knowledge for community energy projects in Angus.

Angus Council

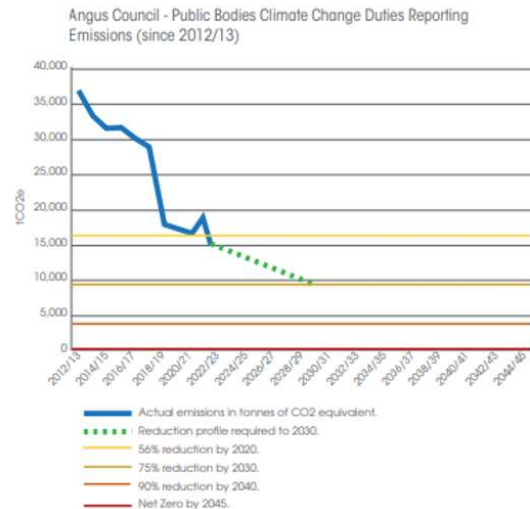
Local authority support and engagement are often key elements of successful community energy projects. An active local authority can have a significant positive impact on a community energy project through a number of roles including landowner, energy consumer, funder, provider of support, power-broker, or any combination of these roles. Equally, local communities have an essential role to play in supporting local authorities to deliver their climate action plans.

This is noted clearly in Angus Council's Sustainable Energy and Climate Action Plan (SECAP), as follows:

“Climate action should seek to meaningfully involve all aspects of local communities. Strong social consensus on the goal and pathways to sustainability is fundamental. Social dialogue has to be an integral part of the institutional framework for policymaking and implementation at all levels. To this end, climate action should make the most of the existing community groups, such as Sustainable Kirriemuir and support the establishment of new ones.”

The Transition to Net Zero 2023 Progress Update notes that although strong progress has been made on emissions reductions within the Council, this has largely been down to the decarbonisation of the electricity network generally as opposed to Council action, and progress is behind the ideal target position. In order to meet the interim target of a 75% reduction by 2029/30, an ongoing reduction of 5.8% per year is required. This is shown in the chart opposite.

A full review of Council strategies, papers and policies, alongside engagement with key officers within the Council, has highlighted the following potential areas of Council activity that are relevant to potential community climate action.



- The Transition to Net Zero Plan notes an ongoing programme of reviewing opportunities for solar PV systems on Council buildings and rolling these out where appropriate. Further engagement with officers has indicated that to date a total of around 200kWp of solar panels have been completed across a small number of buildings. Although finance to progress a larger number of installations is potentially available to the Council, staff resource is a potential issue slowing progress on this front. The Property Assets team are currently looking for funding to commission surveys of large and medium-sized buildings within the Council estate. It was noted by officers that opportunities for community owned solar projects on council buildings may be of interest where these could speed up the deployment of renewables and help to achieve the Council’s net zero targets.
- The Council’s Local Heat and Energy Efficiency Strategy (LHEES) was published in June 2024 and outlines a strategy and delivery plan for decarbonising heat in buildings across Angus. The LHEES was published as this report was being written up, and as such has not been reviewed in depth at this stage. However, it is noted that the main focus of the LHEES has been around establishing a strategy for identifying action required across all sectors of society in Angus, with the role for direct Council intervention in the direct delivery of energy efficiency and renewable heat only a part of the picture and only in specific circumstances. Furthermore, engagement with relevant Council officers has indicated that there will be a need for significant engagement with local communities and with community organisations if the LHEES is to be a success.
- The Council have granted exclusive rights to the commercial firm Private Energy Partners (PEP) for use of the former landfill site at Restenneth as a potential commercial scale solar farm. It is understood that this project is in development and has secured a grid connection agreement. Discussions with PEP may be beneficial to establish whether there is any scope for community benefit and/or shared ownership in this renewable energy scheme.

Commercial renewables projects

There is no definitive register of renewable energy generation projects in the UK, however various sources of online information and engagement with local stakeholders can give a high level overview of relevant projects in Angus. This is presented below.

Wind

According to data from the Local Energy Scotland website there are five operational locally-owned wind turbines in Angus (noting that in this context locally-owned includes turbines owned and operated by farmers and landowners as opposed to being community-owned). These are all in the region of 100kWp to 500kWp and were likely constructed before the closure of various UK government subsidies for renewable energy projects at this scale. While this demonstrates that from a planning perspective and a wind resource perspective such projects can be viable in Angus, it is unlikely that turbines at this scale would be financially viable without subsidies or grant funding.

Seagreen, Scotland's largest offshore wind farm, is located around 27km off the coast of Angus in the North Sea and is a £3bn joint venture between SSE Renewables, TotalEnergies and PTTEP. The Seagreen Community Benefit Fund has been established to benefit communities located in parts of Angus who have some impact from construction of the project. A total of £1.8m will be invested in local projects over the next few years. Further details on this fund, including contact details for the administrator, can be found [here](#).

Solar

There are a number of large-scale solar farms in development in Angus where engagement with the developers may be useful in terms of identifying options for community benefit and/or shared ownership. The include:

- Resetenneth Landfill Site, owned by Angus Council (discussed in more detail earlier in this report)
- Montreathmont Solar Farm, 42 MW of solar panels in development to the south of Brechin, with the developer Renewable Connections stating on their website that a community benefit fund of up to £84,000 per year will be available.
- New Mains of Guynd Solar Park, a 5MW solar farm financed by Social and Sustainable Capital, planned for construction near Arbroath and according to the developer's website aiming to benefit local people living in poverty and/or exclusion.
- Wellbank Solar Farm, a proposed site for up to 35MW of solar near the village of Wellbank, north of Monifieth being developed by Greentech.
- Ecosse Solar Park, an operational 6.7MW solar farm near Forfar that is owned by local family run firm Albamuir Ltd.

Challenges and Opportunities

In order to identify and appraise potential projects that could be taken forward in Angus, an exercise to assess the challenges and opportunities identified in the review has been carried out.

Challenges

- Difficulty in addressing carbon emissions from transport and heat in buildings.
- Relatively high rates of fuel poverty and relatively poor standard of domestic energy efficiency.
- Issues with uptake of support for households on energy advice and energy efficiency measures.
- Relatively low level of known existing skills and capacity in community organisations for delivering community energy projects.
- Low level of uptake of renewables on community buildings despite available support from CARES.

- Significant likely impact of removal of Council maintenance for street lighting on unadopted roads.
- Ambitious targets for decarbonisation within Angus Council are behind schedule.
- Rollout of renewables on Council estate is limited by available staff resource.
- Financial viability of larger community scale wind and solar projects in doubt without UK government subsidies.

Opportunities

- Funding and support available through CARES.
- Active community sector with over 70 organisations within the Climate Action Hub network.
- Small but encouraging number of community groups actively engaged in the development of this study and keen to explore further options.
- Multiple support schemes available for domestic energy efficiency and delivery bodies keen to partner with local community groups to increase uptake and offer supplementary support.
- Significant opportunities for renewable energy measures in buildings in the public, commercial and third sector – solar power and renewable heat.
- Angus Council keen to explore options for partnering with the community sector on energy projects.
- Significant natural resource for larger community scale wind and solar projects, with a number of commercial solar farms in active development.

Options Appraisal

The following projects have been identified based on the specific challenges and opportunities for community energy in Angus and some development work progressed to define the potential model and next steps for developing them in each case.

Rooftop Solar PV on Third Party Buildings

Project Model Overview

Rooftop solar PV is the most well established and tried and tested model for community energy in towns and cities in the UK. The basic model is based on a community group installing solar panels on the roofs of local buildings – most commonly schools, leisure centres, community buildings and local businesses – and selling the power generated to the host site.

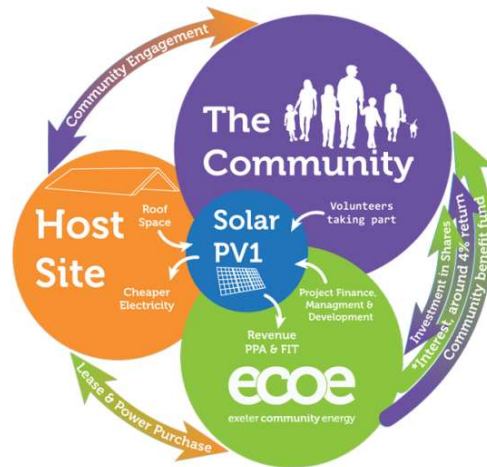
The key mutual benefit lies in the fact that the price of buying power *from* the grid – i.e. the electricity we all get from our mains supplier – is significantly higher than the price available from selling power *to* the grid. This means that the community group is able to sell power to the host site at a rate which gives the host site a significant reduction on their energy bills, but also gives the community group increased income compared to if they were exporting the power to the grid.

The key contractual elements of this project would be a lease, whereby the host site grants permission to the community group to install solar panels on their roof and grant them ongoing access for maintenance etc., and a power purchase agreement which lays out the terms for selling the power generated by the panels to the host site. These agreements typically have a term of 20 years, so it is important for both parties to be comfortable with and confident in the long-term nature of such a project. This is why schools and other public buildings make good sites for community solar, as we can have a high degree of confidence that they will not close or move premises before then end of the project.

In addition to these considerations, an ideal host site is typically one that has a large, unshaded and relatively modern roof, has a high energy demand, ideally during the daytime and across the year, and does not have the capacity and/or the finance to install their own solar panels (or in some cases is motivated by community benefit over financial return).

The most common governance structure for this type of project is a community benefit society, or “Bencom”, which is a form of co-operative that is legally bound to deliver benefit to the wider community as opposed to just its members. A Bencom raises money to install the panels by selling community shares, with investors becoming members of the co-op, receiving interest on their investment, and getting a say in how the organisation is run and how it spends its money.

Each year the Bencom uses its revenue to cover running costs, pay interest to members and create a community benefit fund. This can be used according to the priorities and wishes of the community organisation, often being focused on climate, social and local development issues.



Infographic from Exeter Community Energy demonstrating how the rooftop community solar project model operates

Opportunities in Angus

In order to develop a strategy and project model for community rooftop solar specific to Angus there are a number of factors to consider. Engagement with local community groups is needed to ascertain what existing capacity for and interest in developing this project there is, whether this is specific to a certain geographical area and/or whether there are existing specific areas of interest or local contacts. Identifying suitable sites and site owners is an important step, and thinking through and discussing this within a community organisation will influence the direction taken.

Below are outlined two potential approaches to developing a project, one focusing on dealing solely with Angus Council, and the other based on a local group in one town exploring options in multiple sectors. They are outlined here to demonstrate broad approaches – in reality they are not necessarily mutually exclusive and they do not cover all possibilities.

Local Authority Approach

Partnering with a local authority on a community rooftop solar project has multiple benefits, and an approach to Angus Council should be an early action in exploring this project option further. The benefits include:

- The Council owns a large number of buildings including schools, libraries, leisure centres and offices, which mostly have long-term security and high energy demand.
- Dealing with a single site-owner on a larger number of properties significantly reduces the amount of work involved in engaging site owners and reduces cost and complexity in terms of making legal agreements.
- The local authority has ambitious carbon reduction targets that they may not have the staff resource or the capital finance to deliver on alone.
- They may also be able to provide support in terms of skills, expertise and in some cases development funding.

As outlined earlier in this report, Angus Council has indicated that the Property Assets team may be amenable to a proposal from a community organisation for community solar on their estate as this will support the Council's carbon action plan while reducing the need for investment of staff resource and capital investment.

The Council may be able to provide details of the buildings in their estate across Angus, including energy consumption information, which would enable a community group to carry out some high-level feasibility work and identify the most appropriate sites, and subsequently make a formal proposal to the Council and seek funding for further project development work.

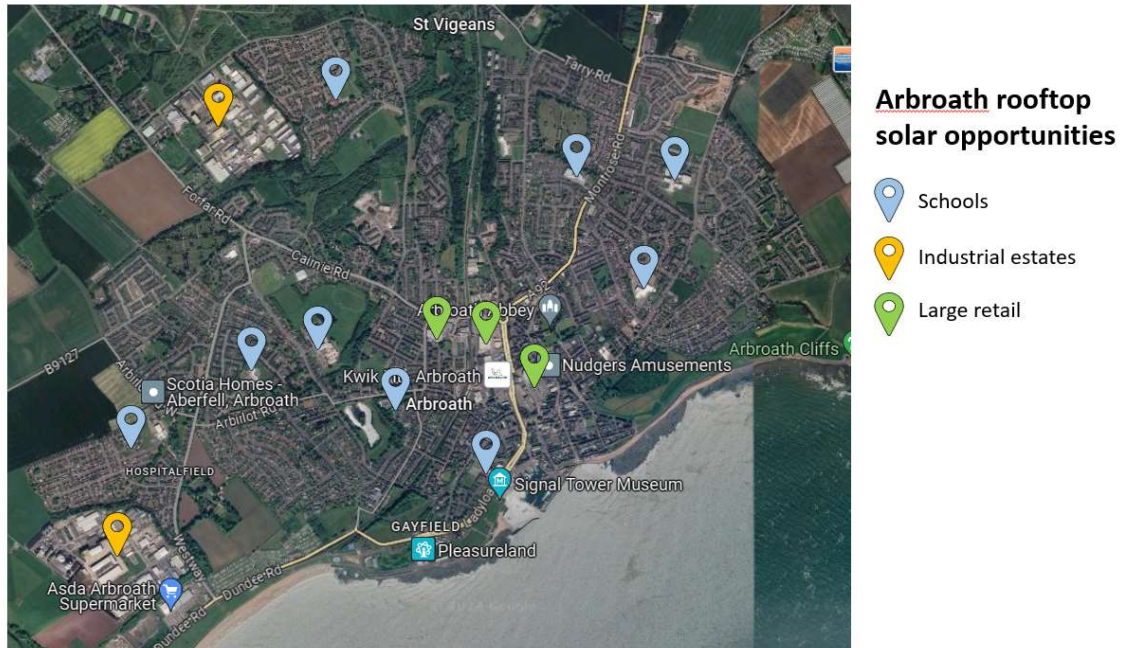
Single Town Approach

If there was a community group in a single defined area or town that wanted to develop this project, a mapping exercise could be carried out to identify all of the buildings that may be suitable and approach the building owners to enter discussions.

For the purposes of this report a high-level desktop review has been carried out of opportunities in Arbroath. It should be noted that Arbroath has been selected as an example and other towns and local areas may be more or less suitable, depending on the opportunities available and the capacity of the local community to develop a project.

As shown below, nine schools, three supermarkets and retail parks and two industrial estates have been identified as having good potential for rooftop solar PV. This list is not exhaustive and other opportunities may also be available. If there was local capacity, further work could be carried out to estimate the potential size of solar installations on these buildings and engage with the building

owners to gauge interest. As outlined above, schools are good partners for community solar because they have long term security and are typically under ownership of the local authority. Commercial and retail sites are typically very attractive from a technical and commercial point of view – they have large modern buildings and use a lot of energy – but can be more challenging to engage and secure agreements with. The two industrial estates are of interest here as they contain a large number of large buildings, with a likely very high energy demand. If each respective estate is owned by a single landowner these would become especially interesting to explore further.



Positive Impacts

- Reduction of carbon emissions and contribution to net zero targets.
- Creation of local community benefit fund.
- Reduced electricity bills for site owners.
- Community ownership and control of important energy assets.
- Opportunity for local people to invest and earn interest on community shares.
- Circular economy, with financial benefit all retained locally.

Challenges, barriers and risks

- Long development process – typically 2-5 years.
- Engaging site owners and securing agreements can take a long time and be resource intensive.
- Requires significant and probably paid community capacity.
- Although rooftop solar PV is a relatively simple technology an element of technical expertise and/or advice will be required from the early stages.
- Raising capital finance through community shares requires work to mobilise and engage the community, market the share offer and administer the shares. Capital grant and/or loan funding may also be required to reduce the risk.

Stakeholders and partners

- Community organisations
- Angus Council
- Other public sector site owners
- Local businesses

- Community and third sector organisations
- Local Energy Scotland
- Technical and legal consultants

Case study

There are innumerable examples of this project model across England and Wales, and a limited number in Scotland. Glasgow Community Energy has successfully installed two solar panel installations on schools owned by the local authority. GCE received support and development funding from CARES and worked with local community anchor organisations to engage local people around the sites and distribute community benefit funds. The panels were financed by a mixture of grant funding from Scottish Power Energy Networks and community shares. They are currently developing plans to roll this out over a larger number of buildings across the city.



Glasgow Community Energy solar installation at Ashton Secondary School, Glasgow

<https://www.glasgowenergy.coop/>

Project activities

Initial steps:

- Engage with local people and community organisations to define aims and objectives, project scope and priorities, and to find out what skills and capacity exist within the group.
- Approach local CARES Development Officer at Local Energy Scotland for advice and to find out what support is available.
- Approach to Angus Council to gauge further interest and seek information on potentially available buildings.
- Carry out high level mapping exercise to identify other sites and engage site owners.
- Secure funding for project development and feasibility.

Project development:

- Develop formal governance structures and community engagement strategy.
- Carry out desktop feasibility of sites for rooftop solar.
- Draw up template legal agreements and discuss terms with site owners.
- Develop a financial model and strategy for raising capital finance.
- Commission formal rooftop surveys and designs for PV systems.
- Ascertain requirements for formal consents and permissions – building warrants, planning permission and grid connections.
- Develop ongoing operations and maintenance procedures.

Capital phase:

- Finalise legal agreements with site owners.
- Finalise finance package, develop and deliver community share offer and/or secure capital grant/loan funding.
- Procurement of installers and rollout installations.

Community Street Lighting

Project Model Overview

In 2015 Angus Council announced that it would cease to maintain existing street lighting on unadopted roads and would not replace lights that became non-operational over time. Engagement with the Council has confirmed that due to budget constraints this policy is ongoing and unlikely to change in the foreseeable future. Although no formal impact assessment has been undertaken by the Council, it is reasonable to assume that the impact of this policy on local communities will be considerable.

Considerable volunteer effort by East Haven Together (EHT) led to the installation of three community owned street lights in the village of East Haven in 2020/2021. The community were able to overcome various issues to achieve this, including:

- The Council were not able to provide a step-by-step guide for communities to provide their own street lighting due to the complexities and number of options open to communities, but officer support and advice was made available for engaging with relevant stakeholders, particularly Scottish and Southern Energy Networks (SSEN) who manage the local electricity distribution network.
- Lighting powered solely by integrated solar panels is considered ineffective in Scotland, largely due to the power being most needed at night and in the winter months. Therefore they are required to be connected to the electricity network, with solar panels providing power when available. This meant that engagement with SSEN and the Council over complex issues around metering, billing, health and safety and maintenance was required.
- The cost for purchase and installation of 3 street lights was around £2,500, for which there was no allocated budget within the community or the Council. EHT were able to source funding for this from SSEN following outages caused by Storm Arwen, which although a positive outcome, may not be replicable for other communities.
- Issues around disconnecting and decommissioning existing out of service lighting were overcome by EHT securing agreement from SSEN and the Council to carry out these respective works.
- Permissions from the relevant landowner to install the new lighting were secured without charge due to them being a local resident and committed to delivering the project.
- Damage caused to the new community street lighting by storms in 2023 has required additional maintenance.

Opportunities in Angus

Council records show that there are 175 unadopted roads in Angus, however they were not able to provide any data on the number of individual street lights that are affected by this policy, or any information that might inform a strategy for tackling the issue such as maintenance or inspection records. Given the complexities of the issues encountered by EHT on their project, the potential scale of a project looking to tackle this issue as a whole across Angus is huge, and without significant funding and support, likely to be unfeasible.

It is therefore important to consider alternative approaches, which may include carrying out more detailed consultation and research to identify priorities and understand the scale and scope of a potential project, and/or to replicate the EHT project on a larger but manageable scale to demonstrate its viability and look to build on their experience.

Consultation and Research

Understanding where the Council's decision to stop maintaining street-lighting on unadopted roads will have the most impact, while also identifying where there is community capacity to address the issue, is of critical importance. The following steps are recommended:

- Obtain data and information on the number and location of affected existing street lights.
- Carry out high-level mapping and feasibility work to give a broad picture of the work that would be needed to address the issue and the investment required.
- Develop an engagement and consultation strategy to take this information out to local communities and community groups so that local priorities and capacity can be measured.
- Analyse all information gathered to inform a more defined and deliverable project that can be progressed.

Demonstrator Project

While the above steps are recommended before a defined project can be developed, for the purposes of this report a potentially deliverable project focused on the village of Letham is presented here as an example. The local community in Letham has not been engaged in the work of this report and it is stressed that the village is used here as an example, and that other locations and communities may be more or less suitable. The following factors have led to Letham's inclusion as an example here:

- The relative size of the village representing an upscaling of EHT's successful project while presenting a potentially more manageable task than addressing the issue Angus-wide.
- Engagement with EHT indicating that the local community in Letham has been managing unadopted roads since around 2020.
- A certain amount of useful data available from the Council specific to Letham is available.

According to a report by the Angus Council Communities Committee in February 2021 there are 20 unadopted roads in Letham, many of which provide important access through and around the village and to local households, and four of which officers in the Council are aware of ongoing issues with disrepair and damage. Based on an estimate of two street lights per unadopted road, and extrapolating costs provided by EHT, this would give a theoretical capital cost of around £33,000.

Desktop research indicates that there is an active Community Council in the village and a small number of other local groups who are active in the community.

Identifying a community organisation in a village such as Letham with an interest in this issue and exploring options for replicating EHT's project may be a constructive and less resource intensive approach than an Angus-wide exercise in consultation and research.

Positive Impacts

- Public safety and security and improving local amenities.
- Potential impact on reducing carbon emissions and reliance on grid electricity.
- Building community capacity and demonstrating positive collective action.
- Gathering data and information that may be useful in highlighting the impact of the issue and influencing government action.

Challenges, barriers and risks

- Potentially prohibitive cost.
- Scale and complexity is likely to require significant dedicated resource and professional expertise.
- Technology is likely to require grid electricity and therefore have limited impact on carbon reduction.

- Involvement of multiple stakeholders – Angus Council, SSEN, landowners, contractors, communities – and multiple consents and permissions required.

Stakeholders and partners

- Local communities and community groups
- Angus Council
- SSEN
- Landowners
- Contractors and professional advisors

Case study

East Haven Together successfully installed three community-owned street lights in 2020/2021, as outlined above. They are aware of one other potential community in the Borders who have delivered a successful project. At the time of writing no other similar project has been identified in Scotland.

Project activities

Option 1 Develop a programme and budget to carry out pre-feasibility on an Angus wide project:

- Obtain data and information on the number and location of affected existing street lights.
- Carry out high-level mapping and feasibility work to give a broad picture of the work that would be needed to address the issue and the investment required.
- Develop an engagement and consultation strategy to take this information out to local communities and community groups so that local priorities and capacity can be measured.
- Analyse all information gathered to inform a more defined and deliverable project that can be progressed.

Option 2 Identify a single community and organisation with capacity and motivation to progress a scaled down version of the above in a small-medium sized location that demonstrates an uplift of EHT's project.

Other potential projects

The following projects have also been identified but with further work required to map out how they could be developed specifically in Angus.

Community Buildings Retrofit

Support from CARES and from Business Energy Scotland is available to carry out energy audits on community buildings and provide a mixture of loan and grant funding to progress renewable energy and retrofit measures identified. However, the process is complex both from an administrative and technical point of view and a level of match funding is required from the community organisation, meaning that uptake in Angus has not been high. With a centralised and paid resource, the Hub or another community body could co-ordinate liaison with these support agencies, apply for match funding, manage the appointment of contractors and oversee installations across a number of different community buildings. Both Montrose Community Trust and East Haven Together are keen to explore options to address energy efficiency and renewables in their community buildings, and it is likely that there are other community buildings who would benefit from this additional support.

Domestic Energy Advice

Significant funding from the Energy Redress Scheme is available for community organisations who want to support vulnerable energy consumers in their local areas, and there is a wealth of case studies and project models that could be reviewed and replicated in Angus. There are also a number of community organisations that are well rooted in communities that are likely to have a higher proportion of vulnerable energy consumers, and a willingness from HES and SCARF to make links

with such organisations to increase the impact of their work. The scope of such a project would require a deeper level of work to identify target groups and establish specific aims and objectives. Engagement with the Hub co-ordinator has indicated that the four active football club trusts may be interested in exploring such a project.

Medium-Large Scale Renewable Generation Projects

Angus has significant natural wind and solar resource and relatively favourable context in terms of planning permission, although existing capacity on the local electricity grid is severely constrained. There are a number of commercial scale solar projects in development, including on Council land, that may be worth approaching to explore opportunities for shared ownership. Local Energy Scotland has a dedicated team to support shared ownership projects. In addition, there is specific interest from East Haven Together in exploring a community wind project on land adjacent to their village. Pre-feasibility work could be carried out on this site at relatively low-cost, or no cost if there is volunteer capacity and Local Energy Scotland were able to provide support. This would give clarity as to whether more detailed work was worthwhile and provide the basis for seeking funding to deliver it.