regen
transforming energy

Local authority models for developing renewable energy

Regen is a not-for-profit centre of energy expertise and market insight whose mission is to transform the energy system for a zero carbon future.

Regen offers independent expert advice and market insight on all aspects of sustainable energy delivery. We use our technical expertise, industry research and policy knowledge to support a range of public and private sector organisations to make the most of their clean energy opportunities.

Regen's paper 'Local Leadership to transform our energy system' published in 2020 sets out actions and examples on what local authorities can do to support sustainable energy.

We would like to thank the following organisations for providing their insights for this paper:

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- **Sean Owen, Greater Manchester Combined Authority**
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This paper is intended as general guidance only; local authorities should obtain specialist advice on projects. All opinions and views expressed in the paper are Regen's. We would welcome feedback and comments and encourage readers to continue to engage with us through our events and membership.

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Contents

We need lots more renewable energy

More renewable energy is the bedrock of achieving net zero.

However, the installation of new renewable generation in the UK is not at the scale needed to achieve our carbon reduction targets.

The Climate Change Committee has indicated that we need at least a fourfold increase in renewable generation deployment by 2050, and this will be needed at all scales, from offshore wind projects to domestic rooftop solar.

Many local authorities, cities and regions have been asking themselves how they can encourage more renewable energy to be built, whilst maximising the local benefits from this clean growth.

Local authorities have a key role in the development of renewable generation as planning authorities. However, they can also play a more direct role in enabling renewable energy projects as landowners, developers or purchasers of power.

This paper has been produced as a guide for local authorities and other organisations to bring together the latest thinking on how they can can support new renewable development in their areas.

For each model and new approach, it examines the key elements, pros, cons and issues to consider.

CASE STUDY

Greater Manchester – Go Neutral

Greater Manchester Combined Authority is looking to deliver 85MW of renewable generation with battery storage and electric vehicle charging infrastructure by bringing together projects on 430 publicly owned sites into a framework to achieve economies of scale. It is expected to require around £155m of investment and will be delivered via a range of models including direct ownership and sleeving PPAs.

CASE STUDY

Exeter City Council

Exeter City Council is developing a solar and battery project, Water Lane, on the edge of Marsh Barton Industrial estate. The site is a 4.1 acre landfill site on which there will be a 1.2 MW solar farm and 1 MW/2 MWh battery storage.

The site will be connected to the council's operational depot in Exton Road via a 11 kV private wire to provide power to its fleet of electrical vehicles. The project was made possible by European Regional Development funding (ERDF).

A guaranteed price for power can support renewable deployment

With the significant cuts made to renewable generation subsidies from 2016, new projects have faced significant hurdles. Although the cost of the technology has gone down, there can be a high cost of network connection or upgrades, particularly in constrained areas. Planning permission, particularly for onshore wind or larger solar sites, can also be problematic.

But the biggest hurdle to new renewable projects is financial. Will the project make enough money over its lifetime to cover costs and achieve an acceptable rate of return?

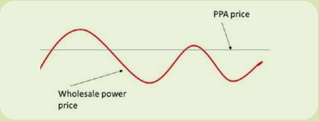
Although there have been considerable electricity price increases during 2021, the price of wholesale power over the lifetime of a renewable energy project is uncertain and difficult to forecast. Many projects are unable to obtain a secure a high enough power price to make the project financially viable.

The key challenge is achieving a guaranteed, long term price for power that can help both the generator and demand customer manage the future market price risk and unlock new renewable energy projects.

In 2021, the UK government has restarted a scheme to support large onshore wind and solar energy projects through Contracts for Difference (CfD), agreeing a 'strike price' for power generated. This means projects have income certainty over the period of the project. Participating in CfD rounds is a costly and competitive process and, therefore, only suited to large-scale well-funded projects.

Wholesale price risk

- Non-subsidised renewable generation projects export power onto the wholesale market and are paid broadly the market price for power.
- Projects will have a power purchase agreement (PPA) agreed with a licenced supplier. These are mainly short term and renegotiated regularly.
- Projects face uncertainty about what price they will receive for their next PPA. If the price of power has dropped, it could make a project unviable.



Local renewables achieving a local dividend

Local authorities, cities and regions are also looking at how they can encourage new local renewable energy projects to achieve associated benefits for local communities and the economy.

Regen has been working to explore the potential of local energy and whether the needs of both generators and demand customers can be brought together to provide a solution. However, it can be challenging as our national electricity markets and systems are not set up to support a 'locally sourced' objective.

Often, at the heart of the issue for local authorities in particular is whether the combination of supporting new renewable local and community generation, managing future price risk and the local dividends of clean growth, can be valued appropriately to meet the criteria of value for money in public sector procurement.

CASE STUDY

Community Ownership

In March 2020, Wolverton Community Energy installed 20 kW of rooftop solar on Stony Stratford library and council offices. The project, led by a local director of Wolverton Community Energy, was supported by Stony Stratford parish council, and was made financially viable by a long term power purchase agreement (PPA) between the council and community energy group.

New local renewables:

There can be significant direct and indirect social and economic benefits to supporting renewables to be built locally and particularly projects which are partly or wholly owned by local communities. These additional benefits can include:

- More local jobs in construction and operation
- Keeping project income and benefits within the local economy
- Improved local environmental impact
- Lower energy prices for local households and businesses
- Greater local energy security and resilience
- Income that can be reinvested for the benefit of the community
- Enhanced community engagement and empowerment.

For more information see Devon Community Energy: Socio Economic Impact Assessment (CAG Consultants)

How can local authorities support new renewables?

This paper looks at three existing models and three new emerging models for supporting new renewable energy development.

The existing models include:

1. Direct development and ownership of renewables
2. Private wire renewables or micro-grid developments
3. Buying renewables through sleeving PPAs

And the new emerging models:

4. Synthetic PPAs – supporting renewables via financial instruments
5. A Sleeving Pool – bringing demand and supply together
6. A local renewable electricity supply tariff

Each of these models have their strengths and challenges. In this paper, each model has been introduced and assigned a traffic light assessment of the following:

- **Development costs**
  Does the local authority cover costs of planning, installation and maintenance?
- **Savings or revenue**
  What is the potential for savings on electricity costs or revenue from export of electricity?
- **Local benefits**
  Does the structure facilitate additional local benefits?
- **Network connections**
  Is there an impact on the electricity network or a cost for connection?
- **Legal and contractual**
  What are the implications for electricity procurement? Is there a cost to negotiating contracts etc.?
- **Carbon reporting**
  What can be reported as part of Scope 2 carbon emissions?

1 Direct development and ownership of renewables

The most straight-forward option for local authorities or any business can be to build and own new renewables directly.

This is an option for those able to invest capital in new development and with opportunities to locate new renewables on owned or acquired sites and land.

The best financial returns can be achieved when new generation, such as rooftop solar, can be co-located with buildings or a source of demand. The energy generated then reduces the amount of electricity that is purchased from the market, providing a more attractive rate of return.

Payback times for solar generation projects co-located with demand can be as low as five years, with onshore wind potentially even lower. Where the project is not directly co-located with a demand source, the power can be sold back to the council via a sleeving PPA for use at another location (see model 3).

As a landlord, local authorities can also use green leases to encourage action in tenanted land and buildings or alternatively if unable to find capital directly, they can make sites available to renewable developers, including community energy organisations.

Further reading: Renewable energy good practice guidance (LGA and Local Partnerships) and Green Lease Toolkit (Better Buildings Partnership)

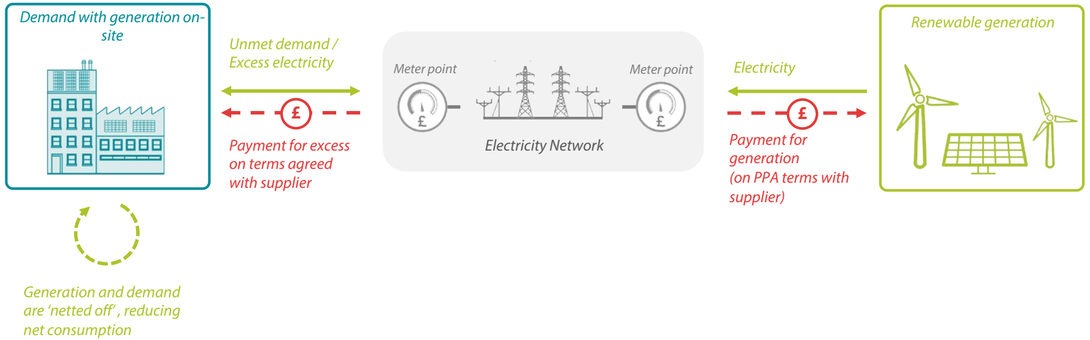
Key issues	Direct development and ownership of renewables
Development costs Does the local authority cover costs of planning, installation and maintenance?	The local authority would be covering all costs associated with the renewable energy development.
Savings or revenue What is the potential for savings on electricity costs or revenue from export of electricity?	Savings could be high, particularly if co-located with demand site. In these cases, the renewable electricity goes directly into the site and offsets the higher cost of imported electricity. If the site exports energy either directly or if there is excess over demand, then revenues would be received from selling the power over the network via a PPA or Smart Export Guarantee.
Local benefits Does the structure facilitate additional local benefits?	By being directly in control of the project, the local authority could use procurement processes to weight decisions towards local benefits, for example local suppliers.
Network connections Is there an impact on electricity network or a cost for connection?	If the development is co-located with demand, there could be no change to the electricity network connection, assuming the installation still operates within existing connection agreement. However, additional network charges might be needed if site wants to export (and does not already have agreed export capacity).
Legal and contractual What are the implications for electricity procurement? Is there a cost to negotiating contracts etc.	If exporting power, a PPA would need to be agreed with a supplier. This could be via a Smart Export Guarantee if it is less than 5 MW capacity. Total electricity imports would be lower which would impact volumes and profile of use of electricity from the network. This would need to be discussed with your existing supplier so it can be reflected in their forecasts.
Carbon reporting What can be reported as part of Scope 2 carbon emissions?	If the generation is directly reducing electricity imported from the network and not being exported, this will mean an absolute reduction in reportable scope 2 carbon emissions. Any exported electricity cannot be reported as a carbon reduction as this will be contributing to UK grid decarbonisation. To claim carbon reduction, the local authority would have to purchase this back via a PPA.

CASE STUDY

Cambridgeshire County Council

Cambridgeshire County Council built a 12 MW solar park at Triangle Farm, Soham in 2017. The solar farm was built on council land and has delivered over £350,000 per year net revenue. The project was one of only two solar farms supported by the last **Contract for Difference (CfD)** round open to solar projects and provides a flat rate for the electricity produced over 15 years. A new CfD round open to solar projects is expected at the end of 2021.

If co-located, generation and demand are 'netted off' behind the meter, reducing net electricity consumption and carbon. Generation and/or excess electricity would be exported to the national electricity network with payment received for the units of electricity via a SEG or a price agreed with the supplier.



2a Private wire renewables or micro-grid developments

Linking generation and demand through a private wire can provide significant benefits. In these models, electricity is not exported to the UK network but instead goes via a private network or micro-grid from a source of generation to demand.

This model means the demand and generation can be owned by different parties with an agreement on power price and the development and maintenance of the private network, which could have a life of up to 30 years. The local authority could either be the generator, for example supplying renewable power to social housing; or the demand site, for example buying generation off a local or community owned project to supply council facilities. Generation projects under 5 MW (or under 2.5 MW to domestic customers) are exempt from the cost and complexity of a supply licence.

Private wires are only viable where the geographical distance between generation and demand is relatively short, though in the right conditions this could be several kilometres.

Depending on the price negotiated, there could still be significant electricity cost savings for the demand site, but these are likely to be lower than direct ownership. However, this model removes the need to pay upfront for the development cost.

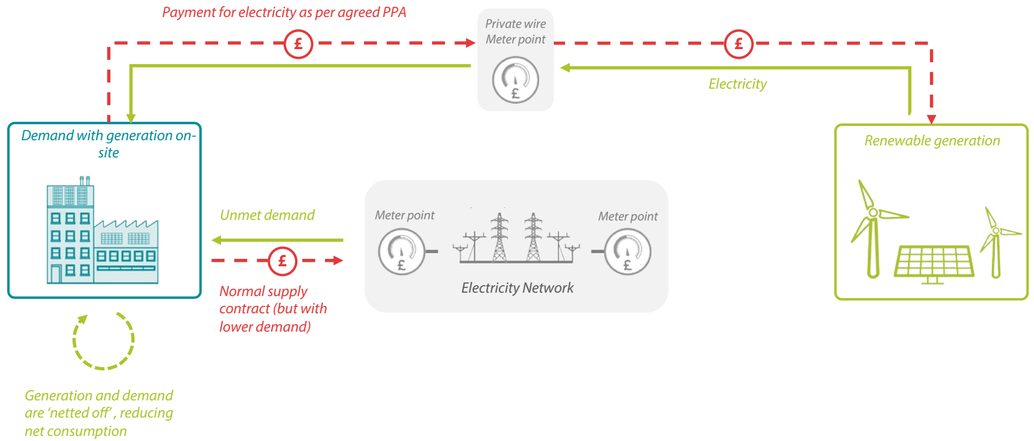
Key issues	Private wire developments between demand and generation
Development costs Does the local authority cover costs of planning, installation and maintenance?	Private wires could involve a renewables project linking directly to a demand site. This may involve no development cost for the demand site unless there is an agreement to share cost. An alternative would be the local authority developing renewable generation in or next to areas of demand (such as social housing) and installing a private wire or micro-grid to deliver power. The local authority would cover full development costs in this instance.
Savings or revenue What is the potential for savings on electricity costs or revenue from export of electricity?	The level of savings will depend on the PPA price. Savings from a private wire contract are likely to be lower than directly owned generation. If excess is generated and exported onto the network, there could be additional revenue (depending on contract).
Local benefits Does the structure facilitate additional local benefits?	A local authority can specify various conditions via procurement and weight decisions towards local benefits. This may depend on whether it is developed by the local authority directly or by a commerical or community scheme.
Network connections Is there an impact on electricity network or a cost for connection?	A long term agreement (up to 30 years) may be needed to share responsibility for private wire infrastructure between generator and demand site. There may be no charge or change to the public network connection if the installation still operates within an existing connection. A change to network connection might be needed if generator wants to export (without existing export capacity) or via a separate network connection.
Legal and contractual What are the implications for electricity procurement? Is there a cost to negotiating contracts etc.	There would be legal costs to negotiate a PPA and network agreement between generation and demand. There could be complexities related to the 'credit worthiness' of either party and in meeting the conditions of a supply licence exemption. If exporting power, a PPA would need to be agreed with a licenced supplier. This could be via a Smart Export Guarantee if it is less than 5MW capacity. There would be changes to the volume and profile of electricity use from the network that should be discussed with your existing supplier.
Carbon reporting What can be reported as part of Scope 2 carbon emissions?	The demand site could report full carbon benefit of renewable electricity from the private wire used within the organisations scope 2 emissions (as an avoided purchase). Any electricity exported to the network could not be included, unless also purchased back via a PPA.

CASE STUDY

Sharing solar benefits across social housing flats

Emergent Energy is working with Nottingham, Brighton and Hove and Gateshead, as well as large housing associations, to drive investment in rooftop solar on social housing. They are taking a smart local microgrid approach to enable solar PV on low and medium-rise flats. Using a specialist regulatory derogation from Ofgem, residents of flats can now share in the cost savings from rooftop solar, while councils also generate returns from installing solar PV on their flats.

Electricity is supplied via a private network directly to a source of demand. To do this, you will need an exemption to the electricity supply licence. Payment will be as agreed by a direct PPA. Additional demand and excess generation are managed through a typical supply contract.



2b Future model: A virtual private wire?

The best returns from renewables can be elusive unless a physical link can be made between generation and demand. A key question is whether it is possible to get the benefits of a private wire within a system that uses or leases existing network infrastructure, rather than building a private network. Can you share the benefits of a local solar farm across all the dwellings on a housing estate without having to build a micro-grid in addition to the existing network?

The 'virtual private wire' is not yet a viable model as it currently has regulatory barriers. These include:

1. Although the parties would pay for using the network, the structure could be seen to involve the transfer or use of public network infrastructure assets for private benefit.

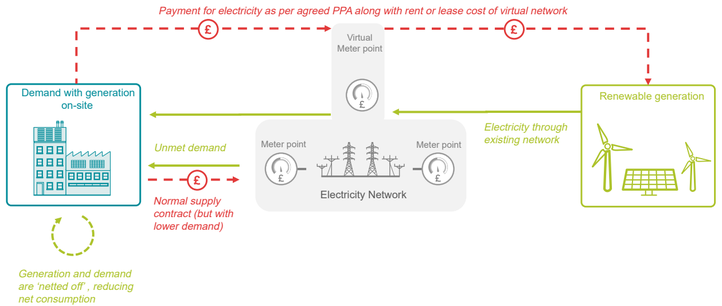
2. There would be a number of exemptions required to the supply license and codes to allow it to operate.

3. There is some potential for the parties to avoid paying environmental and social levies as the electricity is delivered directly without these added. This is, however, already the case with on-site or private wire renewables.

CASE STUDY

Energy Local

Energy Local is not a virtual private wire model but instead has developed Energy Local Clubs. These are to enable households to club together and develop a local 'time of use' tariff to encourage and benefit from using local clean power when it is generated. The scheme gives generators a higher price for the power they produce. The model aims to keeps more of the value from renewable energy in the local area and reduce household electricity bills.



Pricing elements of a Power Purchase Agreement (PPA):

Most models for demand customers to directly support renewable generation will require the negotiation of a PPA between the generator and demand site.

These PPAs can be complex structures with a number of contractual conditions including both wholesale prices (which have been c. £50 MWh) and supply costs (typically between £70-100 MWh).

At its heart, the negotiated wholesale power price manages the uncertainty about the future electricity price, taking into consideration the risk appetite of both the generator and buyer. Negotiations can effectively hedge price risk for both parties.

A basic PPA to reduce the risk for the generator might involve fixing a wholesale price over a period e.g a demand customer agreeing to pay £50 per MWh for 15 years. This fixed price would be linked to inflation consumer price inflation (CPI) or retail price index (RPI) so will increase over time (relevant to medium and longer term PPA).

Other approaches with less risk management for generators involve:

- Indexing PPA price to market wholesale average
- Basing PPA wholesale price on floating prices (day ahead prices)
- Basing PPA price on floating price but with floor and ceiling to manage risk of high and low prices for demand and generator (similar to a derivative or synthetic PPA).

Additional clauses are likely to include:

- Options or conditions to renegotiate (depending on significant market shifts or conditions)
- Meeting expected performance/output from generator.
- Termination conditions and compensation (longer term PPA).

3 Buying renewables through sleeving PPAs

A sleeved PPA is a structure that can link renewable generation with demand where the electricity is transported via the UK electricity network with an energy supplier acting as a 'go between'. The PPA provides a contractual link between the demand customer and generator, rather than a physical one.

This model is an option for local authorities and corporates without the ability to develop directly or via a private wire.

Depending what price and conditions are negotiated, the Sleeving PPA should provide certainty for a generator, as well as reducing exposure to electricity wholesale price increases for demand customers, particularly if the PPA period is over the medium or longer term.

As a result, in the short term a demand customer could be paying similar to, or more than the current market rate. A local authority, for example may be willing to pay a higher wholesale price to recognise additional value creation for local or community owned renewables.

Further reading: Guide to choosing the right PPA for your project (Smartest Energy) and UK PPA structures and parties involved (DLA piper)

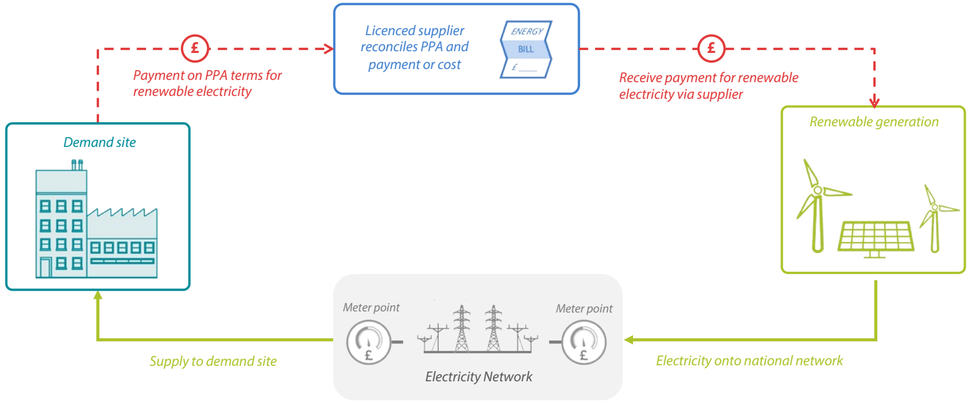
Key issues		Purchasing renewable electricity via a sleeving PPA
Development costs Does the local authority cover costs of planning, installation and maintenance?		None - these are covered by the renewable developer.
Savings or revenue What is the potential for savings on electricity costs or revenue from export of electricity?		The savings for demand will depend on the agreed wholesale price within the PPA. If providing a fixed PPA price, this could be higher in the shorter term than a standard electricity contract but in the longer term this could help manage exposure to price volatility and price rises.
Local benefits Does the structure facilitate additional local benefits?		Any additional benefits will depend upon the generator, their location, and objectives. The local authority can have some influence via the PPA to specific interest areas via the procurement process, for example, biodiversity impact or community ownership.
Network connections Is there an impact on electricity network or a cost for connection?		There is no impact on the demand site.
Legal and contractual What are the implications for electricity procurement? Is there a cost to negotiating contracts etc.		The local authority will need to undertake a procurement exercise including agreeing 'value for money' if the PPA price is higher than a standard supply contract, e.g. valuing the additional benefits of local generation. The sleeving PPA structure requires a licenced supplier to be the 'go between' between the PPA parties. Existing electricity procurement for a demand site would need to be adjusted to reflect for the volumes purchased through the PPA.
Carbon reporting What can be reported as part of Scope 2 carbon emissions?		The sleeving PPA directly buying renewable generation could be reflected in scope 2 'net' reporting; however this would also need to ensure: • Related Renewable Energy Guarantees of Origin Certificates (REGOs) are claimed and retired on your behalf. • Renewable energy additionality e.g. new renewable generation capacity being built that would otherwise not have happened.

CASE STUDY

Voltalia and City of London

In November 2020, the City of London signed a 15-year PPA with Voltalia to buy the electricity generated from their proposed solar 49.9 MW solar farm based near the village of Spetisbury in Dorset. The construction of the solar farm has started, with Voltalia committing to use local contractors whenever they are able. The energy generated is expected to power over half of the City of London Corporation's electricity needs. The agreement ensures there is investor certainty, enabling the solar farm to be built without government subsidies, whilst also giving an expected £3 million saving to City of London as they no longer have to buy from a volatile electricity market. Find out more information about the project here.

Both electricity generation and demand are managed through standard export to the electricity network; however the electricity is 'sleeved' via a PPA where cost for each unit is agreed. A licenced supplier acts as the 'go between' for billing and payment.



4 Synthetic PPAs – supporting renewables via financial instruments

A synthetic PPA is not actually a PPA: it is a financial instrument, where the demand customer agrees to guarantee a price for electricity to the generator based on a financial contract, rather than an energy contract. The aim of these contracts is to directly support renewable projects to reach financial viability and get new projects built.

This model creates a financial contractual relationship between the generator and demand customer. The product is a derivative, similar to a CfD provided by the UK government: the terms of the contract would provide a 'strike price' or guarantee of the price that the generator obtains for their power on the wholesale market (through a standard PPA).

If the generator achieves a market price below the strike price, the generator would receive an additional payment from the demand customer. If instead the generator receives more than the strike price, this excess would be handed back to the demand customer. The contract essentially hedges the electricity price risk for both parties.

Further reading: SW Energy Hub Synthetic PPA Toolkit.

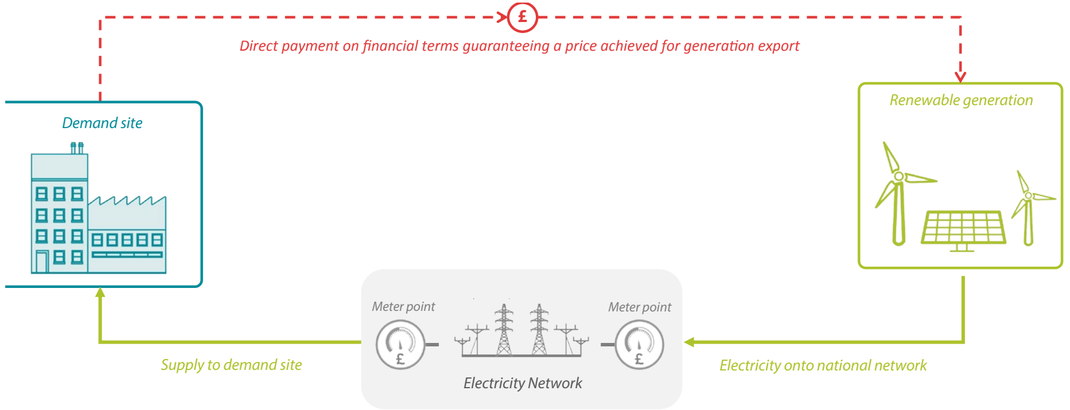
Key issues	Synthetic PPA – support via a financial instrument
Development costs Does the local authority cover costs of planning, installation and maintenance?	None - these are covered by the renewable developer.
Savings or revenue What is the potential for savings on electricity costs or revenue from export of electricity?	The savings or cost to the demand customer will depend on the agreed 'strike' price relative to a wholesale electricity price received from the supplier by the generator. This market price could be calculated in different ways, for example, a negotiated annual PPA or indexed wholesale price. It is possible there may be a cost for the demand customer in the short term, but over the longer term it can provide a hedge against electricity price rises.
Local benefits Does the structure facilitate additional local benefits?	Any additional benefits will depend upon the generator, their location, and objectives. The pure financial instrument has no control over this, except via the choice of generator and project (for example, whether they are a local community owned generator).
Network connections Is there an impact on electricity network or a cost for connection?	None (assuming local authority is the demand party).
Legal and contractual What are the implications for electricity procurement? Is there a cost to negotiating contracts etc.	The structure will not impact existing electricity supply, but will operate in addition as a hedge. For local authorities, there is no requirement to conduct a full procurement process for financial instruments. However, there will be legal costs associated with negotiation of the financial instrument and 'strike' price and conditions. As a new structure, there is little precedence at present that might reduce this. Both parties will need to comply with regulatory requirements for holding a financial derivative, within this there could be difficulties related to the 'credit worthiness' of small generators which may need to be supported by a bank.
Carbon reporting What can be reported as part of Scope 2 carbon emissions?	As the PPA is a financial instrument and not procuring electricity directly, there may be difficulties in claiming reductions as part of net scope 2 emissions. For example, there would need to be a separate contract with the generator to receive (and retire) REGOs related to the generation.

Renewables and carbon reporting

All local authorities will be reporting the greenhouse gas emissions associated with their operations and some will have commitments to reduce this to net zero. Proving this reduction will rely on how actions will be reported. Scopes are used to categorise types of emissions: Scope 1 is direct emissions from burning gas and vehicles, Scope 2 is emissions associated with electricity use and Scope 3 is indirect emissions.

Most organisations will use the average carbon emissions from network electricity to report Scope 2 emissions, but those with good green tariffs or PPAs for renewable generators can report the resulting carbon reduction in Scope 2 emissions if they meet certain conditions. For more information see Regen's blog.

A 'synthetic' PPA contract is a financial derivative or 'contract for difference' where generation and demand agree on a 'strike' price to guarantee a wholesale price for the generator. If a higher price is achieved the difference is paid to the demand customer, if a lower price is achieved then the generator is compensated. Both parties will therefore also have a normal licenced suppliers in addition to an SPPA.



5 Sleeving Pool bringing demand and supply together

Bristol City Council is looking to procure a 'Sleeving Pool' to create a dynamic system to support their existing and new local renewable generation sites.

The structure is an evolution of a sleeving PPA and allows demand customers, such as a local authority, to sign different types of Power Purchase Agreements **directly** with multiple generators (rather than via a supplier) and pay them for all electricity generated.

All electricity from these sites is exported to the network, but contractually assigned to a Sleeving Pool that demand sites can draw from.

The structure means that the local authority can contract directly with the generator with long term PPA contracts and the 'Pool' can also be dynamic, with additional demand or new generation sites being added over time.

Managing the 'Pool', billing demand customers and balancing the demand and generation would be done by a licenced supplier acting as a 'Pool Manager'.

Key issues	Sleeving Pool - bringing demand and supply together
Development costs Does the local authority cover costs of planning, installation and maintenance?	There would be no development cost for projects where the new generation is not developed by the local authority directly. There would be development cost if new generation is also developed directly by the local authority for the sleeving pool.
Savings or revenue What is the potential for savings on electricity costs or revenue from export of electricity?	The savings associated with the electricity will depend on the individual and collective PPA prices paid via the Pool relative to a standard supply contract. It will, however, help manage long term electricity price risk, which could provide savings longer term.
Local benefits Does the structure facilitate additional local benefits?	The local authority would have a level of control via the PPA and conditions. Potentially a local authority can specify the types of projects, location, and local benefits that they anticipate supporting within a procurement exercise.
Network connections Is there an impact on electricity network or a cost for connection?	No impact on demand site network connections. Each generation site would also need to negotiate standard network connection contracts.
Legal and contractual What are the implications for electricity procurement? Is there a cost to negotiating contracts etc.	There would be a procurement exercise required for generation PPAs and negotiation associated with PPA prices. Significant changes to existing energy supply contracts would be needed. A licenced supplier would become Pool Manager and the role may be more costly than a standard supplier contract.
Carbon reporting What can be reported as part of Scope 2 carbon emissions?	The Sleeving Pool would be able to claim net scope 2 contracting directly with renewable generation which should also retire associated REGOs. The Pool would likely also allow LAs to claim renewable energy additionality if contracting with new renewable generation projects (e.g. resulting in new renewable generation capacity being built, that would have otherwise not have happened).

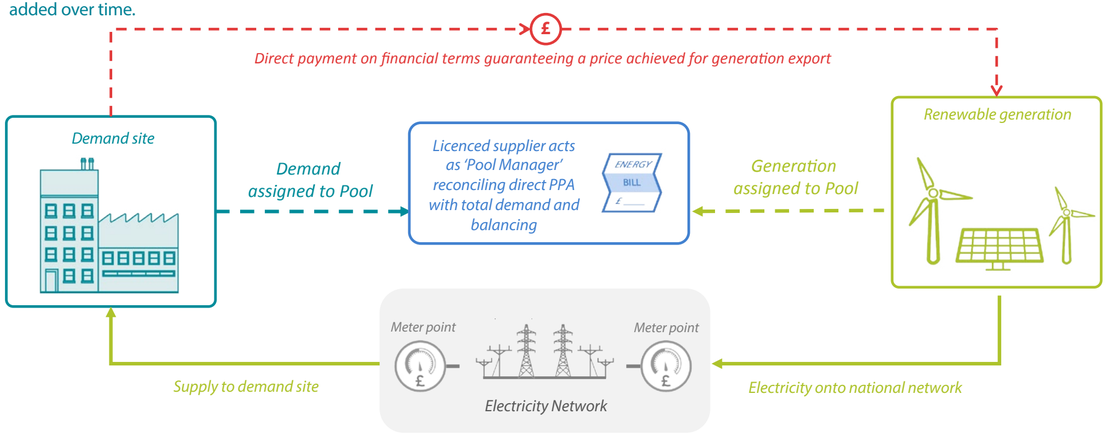
CASE STUDY

Bristol City Council

Bristol City Council is looking to pilot this approach for their existing 7.4 MW of solar and onshore wind generation. They are hoping to use this structure to source net zero energy to supply part of the 40,000 MWh of the City's annual electricity demand. Following the pilot, they hope to expand to new generation projects in and around the City and to match their total electricity demand with net zero electricity.

For more information, see Regen's feasibility study.

The structure is aiming to simplify the process of contracting and matching renewable and low-carbon generation from a large number of generators with demand from numerous sites. The aim is that the Pool can be dynamic, with additional demand or new generation sites being added over time.



6 Local renewable electricity tariffs

Regen has been working with Devon County Council to scope a Devon renewable electricity tariff that supports local, preferably community-owned, generation.

The idea behind the new tariff structure is that it creates a simple, flat rate tariff for domestic and commercial customers that is a fraction higher than the market rate.

For customers, this tariff enables them to buy their equivalent annual electricity consumption from local renewable generators. The supplier may also sacrifice some profit margin in return for recruiting lots of valuable customers who do not regularly switch to other cheaper tariffs.

The supplier would then commit to using this additional revenue to offer new community owned generation a higher price for electricity within the PPA to enable them to be built.

This structure is being explored by Devon County Council. See Regen's report for more information.

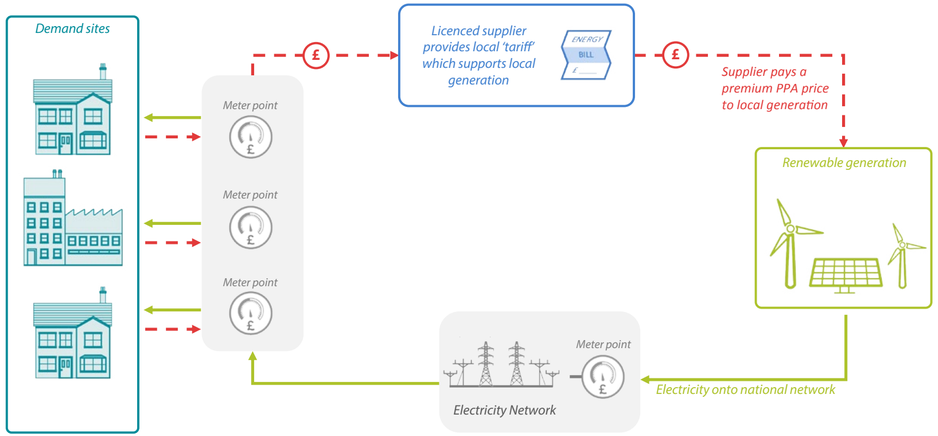
Key issues	A local renewable electricity tariffs
Development costs Does the local authority cover costs of planning, installation and maintenance?	None – these are covered by renewable generation owners or developers.
Savings or revenue What is the potential for savings on electricity costs or revenue from export of electricity?	The prices per unit of electricity paid for customers of the tariff may be designed to be slightly higher to support new generation with higher PPAs.
Local benefits Does the structure facilitate additional local benefits?	Supporting new local and community owned generation would be the outcome of the tariff. The exact details would be decided by the supplier.
Network connections Is there an impact on electricity network or a cost for connection?	No impact on demand site network connections. Each generation site would also need to negotiate standard network connection contracts.
Legal and contractual What are the implications for electricity procurement? Is there a cost to negotiating contracts etc.	The demand site would need to sign up to the new local tariff via a licenced supplier. This would need to be managed through a public sector procurement process. A higher tariff may be difficult to justify as 'value for money'.
Carbon reporting What can be reported as part of Scope 2 carbon emissions?	Tariff should be designed to meet the requirements of a good quality green tariff – so could be reported in net scope 2 carbon emissions if the tariff meets conditions of a 'good quality tariff' including: • Definitively a renewable energy source • The energy volume retains its REGO • Additionality, i.e. the purchasing of the electricity results in new renewable generation capacity being built.

CASE STUDY

Ovo energy and Greater Manchester Local Electricity Market (LEM)

Greater Manchester's LEM project is looking at solutions to generate, store and use more power in a localised system. As part of this, Ovo energy has developed two local energy tariffs for customers in Manchester that look to ensure the system can efficiently absorb the additional electricity use for electric vehicle charging and heat pumps. These systems are aggregated and controlled to provide local flexibility, as well as affordable rates for users. For more information, see here.

A local tariff is developed where demand pays a small premium and the supplier pays a higher price to new local generation to support additional development.



What more can a local authority do?

There are many other barriers in addition to the price of power that can hinder new renewable developments in areas.

Local authorities can also look further than procurement to support new renewable generation including:

Setting robust local planning policies to support renewables deployment

Develop Local Plan that delivers net zero ambitions

The council should set out policies that strongly support appropriate renewable development and rule out fossil fuel generation. In particular, areas that are suitable for wind development should be identified in order to satisfy the requirement in the National Planning Policy Framework. that wind projects can only be approved if they are in areas identified as suitable in a Local Plan.

Requirements for renewables in new development

Local authorities can set local requirements for new developments to meet additional energy efficiency standards and to provide renewable generation. Some local authorities are using this power to push for net zero development. For example, Cornwall Council is consulting on a policy that residential development proposals will be required to achieve Net Zero Carbon and Oxford City Council adopted a Local Plan which stated that: planning permission will only be granted to proposals which achieved at least 40% reduction in carbon compared with building regulations.

For more information see the latest guide from the UK Green Building Council.

Engaging strategically on improving network availability

Availability and cost of network connections can be a significant barrier to new local renewables. Local authorities can engage with local network companies on plans for future investment in the network to help strategically upgrade areas where they expect new generation or demand to be located.

For those areas with constraints, authorities can potentially invest directly in network upgrades (See Central Bedfordshire Super Grid).

All distribution network operators (DNOs) provide information as to which areas of their networks are subject to constraints. See examples:

- WPD network capacity maps
- SSEN generation availability maps
- SPEN distribution generation heat maps
- Northern Powergrid generation availability map

DNOs also conduct annual studies, Distribution Future Energy Scenarios, to look at how the network will need to develop develop to deliver the UK's net zero ambitions. DNOs seek local authority engagement in the development of the DFES.

CASE STUDY

Co-op Energy's "Community Power Tariff"

Co-op Energy, powered by Octopus Energy, launched the 'Community Power Tariff' in January 2020. This tariff sources energy directly from 75 community-owned, renewable energy generation projects across the UK. The tariff is around £5 extra compared to the regular Co-op Energy tariff, but ensures the generation is renewable, a fair price is paid for the power, and any profit from the generation is reinvested into community initiatives. The gas sold on this tariff is carbon offset. For more information, click here.

Supporting community and local energy groups

Community energy groups can be a key source of new renewable generation projects or low-carbon heat projects that maximise the benefits to the local area by retaining investments and profits within an area or community.

Local authorities can support these groups by various means including providing grants (feasibility), training, supporting meetings and networking.

An example of this is Devon County Council who pay for an external secretariat to support the Devon Community Energy Network, enabling quarterly networking meetings to support their activities and peer learning.

Other actions to support community energy can include:

- Setting a target for community owned or shared community ownership for local renewables
- Giving priority to communities in the right to buy local renewable energy projects when up for sale
- Communities given first option to buy or lease public land to develop renewable projects.

Community groups can get help via a number of organisations such as Community Energy England, Community Energy Scotland and Community Energy Wales.

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