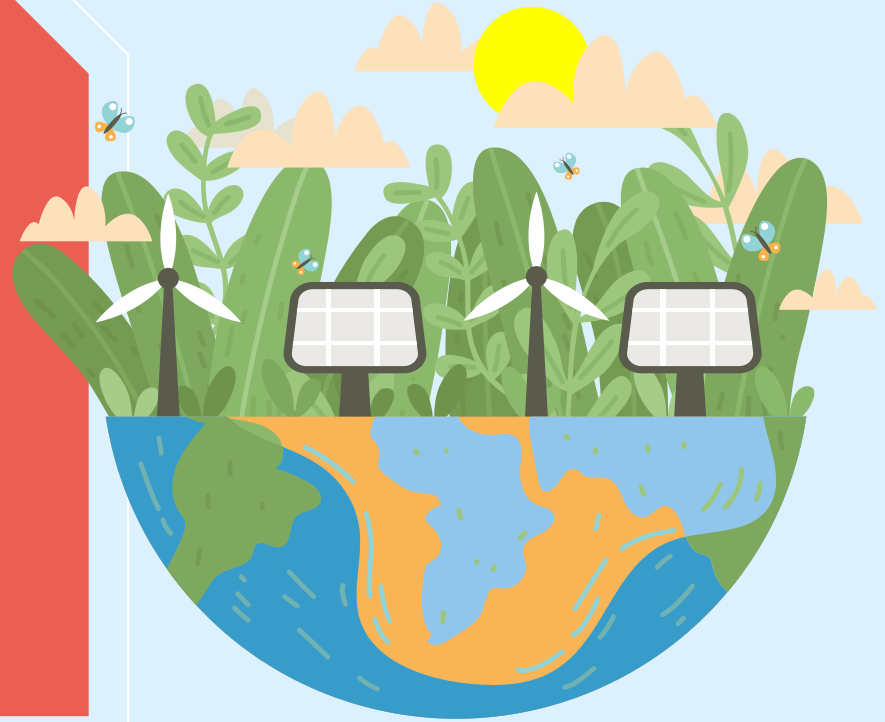


Sharpe Pritchard LLP
Green Steves:
Solar Generation

Thursday 21 July 2022



Agenda

01.

Introduction

02.

Steve C

03.

Steve G

04.

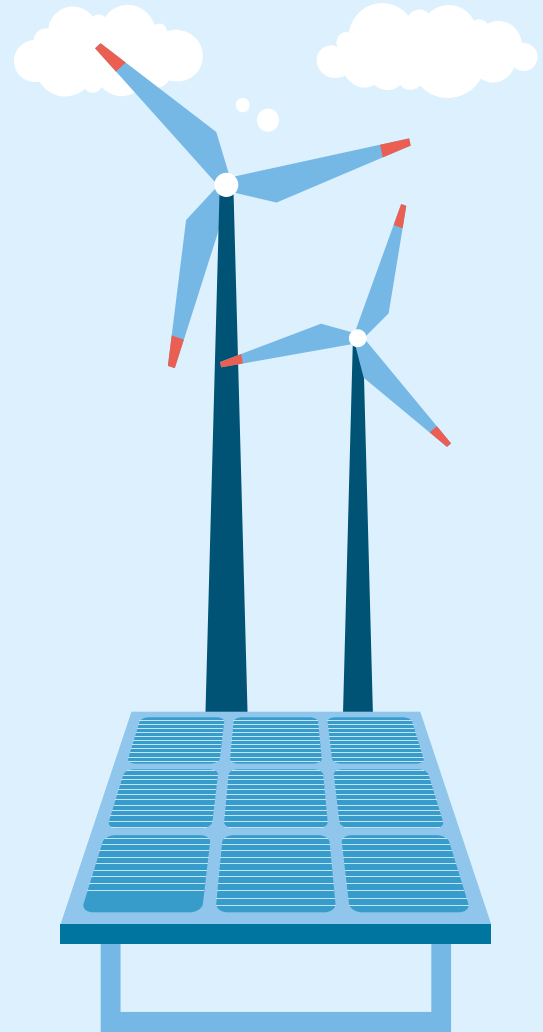
Razak J

05.

Q&A

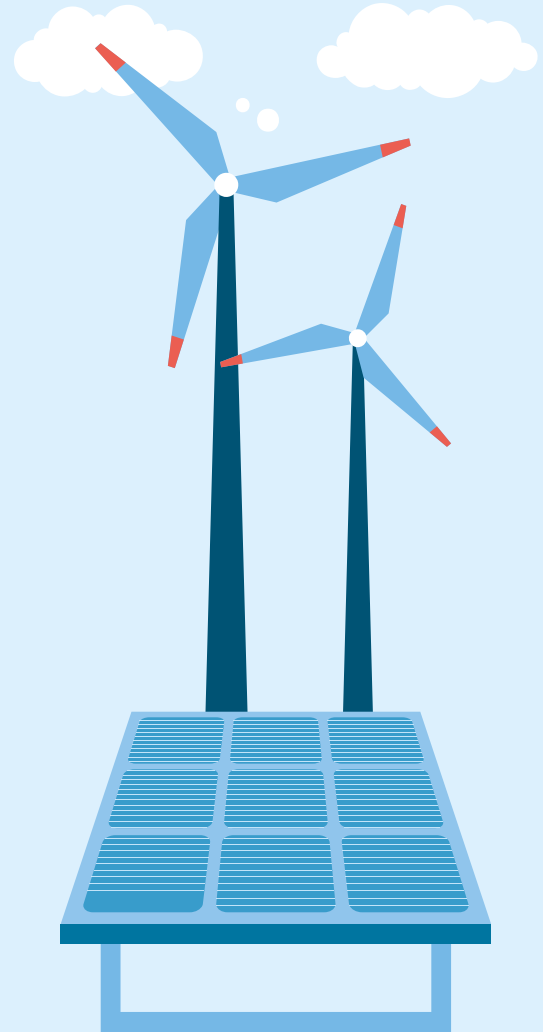
Introduction

Radhika Devesher



Renewable Generation

Steve Cirell



Renewable Energy Projects for Local Authorities

Stephen Cirell



Stephen Cirell Consultancy Ltd

Introduction & Background

- Today looking at renewable energy
- Lots going on nationally, but less in local government
- Climate emergency plans laid
- The time is perfect for a local government push



Solar PV Schemes

- Huge move forwards in the last few years
- The types of project are:
 - Solar farms
 - Buildings projects
 - Housing



Business Cases

- 4 ways to make it work:
 - Use on site
 - Private wire
 - Sleaving
 - Electricity trading



Offsetting

- Widely misunderstood
- Three key points:
 - Solar farms get offset credit
 - Buildings where use on site - no
 - Buildings not occupied - yes



Conclusions

- Local authorities are missing out
- You need the value from your assets, income streams and offsets
- This is a legitimate use of your powers and a good way to help deliver your climate emergency plans



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Renewable Energy Projects for Local Authorities

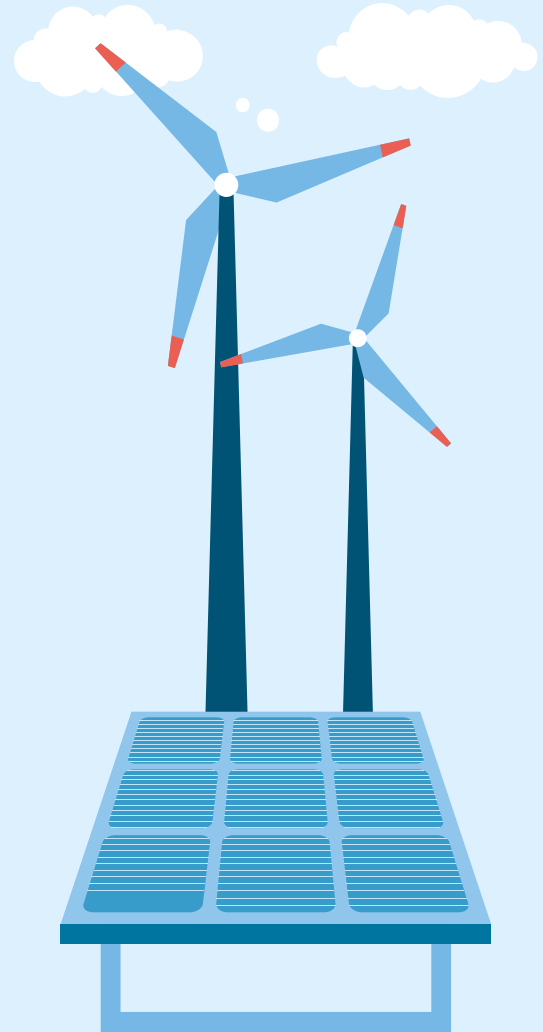
Stephen Cirell



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Issues in Solar Projects

Steve Gummer





Summary

Types of Solar Projects

- There are a range of solar projects – from major solar farms to localised solar PV and solar thermal projects (the former is electricity, the latter is heating).
- There has been an extensive roll out of solar projects.
- Solar PV systems use cells to convert sunlight into electricity. The PV cell consists of one or two layers of a semi conducting material, usually silicon. When light shines on the cell it creates an electric field across the layers causing electricity to flow.
- Before we dive in LGA has produced a helpful guide:

https://www.local.gov.uk/sites/default/files/documents/5.81%20Renewable%20Energy%20Good%20Practice%20Guidance_03%20%28002%29.pdf

- There is guidance on how your solar project can contribute to decarbonising electricity at:

<https://www.gov.uk/government/statistics/solar-photovoltaics-deployment>

Types of Solar Projects

- Solar PV systems use cells to convert sunlight into electricity. The PV cell consists of one or two layers of a semi conducting material, usually silicon. When light shines on the cell it creates an electric field across the layers causing electricity to flow.
- There are many aspects of a solar PV project. Today we are focussing not on localised solar projects but large scale ground and air solar projects.
- There are a number of phases of a typical project:



Key Stages (1)

- **Project Development** – Pick a site. Tackle land issues (lease vs freehold). Outline design. Planning./DCO (dependent on output – most commonly TCPA) Commissioning surveys including solar feasibility of site (i.e. irradiation). Environmental Impact Assessments. Generation licence is needed under the EA1989 (though there are exemptions for sites with less than 100MW and that does not export more than 50MW). Supply and Distribution licences may also be required (or exemptions therefrom).
- **Commercialisation** – Need to agree key contracts, including land agreements, wayleaves, construction agreements, PPAs, O&M and finance documents. Also need to consider revenues and whether subsidies are available. CfDs are available in allocation rounds. May also consider SEG (small scale only) and capacity market. Financing should be placed in the delivery vehicle. Vires will also need to be considered if trading – consider back up supply. Note: You may even require an electricity supply agreement where battery storage is not available. Need a grid connection for a suitable cost and time.

Key Stages (2)

- **Construction** - Detailed design and build.
- **Commissioning** - The solar farm is tested to ensure that it can operate within the necessary parameters and can be connected to the network to export power. Testing requirements may apply to government subsidies. If there are commercial lenders this will be an issue too.
- **Operations** - The solar plant generates power and earns revenue.
- **Decommissioning** - This deals with the end of life. Normally requirements in the planning consent and lease.



Build



Focus on Construction

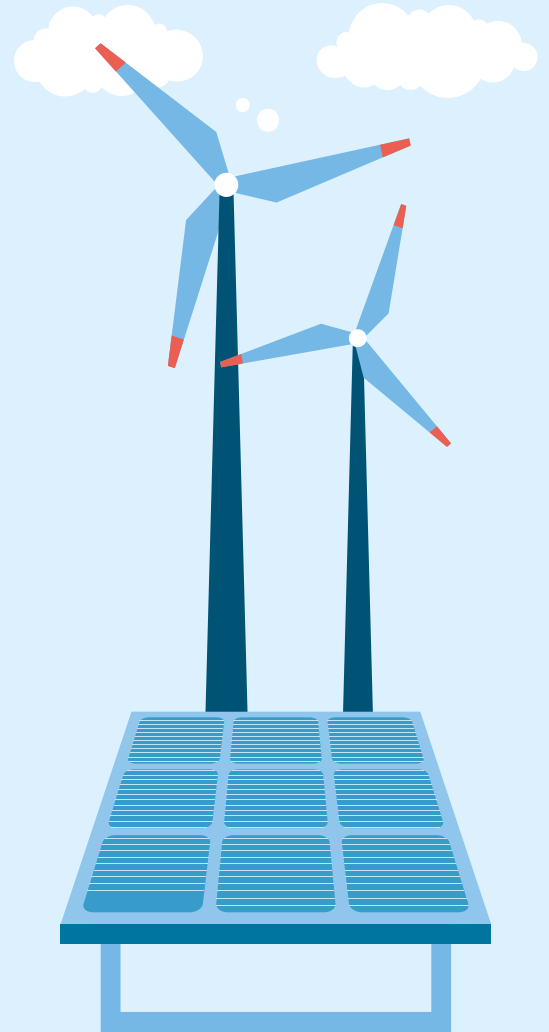
- **Turnkey to the extent possible.** There are likely to be gaps. Where there are the Council should back off risk. Council may want to obtain equipment and carry out certain tasks. Basic decision is one contractor or a multi-contractor solution.
- **Form of Contract** – Typically JCT or NEC.
- **Design and Output Specification.** Employer responsible for certain limited design aspects. Then Contractor to take detailed design risk. Consider standard of design – FFP vs RSC.
- **Price for the Works** – Fixed Price generally – although consider reopeners e.g. ground conditions.
- **Fixed Date for Completion** – Align to subsidy and PPA. LDs for damage
- **Completion** – How is it defined? Aligned with PPA and subsidy agreements. Should be commissioning tests. **MAKE IT THE CONTRACTOR'S PROBLEM.** Consider performance guarantees. Independent certification.

Focus on Construction

- **Payment** – Retentions or withhold something to the end. However consider working capital burden on the contractor.
- **Title and Risk** – Ensure it passes when on-site to protect against insolvency risk.
- **Bonding and security** – Check solvency of contractor.
- **Defects Period** – Can generally be 12 months to 2 years. This should tie to retention. Ensure liability at law continues.
- **Warranties from sub-contractors** – Is there key plant.
- **Performance Guarantees** – Tie to subsidy and PPA. Net capacity, reliability test, net electrical output, efficiency and emissions. LDs?
- **Consents** – Ensure obtain and compliance.
- **Limit of liability** – The cap on all risks.
- **Insurances** – All risks, TPL, PI.
- **Termination** – When can Authority terminate?

Solar PV for Local Authorities

Razak Joomrally





Nottingham

City Council

**Carbon Reduction,
Energy and
Sustainability**

Sharpe Pritchard solicitors


Presentation by

Nottingham City Council

Solar PV for local authorities



Solar PV

- How we started
 - How much have we got?
 - How it has been funded
 - Issues & lessons learnt
 - What else we do
 - Future plans
- 

How it started


- ◆ Rent a roof / Power Purchase agreement (PPA)
- ◆ Domestic solar PV
- ◆ Commercial solar PV




Funding

- Rent a roof and PPA's
- Energy development fund
- Salix
- Housing revenue account

Lessons learnt

- Capital purchase is our way forward – keep all the benefits
 - Solar canopy at Ken Martin Leisure Centre
 - Pigeon proofing
 - SolarEdge technology
 - Grid connection
- 

What else we do

- Design, build and Maintain all of our own solar assets
 - eeMonitor
 - Consultancy services
 - Continued process of reviewing building stock
- 

Future plans

- Additional solar PV
- Battery integration
- Battery Energy Storage Systems
- Energy analysis

Question time

Do you have any questions..... ?

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Any Question?



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