Developing a solar farm – *inception to completion, and beyond…*

APSE Renewables and Climate Change Advisory Group
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PPS

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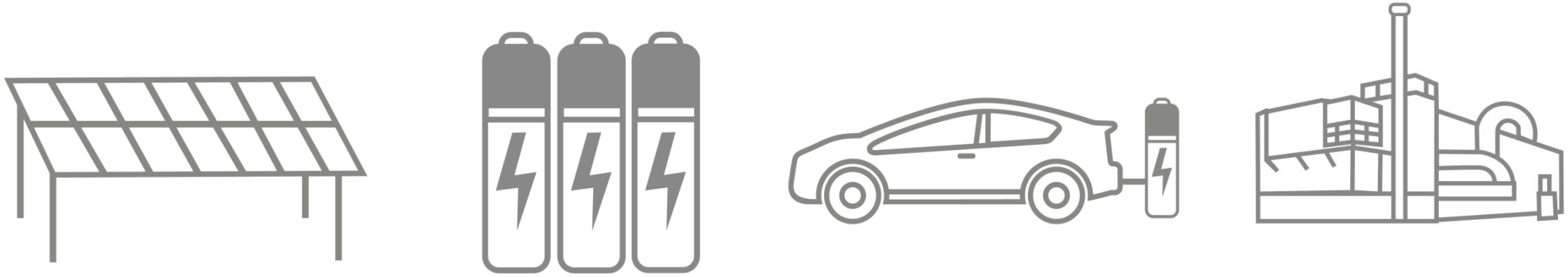
Technologies



"Bridge" Model

Public sector

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Swindon Borough Council

Private sector

Power Services

1 Feasibility

2 Development

3 Procurement

4 Construction support

5 Asset management

Why develop a solar farm?

- Manage your energy costs
- Provide protection from fluctuating electricity prices
- Create income streams
- Retain your asset
- Reduce your carbon footprint, mitigate climate change impacts
- Provide opportunities for community investment
- A platform for future innovation

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The old world?

CHAPEL FARM SOLAR PARK

5MW solar park constructed on a former landfill site. Accredited as a 1.2 ROC scheme.

The **first** community solar project to be funded directly through an Innovative Finance ISA with council solar bonds allowing the community to invest in the project from as little as £5.

The project is now supplying enough electricity to power the equivalent of 1200 typical homes.

The site is being managed as a biodiversity hotspot and retained in agricultural use with sheep grazing for part of the year.

Winner of the Association for Public Service Excellence award, 'Best Renewable Energy or Energy Efficiency Initiative' for Chapel Farm Solar Park, September 2017

Subsidy free – key ingredients?

Public sector well placed to take advantage:

- **good range of land/building assets.**
- **levels of energy consumed/longevity (robust PPA counterparty).**
- **strategy role in community.**
- **access to low cost capital.**

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Development process

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Potential assets…

- Land and buildings near a **suitable energy load** or **good grid connection**
- Car parks (surface and multi storey)
- Unused land
- Closed landfills
- Low grade farmland

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Feasibility considerations

- **GRID**: Is there good access to the grid in the area (this can be the most expensive element) Landownership of adjoining land
- **PLANNING**: Are there planning restrictions (e.g. is the asset in an AONB, subject to)
- **LAND**: Are they any restrictions in place? tenancies on the assets? Future development plans?
- **FUNDING**: How will the project be funded? (council investment, commercial investment, community investment)
- **COMMUNITY**: Engagement with the local community is essential in successfully developing a project. How will you involve the community?
- **PROCUREMENT**: How will the services and goods will be procured?
- **CONSTRUCTION**: Are there any issues relating to the construction process? Access? Bridges
- **INTEGRATION**: Phasing and impact of wider projects.

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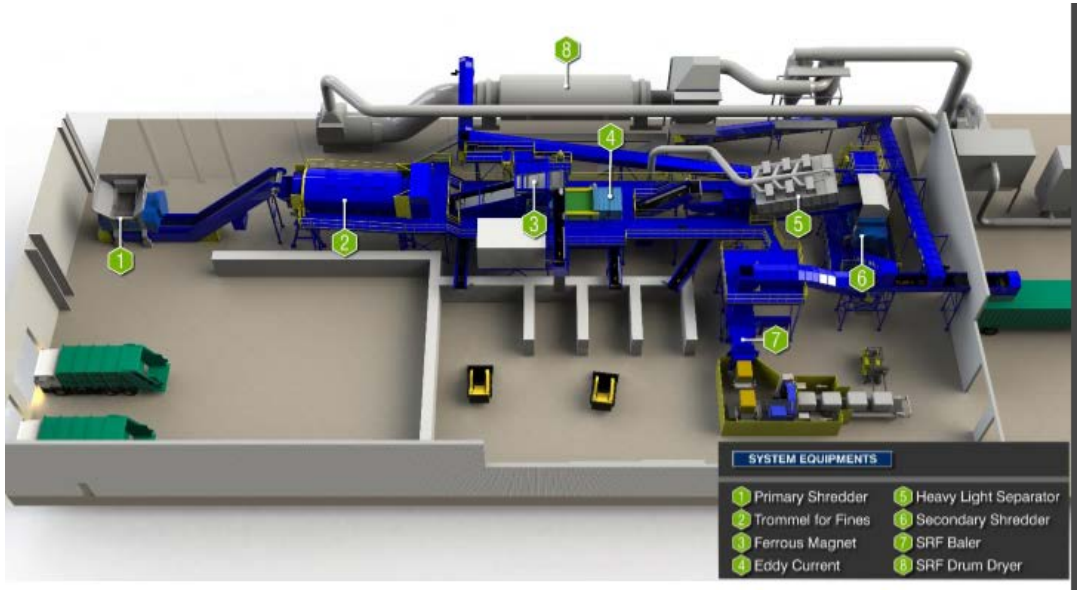
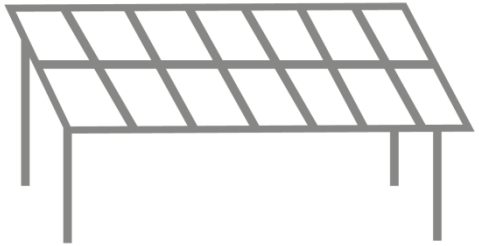
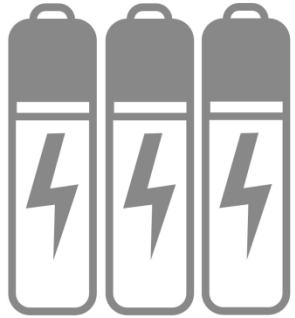
Waterside, Swindon.

2014 – the UK's first Solid Recovered Fuel (SRF) plant for municipal waste (25 year life).

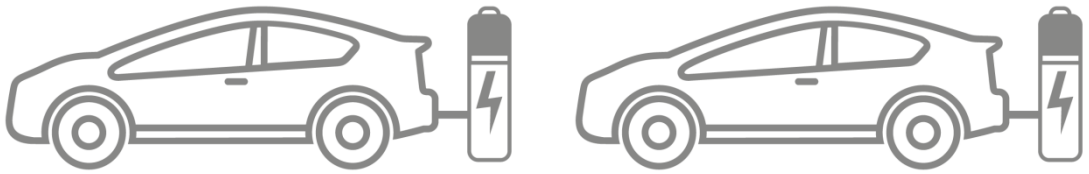




2018: 2.5MW solar PV with 1.5MW battery



2018: Deployment of EVs (Council fleet)



Outputs:
SRF – widely used in cement production, cost saving

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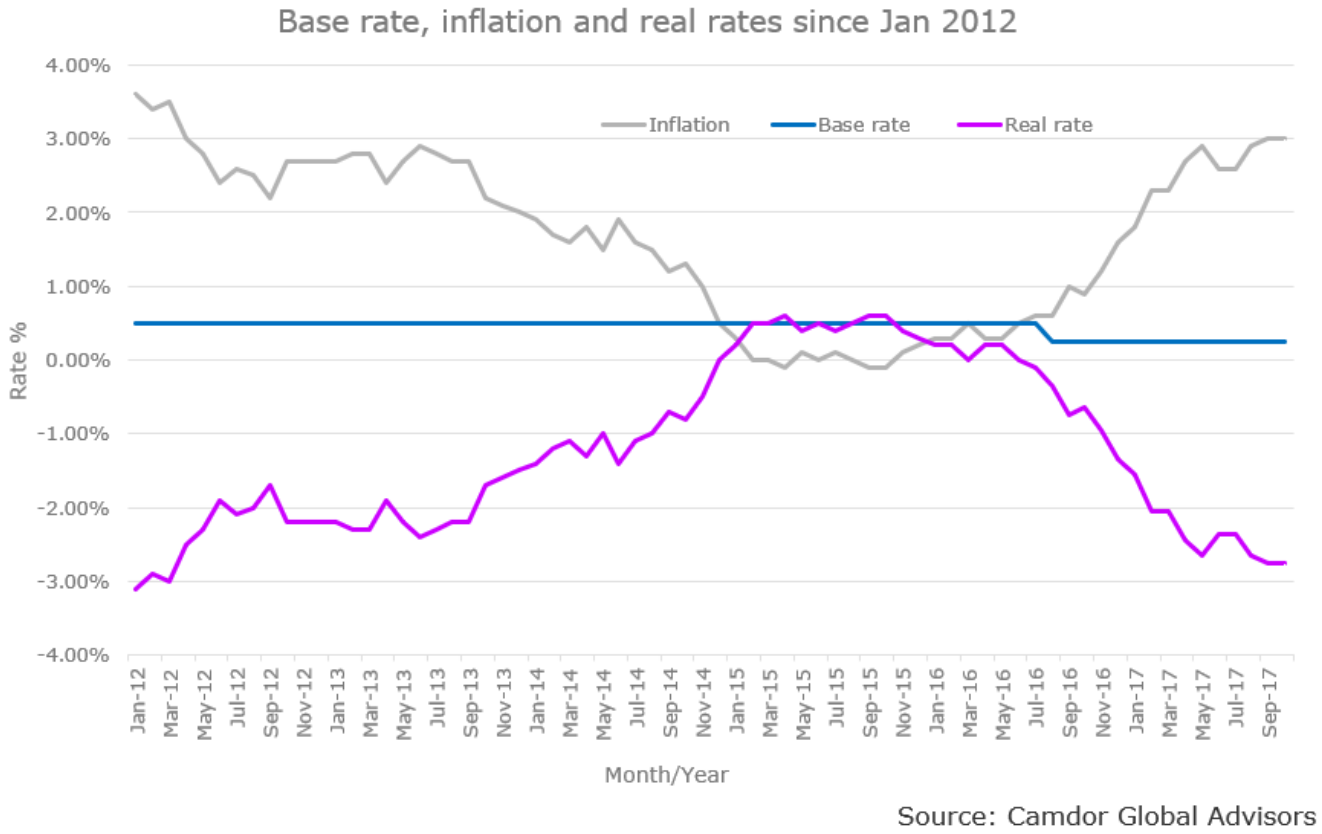
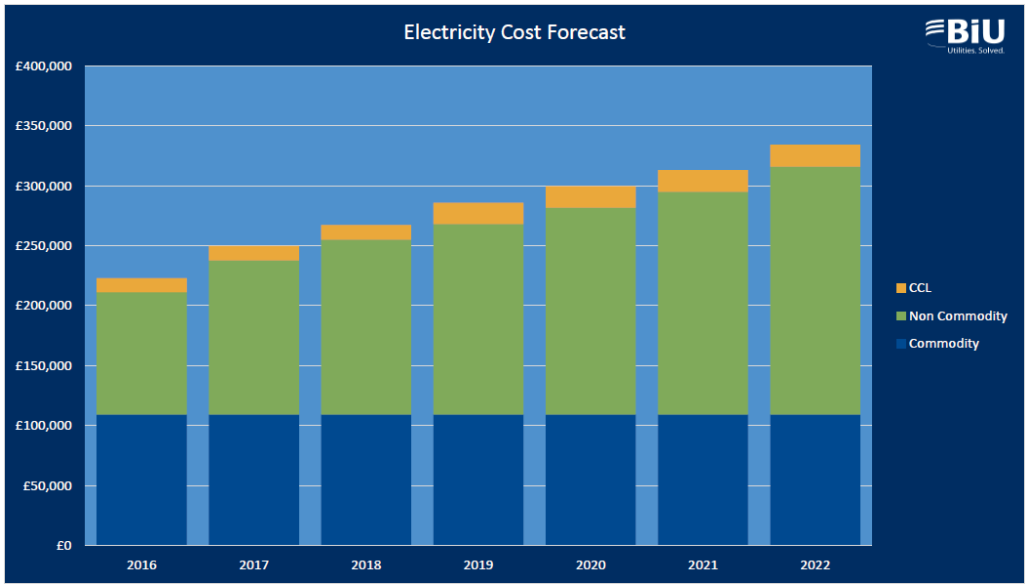
The new world?

Spending power erosion



Source: Camdor Global Advisors



Increase in non-commodity costs of electricity….

LAs have £24b in cash inflating away….

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Summary

1. **Public sector very well placed** as a catalyst for zero subsidy solar
2. **Strategy –** what do you want to achieve?
3. **Community focus.** Opportunity to engage and share the benefits.
4. **Post construction –** Don’t underestimate the value of good asset management. Optimise!

Questions

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