

Feeding the depot with a private wire – Barnfield Case Study

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Public Power Solutions - Background



Power

- Sustainable renewable energy solutions
- Wholly owned by Swindon Borough Council
- Now developing projects for other local authorities
- UK's first solar farm funded by council-supported solar bonds
- UK's first Innovative Finance ISA (IFISA) allowing local community to invest in renewable energy with tax free returns
- OJEU approved Dynamic Purchasing System



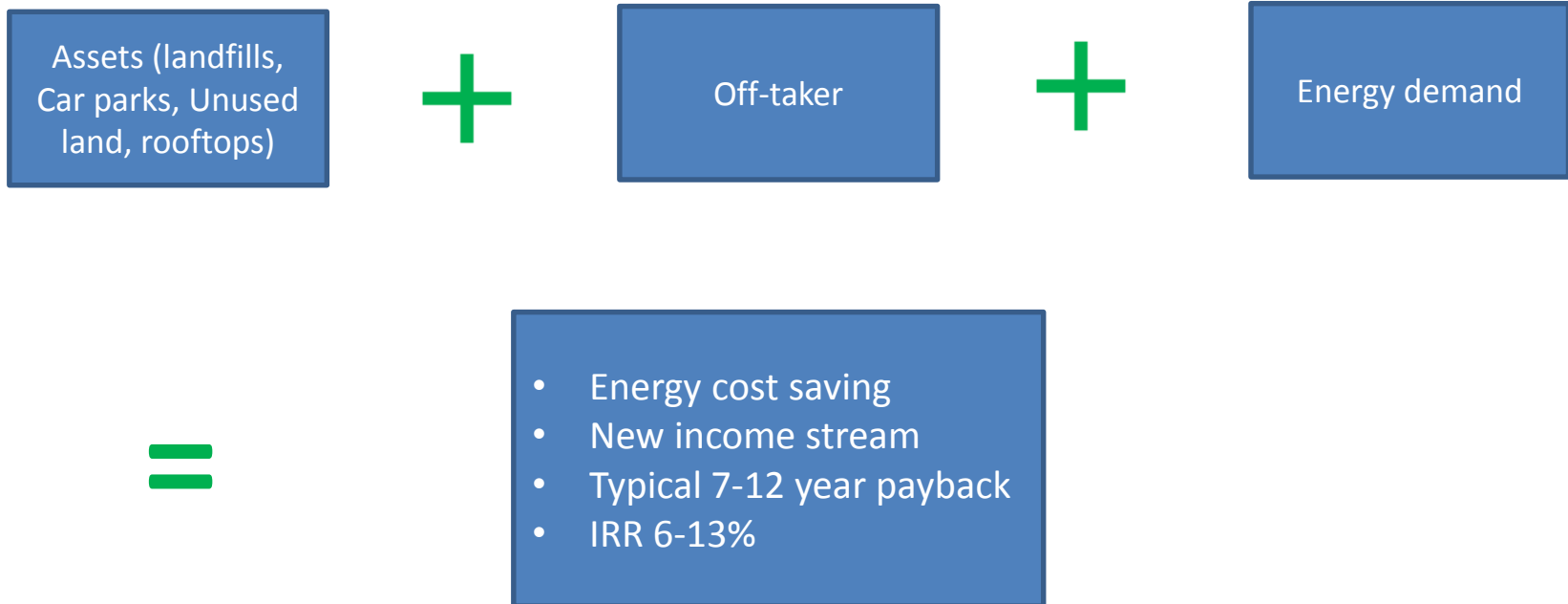
Waste

- UK's first Solid-Recovered Fuel (SRF) Plant for municipal waste
- Annual saving to SBC of £1.1million
- 97 % of waste diverted from landfill
- Waste to energy plant in planning

Ingredients to make renewable power work for you

Business model following market changes -

- Solar pv private wire connection
- 100% match between generation and consumption
- Suitable off-taker with high electricity demand



Background, Benefits and challenges

- **Background**
 - 2.5 MW Solar PV site
 - Connected by 900 metres of cable to Waterside Park
 - Covers 72% of electricity requirements on site
- **Benefits-**
 - Creating value from unused ex-landfill site
 - Close proximity to demand
 - £30,000+ energy bill savings for 25 years
 - Carbon saving of 1000 tonnes
 - Leadership - Circular Economy
- **Challenges-**
 - Complications of ex-landfill land
 - Grid route - railway, the River Ray
 - Access to construction site

What next ?

Co-location of energy storage at Waterside

Maximise utilisation of solar pv generation

Behind the meter solution – 1MW / 1900 kWh system

Projected Annual Revenue / Savings £140,000

Peak shaving

- *TUoS, CM Levy Reductions*

Load shifting

- *DUoS*

Ancillary services

- *Frequency Response, Capacity Market*

Additional services

- *Backup power, UPS*

Commercial Requirements -

- Electricity bill with appropriate non-commodity cost passed through
- Aggregator services