The Westmill community solar project

The economics of solar power in the UK

Making community energy work
Westmill Solar Cooperative

Hemau

Westmill Windfarm Cooperative

Adam Twine
<table>
<thead>
<tr>
<th><strong>Westmill Solar Park</strong></th>
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<tbody>
<tr>
<td><strong>Capacity</strong></td>
</tr>
<tr>
<td><strong>No. of panels</strong></td>
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<tr>
<td><strong>Site area</strong></td>
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<tr>
<td><strong>Income</strong></td>
</tr>
<tr>
<td><strong>Annual output</strong></td>
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<tr>
<td><strong>Enough for ~</strong></td>
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<tr>
<td><strong>CO₂ saving/yr</strong></td>
</tr>
<tr>
<td><strong>Developer</strong></td>
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![Graph showing MWh/mth with data points for P50, Projection, Theoretical, and Actual from August 2011 to June 2012.](image)

> Enough for ~ 1,400 homes

![Graph showing MWh/mth with data points for P50, Projection, Theoretical, and Actual from August 2011 to June 2012.](image)
Westmill Solar timeline

Jul-11  Park built by commercial developer

Late 11  WSC Co-operative established

Apr-12  Purchase option assigned to WSC (£16m needed)

May-12  Investec & advisers appointed

23-Jun-12  Public Offer launched to raise £4m

31-Jul-12  Offer closes – 50% over-subscribed

Sep-12  Private placing raises £2m

Oct-12  Investec agrees £10.8m facility

31-Oct-12  Purchase option expires

Feb-13  LCC Pension Fund lends £12m, Investec repaid
Westmill Solar – a trailblazer

Community benefit fund from:

- % of the total revenue
- Share of ‘surplus’
- Members waiving all or part of ‘dividend’ payments

£6m raised in 6 weeks from 1,650 community investors

UK’s first large-scale community solar project

First community loan by local authority pension fund

Various national and European awards

World’s largest community solar project (until June 2015)
Solar modules – capital cost trend
Grid parity

- Retail grid parity
- Wholesale grid parity

solar electricity

grid electricity

Price

Time

8
Comparative electricity prices

What do you pay for electricity?

At home
- Small consumer £195
- Large consumer £169

For business
- Small business £124
- New nuclear £101
- Medium business £77
- Wholesale c. £57
- Utility-scale solar £38

Where is solar?
Solar power projects are now viable, if

- The electricity can be sold at user prices:

  - From rooftop systems to building occupiers
    - Schools projects
    - Oxford Bus Company
  - To multiple consumers
    - Energy Local
    - Other pilot schemes
  - To industrial users
    - ‘Riding Sunbeams’

*This Thursday, London Transport Museum*
<table>
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<tr>
<th>Challenges</th>
<th>Advantages</th>
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<tr>
<td>Competes for grid capacity with commercial developers</td>
<td>Engages communities &amp; people (and their money)</td>
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<tr>
<td>• No seed capital</td>
<td>• Co-operative &amp; democratic</td>
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<tr>
<td>• Limited buying power</td>
<td>• Local / decentralised</td>
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<tr>
<td>• Dependent on volunteers</td>
<td>• Less planning objections</td>
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<tr>
<td>• Slow decision-making</td>
<td>• Delivers community benefit</td>
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<td></td>
<td>• Access to energy users (if only regulation would allow)</td>
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Some conclusions

Find ways to leverage community involvement
- Benefits vs. returns
- Wide participation – lots of energy users

Solar is viable now if power is sold direct to the user
- … and soon even for electricity to the grid
- Nuclear is not the answer
Your comments and questions

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