150,000t of wheat and OSR straw capacity at new Ely, Cambs pelleting plant

Farm Energy

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Rooftop solar is 'most attractive' investment

By Paul Spackman

Recent cuts to government support have reduced the attractiveness of large-scale wind and solar investments in the latest Carter Jonas Energy Index, while smaller 50kW rooftop solar is the most attractive.

The index assesses technologies against a range of factors, including financial returns (plus available subsidy), development risk (cost and planning) and the chance of securing a viable grid connection.

While 50kW rooftop solar arrays do not necessarily give the highest rate of return, they are attractive given the Feed-in Tariff support still available, lower risk from generally not needing planning permission and relative ease of grid connection.

The report also says that despite recent cuts to Renewable Heat Incentive payments, biomass systems greater than 200kW are also attractive investments, particularly for properties off the gas grid. But small-scale (sub-200kW) biomass remains "financially challenging".

For wind, 500kW turbines deliver the highest return on investment for the right site, however the lower planning approval rate, high development costs and risks associated with securing planning make it the riskiest investment, the report says.

"Each opportunity will be driven by site-specific circumstances and we always recommend careful assessment and due diligence of individual projects prior to any investment," says Andrew Watkin, Carter Jonas head of energy and marine.

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It can be relatively easy to secure a grid connection for small-scale solar.

CARTER JONAS ENERGY INDEX RISKS	
Wind	Grid connection (availability and costs) Wind speed and obstructions to wind flow Planning approval Long development timescale
Rooftop solar PV	Grid connection Structural stability of buildings Volatility of support
Biomass	Fuel storage Securing fuel supply (quality and price) High capital cost versus fossil fuel equivalent Higher maintenance requirements Volatility of support
Hydro-electric	Extensive environmental and ecological surveys required Limited suitable sites Complex and lengthy planning process Costs and income very site-specific
Anaerobic digestion	Feedstock availability Volatility of support Digestate disposal Higher operation and maintenance costs
Ground-source heat pumps	Extensive groundworks required Less effective on traditional buildings/heating systems

Growers cheered by pelleting plant approval

South Cambridgeshire Council has given the go-ahead for Pelco to build a straw pelleting plant at Ely.

Construction will start shortly and the facility is due to be operational by November 2016, taking straw from next harvest on long-term supply contracts.

Pelco says the plant will have capacity to process about 150,000t of wheat and oilseed rape straw annually from farms within a 50-mile radius and will be the first of five similar projects.

Other pelleting plants in Yorkshire, Warwickshire, Wiltshire and Hertfordshire, are likely to come on stream at the rate of one a year, the firm says.

"This is another good opportunity in renewable energy providing a valuable additional margin for hard-pressed arable farmers," says NFU combinable crops board national chairman Mike Hambly.

Farmers interested in supplying straw to any of the proposed Pelco plants should contact Will Mitcham of Wilson Wraight on 01284 700 727.

Lease scheme offers solar array funding

A solar operating lease scheme for installation of rooftop or ground-mounted arrays of 30kW upwards has been launched by Cheshire-based renewable energy firm Smeaton Wood Energy.

It allows landowners to have solar panels funded and installed by a third party with no upfront costs and instead pay a pre-agreed fixed lease payment for the technology over its lifetime (25 years).

The firm covers all installation, monitoring and maintenance costs associated with the array, while farmers/landowners can use or export the electricity generated and also receive Feed-in Tariffs payments.

However, lease rates are determined by the value of the installation and the financial stability of the firm making the payments and will be significantly higher in the first seven years of the scheme when the majority of the installation cost will be paid back, says the firm's Tom Charlesworth.

Although the lease payable will drop after year seven, the scheme is still most likely to appeal to businesses with high energy consumption that can use at least 80% of power generated on site and therefore maximise benefits from electricity savings rather than relying on sales to the grid, he says.

For example, annual lease payments for a hypothetical 50kW array generating 44,800kWh/year and using 100% on site range from £9,669-£13,000 in years one to seven and £3,600-£5,600 in years eight to 25. The firm claims that using 100% of electricity on site gives a cumulative benefit of £3,738 by year seven and £310,962 by year 25. However using just 50% of electricity on site gives a cumulative loss of £18,148 by year seven and a benefit of £182,671 by year 25.

"We design schemes to be self-financing and cashflow-positive throughout, so would tailor system size so they export next to nothing."

Mr Charlesworth says the scheme does not affect future borrowing as it is "off-book" and unsecured. "There may be tax advantages too as the asset is not on the balance sheet."

There is an option to exit the scheme at any time for a fee.