



# Here comes the sun!

Hosted transactional solutions will play a growing role in the domestic solar power sector as subsidy cuts prompt suppliers to work smarter, says James Cutler

The UK government's recent announcement that it would cut feed-in-tariffs (FITs) for solar panels prompted predictable criticism from power companies and installers in what is still an emerging industry.

While many in the small-scale renewables sector were expecting reduced subsidies, proposals for a 50% cut effective months earlier than they thought led to radical reviews of business plans, recruitment potential and profit forecasts.

## Downward adjustment

The abrupt downward adjustment from 43p per kWh to 21p and the resulting financial uncertainty for companies has left many needing to focus even harder on being efficient.

The upside is that geospatial technology is well placed to support that renewed drive.

Up-to-date, high-resolution aerial photography, for example, can help assess roof sizes, slopes, directions and angles along with potential obstacles to sunlight such as nearby trees or other buildings. But what is the best way to identify those properties eligible for FITs in the first place?

Smarter suppliers are already making use of spatial databases to map and focus in on properties most likely to benefit from photovoltaic panels.

## Web-based solutions

FreeSolar, a leading provider of free solar and energy optimisation services in the domestic market, is among those companies turning to web-based solutions. Rod Hughes, Managing Director, said GIS-based input is helping his team evaluate locations to gain installation contracts with around 2,000 residential properties across the country every month.

"We work closely with emapsite and have developed a unique system that identifies and quantifies suitable properties in a semi-automated way using graphic information," says Hughes. "It enables us to go in and change views, drilling down into more and more detail. We use the information as part of what we need to do to prequalify jobs. The benefits of our hosted solution are speed, 24-hour access and accuracy of information. We can also develop add-on services and customisation as required"

Another major industry player, Solar2Energy aggregates bundles of residential properties suitable for solar power on behalf of investment funds. It has a network of 10 installation companies working on around 1,000 properties a month across most regions of England and Wales. As with FreeSolar, a key requirement in the process is the generation of site plans for submission to HM Land Registry.

Solar2Energy Managing Director Caroline Joseph said: "We use emapsite's hosted solution to help us pin down the properties we have identified through desktop surveys and validate that they are suitable. Once they are through that process, we also use the solution to put all the documentation together and produce our Land Registry maps. It's a very practical tool that gives us instant output. Once locations are identified we aggregate portfolios of residential properties which then go to our investment partners. Emapsite makes it very easy for us to offer these partners a consistent, professional presentation."

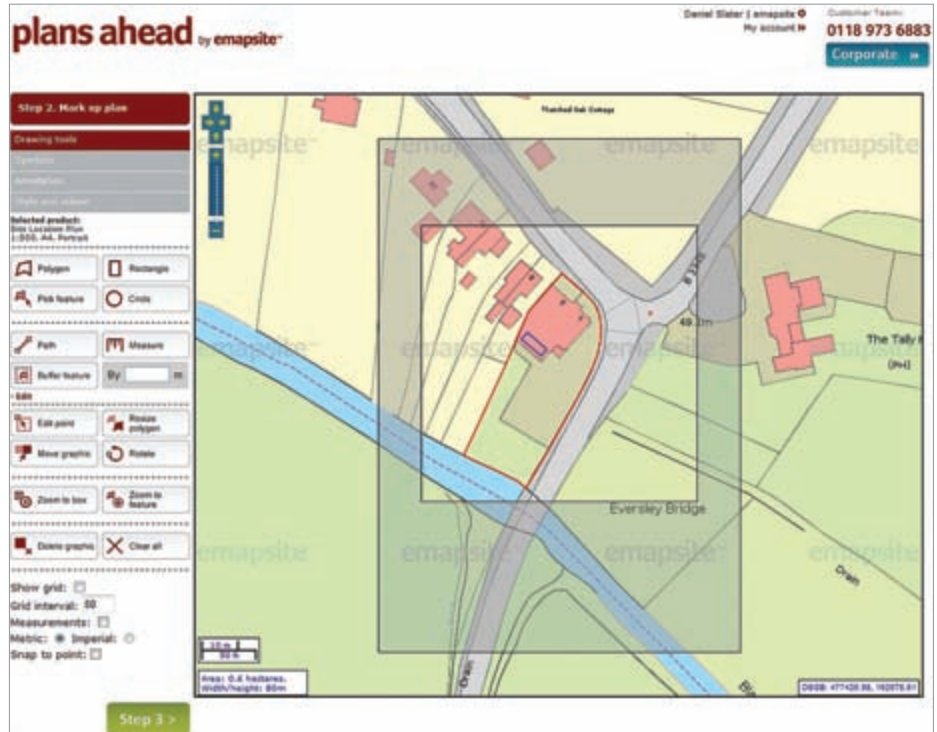
## Staying in profit

In helping solar companies efficiently scope out target roofs, generate information for their customers, and submit site plans to Land Registry, transactional solutions offer a reliable way to help mitigate the halving of FITs. To ensure they stay in profit, companies have to identify as many locations as they can, as quickly as they can, and at the lowest possible cost per unit.

At emapsite, we quickly recognised that installers, especially smaller ones, will typically have little or no spatial infrastructure to convince potential customers their properties are suitable for panels.



A plan for submitting to Land Registry or a local planning authority indicating the same information



How a property marked-up as suitable for solar panels looks through the emapsite Plans Ahead service. The red polygon identifies the property for addressing purposes while the blue rectangle indicates the roof where the panels would sit

In the same breath, we knew that reports based on accurate, up-to-date spatial information would be an ideal way to identify relevant properties quickly and cheaply. Such reports would also be the basis for assessing sunlight levels, roof pitch, solar metric areas and the direction a roof is facing.

In response to this situation, we've built a data solution that can deliver an individual address for just a few pence and enable a user to do their analysis for free in a geobrowser such as Google Earth.

**Google integration**

We provide integration with Google for client workflows. A user in the client company looks at Google Earth and draws polygons around roofs for each property identified as suitable. These could be single or multiple polygons tagged as information such as from 'screener 1 in zone A'. They simply save their polygons as a KML file and send to emapsite for processing.

Our geocoding web service provides address matches for all properties falling within the polygons. It incorporates the addresses into a new KML file containing the location coordinates for each address found. The point KML file can be loaded into Google Earth to view the addresses for the identified prospective properties.

The data behind each point supplied also includes a link direct into emapsite's Plans Ahead system which when clicked will take the user straight into viewing a large-scale plan centered on the property, ready to order as a PDF.

The user can draw the position of the panels on the roof in red and include that in the Land Registry plan and, if required, onward sales and marketing collateral.

A key aspect of the service is that users require no specialist GIS knowledge. As it is



hosted, there are also no data storage, content management or licensing worries.

**Payment by results**

Both aspects – the identification of the properties' addresses and the resulting site plans – are only paid for on an agreed result such as an identified prospect. It is effectively an inline service hosted by us as a spatial data provider that maps the client's workflow through the platform they are using. We are now generating hundreds of plans per day for our clients and offering them a complete audit trail.

In identifying properties more cheaply,

such a transactional solution helps reduce the costs of the solar panel supply chain. It also has the benefit of helping to predict further 'likely zones' for more installations based on comparable property characteristics.

To sum up, while end users and installers will no doubt have to spend and invest more as a result of the government changes to FITs, hosted geodata services can help the sun shine a little longer on what is still a fledgling industry. That is good news for suppliers, consumers and the environment as a whole.

*James Cutler is CEO of emapsite  
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