CLA Webinar: Two Blues Solar – On-site solar: Key considerations and funding models

Q&A answers from 19 March 2024

Question	Answer
Question re Energy security: Does PV really achieve this as my experience is that the inverters shut down in the event of a power outage.	PV does not provide complete energy security. When paired with a battery storage system however it can be capable of running operations for short periods when brown-outs occur.
Another criteria is difficulty getting DNO's and/or the contribution the network provider is often asking for to make a connection to strengthen the system.	This is correct as the network has been set up to work on a centralised generation basis and needs improvements to enable a disaggregated generation approach. The government is working hard to reform the grid however with significant investment planned over the next 20 years.
What is the annual saving. June is not indicative of the whole year.	The information provided showed savings between £7.5k-£9.5k for a 20k sq. ft building with solar on the roof.
There wasn't a question relating to the very low winter generation when energy is generally most needed as being a deterrent to solar PV.	It is correct that a crucial aspect of determining whether solar is right for you (and in fact that the system you are installing is the right size for you) is comparing your energy consumption profile against the solar system's energy production profile. This is best done with a year's consumption data broken into half hourly consumption proportions.
1) Can rooftop solar be installed on buildings within an airport exclusion zone. 2) what's your experience with planning permission for retro fitting to a listed buildings. 3) do your calculations re payback and savings include cost of finance.	1) the rules on this will differ depending on the individual planning/local authority. However, for the most part, a "glint and glare" assessment will be required as part of the application to determine whether the array will cause any visual hazards. As part of our PPA, we would fund this assessment. 2) if a building is listed, we would need to obtain listed building consent from the local authority and ensure that the panels will not significantly alter the character or appearance of the property. 3) our calculations on the payback timescales of self-funding a system include an assumed 7% cost of capital. They also take account of long-term

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	maintenance costs and any potential export revenue.
Is a 3-phase connection to the grid required.	Yes, above a small domestic system.
How many sqm of roof space do you need per kW of install.	Solar panels available today are generating 0.225kWp / m2 in Y1.
If it takes so long for a site connected to the grid for sale of excess of generated power, how do Two Blues deal with the excess.	Two Blues Solar focusses on on-site solar, also known as a private wire system, where we are using the client's existing grid connection. Therefore, the timescales associated with grid connection for a completely stand-alone solar farm don't apply. Instead, the consent process typically takes c. 3 months and involves an application to the distribution network operator (DNO) as well as the relevant planning or permitted development applications.
What is actually involved in the "yearly maintenance" of the system.	In addition to daily remote monitoring, annual (or in some cases semi-annual) onsite maintenance involves the checking of all connections and panel fixings to ensure they remain well seated, inspection of panels for surface damage, cleaning of panels and removal of obstructions, infrared inspection of panels to check for hot spots and cleaning of air intakes on inverters.
Are you likely to be able to obtain consent for a roof top scheme on farm buildings within a conservation area.	This again will vary across different local authorities. In some conservation areas, authorities may require a full planning application for solar rather than using the standard permitted development process which is typically associated with rooftop solar.
Are batteries combined with solar now cost effective if you have a high evening power usage.	In order to shift load from daytime to nighttime, you may require a reasonably large battery. There are various other revenue streams available from batteries and it is worth speaking to an energy broker to see if it makes commercial sense. From a PPA perspective, we are open to funding batteries but will need to replace them during the life of the PPA (as

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	their lifespan is less than half of solar's) and therefore the costs mean that the PPA price can end up being reasonably high if batteries are incorporated.
If we are not using huge amounts of electricity is it worth investing in solar to export.	If you oversize your system and aim to export a large proportion of the energy, you will significantly increase your pay-back period as the price available for export is reasonably low. However, if your main priority is to deliver environmental benefits, then it can be worth considering.
What is the cost difference between panels and the newer slates that are becoming available if you have to re-roof with traditional slates.	There is roughly a 30% cost differential.
If a roof apex runs north south is that any good.	Yes, this will still work with solar.
Will you let us have contact details for further Q's.	Please contact Rachel Stark at: rachel@twobluessolar.com.