

Solar Panels Live Q&A - Thursday 26 January, 2012 (12:30pm - 3pm)

Transcript of Which? live event at <http://www.which.co.uk/energy/creating-an-energy-saving-home/reviews-ns/solar-panels-live-qanda-2/>

12:28: Which?: Hello everyone!

12:28: Which?: We're back (again!) for our second live solar panels Q&A - which we're repeating based on how popular the last event was back in October.

12:30: Which?: We're expecting the next couple of hours to be very busy, but we'll do our best to cover off as many of your questions as we can - so please start firing away.

12:30: Which?: So, without further ado, I'll let our expert panel do the talking...

12:30: Which?: Hello! I'm Sylvia and I am a researcher at Which? specialising in Energy topics. Welcome.

12:30: Which?: Hello, I am Simon Osborn and I work in the policy team at Which? on solar panels, other microgeneration technologies, energy efficiency and other environmental issues. Welcome to the Q&A, Simon

12:31: Which?: Hello, I'm Natalie, a deputy editor at Which? specialising in energy topics.

12:31: Which?: Hi, I am Jim Kenney, Tech Director at Chelsfield Solar, PV installers. I hope I can help with your queries.

12:34: [Comment From Guest] Is it too late to install a system & apply for the 41p FIT ?

12:34: Which?: The only certainty is 21p. If you install before 3 March there is a very good chance of getting 43p but it will only be certain after a little more legal proceedings.

12:34: Which?: Hi I'm Gareth Shaw deputy money editor at Which?. I'll be here to help you with any queries you might have about making money from solar panel investments.

12:35: [Comment From Paul Eldridge] What are the chances of the government winning its appeal to the supreme court?

12:35: Which?: Hi Paul, We just don't know what the chances are. We would not advise gambling on them losing at this stage. Given that both courts so far have ruled against the Government I would not bet on them winning, but I have not read the Court of Appeal's judgment yet. Government must feel they have at least some chance because the legal bill (being picked up by the taxpayer) is likely to be substantial.

Simon

12:36: [Comment From Mark Novak] Hi, I think about installing a solar panel system on a four bed house, but know very little about how to go about it?

12:36: Which?: Hi Mark, I would advise you first to read our advice on [which.co.uk/solar](http://www.which.co.uk/solar) to see if your roof orientation and slope is adequate. Then get at least three quotes and following our solar checklist (also online). Sylvia

12:37: [Comment From Ron Ellis] How do I keep in touch with the actions in the appeal court on FITs?

12:37: Which?: Hi Ron, we're covering the latest developments on Which.co.uk/news. You can also keep tabs on the situation using the Energy Saving Trust website, as well as the websites of the parties involved, for example Decc's website at: <http://www.decc.gov.uk/en/news/>

12:38: Which?: A quick note on how the Q&A works: all you need to do is type your name and question into the box on the screen below and press 'send'. It won't appear immediately but will join the queue, before being allocated to an expert.

12:39: Which?: Please bear in mind that all comments are moderated, so not all your questions will appear immediately. We'll try our best to get through as many as your comments and questions as possible.

12:40: [Comment From Guest] How should homeowners plan for end of life disposal costs of the solar panels?

12:40: Which?: That's an unusual question as it should last 40 years or more. but the inverter is easy enough to dispose of as it is a regular piece of electronic equipment. Removal from a roof will require a scaffold but physical removal will take a team of 2 less than a day and then it can be dropped off at a distributor. It is their responsibility to recycle the panels. total cost will depend on the scaffold but I'd expect £400 to £1000 total. or you could just leave it there.

12:41 [Comment From Mike] Is it too late to install a PV system and get the 41p FIT ?

12:41: Which?: Hi Mike, it is not too late but the outcome of the legal process is not yet known, because Government is appealing the judgement (again). If the Government loses, which is not certain, then you will have until 3 March to get the system installed and registered. This is doable but we would advise treading carefully because it cannot be guaranteed that you will get this done in time. Last time there was a rush and many installers had backlogs. We would advise caution therefore and be prepared to get the lower rate. Simon

12:43: Which?: If we get to a point where we aren't able to take any more questions, we'll let you know - and make sure a note flashes up on screen. Your questions are already stacking up!

12:43 [Comment From Andrew] If you had the cash, would you install now (before 3rd March) ?

12:43: Which?: Hi Andrew, see my response just posted to Paul. We would caution against rushing into getting panels installed before 3 March when the court case is still to be resolved. Simon

12:44 [Comment From Aidan] Reading recent article about energy monitors - didn't see anything about PV installations. Are there particular energy monitors to use with PV installation?

12:44: Which?: Hi Aiden, at the moment there are not any energy monitors we can recommend for solar PV monitoring. Most energy monitors are not able to deal with energy generated by solar panels as they are unable to calculate your net usage based on energy consumed, energy generated and energy fed back to the grid. Most will just be able to measure your consumption or your generation (and where you will need to attach the sensor in order to do this will depend on your solar setup). However, several manufacturers are developing new energy monitors that are specifically designed to deal with solar technology - so if you have solar panels it may be waiting until these are launched before buying an energy monitor.

12:44 [Comment From John V] Do older panels ever lower a home's resale value rather than raise it, due to the disposal/changeover cost?

12:44: Which?: Hi John V. Although solar panels have been around for a few years, there's no empirical evidence as yet to see if solar panels positively or negatively impact on the value of your home. We are researching into this at Which? and should hopefully be able to produce some more guidance around this in the future.

12:48: [Comment From Mike Chaplin] Very few things last without regular attention. To what extent does a properly installed system need maintenance.

12:48: Which?: Hi Mike, Solar PV systems are relatively simple and have no moving parts, so they don't need much maintenance. However, within 25 years you'll need to replace the inverter, which costs about £1,000 (some installers say it costs less). Although when installed on an ideal roof slope the panels are self-cleaning, it is a good idea to have the solar panels cleaned occasionally. How often you clean them will depend on the slope of your roof and on how much dirt, such as bird droppings and leaves, they accumulate.

12:49 [Comment From Atul] hi can we talk about some companies offering free panels, and how that works, and what do we do if we move, as we may need to sign a 25 year lease doc, and also do we need to pay for our legals?

12:49: Which?: Hi Atul

Basically the 'free solar' company hires your roof for 25 years. You get to use the free electricity and in exchange gets to pocket the feed-in tariff. You can read more about it in our online guide to 'free solar': <http://www.which.co.uk/energy/creating-an-energy-saving-home/guides/how-to-buy-solar-panels/free-solar-schemes/>

Make sure you read the terms of the contracts carefully. And with the changes to FIT, these companies might not be offering the same sort of deals anymore...

12:49 Alan, you asked this question:

In July 2010 we had a PV system installed. When I sent back the contract I noted [...] on it that the meter was running backwards when enough electricity was produced. As I heard nothing I assumed that when they had enough meters to change to make it economic they would get in touch with me. In April 2011 I emailed the energy company advising them again that the meter was still running backwards. They made one incontinent appointment to change the meter and then advised me by email that they had passed the information on to a colleague to arrange an exchange of meter. Since then have heard nothing. An energy company representative has however read the meter which as it was less than the previous time that they read it sent me a revised estimated bill as they said the meter

reading must have been incorrect. Two questions 1. Where do I stand about my meters readings and my electricity consumption and bills as the company have been advised twice that the meter is running backwards and they have not yet got round to changing the meter? 2. As it appears to me that when they do change the meter I will be exporting considerably more than the 50% that they are paying for as deemed exported electricity can I request a meter that shows how much is being exported as well as being used do that I get paid correctly for the electricity that I generate?

12:50: Which?: Hi, you can request an import meter with an export facility to accurately measure exported electricity. in the meantime you are almost certainly quids in because the meter is winding backwards AND you will be getting an assumed 50% export. So it is financially working in your favour and you have done the reasonable thing in telling your provider. It is a common situation. I hope this helps?

12:50: [Comment From rafal] hi can you tell how the prices for solar panels will change in the coming months and years? should they drop significantly and to what levels?

12:50: Which?: Hi Rafal. Solar panel prices have been dropping fairly rapidly over the past few months. When we investigated solar PV sales back in July 2011, the cost of installing a 3kWp was around £12,000. In January 2012, this had dropped to £10,000. If the demand for Solar PV can be sustained, prices could continue to fall, but we expect this will be subject to the proposed changes to the feed-in tariff.

12:51: Which?: A quick note on the latest on feed-in tariffs - Only yesterday the high court decided to reject the government's appeal against an earlier ruling that said the way it carried out the consultation into the proposed subsidy cuts was unlawful. However, it has now decided to appeal to the supreme court.

12:52: Which?: Pending the supreme court decision, yesterday's ruling means the higher rate of the feed-in tariff (43.3 p per kilowatt-hour), originally to be cut on 12 December 2011, will apply for solar panels installed and registered before 3 March 2012.

12:52: Which?: But systems installed and registered after 3 March will get the new lower rate of 21 p/kWh. This clearly has implications if you're thinking about solar panels as a long-term investment.

12:53 [Comment From Lou] Hi, Are there any recommended best practices for mounting on a slate roof?

12:53: Which?: Yes there are. Slate roofs are the most tricky of domestic pitched roofs and it is very important not to put any weight loading onto the slate as they will break and leak. there are British Standards on this but the best thin to do is to ask your installer what they do and how long they have been doing it for. jim

12:53 [Comment From peter] I think it is probable that I may need to move in the next 4 to 5 years. Is it worth considering solar for my benefit till then and then as an enhancement to the resale vale of my property ?

12:53: Which?: Hi Peter, at present there is not enough evidence on whether solar panels would add to the value of your house, and, if so by how much. And the payback period with the proposed, lower FIT rates could be more like 15-20 years, so it doesn't make sense on financial grounds alone to invest in solar panels in your case. Simon

12:53 [Comment From Alan Jones] I'm concerned about the effectiveness of my panels in winter. The system is 3.4kwh rated, but even on the sunniest day since the new year, I get a max of 2kw, whereas others claim to be getting 5kw. I am on the south coast facing just 2 degrees off south. Is my system "broke" or is there another explanation?

12:53: Which?: Hi Alan Jones

It could be that one of your panels is in the shade or malfunctioning and shortcircuiting the other panels. Worth getting them checked. Sometimes having just one panel in the shade is enough to impact the whole system if connected in series. Ask an electrician or your installer to check.

12:54: [Comment From Atul] Hi is this a chat session by instant chat, or is there sound as I can't hear anything?

12:54: Which?: Hi Atul - no, we're working our way through all the comments we've been sent in - it's not with sound I'm afraid!

12:56 [Comment From Atul] will a full transcript of this session be made available after this and where will I be available to see it?

12:56: Which?: Hi Atul - you can come back to this page later to replay the event in full. And we'll also be posting a PDF transcript here shortly of all of today's activity so you can print it off.

12:57 [Comment From Tony] Does installing solar panels affect my house insurance in any way?

12:57 [Comment From Alan] What's the extra cost of house insurance after installing solar panels?

12:57: Which?: Hi Tony It shouldn't, although you should notify your insurance and check with them before signing up.

12:58 [Comment From Richard Johnson] The need to replace the inverter in a Solar PV system after 10-15 years has been stressed in the past; to what extent is this influenced by the technology used (e.g. are transformerless inverters less likely to fail) and are failures expected to be sudden or slow degradation?

12:58: Which?: Inverters are likely to need attention in around 12 to 15 years and they all cost a similar amount (approx £350) to exchange. transformer inverters are (in my opinion) likely to stop working but TL inverters may have less straightforward failures. TL inverters are often more efficient and so I'd go for that as they will produce more while they are working OK

12:59 [Comment From david] I was interested in free solar panels but the lease did not mention what happens if I decided to sell my house.

12:59: Which?: Hi David. The issue with free solar panels is that they are not owned by you, you simply 'rent out' your roof and benefit from the free electricity provided. We do not believe that these represent good value, as all of the upside from the Feed-In tariff is taken by the third party that owns the solar panels. We calculated that, on the old rate of FIT, for a 4kWp system, while you could be saving more than £5,000 over 25 years from the

electricity produced by the panels, you could be missing out on as much as £23,000 from the feed-in tariff.

You may also face difficulty selling your home, as most of the benefits of the solar panels are not retained by the home owner (or buyer) but the company that owns the panels and may make the property less attractive. We are investigating how solar PV installation affects property values.

12:59 [Comment From Guest] Hi, after the courts decision yesterday on solar feed in tariff, if i ordered solar panels now and had them installed before the 3rd March, would i still get the 43.3p per kilowatt- hour, even if the Government win their appeal in the Supreme Court to uphold their decision to cut the tariff to 21p per kilowatt. William Devlin

12:59: Which?: Hi Guest (William), you are not likely to get the higher rate if the Government wins its appeal. They have said they reserve the right in that case to go ahead with the originally proposed 12 December. Even that is not guaranteed, but that would be the likely outcome. Simon

1:01 [Comment From Robert] could I not buy the solar panel from an electrical wholesaler and install them and the electrics myself? and who is the people authorised to install the FIT meter?

1:01: Which?: Hi Robert

You could do it DIY. However in order to get the feed-in tariff you would need to use both MCS approved products AND an MCS approved installer. So if you want the FIT payments, you would have to use an MCS installer.

MCS stands for Microgeneration Certification Scheme and you can find certified installers on its website.

1:02 [Comment From James] Jim, How long are you finding the inverters lasting for - I know they are only supposed to last for 1/2 the lifetime of the panels?

1:03: Which?: Hi James, it depends on the inverter but the average lifetime now is around 12-15 years. You might be able to have it repaired reasonably cheaply though, you can get an exchange (refurbished) one for around £350 I understand. Simon

1:04 [Comment From Alan Wilter] Hi, I have an unusual roof with shades and I've done my homework and the best solution would be with micro inverters. But where to find an installer that knows about it (Evo used to work with micro inverters, but not anymore)?

1:04: Which?: Alan, the best thing to do with shade is avoid it unless you really cant. Microinverters have benefits but there are risks with putting lots of small inverters out on a roof where they will be expensive to maintain. You could be storing problems up for the future unless you have easy roof access. If you need more info, you could google micro inverters in Cambridge to get a decent manufacturer. Good luck

1:05 [Comment From Aidan] Will smart meters monitor kWh sold back to energy supplier?

1:05: Which?: Hi Aidan

This will depend on the type of smart meter that will be specified for the roll-out in 2014. There are cheaper one-way smart meters or more expensive two-way ones that could also record energy going out into the grid. At the moment the feeling is that industry will go with the cheaper option, especially as the smart meter roll-out is already expected to cost £11 billion and only a small fraction of households are exporting to the grid.

1:05 [Comment From Andrew] when is the supreme court appeal decision likely?

1:05: Which?: Hi Andrew - no hard and fast date that we're aware of at the moment - times suggested have ranged from a couple of weeks up to 8 months! We'll keep you updated on Which.co.uk/news.

1:06 [Comment From Atul] if we install by 31st March, are we guaranteed the 21p/kwh ? and also i hear on April 1st, govt announces EPC energy efficiency requirements, which 90% of homes will fail,

1:06: Which?: Hi Atul, on the 21p rate see my response to William at 12.59. The Government is proposing stringent energy efficiency requirements, you are right (one option is EPC level C). Their decision on this is expected by 9 February. At Which? we think some energy efficiency requirement is reasonable - such as putting in loft or cavity wall insulation if you don't have it already - but we think the Government's proposals are too stringent as the costs of meeting them could run into thousands of pounds.

POLL: Do you understand the government's proposed FIT changes?

- > Yes, I'm up to speed: (50%)
- > Yes, just about (40%)
- > No, I can't keep up! (9%)
- > No, I'm not sure what it all means (2%)

1:07 [Comment From David] Where can I find information about reliable knowledgeable suppliers in South Devon

1:07 [Comment From Barry Sidaway] Registration for the Feed in Tariff is in a sole name. We recently had panels installed and as I had dealt with all the paperwork I registered for the FIT in my name. If I should die, would the FIT payment automatically transfer to my wife? Thank you

1:07: Which?: Hi Barry. You can make a provision to transfer this on death. It's worth contacting your energy provider to clarify this, as each provider may have a different process to go through.

1:07 Which?: Hi David and everyone else asking about how to choose an installer - there are so many small independent suppliers in the market, it would be near impossible for a single organisation to audit them all. Your best bet would be to ask around for personal recommendations, and also, if you are a Which? member, check out <http://local.which.co.uk/> for recommended suppliers put forward by other Which? members.

You can also contact your local Energy Saving Trust advice centre on 0800 512 012 (or 0300 456 2655 from mobile phones) for a list of MCS certified installers in your area.

Which? has produced a downloadable solar PV installation checklist - <http://www.which.co.uk/documents/pdf/solar-pv-checklist-pdf-269629.pdf> - which highlights the things you need to consider before having solar PV installed, too.

The checklist was developed with the support of REAL (Renewable Energy Assurance Limited), the Energy Saving Trust, MCS (Microgeneration Certificate Scheme) and trade association BPVA (the British Photovoltaic Association).

1:08 [Comment From Pat] We had selected Solar PV which was then installed in the rush to beat the deadline. Not surprising, the installers were under pressure and installed uneven mounting rails on brackets which left gaps under the roof tiles and damaged membrane in the attic. The installers have returned several times but are unwilling to correct the roof installation. What options to rectify do we have given that we do have the Consumer Protection Agency guarantee?

1:08: Which?: Pat, If you get no luck, speak to REAL in Waterloo. They should be able to apply some pressure to your installer and possibly help with getting another installer, if yours doesn't fix the snags. Good luck

1:08 [Comment From Malcolm] Just about everything exposed to the sun will deteriorate given enough time. Will the output of the solar gradually reduce over time?

1:08: Which?: Hi Malcolm. Solar PV panels are generally guaranteed for 25 years for 'up to 80% of their efficiency'. So, yes they are expected to degrade slightly but by a maximum of 20% over 25 years, which is not too bad.

1:08 [Comment From Ahmad] I have sent a couple of questions about 15 mins ago. Not sure they are received by you! Are they stacked and or in a queue?

1:09: Which?: Hi Ahmad - we've got your question and getting to it asap! Sorry for the wait, but we've got a lot of comments coming in...

1:09 [Comment From Beryl] I heard that the feed-in tariff is index linked, i.e. it increases with inflation each year. Is this correct?

1:09: Which?: Hello Beryl - yes, that's correct!

1:10 [Comment From Edsview] What is the likelihood that the FIT will change in the future, either up or down ?

1:10: Which?: Hi Edsview, the FIT rate is likely to go down significantly soon, see earlier responses on the court judgment. The whole set up of the scheme and rates for future years are going to be consulted on by Government next month too. There could be some wider reforms. Simon

1:13 [Comment From Ahmad] Is there a significant difference between different brands of solar panels?

1:1: Which?: Yes, very much so. There is a big difference in build quality, reliability, performance and manufacturer's support as well as appearance. I'd always recommend

opting a big brand that has been around a while. Your supplier should have an eloquent explanation of the different types of panel and their features and benefits. If they say all panels are the same, I'd recommend looking elsewhere

1:14 [Comment From david] Is it possible to take panels with you if you moved house

1:14: Which?: Hi David, there is nothing to stop you taking your solar panels with you when you move house, as long as you are happy to meeting the cost of having them dismantled and replaced on your new roof, along with the cost of surveying your new roof to make sure it is suitable. However, the main drawback is that your moved solar panels will no longer qualify for the FIT as they will be classified as 'used' panels.

1:14 [Comment From Robert] Many Thanks

1:15 [Comment From Robert] I have just (yesterday) had a quotation for the installation of 12 solar panels but the sales rep put a dead line of 1 day whereby we get a discount or he will tear the agreement up. His paper works says any quote is for 1 year. Am I right not to trust this "quotation" with out a proper survey?

1:15: Which?: Hi Robert

A company that is MCS approved would have signed up to the REAL code of conduct which bans pressure selling and the offer of big discount. Sounds like they are not complying. Check that the company is MCS registered and if so, report their sales behaviour to REAL who should investigate them as they could be in breach of the code of conduct. We found a couple such cases in our investigation last year:

<http://www.which.co.uk/energy/creating-an-energy-saving-home/guides/how-to-buy-solar-panels/free-solar-schemes/>

1:16 [Comment From Allen] I already have 6 PV panels. My query is that I was NJOT advised just how critical getting the installation registered ASAP after installation. My energy supplier were in my opinion dilatory in sending me the very complicated registration form. It took 3 separate requests before I received it. All of which meant that it was almost 6 months before I got registered. Now the energy Co will not back date the registration so they have had 6 months of energy that I produced, But won't pay for it!! Any ideas what I can do?

1:16 [Comment From Simon H] I've read a lot about optimum roof slope. At what angle does installation become ineffective?

1:16: Which?: optimum inclination is 30 to 40 degrees but performance doesn't drop off dramatically. I wouldn't recommend going less than 10 degrees unless you can get at them to clean them twice a year. I'd expect performance to be approx 15% below optimum. I hope this helps

1:17: Which?: Hi Allen, my suggestion would be that you complain to the electricity supplier through their formal complaints process and then, if that does not work, refer your complaint to the Energy Ombudsman (www.energy-ombudsman.org.uk). That is the process set down for cases such as yours of disputes or delays in registration of installation. Simon

1:18 [Comment From John V] The return you can get from your investment in solar panels is considerably lower than putting your money into a high interest bank accounts, taking

the 21p FIT and assuming no change in electricity prices and a life of 25 years. In that case is there still an incentive to go for solar panels at all (if the FIT does change to 21p)?

1:18 [Comment From Guest] Saw table indicating return on PV panels could be as high as 3% pa - compared with the long-term 'historical' return of 5% this doesn't seem great. As a home for your money it doesn't look like the best investment.

1:18: Which?: Hi John V and Guest. Many of the quotes that are provided by solar PV firms (8%-10%) failed to take into consideration installation costs. When these were factored in, the annual growth rate fell significantly when we carried out our own calculations. On the old tariff, for a 3kWp system, we calculated an annual growth rate of 4.14% after installation over a 25 year period. If you reinvested your profits into a 3.25% cash Isa (the best one year cash Isa currently available), this could be boosted to around 6.4%. However, on the new proposed rate, the annual return would be 1.6%, up to around 3.8% if you reinvested profits into a cash Isa. You can see more on this guide.

<http://www.which.co.uk/energy/creating-an-energy-saving-home/guides/how-to-buy-solar-panels/is-solar-pv-a-good-investment/> Please note however, that our calculations do not take into consideration rises in inflation or electricity in the future, so returns could be potentially higher. But there are five year cash Isas (also tax free) that pay nearly 5% a year, and you don't spend any money on panels, so there's far less risk by putting it into an savings account or Isa.

1:18 [Comment From Guest] We have a house which is south facing but, given the roof construction we have been advised that it would also be worthwhile to put some panels on the east facing side. Is this correct?

1:18: Which?: Hello, Solar panels can still work on an East facing roof, although they'll produce a bit less than if they were on a South facing roof. Check our table online which shows you what efficiency losses you would get from an East facing roof:

<http://www.which.co.uk/energy/creating-an-energy-saving-home/guides/how-to-buy-solar-panels/free-solar-schemes/>

1:19 [Comment From peter] Does your coment mean that it is unrealistic to view it as an enhancement of the resale value of the property, whenever that might be ?

1:19: Which?: Hi Peter, yes at present there is simply not enough reliable evidence to show by how much the resale value is increased. Simon

1:21 [Comment From Alan] My system is a 3.6Kw system however even on sunny days it never generates over about 3.2Kw. We have a Sunny Boy inverter and a Sunny Beam that shows our production. On the best days in June/July the production has been like the table top mountain with a flat peak over the main producing hours at around 3.2Kw. Our installer said that although it was a 3.6 Kw system we could only expect a max production of around 3.2Kw is this correct. We are 2 degree off South and a approx 30 degree sloped roof with no shading

1:21: Which?: Alan, that sounds OK. This is to do with inverter sizing & efficiency but providing you get the correct kWh over the course of a year, you should be OK. The important thing is always kWh not peak kW.

POLL: What appeals to you about solar panels?

> Reducing your energy bills (62%)

- > Making money through the feed-in tariff (20%)
- > I'm off the national grid (0%)
- > To be more environmentally friendly (18%)

1:23: Which?: John Harrington - we're just getting to your question now. Sorry for the wait but we're extremely busy, and trying to cover as wide a cross section of questions as possible...

1:25: Which?: Ditto to Steve GS - we've got your question but it's in a queue I'm afraid. Please bear with us!

1:25: [From Steve G.S] Perhaps you didn't get this first time round because I had forgotten to log in...[...] I've been considering solar PV on this old house (built 1880) for some time, but have big concerns: 1) My roofspace can only accommodate 5 (or possibly 6) panels, so is it worth it anyway; 2) There's no room for the inverter in the attic, but there should be in the airing cupboard - is that a good idea; 3) There's no spare way in the consumer unit to connect to the grid or space in the fusebox area for a larger consumer unit - could it go into a ring main instead; 4) There's no room in the fuse box area for a generation meter - could it go in the airing cupboard with the inverter instead? Finally, there's no way this house with 9" solid walls could meet energy rating C or better without major rebuilding. Is the proposal to cut FiT even more for such property definite?

1:25: Which?: Hi Steve, you are best waiting until after 9 February by when the Government will have said whether it is sticking with the option of requiring Energy Efficiency Level C to get the Feed in Tariff (the other option was to undertake all measures eligible for financing under the Green Deal, to be launched in October 2012). As you say, it is likely that you would need major investment, probably solid wall insulation, to get up to that that level in your 1880 house.

As to putting an inverter into the airing cupboard, you can but only if there is lots of ventilation as they don't respond well to hot spaces. Simon

1:25 [Comment From Peta] We have installed panels (6 Jan this year) and submitted certificate to the energy company. What is the definition of "registered"?

1:25: Which?: Hi Peta

'Registered' for the purpose of FIT is when your FIT supplier (the electricity company) has received your application form, along with the Microgeneration Certification Scheme (MCS) certificate. See our explanatory diagram here: <http://www.which.co.uk/energy/creating-an-energy-saving-home/guides/feed-in-tariffs-explained/proposed-feed-in-tariff-cuts/>

1:28 [Comment From Pauline] Can I just double check that if the new efficiency requirements are introduced they will only come into effect from installations after 1 st April - ie there will be no retrospective requirement for previous installations

1:28: Which?: Hi Pauline - no, you won't be retrospectively required to carry out energy efficiency requirements if you already have a solar panel system installed. Thanks.

1:29: [Comment From John Harrington] I had a 2 kwh fitted in October so got in before the cut off date, however, although I opted for the most efficient panels(Sanyo) I am getting extremely poor results. So much so that one of the FIT personel phoned me to make sure

that my figure was correct. The figure for 31st of December was 19.7 which I upgraded to 20 kWh. I have complained to the installers but so far have had no meaningful attempt to rectify what to me seems a faulty system. What do you think are my options please?

1:29: Which?: John. Sanyo are definitely the best so you made a good choice. I would expect 2kWp system to generate around 1850 kWh a year with maybe 10% being generated in the winter 3 months. 10% is nearer 180 units so my first impression is that your output sounds low. I suggest you ask your installer for more assistance for your peace of mind. If not, then speak to REAL in Waterloo. or Which?

1:30 [Comment From John] What happens when there is a power cut, does the system automatically shut down so as not to feed electricity back down the line?

1:30: Which?: Hi John. When there is a power cut, the PV system will indeed automatically shut down for safety reasons. When power comes back, the system will start working again.

1:30 [Comment From Paul T] Hi. Surely the big question at this moment is what the FIT rate is. Yesterday the govt. lost its case, however, they are appealing. So if I was to order installation now - what rate of FIT would I get? How can I be sure that it will be the top rate as it was last year.

1:30: Which?: Hi Paul, I have posted an earlier response on this. If the Government loses its case, which is not certain by any means, you will only get the higher rate after 1 April 2012 if you install and register before 3 March. So we advise people to tread carefully as by the time the court judgment is known there may be not enough time before 3 March. Simon

1:31 [Comment From Richard Johnson] Is the Feed-In-Tariff linked to RPI or CPI? How does electricity price inflation compare with that?

1:31: Which?: Hi Richard Johnson. The FIT is linked to RPI, which is the higher of the two inflation measures and, consequently, a better deal for those registered with the scheme. It's difficult to know how this will affect the tariff over the next 25 years, as the ONS only forecasts inflation for three years ahead, and that's often not the most accurate measure.

As for electricity price rises, it is predicted that consumers in the UK face rising prices for a long time into the future. I point you to a story in the Financial Times published in October last year <http://www.ft.com/cms/s/0/fb79d97e-f7fd-11e0-8e7e-00144feab49a.html#axzz1kZRuQlBg>

1:32 [Comment From Alan] Jim - Thanks for your reply. When the system was installed we were told that we could expect to produce 3092Kw in the year. In 2011 we produced 3716Kw a 20% increase in expected production. In the 6 months we had the system in 2010 we again generated 20% more than we were told to expect. The company was a small one "ecocetera" but they did a brilliant job. We are just outside Bristol so get a fair amount of sun. We are very happy with the concept and generate more electricity than we use over the year. Great green credential.

1:32: [Comment From Malcolm] A man from our energy supplier came round recently to advise on free insulation and said even with the lower FIT the payback period for solar cells was only 10-15 years. Is this realistic in practice?

1:32: Which?: Hi Malcom. Installation costs for a 3kWp system is around £10,000 at the moment. Under the new proposed tariff, we calculate that you would earn around £650 a year in exporting electricity and bill savings. This means that the estimated time to recoup your expense would be around 15 years. However, this does not take into consideration future rises in the FIT or electricity prices so it may be a shorter repayment period. On the current higher rate, it would take around 9 years to repay your outlay. Here's some more information <http://www.which.co.uk/energy/creating-an-energy-saving-home/guides/how-to-buy-solar-panels/is-solar-pv-a-good-investment/>

1:34 [Comment From Trev] Hi, The solar panels can be guaranteed for years and an inverter up to 10 yrs with extended warranty, but is there any installers that will match these long manufacturers guarantees with labour, travel and scaffold expenses if needed?

1:34: Which?: Hi Trev, I understand from Jim our installer here that 5 years is not uncommon for installer guarantees of costs such as this but we don't know of any that are longer than 5 years (without negotiation anyway). Simon

1:35 [Comment From John Harrington] Thanks!

1:35 [Comment From John Owen] I am very close to deciding to install Solar Panels type ;R E C 245pe with a Sunny boy Tnverter 3800 Does anyone have experience or advice on this please

1:35: Which?: John. REC and Sunny Boys are both very good makes. without knowing more about the number of panels I couldn't comment more but it sounds good

1:35: Which?: Hi John Owen - yes, we're getting to your REC panel question. Thanks for your patience!

1:36: Which?: Hi Jane Stoddart - would you please be able to re-send your question? Thanks.

1:37 [Comment From Malcolm] About a year ago I read that a new type of solar cell had been invented that was twice as efficient as current ones (I think about 50% compared to 25%). Has this reached the market yet and will they be twice the price!?

1:37: Which?: Hi Malcolm, we don't think any new type of cell is expected on the market any time soon, it's more about continuing gradual improvements in efficiency. Simon

1:38 [Comment From Atul] There are quite a lot of brands of panels, how do I choose, I have heard over 14% efficiency is good, which are the top 5 panel manufactrers so I can get best yield?

1:38: Which?: They all have diffent characteristics but my top 5 would be Sanyo, Yingli, Suntec, Solarcentury and REC. Sanyo for sure if you have a small roof

1:38 [Comment From Malcolm] Following on from John's question, if there was a grid failure during daylight hours will I still get power to the house from the solar cells, thereby reducing the impact of power cuts?

1:38: Which?: Hi again Malcom

For safety reasons - in case an electrician is working on a fault down the line - your PV system will be shut down in the event of a power cut. The only option would be to have a back-up system (eg. batterie) to store some of the electricity produced by the PV system to be used in the case of a power cut.

1:41 [Comment From Trev] If the government keep appealing against keeping the FIT at 43 pence until end March 2012 will they have infact blocked people from buying new systems for fear of being put on a FIT rate of 21 pence per unit. What would be a reasonable time for the second appeal to be decided in the high court?

1:41: Which?: Hi Trev, yes they will. But this is their last chance at appeal. It is the Supreme Court which is the highest court in the land, not the High Court. To be honest, there is lots of uncertainty over the Supreme Court timing, some reports are that the decision may not be for a while. We will post on the Which? website when we hear for sure. Simon

POLL: Tell us about solar panels and you...

- > I have a solar PV panel (24%)
- > I have a solar thermal panel (0%)
- > I'm considering solar PV panels (70%)
- > I'm considering solar thermal panels (4%)
- > I do not want solar panels (0%)
- > I'm just curious (2%)

1:43 [Comment From Marianne & Johnn] This might be a duplicate of a previous message. We had a 3.81 kw PV system installed in Sept.2011. This appears to be grossly under-performing; 166.5 kw in the first 3 months. According to the BG FIT Team this appears to be 23% of what might be expected. We contacted the installers (by fax and email on 10 Jan.2012) on how to rectify the matter without reply. What redress do we have?

1:43: Which?: A quick reality check would be 3.8kW should generate 3200 units a year if south facing and unshaded. you should have generated around 20% in first 3 months from sept which would be around 600 units. sorry for the quick maths, but your generation does sound low so I would chase your installer up and get them to check. if not then contact REAL in Waterloo or Which? but do keep track of generation

1:47: Which?: Thanks for your patience as we work our way through your questions. If you're not able to stay with us for the whole of the session, please do revisit this page afterwards - you can replay the event or download a PDF transcript of all the questions and answers.

1:47 [Comment From Ahmad] When a house is sold, is it possible for the new owner to get their electricity for free, but the FIT to go the account of the original house owner who installed it?

1:47: Which?: Hi Ahmad

The FIT is normally attached to the house, so the new owner would get the free electricity and the FIT. However, there isn't anything, we think, stopping you from doing some sort of deal with the new owners that would allow you to keep getting the FIT payment and them the free electricity.

1:47: Which?: Hi Marianne and John, To add to what Jim has said, I suggest that you keep pushing the installer but also contact the manufacturer. the problem could be a fault or could be a problem with shading, for example. if you are not satisfied with the performance then approach the installer's certification body (as all installers have to be accredited by a Microgeneration Certification Scheme certification body). So ask the installer who their certification body is and see details of certification bodies at www.microgenerationcertification.org

1:49 [Comment From edsviv] I have just received a quote of £9000 for PV Panels, 2.73 kWh, and they say that annual generation will be 2367 kWh. My annual consumption is 2270 kWh at cost of £331. Am I correct in saying that the Export will be 97 kWh annually and at 21p the annual FIT would be £20.37, and would this be cost effective ?

1:49: Which?: Hi edsviv. Using the Energy Savings Trust calculator, you would receive around £490 from the generation tariff, save £66 on your annual bill and earn £35 exporting your electricity back to the grid. That would give you a total earnings of £590 per year. With these kind of earnings, it would take around 15 years to recoup installation costs. After you have recouped this, you could go on to earn another £6000. That works out to an annual rate of return of around 1.78%. This is far lower than what you can currently get from a cash Isa (which is also tax free).

However, these calculations do not take into consideration future inflation rises in the Tariff and rising electricity rises, so you returns could be higher in the future.

1:50 [Comment From Si M] I am considering installing a 4.9 Kwh East/West system and have been told that this needs to be capped at the inverter to 3.68 Kwh due to G83 regulation. My question is what are the actual physical rather than legal consequences of the cap not being applied to such a 4.9 Kwh system - as this less than optimum split orientation is not very likely to exceed 3.68 Kwh even in the height of summer. I ask because a neighbour has had a similar East/West 4.9 Kwh system fitted and despite his requests the installer has not yet capped it. Are my neighbours or the installers liable if the system ever exceeds G83 regulations and what might happen if their system fed back into the grid a little over 3.68Kwh?

1:51: Which?: Si. firstly, it sounds like you have a regular single phase supply rather than a 3 phase supply (G83 requires a 16A per phase limit) because if you have three phase you dont have a G83 problem. I'd stick to G83 unless you apply to your DNO (grid operator) in writing. It takes some time but it is the only legitimate way to do it. It is a slightly complex situation but your installer should be able to give you more info on exceeding G83

1:51 [Comment From Andrew] 1. How likely do you think the government will win in the High Court?

1:51 [Comment From Clive Norkett] Can the team indicate the likelihood of the Government succeeding in a Supreme Court challenge, and if so what would be the impact on the FiT tariff?

1:51: Which?: We wouldn't want to predict it either way. We wouldn't suggest you make a decision that's effectively gambling on the ruling going one way or another, though.

1:52: Which?: Pending the supreme court decision, yesterday's ruling means the higher rate of the feed-in tariff (43.3 p per kilowatt-hour), originally to be cut on 12 December 2011,

will apply for solar panels installed and registered before 3 March 2012. But systems installed and registered after 3 March will get the new lower rate of 21 p/kWh.

POLL: Do you trust companies selling solar panels for homes?

- > Yes (16%)
- > No (84%)

1:53 [Comment From edsvie] Thanks Gareth

1:54 [Comment From Chris Blagden] How do I get an accurate professional estimate of solar power/£s to be generated ? Two years ago EDF did a £150 survey of my roof. Said 1.2KW installation costing £18K was appropriate. Met Office will sell

1:54: Which?: Hi Chris Blagden. Our advice would be to get a range of quotes from a number of different firms. These are usually free. Solar panel prices have come down significantly over the past few years, so its likely that a 1.2kWp would be much lower today.

As for how much you could generate, have a look at the Energy Savings Trust's calculator to get an idea of how much you might earn in the future.

<http://www.energysavingtrust.org.uk/Generate-your-own-energy/Solar-panels-PV/Solar-Energy-Calculator>

1:54 [Comment From Alan] When should you pay your installer - once the system is working? Is a deposit required?

1:54: Which?: Hi Alan, installers often ask for about 10% at the signing of contract (under the REAL rule this must not exceed 25% under any circumstances). They may well ask for another interim payment when the panels are due on site. Then the remainder after commissioning.

All MCS and REAL -registered installers should have signed up to the REAL deposit protection scheme which means you will get your deposit back if the company goes bust before installation. Simon

1:55 [Comment From Diana Lohman] What are the pros and cons of having both PV solar panels and thermal for hot water?

1:55: Which?: Both are great for most homes. Lots of people have both for the same reason that they have gas and electricity supplies. PV contributes to the electricity than runs lights and TV, etc; thermal contributes to hot water so they are a good financial and environmental combo.

1:58: Which?: Hi Michael Parry - we've got your question and will answer it asap. Thanks for your - and everyone's! - continued patience. There's a lot to get through. If you can't stay for the whole session, you can return here afterwards to replay the event.

1:58 [Comment From syh] I have applied for the solar panels deal, what would happen in the future if I needed to alter the roof, I live in a bungalow?

1:58: Which?: Hi Syh, there's nothing to stop you altering your roof after a solar panel installation, but any work that involves removing or moving the panels will naturally increase the cost of your roof works, and also the length and complexity of the job. We'd recommend getting your roof sorted before solar panel installation where possible. After solar installation you'll need to consult professional solar installers for advice before starting any roof work involving the area holding the solar panels.

2:00 [Comment From Michael Parry] I have had several very differing quotes for a 140 panel roof mounted system. each panel will .235wh. Can you give me a budget cost that I should be able to obtain please

2:00: Which?: that sounds like a big system? 32.9kW should be around £80k but it will depend on panel manufacturer and access (scaffolding)

2:01 [Comment From Barry] I see comments that contributors have a PV system that is predicted to produce electricity equal to their annual useage. But surely a considerable amount of a households useage will be in dim daylight hours [winter months] and at night, when the panels are contributing little or no electricity at all!

2:01: Which?: Hi Barry, how much you generate depends on the size of your system and where you live etc, and what % this will be of your annual electricity usage depends on your usage patterns too. But a rough rule of thumb is that a system could generate about a 1/3 of your electricity use over the year, but, as I say, it could be more or less. As you say, the panels will generate a lot less in the middle winter (about 20% of peak summer generation) and nothing at night. So you will get more out of your panels if you are at home in the day and you could also set some of your appliances eg washing machines on timers if you are not. Simon

2:04 [Comment From Trevor] So, if we wait until the Supreme Court's decision, and they find against the Government, will there then be enough time to get a system installed and certified? In that case, is it likely the 3rd March deadline will be amended?

2:04: Which?: Hi Trevor, see my earlier responses at 12.35 and 12.41. Simon

2:06 [Comment From Phil S] Responding to your panels earlier comment "Government must feel they have at least some chance because the legal bill" and being cynical, could it not be that the government is willing to spend the taxpayers money defending their actions, even though they know that they will lose, just so less people will have time and certainty in installing a system that allows the 41p FITs to be claimed?

2:06: Which?: Hi Phil, yes that is possible of course. It could also be that Government feel that this ruling is important for consultation processes in general. It's certainly a messy situation with consumers and the industry left in limbo and the taxpayers picking up a bigger legal bill too. Simon

2:06 [Comment From David] Is there a trade body with a list of approved installers

2:06: Which?: Hi David, we'd suggest you go for an installer that's MCS (microgeneration certification scheme) accredited - there's a list of installers here:
<http://www.microgenerationcertification.org/mcs-consumer/installer-search.php>

We'd also suggest you try Which? Local (which.co.uk/local), which lists installers that have been used and recommended by Which? members.

2:08: Which?: Jane, I am afraid you cant with the kit that you have - unless you have PV tools & training. there are monitoring systems available as extras but they are generally cost prohibitive. Panel failures are unlikely although performance may decline over the years. the most likely thing to fail is the inverter and it is likely to be a very obvious failure as it will fail safe and turn itself off. I hope this helps?

2:08 [Comment From Trevor] If we get another storm like that of Oct 1987, what is the likelihood of a solar panel installation being damaged or destroyed - and who would be responsible for the cost of fixing it?

2:08: Which?: Hi Trevor, Solar panels, if properly installed, should be able to withstand forceful weather conditions. They must be installed a minimum of 10cm from the edge of the roof to ensure that they will not be compromised by extreme weather.

Your home insurer should cover any damage to your panels, provided that you have fully disclosed that you have had them installed. This may have an impact on your premiums but it would be better for piece of mind.

2:11 [Comment From Richard Johnson] Has Which? considered conducting a test of panels? While the electrical and physical characteristics are well documented in spec sheets, it would be useful to have an independent view of (a) manufacturing quality/durability, (b) actual performance in comparison with the specs, and (c) actual degradation over time. Or is there an existing resource that provides this information?

2:11: Which?: Hi Richard Johnson

Testing of solar panels is very expensive and takes a long time; which is why no other organisation in the UK has tested them as yet.

Which? is looking into the possibility of testing solar panels with its European partners and will keep you updated on our website.

2:13 [Comment From Soody] Did you get my question, that I submitted at 12.40 about the pros and cons of fittiing panels into a roof rather than on a roof?

2:13: Which?: Hi Soody, Jim here says that this is quite normal on new builds but fairly unusual for retrofit to fit tiles into the roof rather than on top. It can be done though but it will increase the roofing costs, perhaps by around £2000 as a rough rule of thumb. So ask your installer about the costs with and without, make sure you get a clear breakdown of the costs and we would always advise people to get 2-3 quotes anyway. Simon

2:14 [Comment From Soody] Thanks Simon/Jim

2:15: Which?: Hi folks - hope you're finding today's Q&A useful.

I'm afraid we've still got a lot of questions to get through but not enough time in which to do it, so if you're only sending in your question now I'm afraid we won't be able to tackle it.

2:17: Which?: Please do keep on sharing your stories and comments though - it'd be great for us and everyone else to hear about how you went about getting your system installed, and what the process has been like?

2:17 [Comment From Jane Stoddart] Hello Jim - many thanks for the response to my question. Regards. Jane

2:17: [Comment From Barry] Thanks to all the Team; I think you have done very well

2:17 [Comment From Guest] Hi, I live in a conservation area in North Yorkshire and am looking into fitting solar panels for electricity and/hot water. One problem I'm expecting is for planning permission to be refused unless the panels are relatively inobtrusive. Would you be able to recommend those manufacturer who produce less conspicuous panels please?

2:18: Which?: Hi Guest, Jim tells me that while many of the solar panels available come in bright blue with silver frames, there are a couple of manufacturers that have produced more discreet, slimmer panels. Sanyo and Solar Century offer black panels, which are slimmer than the blue ones generally seen. They may be more suitable for your situation.

2:18 [Comment From Stephen W] Hi Would you recommend Sunny Boy or Fronius inverters? I have been quoted for Fronius but have heard that the Sunny Boys are good.

2:18: Which?: Hi Stephen W, Jim here says that he has found that Fronius can tend to be a little lower in output than Sonny but that both are good brands. Simon

2:20: Which?: Would be good to hear from others who have a system up-and-running which brand of solar panels you went for, and how they're faring...

2:20 [Comment From Guest] Fantastic! Thanks very much for that. I'll get on there websites and check them out. Nick

2:21 [Comment From Marie Lewis] Is the efficiency of different manufacturers panels a significant factor to consider in installing a PV array? Currently the choice is between Kyocera, Sharp or Hyundai - any recommendations? its for a ground mounted system, facing due south, unshaded. Are there any other factors to consider in getting the most KWH's from the installation?

2:21: Which?: Marie. Efficiency is very important but also the way the panels maintain efficiency with temperature (salesfolk often overlook this). I'd suggest maybe you look at some other manufacturers too. I would also look at the power tolerancing of the panels. some of the manufacturers use 'positive' tolerancing so that the panels max output will be at least their rated value. i think some of the panels you mention use +/- tolerancing where the actual maximum output maybe a little lower than the rated value. definitely worth a little more looking into. good luck. jim

2:21 [Comment From Trevor Kearley] I had 12 panels (a 3kwp system) installed and registered by the 12 Dec deadline. They face ESE so I lose generation in the early afternoon as the sun transfers to my main (SSW facing) roof - on which I didn't originally want panels fearing that they would spoil the appearance of an attractive house and roof. Now however I wish I had had some fitted on the main roof - enough to boost the system to a 3.9kwp rating so as not to move into a higher tariff code. My question is can I add extra panels and continue to get the 43.3p rate, providing the tariff code is not changed? Would I have to re-register my system and if so would I risk my supplier regarding it as a totally new system and only get the new 20(?)p rate for all the panels? nPower's agreement says "If the change to your system impacts your Tariff Code and/or Generation Tariff unit rate, the change will take effect at the point from which the Central FiT Register is updated by

Ofgem. This agreement will then terminate and you will receive a new agreement and FiT Plan."

2:21: Which?: Hi Trevor Kearley. It should be that, as long as you stay under the 4kWp in total, you could have two separate systems registered on your house: the existing one will continue to get the higher 43.3p/kWh whereas the new system, installed after 3 March, would get a separate meter and the new lower rate of FIT of 21p/kWh.

2:22 [Comment From John V] Could you tell me the pro's and con's of solar shingles?

2:22: Hi John V, apologies for the very slight delay getting back to you. Jim informs that solar shingles are only really appropriate for outbuildings and not for homes. If you want some smaller, more discreet solar panels, you can install solar tiles or solar slates. These have a better look, and are often used in conservation areas where aesthetics are important. However, they are generally less efficient than solar panels and are more expensive.

2:23 [Comment From Peta] We have a Sunny Boy inverter and didn't get a repeater of all the readouts with our installation. We discovered afterwards that we have a wireless / bluetooth model and have been able to install software (works on Windows) that tracks it for us, including daily, monthly, annual & total outputs. And it's free!

2:24 [Comment From Maggi] We had a REC 17x235W (3.995kW) panel/Sunny Boy installation on 25th November 2011 which has generated 281kW to date which is better than projected so we are very pleased with the results so far.

2:26 [Comment From Malcolm] Well done team, congrats for fielding so many Qs.

2:26 [Comment From Stephen] Hi My supplier has given me the option of LG Mono X 250 or Canadian Solar 245 panels in a 4kW system but I have not been able to find any comparison info to help me choose. Which panel would you recommend?

2:26: Which?: Stephen. Of the 2 manufacturers my personal preference would be LG. that may be a little unfair on the Chinese Canadian modules but I think LG have a bit more of a permanent presence in the UK, and I think this can be important if considering warranties. Needless to say this is my opinion, not that of Which?

2:28 [Comment From Steve GS] Any comments on Trina panels? These are Chinese, costing £246 (incl. 5%VAT) for a 235W panel from a solar installer. Much cheaper than Sharp (£400 for 250W) from the same supplier. My gut feeling is to avoid Chinese because they might not last as long - am I being too cautious?

2:28: Which?: Hi Steve GS - have just asked Jim here and he's not had issues with using Trina panels in the past and thinks they're a pretty reasonable choice.

2:29 [Comment From Richard Johnson] Following on from Ahmad's question and the response, I thought the FIT went to a single person (natural or corporate); certainly SSE's forms indicate that they will only transfer the FIT to the new owners of a house if that person can prove they have taken ownership of the panels specifically.

2:29: Which?: Hi Richard, Generally the panels are sold along with the house. In this case the new occupant (who now owns the system) will receive the tariffs, as they will be able

to prove ownership of the house and the panels. It is possible to agree ownership of the system stays with the original owner but this is more difficult legally. Simon.

2:30 [Comment From Nick] If I manage to obtain planning permission for solar panels (water/pv). What sort of timescale would I be looking at for fitting? (Since I need to replace the roof and get some iron-work in I'd be amazed if there was a chance of hitting the March deadline for the higher FIT) nevertheless if it is only a short time-scale it'd be worth knowing! Nick

2:30: Which?: Hi Nick,

It's a tough call and depends on the provider and the back-log of work that they have to do. We've had some cases where people have had panels installed the next day, and others where it has taken a number of months. Make sure you get a number of quotes and find out how long it will take to install the panels. If you have additional work to do and obtain planning permission and then get the panels installed, and you have until 3 March, little over a month, you may be cutting it slightly fine!

2:30: Which?: Hi everyone - just to let you know that we'll be wrapping up soon...

2:33 [Comment From Malcolm] I have a small inverter which will work lights etc during a power cut. This inverter will work with most devices, but because it produces a stepped sine wave rather than a true sine wave it won't work with absolutely everything. Is this also true of inverters used in solar panel systems?

2:33: Which?: No, grid connected PV inverters are all true sine wave inverters

2:33 [Comment From Steve GS] Which performs better: mono or poly crystalline panel?

2:33: Which?: Hi Steve

Monocrystalline cells tend to be more efficient than polycrystalline cells (13-17% efficiency compared with 11-15% efficiency), but polycrystalline cells can be cheaper. However the way they perform will depend on your roof orientation and incline. I would advise you talk this through with surveyors when they come to quote so they can advise which one is best for your house.

2:34 [Comment From Simon] You mention 'doing some sort of deal with the new owners that would allow you to keep getting the FIT payment and then the free electricity.' but if you moved home how would you keep track of your old home's solar generation? Would you have to rely on the new home owners taking regular readings?

2:34 [Comment From Bimal] Hi, Have any of you experts had any experience with panels produced by JV solar which are supposed to have a high efficiency and strong company reputation?

2:34: Which?: Hi Bimal - I'm afraid we can't comment as no-one in the room is familiar with JV Solar. Sorry about that. We're just looking at your other question now.

2:34: Which?: Hi Simon, I think what we meant was you could do a deal which would enable you to keep the FIT payments if you moved house but I don't think you would be able to get the free electricity too. The benefit of the free electricity would have to go to the new owner I think, Simon

2:35: Which?: Hope you've found the Q&A useful today - some really great (and complex!) questions.

2:37 [Comment From Guest] The Q&A was very useful - thanks again to all concerned. Nick

2:37: Which?: Remember you can also head over to Which? Conversation if you want to continue the solar and FIT debate...

<http://conversation.which.co.uk/energy-home/solar-panels-feed-in-tariff-questions-answers/>

2:40 [Comment From Bimal] Hi, I am thinking of installing a 7kWp solar PV system before the 3rd March deadline for the old FIT. I understand that I will need DNO approval (WPD in my case) to export >16A per phase which I am told needs to be submitted before the installation and may take up to 45 working days to obtain approval and approval is not guaranteed as it depends on where I live and how many similar generation plants there are in the vicinity. This would take me past the 3rd March deadline. The planner I spoke to at WPD suggested that I could proceed to get a standard 4kWp system installed now on the old FIT and then if there is still time before the deadline to "upgrade" to the full 7kWp after this. However I can see some problems with this: 1) the scaffolding will need to stay up in the interim time. 2) the installer will have to return to fit the extra panels, 3) Do i size the inverter for 4kWp or 7kWp? 4) are there any issues associated with upgrading a 4kWp commissioned system to a 7kWp one?

2:40: Which?: Bimal. firstly, you may have technical problems running 4kW on a 7kW inverter so I would suggest staying with the 4kW inverter. Also, the situation is different (much easier) if you have a three phase supply. I doubt if you could get the 7kW installed before 3rd March so realistically i would aim for 4kW now and look at the additional 3kW as a lucky extra if you get it installed. I hope this helps. Jim

2:40 [Comment From Rob P] Are there any issues with roof maintenance? I would be installing on a 1970 tile roof.

2:40: Which?: Hi Rob, it depends on the condition of your roof. Make sure this is looked at in the survey and do ask about this. It is possible to take off the panels if the roof needs repairing and put them back but that costs of course.

Which? has done a solar PV checklist which highlights the things to think about and ask <http://www.which.co.uk/documents/pdf/solar-pv-checklist-pdf-269629.pdf>

Simon

2:41 [Comment From Guest] Thanks again to all on the Panel; what are the chances of you answering outstanding questions off-line for downloading later ;o)

2:42: Which?: Hi Guest - I'm afraid we won't be able to answer every single one of your questions - we have tried our best though!

If you would like to continue the discussion do head over to Which? Conversation, on the link I posted below, and where possible we can try and address people's comments.

2:43 [Comment From Richard Johnson] Many thanks for the responses to my questions. Having contacted several suppliers and received 7 quotes ranging from £7000 to £12000 for

a 4kWp system, I'm expecting to place an order tonight on a local installer who has been the most knowledgeable and the most helpful as well as being recommended through Which? Local. While the financial case is nowhere near as clear-cut as most installers would have you believe, at just under £8500 it achieves parity with an ISA even at the lower FIT rate and assuming RPI drops back to 2% (provided you also save the returns in an ISA) ...

2:43: Which?: Hi Richard Johnson. You are taking a sensible approach to the investment. By reinvesting your profits into a best rate Cash Isa, you can really maximise the returns that you'll be receiving. You can find the best rates for cash Isas here:
<http://www.which.co.uk/money/savings-and-investments/reviews-ns/best-rate-cash-isas/>

Remember that the Bank of England base rate has been at a record low for almost three years now, and that has had a detrimental impact on the rates you would have been able to achieve in an Isa. However, while the low rate might persist as we try and get through this difficult economic climate, they will almost certainly rise over the next 25 years. And as this rate increases, the returns you could get from reinvestment will be higher too.

2:44: Which?: We're going to wrapping up very soon I'm afraid - a big thank you everyone who got involved.

2:44: Which?: Just to reiterate that you can replay the whole of this Q&A session on the page after the event - and we'll add a downloadable PDF transcript with everyone's Q&As to the page later today.

2:46 [Comment From Peta] Does anyone know how many folk are affected by proposed changes in FIT rate (back to 12 Dec)? I suspect there aren't too many of us in this group.

2:46: Which?: Hi Peta, it could be quite a few as there was a rush to get panels installed. At Which? we are saying that the Government needs to find out how many people have been affected, and we are pushing for those people who had already signed contracts and paid deposits at the time of the announcement but not been able to get installed in time for 12 December to get the higher rate (if the Government loses its appeal). And for those people who paid deposits and lost them if they cancelled to get those back. Simon

2:46 [Comment From Nick] I've looked at the Which? costing which shows that in financial terms feeding the savings back into an ISA makes the new FIT fractionally better than an ISA for a long-term investment. However, the big factor which could make solar panels far more cost effective are future energy price increases. Is there a view on what they're likely to do over the next 5-25 years (I'd suspect rise above inflation - or possibly rocket!?)
Nick

2:46 [Comment From Barry] a technical question: How does the house 'know' when to take electricity from the roof? Also when the roof isn't producing quite enough for your present demand, does the house take as much as it can from the roof, and the balance from the mains?

2:46: Which?: Hi Barry

The electricity produced from the solar panels will always go first into your house before that coming from the grid. So when the sun shines and the panels produce electricity, it will first flow into your house to be used there and if there is no use for it, would be exported to the grid.

2:46: Which?: Hi Nick,

Energy prices are predicted to rise over the long-term, although there are a lot of conflicting forecasts. I'm pointing you to an article that was published in the Financial Times last year, which has a note on how electricity prices might rise in the future <http://www.ft.com/cms/s/0/fb79d97e-f7fd-11e0-8e7e-00144feab49a.html#axzz1kZRuQlBg>

As you can see, with this and inflation so difficult to predict, it's difficult for us to make responsible calculations based on future price rises. Therefore our costings are only a guide on current rates. We are looking at ways we can make our calculations more realistic.

2:46 [Comment From Charlie] I have 11 sanyo hybrid panels (2.75 kwp system) arranged in 2 separate arrays with separate cables feeding into a sunny boy inverter 2500HF. This takes 2 strings but has only 1 MPP tracker. If one of the arrays is affected by shadow but not the other, will the input from both arrays be reduced?

2:46: Which?: Charlie. I don't have all the info I need here but I think your 11 panels are all wired up as a single string so I guess they are all at the same inclination and orientation? If this is the case and 1 array becomes shaded, it is very likely to impact the whole system. I hope this is OK, sorry not to be of more help

2:47 [Comment From Mike] Some inverters come with a USB port to enable you to connect to a computer. You can then optimise your appliance use so that you use e.g. washing machines during the peak PV production window. Since the current utility company assumption is that you use 50% of your PV-produced power, this optimisation can work in your favour.

2:50 [Comment From Atul] so if we install by 31st March does that mean we would not need to spend £000's of pounds on being EPC compliant ?

2:50: Which?: Hi Atul, yes the proposed eligibility date when these requirements would kick in is 1 April. So you would need to install and register then. But we need to wait and see what the Government decides (which will be by 9 February) as nothing has been decided yet. The EPC Level C requirement was only one option, and the Government might decide to go for Level D etc, another was to require all measures that are eligible for Green Deal finance. Simon

2:52 [Comment From Lou] Hi, I had several quotations before the government's surprise initial announcement that the FIT would reduce to 21p in December. All the companies contacted me after the announcement to advise they could install for less (by several £000) so the payback time would be of a similar time. This doesn't seem or feel right. Comments?

2:52: Which?: Hi Lou,

With the lower rate of 21p/kWh, solar PV will become less attractive as householders will earn much less money for the electricity their solar panels generate. A typical 3kWp system, installed in central England and costing £10,000, would have made you about £1,210 a year from FIT with the current rate. With the proposed new rate that will drop to about £646 per year. Consequently the payback time rises from 8-9 years to around 15-16 years.

2:53 [Comment From Guest] Is the technology basically set or is it developing rapidly.

2:54: Which?: The technology is developing gradually rather than rapidly - but the good news is we have seen the cost coming down...

2:54: Which?: Hi Stephen W - I'm afraid the honest answer is no one really knows how long the Supreme Court could take to rule on the case - we've also heard estimates of up to one year, and it does on the surface seem very unlikely the case will be ruled upon and closed before the March deadline closes, especially leaving a gap sufficient to get solar panels installed. Our best advice is therefore not to effectively gamble on the higher rate standing until March by installing panels just in case.

2:54 [Comment From Stephen W] Hi I have read that it could take up to one year for the case to be heard in the Supreme Court. Is that really the case? Or do you know if we might get a decision soon enough to allow us time to install panels before March if the decision goes against the Gov?

2:55 [Comment From Mike] The big advantage with a TL inverter is that is silent running. That may be important depending on where the inverter can be sited in the house

2:55 [Comment From Peter] I have just spoken to the Energy Saving Trust but they were not much help on solar panels. We don't have any at present. Our electricity bill is approx £40 per month. All our heating (mainly underfloor) and cooking is by an oil-fired Rayburn. Oil costs and servicing are in excess of £1500 per year. There is no mains gas here. Our house is thatched, but has slate roofed wings that could take panels subject to insurer's approval. A lot of people here have had electricity panels. In the EST calculator for electricity panels it said payback time would be 17 years. What are the approx installation costs for both types, what is the funding if any, what size is necessary to make it worthwhile and would I be likely to see much advantage in my lifetime (I'm 65), taking into account what changes to fuel costs and funding there might be in future. I'm afraid being on a very small income, I can only think about my costs and not benefit to the planet.

2:55: Which?: Peter, PV systems aren't great at dealing with hot water or space heating (your £1500 oil bill) although PV can often represent a good financial investment. From what you say I suspect that solar thermal panels would be a good investment for producing hot water and maybe a heat pump for your space heating. having said that, a PV system could help offset the costs. It is a shame that EST aren't more helpful. Sorry not to have a definitive answer. Jim

2:55 [Comment From Trev] I think solar panels are same as any other purchases in get what you pay for. I bought a watch from China the other day but the quality was very poor compared to one from the UK paying a little more momey. I have BP panels and they are still going well after a year.

2:55 [Comment From Jenny Wilkes] Re cleaning panels. Would this need scaffolding when the panels are on a 3 storey house roof extension (like 3rd floor0.

2:55: Which?: Hi Jenny Wilkes,

The panels are generally maintenance free and self cleaning. If you have them installed at a 30 degree angle (as recommended), they should clean themselves. But keep your eye on the generation meter and if the power output starts to fall, there may be dirt on your panels. It would be worth checking this before putting up any scaffolding at your cost.

2:57 [Comment From Heidi Morse] Also we have solar thermal and need to know when we will be paid any incentive - they were fitted during the special dates and meet all the criteria

2:57 [Comment From Bimal] Hi, I understand that China produces decent panels. However was informed by one company that the panels manufactured there may not be made to the same wind loading spec as the ones produced for the windier European climate. Is this true and if so what is the minimum spec that I should look at for wind loading?

2:57: Which?: Bimal, Chinese panels are made to the same wind loading spec. Else they would not be allowed in the UK. The spec is IEC61215. Jim

2:57: Which?: Hi Heidi, As regards solar thermal, the renewable heat incentive consultation is expected from the Government soon. I think you will have to wait and see what eligibility criteria are chosen and what from the RHI will take. The original consultation said "Domestic installations completed and first commissioned on or after the 15th July 2009, will also be eligible for RHI tariffs, once tariffs are available through the RHI, providing they meet the final eligibility criteria". It was expected all this would have been known by now but we still don't know what will be eligible and when the domestic phase of the RHI will be up and running. Simon

2:57 [Comment From Peta] When Govt announced their FIT changes, our installer offered a 10% reduction in cost as an incentive to keep the business (we were in discussion before the announcement, but no contract signed). They were worried for the future of their business and, I suspect, just cut their margins.

2:58: Which?: Time is ticking away - we'll be wrapping up in a few minutes...

2:58 [Comment From Chris Blagden] Hi Advisor,

2:58: Which?: Hi Chris. i wish they were all that easy

2:59: Which?: Hi folks, I think we are closing down now. We have tried to answer as many questions as possible. Thanks for all your questions and we hope we were of some help. Simon

3:00: Which?: That's it everyone. A big thank you to our panellists today - and especially to Jim, who has literally been powering non-stop through your technical questions today!

3:01: Which?: Thank you for all your very good questions. Keep an eye on our website for updates on solar panels and FIT: www.which.co.uk/solar

Bye for now, Sylvia

3:01: Which?: Thanks for all your interest & questions. Sorry that we didn't get round to them all but I hope it was of help. Happy generating. Jim

3:01: Which?: Thanks for all your great questions. If you want to know any more about the benefits and drawbacks of solar PV as an investment, do read our guide here...
<http://www.which.co.uk/energy/creating-an-energy-saving-home/guides/how-to-buy-solar-panels/is-solar-pv-a-good-investment/>

3:01: Which?: And as mentioned, do head over to Which? Conversation, where we've been talking about FIT and other solar considerations...

<http://conversation.which.co.uk/energy-home/solar-panels-feed-in-tariff-questions-answers/>

3:02: Which?: Finally - of course we'll be keeping a close eye on the outcome of the FIT case... Keep checking back on Which.co.uk/news for the latest.

Thanks - goodbye!!

-- ENDS --

On the Which? panel: Kelly Fenn, Sylvia Baron, Simon Osborn, Natalie Hitchins, Gareth Shaw, Jim Kenney (Chelsfield Solar)