

Is the weather getting worse?

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[module power losses over time](#) [Is the weather getting worse?!](#) This is the question I have pondering for some while. What I mean by this is it getting duller. I have had two PV systems on my roof for some years and the output is dropping year on year. There are 3 possible reasons I have come up for this. The first is that there is something wrong with the PV's. PV efficiency does indeed fall very slowly and the modules have a 20-25 year guarantee against power loss. This is very low even after 25 years and in fact studies have shown the actual declines in efficiency are much lower than the module's guarantee. I know its not this since this February one system had a record output for that month (even higher than the computer prediction). Most years I get such months for either system. My favourite theory until recently was my neighbours tree (and to be fair one of mine). My neighbours tree is a birch bought from a supermarket for £2.50. Over 20 years it has grown from a few cm to 6 stories. Its much too big for the garden blocks her and our light and she has said she will have it taken down. My Scots Pine (far older) which it yomped past is about 4 stories high, this also blocks our light (I probably would not be allowed to take it down). Again I still get record output now and again and in summer when the sun is high in the sky so the problem from either is not that great when there is max power output. PV output is greatly impacted by trees and buildings and is difficult to predict. The last theory is that raised by this blog is the weather getting worse? By that I mean is getting more cloudy? Its very hard to be sure since this data if its kept at all is kept by the met office. There is some logic to this though. We know that climate change is heating the atmosphere. This pushes more water vapour into it. These form clouds and make the weather more dull as well as causing many more torrential downpours (interestingly I think we are getting less of these). As well as this the gulf stream [is weakening](#) this will make UK weather different with colder winters and hotter summers. I want to test this theory using a paired test but I have odd numbers of data. Missing one year out would introduce bias so I will wait till the end of the year to see if the rate of fall is significant. The implications of this are that predicted PV output might be lower than thought. Is is balanced by higher efficiency modules (this is constantly creeping up). The techno solution might be to use modules that work cross spectrum, on a bright cloudy day they work as well as a sunny one. Neil

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