So how quiet is solar?

Solar energy can be created in two basic ways: either in a solar farm or from solar panels on the roof of a property.

We consider the noise from solar farms first.

The noise comes from the invertors and the transformer. A key study (4) found that the average noise at 10ft from the inverter face ranged from 48 decibels to 72 decibels. At 150ft the study showed that typically the noise didn't exceed background levels. Generally, there was a reduction of 6 decibels with a doubling of distance.This means that noise from solar farms is only heard close to the farm. It takes the form of a hum. The report explains: "The high frequency peaks produce the characteristic 'ringing noise' or high frequency buzz heard when one stands close to an operating inverter. The tonal sound was not, however, audible at distances of 50 to 150 feet beyond the boundary. All low-frequency sound from the inverters below 40 Hz is inaudible, at all distances". The available evidence, therefore, suggests, as long as solar farms are not sited within a few hundred feet of a property noise should not be a problem.

What about noise from rooftop panels?

There is less unanimity than with noise from solar farms. What is agreed is that inverters will make a humming noise while converting energy. And that could create a noise nuisance in a person's home. One resident said: "A solar system was installed in April. A few weeks later, we started noticing a hum noise inside the house. It is more noticeable inside the house (as opposed to outside). The loudness of the hum is approximately the same in each room, upstairs and downstairs, as well as in the garage". That reaction may not be typical as solar panels have not generated the level of protest which noise from wind turbines have. What is clear, though, is that in rented properties where tenants have little control over the siting of inverters or in blocks of flats were the panels may belong to somebody else there could be problems.

References: (1). https://www.eea.europa.eu/publications/environmental-noise-in-europe/ (2). https://inrix.com/press-releases/scorecard-2018-uk/ (3).https://www.transportforqualityoflife.com/u/files/200131%20An%20Eco%20Levy%20for%20Driving_cut%20carbon%20and%20clean%20up%20toxic%20air.pdf (4). https://files.masscec.com/research/StudyAcousticEMFLevelsSolarPhotovoltaicProjects.pdf

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