

Re: Generators and switch mode power supplies.

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Nico Coesel wrote:

Sylvia Else <sylvia@xxxxxxxxxxxxxxxxxxxxxx> wrote:

Given the parlous state of Australia's power systems, I've been considering buying a standby generator. One marketing point of some of the inverter based models is their suitability for 'sensitive electronics' with computers given as an example. This appears to be based on the fact that they'll provide a consistent sinewave output.

But given that computers invariably use switch-mode power supplies, are they actually going to care what waveform they see – from square wave thru 'modified sinewave' thru pure sinewave?

Not really. A computer doesn't care much as long as the voltage is within range. One thing to consider is that computers are a bad load to a generator. As a rule of thumb you need a generator with at least twice the VA rating as the total VA rating of all computers. Otherwise the generator cannot keep its rpm constant (starts speeding up and slowing down).

I assume that's related to the harmonic load represented by switch mode power supplies.

Circuits for significantly improving the harmonic performance have been around for a decade, but I suppose little will happen until legislation requires their use.

Sylvia.

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