



## Solar panel cleaning jacks output

By John Dodge | Aug 4, 2009 | 4 Comments

True or false? Solar panels are maintenance free.

False! When Google cleaned its solar panels specified to generate 1.6 megawatts, it reaped major gains in output. The installation is at the Mountain View Googleplex headquarters where the sun shines a lot and the temperature ranges between the high 50s and low 80s - ideal for solar.

After analyzing “mountains of data,” Google cleaned the flat-mounted panels following 15 months of operation and output doubled. They were cleaned again eight months later and output spiked 36%, according to Google’s blog. These panels were located near car ports and a sand field so the surrounding atmosphere was dusty and dirty.

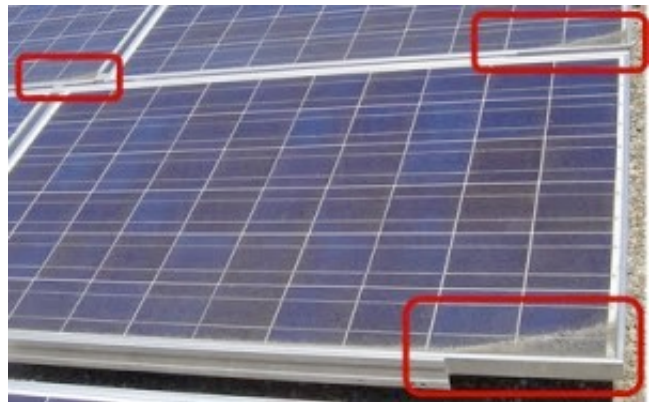
“We found that cleaning these panels is the #1 way to maximize the energy they produce,” the blog says. See the video below on how to clean solar panels. Google’s rooftop panels were sufficiently angled and rain-washed so only the corners collected dirt had to be cleaned.

It’s a different story in the Northeast where weather dynamics are markedly different.

“Snow cover is an issue. I could just not worry about it, but then I’d lose most of my output until it melted. In a winter like last year, it can be pain. I was out there 10 times,” says West Newbury, Mass. resident Rick Parker with his 3.6 kilowatt home installation. His cleaning tool is a car windshield brush attached to a long handle.

The only other time he cleans his panels is hosing them down to remove pollen in spring and early summer. They are angled at 35.5 degrees, face south and sit on a separate platform behind his garage.

“Otherwise, they clean themselves on their own accord in spring, summer and fall. I rub my fingers across them to see if there is [visually] undetectable grit and they come off clean,” he says.



Google's rooftop panels collect dirt in the corners.

Parker’s installation will be exactly two years old two days from now and has met his expectations. However, output in the second year is down eight per cent from the first. He suspects the culprit is weather, not panel degradation.

“This has been a very rainy and cloudy year.” The panels have cut his electric bill by 70-75 per cent.

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## Deborah Gage

### Contributing Editor, Technology

I've been a journalist for nearly 20 years, not counting the high school and college newspapers I edited, and I keep doing it because I love the work. Most of my time has been spent covering business and technology out of Silicon Valley -- most recently for the San Francisco Chronicle -- but I've also covered politics for Minnesota Public Radio and worked for magazines, Web sites and

other newspapers.

My work has won over a dozen national awards over the years, including the Neal Award and Grand Neal. The story I'm most proud of was an investigation for *Baseline* magazine of American-made software that was exported to Panama and malfunctioned, which caused 28 patients at Panama's National Cancer Institute to be overdosed with radiation. The hospital assumed the workers who operated the machine were responsible, and they were charged with second-degree murder. Their case was ongoing the last time I checked.

I do have a family, which includes five cats, and I ride road bikes and practice Yoga so I remember to get out of my desk chair and away from my computer once in awhile.

She writes for SmartPlanet and is not an employee of CBS.

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I pride myself on being an independent journalist. My reporting and writing are not influenced by any financial holdings, and I have no business affiliations with companies other than the publishers I write for as a journalist.

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The Thinking Tech blog focuses on technologies such as virtualization, smart electric grids, enterprise 2.0, open source, data center management, green technology and the intersection between the innovation and application of these advancements.

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