

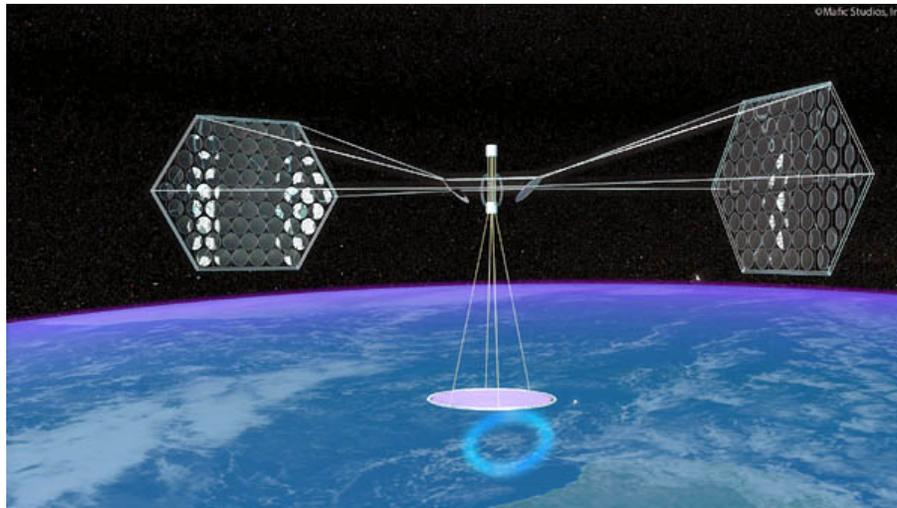
## Could solar energy development lead to space?

**On 1 October this year, PV Group, the SEMI Special Interest Group for the photovoltaic supply chain, organized a PV Lobby Day to talk with legislators about ways to promote the [solar energy development](#) in the US.**

But, as it turns out the lobbyists could end up getting more than they bargained for.

Solar energy in space has returned to the industry's agenda. Since the 1960s the prospect of generating solar energy from space has been on the drawing board, but has since never been successfully developed to the next level of actually creating a test model.

Washington has ambitious plans for [America's renewable energy](#) future, with solar and wind power being at the very sharp end. Technology advancements in Japan have had a knock on effect in America where scientists are beginning to seriously this form of solar energy development.



### Japanese solar space station

The Japanese government has stated that it is prepared to spend 2 trillion yen to bring a one-gigawatt solar power station into orbit by 2030.

The project would involve roughly four kilometers of solar panels and would orbit the Earth approximately 36,000 kilometers away. The power would be transmitted back in a laser beam or microwave. Some Japanese companies have already signed on to support the concept and will probably be taking part in the supply of materials and innovative expertise.

However at its current stage the technology is far from cost-effective, with the power generated in this type of project only being enough to power 300,000 homes, and with any one project estimated to cost around \$21 billion, it doesn't appear particularly attractive.

### Solar could supply all Earth's electricity

But the technology will develop, and the benefits of space solar power are clear. As Earth receives only one part in 2.3 billion of the Sun's output, space solar power is by far the largest potential energy source available, dwarfing all others combined, and solar energy is

routinely used on nearly all spacecraft today. This technology on a larger scale, combined with already demonstrated wireless power transmission, could supply almost all the electrical needs of our planet. ([Video demonstration](#))

Space solar also requires less use of already scarce resources such as land and fresh water, does not produce hazardous waste, and is available 24-hours a day, seven days a week.

If we are able to develop the necessary technology to make space solar energy more cost-effective, such as low-cost, environmentally-friendly launch vehicles, and durable large scale in-orbit construction and operations platforms, then it could be a genuine possibility.

The sun is the most abundant and powerful source of energy at our disposal and, if harnessed properly, could easily satisfied the world's energy demands. Let's hope we can move from science fiction to fact as soon as possible.