



## **Welcome to Vol. 9 No. 6 of Design Science News, the e-bulletin of the Buckminster Fuller Institute**

Design Science News brings you news from around the world related to humanity's option for success and comprehensive design science. It also features updates from BFI and periodic special offers for our members.

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## **The first annual Buckminster Fuller Challenge prize is conferred**



*Photo by Martin Seck*

The first annual Buckminster Fuller Challenge prize was conferred to Dr. John Todd at a packed-to-capacity ceremony at the Center for Architecture in New York City on Monday, June 23rd, 2008. Dr. Todd was presented a check in the amount of \$100,000 for his winning project Comprehensive Design for a Carbon Neutral World: The Challenge of Appalachia.

[Click here](#) to watch The Buckminster Fuller Challenge movie.

Dr. Todd was also presented the OmniOculi, a limited edition sculpture by artist [Tom Shannon](#), commissioned for the Challenge.

Hunter Lovins, representing the Jury at the conferring ceremony, presented a compelling case for the selection of Dr. Todd's project. Her remarks were followed by a presentation by Dr. Todd of his award winning project. A panel session concluded the afternoon's events, moderated by Susan Szenasy, Editor in Chief of Metropolis Magazine.

Congratulations to Dr. Todd for his pioneering work and a special thanks to everyone who made the first Challenge and this beautiful ceremony possible.

Democracy Now! a New York-based independent radio/TV news broadcast hosted by award-winning journalist Amy Goodman covered the ceremony, [click here](#) to watch an interview with Dr. Todd, Hunter Lovins, and Jaime Snyder.

We will be updating the [Challenge website](#) over the next few weeks with pictures, videos, reviews, and articles about the conferring ceremony, the opening of the Whitney exhibition, and the other events of the week - but for now, we hope you enjoy the pictures below!

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## Bucky week in NYC!

Thanks to all of you who joined us for the action-packed week of events in NYC June 23 - 28th, 2008.

Here are some photos (by Martin Seck) of a few highlights:











Captions (individuals are always listed from left to right): **Photo 1**: the Dymaxion Study Center at the Center for Architecture; **Photo 2**: crowd at the Challenge conferring ceremony; **Photo 3**: conferring ceremony panel; Jay Baldwin, Greg Watson, John Todd, and Hunter Lovins, moderated by Susan Szenasy; **Photo 4**: OmniOculi prize sculpture; Joseph Clinton, BFI Board member and sculpture collaborator and Tom Shannon, artist; **Photo 5**: crowd; **Photo 6**: Panel; Dr. Michael Ben-Eli, Ed Schlossberg, Paola Antonelli, and Jonathan Marvel (at podium); **Photo 7**: Authors Roundtable; Shoji Sadao, Amy Edmondson, and Thomas Zung; **Photo 8**: Fly's Eye Dome admirers

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## Buckminster Fuller's Fly's Eye Dome makes its downtown debut



*Photo courtesy of Max Protetch Gallery*

Fuller's 26' Fly's Eye Dome has made its debut in downtown New York City. The dome, one of Fuller's original prototypes, will be on display at LaGuardia Park between Bleecker and West 3rd Sts. in Manhattan throughout July.

Also be sure to check out ongoing exhibits of Fuller's sculptures, drawings, and inventions at both [Max Protetch Gallery](#) (through August 15th) and [Sebastian + Barquet Gallery](#) in association with Carl Solway Gallery (through August 30th).

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## Buckminster Fuller: Starting with the Universe opens at the Whitney Museum of American Art



The much-anticipated Fuller show at the Whitney Museum opened on June 26th to critical acclaim. The exhibition traces Fuller's personal and intellectual developments from the 1920s up until his death in 1983 through the mediums of sketches, paintings, sculptures, models, patent drawings, and inventions such as the Dymaxion car, Dymaxion map, and geodesic dome.

### Resources

[Exhibition homepage](#)

[Upcoming Fuller-related events at the Whitney](#)

### Press

[Print](#)

[The New York Times](#)

[Wired](#)  
[Time](#)  
[Newsweek](#)  
[Core 77](#)

Metropolis (see the July 2008 issue; not yet online)

*Audio*

[WNYC Radio](#)  
[New York Academy of Sciences](#)  
[Voice of America](#)

*Video*

[Whitney Museum](#)

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## TRENDS & PERSPECTIVES

### A scientist pioneers a food revolution, starting with rice



Many a professor dreams of revolution. But Norman T. Uphoff, working in a leafy corner of the Cornell University campus, is leading an inconspicuous one centered on solving the global food crisis. The secret, he says, is a new way of growing rice.

Rejecting old customs as well as the modern reliance on genetic engineering, Dr. Uphoff, 67, an emeritus professor of government and international agriculture with a trim white beard and a tidy office, advocates a management revolt.

Harvests typically double, he says, if farmers plant early, give seedlings more room to grow and stop flooding fields. That cuts water and seed costs while promoting root and leaf growth.



The method, called the System of Rice Intensification, or S.R.I., emphasizes the quality of individual plants over the quantity. It applies a less-is-more ethic to rice cultivation.

In a decade, it has gone from obscure theory to global trend - and encountered fierce resistance from established rice scientists. Yet a million rice farmers have adopted the system, Dr. Uphoff says. The rural army, he predicts, will swell to 10 million farmers in the next few years, increasing rice harvests, filling empty bellies and saving untold lives. (Source: [New York Times](#))

<http://tinyurl.com/5jj43g>

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## Brighter future for solar panels, silicon shortage eases



Quartz, the raw material for solar panels, is one of the most abundant minerals on earth. But for years, the solar industry has faced a bottleneck in processing quartz into polysilicon, a principal material used in most solar panels. The problem stalled a steady decline in prices for solar panels.

Now the silicon shortage may be coming to an end, predict some solar analysts, thanks to new factories coming online.

If true, the price for solar panel modules could start falling by as much as a third by 2010, says Travis Bradford, president of the Prometheus Institute for Sustainable Development in Cambridge, Mass. That's good news for an industry that remains one of the most expensive power sources.

Global demand for solar panels is growing at about 50 percent per annum, says Mr. Bradford, but the polysilicon supply for solar will grow by 80 percent for each of the next couple of years.

"That should be faster than the demand is growing and should be putting some downward pressure on prices," he says. (Source: [Christian Science Monitor](#))



## The next president's first task



Today, we don't need to abolish carbon as an energy source in order to see its inefficiencies starkly, or to understand that this addiction is the principal drag on American capitalism. The evidence is before our eyes. The practice of borrowing a billion dollars each day to buy foreign oil has caused the American dollar to implode. More than a trillion dollars in annual subsidies to coal and oil producers have beggared a nation that four decades ago owned half the globe's wealth. Carbon dependence has eroded our economic power, destroyed our moral authority, diminished our international influence and prestige, endangered our national security, and damaged our health and landscapes. It is subverting everything we value.

We know that nations that "decarbonize" their economies reap immediate rewards. Sweden announced in 2006 the phaseout of all fossil fuels (and nuclear energy) by 2020. In 1991 the Swedes enacted a carbon tax—now up to \$150 a ton—and as a result thousands of entrepreneurs rushed to develop new ways of generating energy from wind, the sun, and the tides, and from woodchips, agricultural waste, and garbage. Growth rates climbed to upwards of three times those of the U.S.

Iceland was 80 percent dependent on imported coal and oil in the 1970s and was among the poorest economies in Europe. Today, Iceland is 100 percent energy-independent, with 90 percent of the nation's homes heated by geothermal and its remaining electrical needs met by hydro. The International Monetary Fund now ranks Iceland the fourth most affluent nation on earth. The country, which previously had to beg for corporate investment, now has companies lined up to relocate there to take advantage of its low-cost clean energy.

It should come as no surprise that California, America's most energy-efficient

state, also possesses its strongest economy.

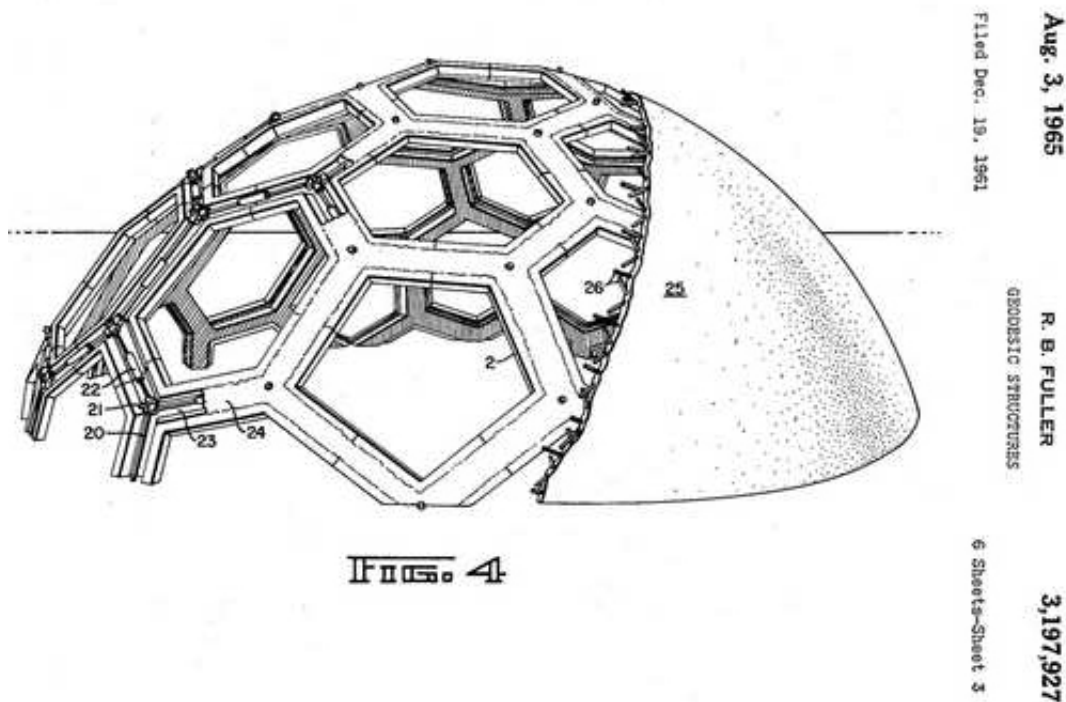
The United States has far greater domestic energy resources than Iceland or Sweden does. We sit atop the second-largest geothermal resources in the world. The American Midwest is the Saudi Arabia of wind; indeed, North Dakota, Kansas, and Texas alone produce enough harnessable wind to meet all of the nation's electricity demand. As for solar, according to a study in Scientific American, photovoltaic and solar-thermal installations across just 19 percent of the most barren desert land in the Southwest could supply nearly all of our nation's electricity needs without any rooftop installation, even assuming every American owned a plug-in hybrid.

In America, several obstacles impede the kind of entrepreneurial revolution we need. To begin with, that trillion dollars in annual coal-and-oil subsidies gives the carbon industry a decisive market advantage. Meanwhile, an overstressed and inefficient national electrical grid can't accommodate new kinds of power. At the same time, a byzantine array of local rules impede access by innovators to national markets. (Source: [Vanity Fair](http://www.vanityfair.com/politics/features/2008/05/rfk_manifesto200805))

[http://www.vanityfair.com/politics/features/2008/05/rfk\\_manifesto200805](http://www.vanityfair.com/politics/features/2008/05/rfk_manifesto200805)

## EVENTS

### Synergetics Collaborative's Sixth Annual Summer Workshop



July 11-14, 2008 in Oswego, NY

The Synergetics Collaborative's Sixth Annual Summer Workshop in Oswego will focus on "Geodesic Structures: Build a Dome for Bucky's Birthday." Included among a distinguished group of individuals that will guide the workshop are:

- Thomas Zung, partner of Buckminster Fuller, Sadao and Zung Architects; Board member, Synergetics Collaborative
- Blair F. Wolfram, President of Dome Inc.
- John Belt, Department of Technology SUNY Oswego; Vice President & President-Elect, Synergetics Collaborative
- Joseph D. Clinton, President of Clinton International Design Consultants; President, Synergetics Collaborative

Topics to be covered in the workshop:

- History of geodesic structures.
- History of Fuller, Sadao and Zung Architectural Projects.
- Introduction to light and commercial geodesic structures.
- Definitions and geometry of geodesic topology.
- Form finding and analysis design tools as applied to geodesic structures.
- Commercial construction methods and techniques

The workshop will consist of an interweaving of presentations, open discussions, photo displays, patents and architectural detail parts exhibit, and participants' displays for a Comprehensive Anticipatory Design Science Solution for an ecologically friendly shelter. Monday, 14 July 2008, the last day of the workshop, will be devoted to building a dome(s) to celebrate R. Buckminster Fuller's birthday.

For more details, visit the [Synergetics Collaborative website](#)

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## **FamilyDay@theCenter: Bucky's Ge-Odyssey**

Join us on Buckminster Fuller's birthday for a hands-on journey through the geometries of the Universe and find out how they inspired his Design Science.



Earth Voyage, an experiential education organization based in Asheville, North Carolina is a special project of the Buckminster Fuller Institute in New York. The Earth Voyage mission is to inspire people of all ages to experience the world with a new perspective. EV programs engage participants with multi-media environments, life-size educational tools, kinesthetic activities and service learning to cultivate a deep understanding of environmental and social interconnectedness, systems thinking, science literacy, and encourage active participation as global citizens.

Organized by: The Center for Architecture Foundation with Earth Voyage

Sponsored by: Beverages provided by IZZE

Location: Center for Architecture, 536 LaGuardia Place, New York, NY

Price: \$10 suggested donation per family

Telephone: 212-358-6133

Contact: [info@cfafoundation.org](mailto:info@cfafoundation.org)

RSVP: [Session 1 \(10:00am - 12:00pm\)](#); [Session 2 \(1:00pm - 3:00pm\)](#)

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Have you come across interesting Design Science news articles, resources, or events?

We invite you to forward them so we can consider them for inclusion in future e-bulletins. Send them to: [designsciencenews \(at\) bfi.org](mailto:designsciencenews@bfi.org)

If we use your suggestion for future e-bulletins and you would like to be credited by name, please indicate it in your e-mail.

**Thank You!**

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