## **Nuclear Information and Resource Service – Energy Fact Sheet** NIRS Southeast Office

## Got Solar!

## Building new nuclear power plants would cost more per kilowatt than retail PV solar...

Some may be surprised to find that even retail prices for PV Solar power can out compete<sup>1</sup> nuclear. See below – check out the references... and **go solar!** 

	Solar Hot Water installed	Crystalline Photovoltaic (PV) installed	Thin-film Photovoltaic (PV)	New Nuclear Construction
Cost per kW construction	\$1,250 \$2,000 <sup>2</sup>	\$4000 <sup>3</sup> \$4750 <sup>4</sup> and dropping	\$3000 \$4000 and dropping to \$1000 <sup>5</sup>	\$5000 \$8000 <sup>6</sup> and rising
Cost of Fuel per kW	none	none	none	\$19 and rising <sup>7</sup>
Water required for operation	As consumed	none	none	varies – thousands to millions of gallons per minute <sup>8</sup>
Waste per kW hr	equipment production waste + unit itself divided by total kilowatt- hours saved	equipment production waste + unit itself divided by total kilowatt- hours generated	equipment production waste + unit itself divided by total kilowatt- hours generated	construction waste + total so-called "low-level" waste + irradiated fuel + toxic wastes + solid waste divided by total kWhrs generated
Liability	negligible	negligible	negligible	waste hazardous for millennia, worst industrial accident in history, attractive terrorist target

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<sup>2</sup> Various web based info – see for instance: ToolBase.org posted at:

3 See: "A Solar Grand Plan" Scientific American, January 2008. Web Posted at:

http://www.sciam.com/article.cfm?id=a-solar-grand-plan

- 4 See: "Solar Module Price Highlights January 2008" on Solar Buzz.com posted at: http://www.solarbuzz.com/Moduleprices.htm
- <sup>5</sup> See above and see also: "Solar Cheaper than Coal and Falling" on Gristmill, posted at: <u>http://gristmill.grist.org/story/2007/12/23/2919/8613</u>

<sup>&</sup>lt;sup>1</sup> No, the sun does not shine at night, but for residential and many commercial applications, sufficient additional capacity could be purchased at these prices to generate stored power to use during solar off-hours.

http://www.toolbase.org/Technology-Inventory/Plumbing/solar-water-heaters

<sup>6</sup> See: "FPL's plans for two nuclear reactors at Turkey Point draw mixed reviews" South Florida Sun-Sentinel, January 10, 2008 and "Nuclear Costs Explode," Tampa Tribune, January 15, 2008 posted at http://www2.tbo.com/content/2008/ian/15/bz-nuclear-costs-explode/

<sup>&</sup>lt;sup>7</sup> See: US Energy Information Administration "Assumptions to the Annual Energy Outlook, 2007" posted at: <u>http://www.eia.doe.gov/oiaf/aeo/assumption/electricity.html</u>

<sup>&</sup>lt;sup>8</sup> See: "Got Water?" David Lochbaum, Union of Concerned Scientists:

http://www.ucsusa.org/clean\_energy/nuclear\_safety/got-water-nuclear-power.html