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Photovoltaic cost reduction powered by nuclear spending TIMOTHY SMITH, MARK DEINERT, The University of Texas at Austin — Between 1975 to 2010, Japan has spent an average of $2700 Million per year on nuclear R&D and $74 Million per year on solar energy R&D (2010 dollars). While the cost of photovoltaics dropped by a factor of 30 during that time, the overnight cost to build a nuclear power plant has doubled between 2003 and 2009. The price of commercially available photovoltaics has been shown to follow a power law reduction with the number of units produced. This begs the question as to what the current price of these systems would be had some of the available funds used for nuclear R&D been spent on the acquisition of photovoltaics. Here we show the reduction in price for single crystal photovoltaic panels if the Japanese government spent some of their nuclear R&D funds on the installation of these systems. We use historical cost and cumulative production for the world and Japan to build a learning curve model for PV. If the government had spent only 0.07% of its nuclear R&D budget toward PV technology since 1975, photovoltaics would now have reached $1/Watt, the point at which they are cost competitive with conventional resources.

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