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The DOE SunShot Initiative: Science and Technology to enable Solar Electricity at Grid Parity

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The SunShot Initiative's mission is to develop solar energy technologies through a collaborative national push to make solar Photovoltaic (PV) and Concentrated Solar Power (CSP) energy technologies cost-competitive with fossil fuel based energy by reducing the cost of solar energy systems by $\sim$ 75 percent before 2020. Reducing the total installed cost for utility-scale solar electricity to roughly 6 cents per kilowatt hour (1$/Watt) without subsidies will result in rapid, large-scale adoption of solar electricity across the United States and the world. Achieving this goal will require significant reductions and technological innovations in all PV system components, namely modules, power electronics, and balance of systems (BOS), which includes all other components and costs required for a fully installed system including permitting and inspection costs. This investment will re-establish American technological and market leadership, improve the nation's energy security, strengthen U.S. economic competitiveness and catalyze domestic economic growth in the global clean energy race. SunShot is a cooperative program across DOE, involving the Office of Science, the Office of Energy Efficiency and Renewable Energy and ARPA-E.