

Hotter than the Sun: The Mandatory Section on Nuclear Electricity

Inexpensive sustained net-energy fusion would be wonderful if we had it; but we don't. The last time we built nuclear power plants in the U.S. their capital costs averaged over \$3,000 per KW in mid-80s dollars²⁹⁵.

The nuclear industry insists that modern plants could be built more quickly and would cost much less; they promise their plants won't end up costing four to seven times budget as they have in the past.

The pebble bed reactor is one example often promoted of a new generation technology for producing less expensive, safer fission reactors. The consortium building a pebble bed reaction in South Africa has finally revealed the cost – just short of \$9,800+ per KW in capital costs²⁹⁶; that cost has no chance of falling, but may yet increase.

We can build solar thermal with storage at two thirds of that price, fully dispatchable wind at one third – and not have to worry about uranium mining, waste transport and storage, and the liability issues (which in the U.S. are dealt with through the special privileges of the Price/Anderson act not given to any other power source).

End Notes

²⁹⁵American Society of Civil Engineers, *2001 Report Card for America's Infrastructure - Report Card ASCE - Energy*. 2001, American Society of Civil Engineers, 8/May/2003
<<http://www.asce.org/reportcard/index.cfm?reaction=factsheet&page=12>>.

²⁹⁶Steve Thomas, "Government Needs to Take a Brave Decision Now | Crunch Time for Pebble Bed Plan," *Cape Times* 18/Sep 2003: Insight, The Cape Times & Independent Online (Pty) Ltd, 10/Apr/2005
<<http://www.capetimes.co.za/index.php?fSectionId=332&fArticleId=238104>>.