

Adam Glick
NE 250
Deep Burn paper critique

Deep burn is a concept that uses gas cooled fast reactors to transmute TRU waste, including weapons grade products such as Pu-239. The reactors are cooled by Helium gas and produce a unique neutronics environment that is ideal for the deep burn concept. The fuel used must be a ceramic coated particles that have high containment of the products and high resistance to radiation damage. This is an interesting concept, especially since the authors claim that these reactors have up to a 50% thermal to electric conversion efficiency.

One of the problems with this paper is that it claims the only purpose of transmuting waste is to prevent nonproliferation of weapons grade products from LWR. I believe that this is a very limited scope for a paper to have and leaves out a lot of public concerns about nuclear waste which are primarily health concerns. I don't think that this paper will be a good resource for creating good policy to promote burning of nuclear waste due to the very limited scope it has in terms of motivation for this technology.