

Abstract Submitted
for the DPP05 Meeting of
The American Physical Society

The energy Park WALLACE MANHEIMER, retired from NRL — If world development is to continue, per capita energy use in the developing world must increase to levels in the developed world. Restrictions on how much CO₂ mankind can responsibly put into the atmosphere complicate the task further. Studies show that by 2050 the world will require an additional 10-30 terawatts (TW) of carbon free power, at least as much additional, as the 10 TW generated today with fossil fuel. Neither mined uranium nor renewable energy is capable of sustained power production at this level. This paper proposes, an energy park, a self contained unit a square mile or two in area which supplies about 7 GW of electrical power or hydrogen, emits no CO₂, has little or no proliferation problem, and cleans up its own waste. Most of the energy is supplied by conventional nuclear power plants. However the nuclear fuel is bred by a fusion reactor, which is the key to the energy park. The waste cleanup is done by a combination of fission, fusion, and patience. There is neither long time storage nor long distance travel for materials with proliferation risk or long lived radio nuclides. Thus only thorium comes into the park, and only electricity and hydrogen go out.

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Date submitted: 17 Jun 2005

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