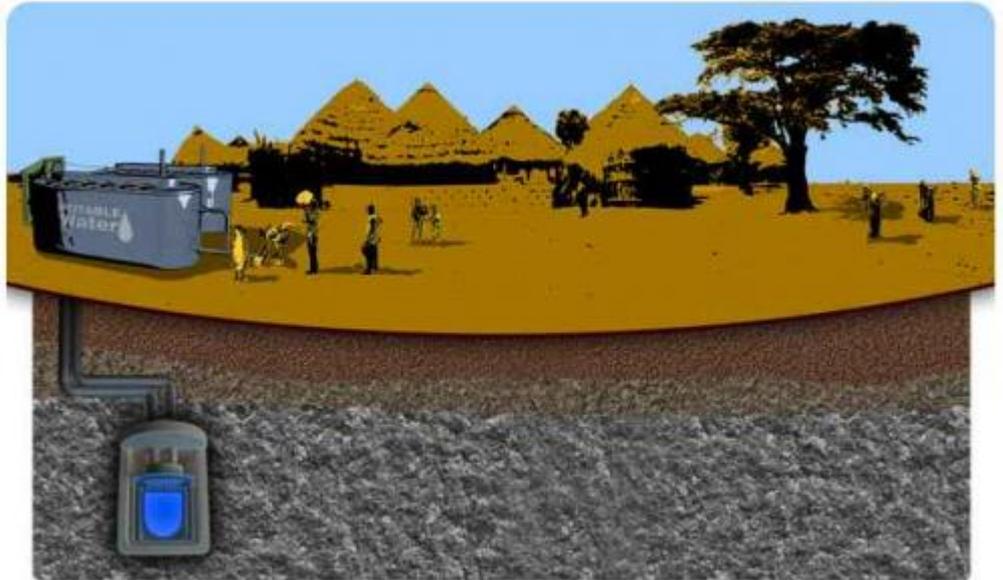


Mini nuclear plants to power 20,000 homes

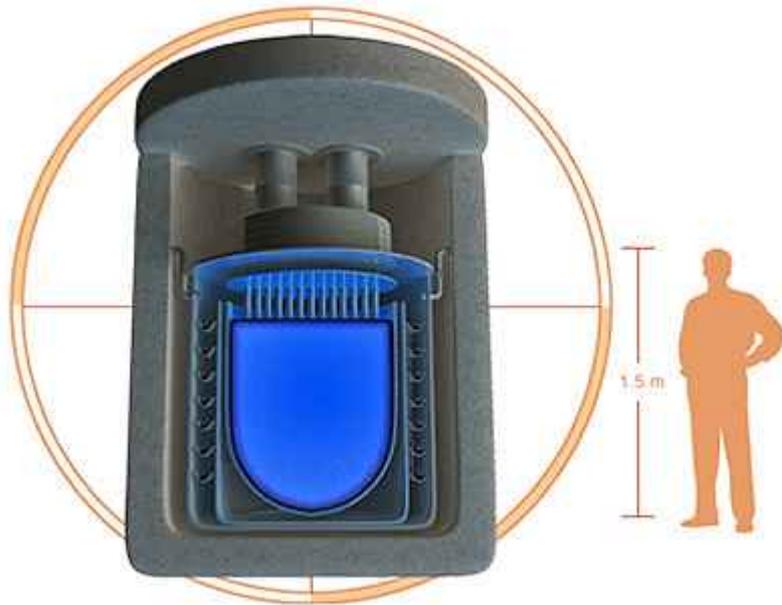
£13m shed-size reactors will be delivered by lorry

Nuclear power plants smaller than a garden shed and able to power 20,000 homes will be on sale within five years, say scientists at Los Alamos, the US government laboratory which developed the first atomic bomb.



The miniature reactors will be factory-sealed, contain no weapons-grade material, have no moving parts and will be nearly impossible to steal because they will be encased in concrete and buried underground.

The US government has licensed the technology to Hyperion, a New Mexico-based company which said last week that it has taken its first firm orders and plans to start mass production within five years. 'Our goal is to generate electricity for 10 cents a watt anywhere in the world,' said John Deal, chief executive of Hyperion. 'They will cost approximately \$25m [£13m] each. For a community with 10,000 households, that is a very affordable \$250 per home.'

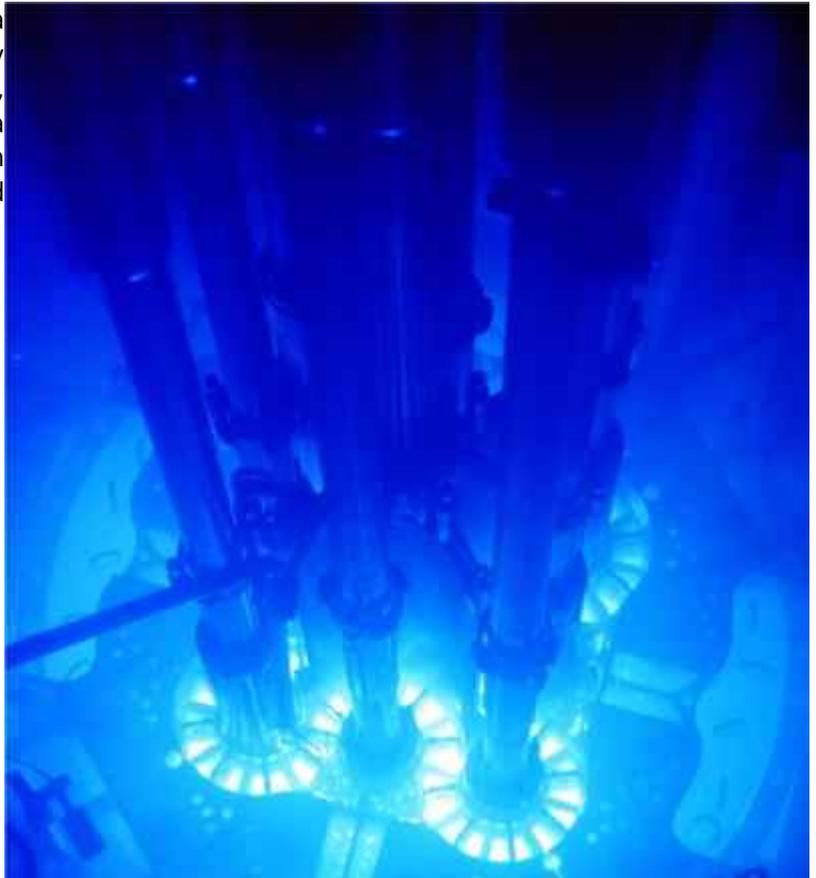


Deal claims to have more than 100 firm orders, largely from the oil and electricity industries, but says the company is also targeting developing countries and isolated communities. 'It's leapfrog technology,' he said.

The company plans to set up three factories to produce 4,000 plants between 2013 and 2023. 'We already have a pipeline for 100 reactors, and we are taking our time to tool up to mass-produce this reactor.'

The first confirmed order came from TES, a Czech infrastructure company specialising in water plants and power

plants. 'They ordered six units and optioned a further 12. We are very sure of their capability to purchase,' said Deal. The first one, he said, would be installed in Romania. 'We now have a six-year waiting list. We are in talks with developers in the Cayman Islands, Panama and the Bahamas.'



The reactors, only a few metres in diameter, will be delivered on the back of a lorry to be buried underground. They must be refuelled every 7 to 10 years. Because the reactor is based on a 50-year-old design that has proved safe for students to use, few countries are expected to object to plants on their territory. An application to build the plants will be submitted to the Nuclear Regulatory Commission next year.

'You could never have a Chernobyl-type event - there are no moving parts,' said Deal. 'You would need nation-state resources in order to enrich our uranium. Temperature-wise it's too hot to handle. It would be like stealing a barbecue with your bare hands.'

Other companies are known to be designing micro-reactors. Toshiba has been testing 200KW reactors measuring roughly six metres by two metres. Designed to fuel smaller numbers of homes for longer, they could power a single building for up to 40 years.

Author: John Vidal and Nick Rosen

Copied from: <http://www.guardian.co.uk/environment/2008/nov/09/miniature-nuclear-reactors-los-alamos>

Article downloaded from page [eioba.com](http://www.eioba.com)