Micro-nuclear

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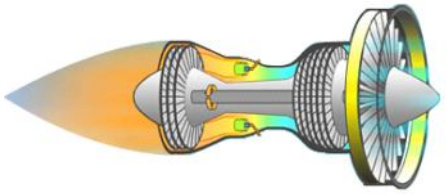
Renewable energy sources all have some significant downside:

- Wind power
  - Noisy, ugly
  - No wind, no power
  - Attracts environmental opposition
- Solar
  - No generation at night
  - Reduced generation on cloudy days
  - Expensive
- Hydro
  - Wrecks river systems
  - Attracts environmental opposition
- Ocean Thermal Energy Conversion
  - In development
- Marine Current Generation
  - In development

Wind, solar, geothermal — all available technologies are important and will have their place in the ultimate solution to our global energy problem. But the workhorse is going to be nuclear. —*Hyperion Power Generation*

Pasted from <http://www.hyperionpowergeneration.com/why.html>

Global heating is like a turbofan aero motor...



the turbine at the back is driving the fan at the front, so the faster it goes...the faster it goes...the faster it goes. It's in a state of positive feedback. *And the governer's broken.*

"When, in the 18th century, only one billion people lived on Earth, their impact was small enough for it not to matter what energy source they used. But with six billion, and growing, few options remain; we can not continue drawing energy from fossil fuels and there is no chance that the renewables, wind, tide and water power can provide enough energy and in time." —*James Lovelock*

Pasted from <http://www.ecolo.org/media/articles/articles.in.english/love-indep-24-05-04.htm>

To Lovelock, the logic is clear. The sustainability brigade are insane to think we can save ourselves by going back to nature; our only chance of survival will come not from less technology, but more.
—*Decca Aitkenhead in the Guardian*

Pasted from <http://www.guardian.co.uk/theguardian/2008/mar/01/scienceofclimatechange.climatechange>

What makes massive amounts of power at < 20cents/unit? Is clean? In some cases actually burns waste product? Needs refuelling once a decade (or better, in some cases once every forty years). Does not heat the planet. Near-neutral carbon footprint.

Nuclear.

"Most of all, they must drop their wrongheaded objection to nuclear energy. Even if they were right about its dangers, and they are not, its use as a secure, safe and reliable source of energy would pose a threat insignificant compared with the real threat of intolerable and lethal heatwaves and sea levels rising to threaten every coastal city of the world." —James Lovelock, *The Revenge of Gaia*

Note: The reader should be cautious in interpreting this quote, like all quotes, it is easy to lose the context. In the same chapter Lovelock continues to explain that he is proposing nuclear power as a stop-gap solution, buying us a half century or so while renewable energy solutions are developed into something better than they are now. [For example: conducting polymers for use in solar arrays].

Steve's comment

These ideas that nuclear power and/or micro-nuclear power could be a part of the energy solution seems quite shocking at first. I encourage the reader to keep an open mind, and not change channel when a programme about the nuclear solution comes on. Toshiba make a 200kW reactor you can buy and bury in the ground. That's enough to provide electricity for, say, some water makers, a food processing plant, street lighting, a Four Square, a small clinic, a village school, and the cottages of thirty families. It will make this power for 40 years at a price that is fixed from the very start at less than 20 cents NZ per kWh.