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February 2023 | £7.99 | [perspectivemag.co.uk](http://perspectivemag.co.uk)



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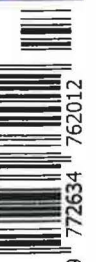
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ISSN 2634-7628



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# Nuclear fall-out

Cheap power comes with a lethal radioactive legacy

By Wade Graham



*Sizewell Marshes, just behind the nuclear plant, is a Special Protected Area*

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*Globally, 250,000 tonnes of nuclear waste from 34 countries are lying around*

**L**ike zombies, some bad ideas refuse to die, like tax cuts for the rich, corporate bonding weekends, no-carb diets and flared jeans. One such is nuclear power. Just as it seemed to be on the way out, new boosters of a “nuclear renaissance” are bobbing up from the mire. Chernobyl and Fukushima showed its terrifying risks, and cheap renewables have significantly undercut the spiralling costs of new reactors (without pricing in the extra, essentially incalculable risks). Yet even some prominent environmentalists are now touting nuclear power as the solution to climate change, because of its lack of direct carbon emissions. And lately, nukes have beckoned as the way to punish Russia for its attack on Ukraine, by showing we don’t need its gas, even though gas isn’t primarily used in Europe for electricity generation, and new reactors take decades to complete.

The latest tout is serial conspiracy-monger, director Oliver Stone, whose new film *Nuclear Now!* just premiered at Davos before a rapt audience. (It appeals to would-be Masters of the Universe looking for the next killer app or crypto-tech to jump in on, while incidentally saving the world and redeeming capitalism.) Stone’s argument, that nuclear plants are safer than “disinforming environmentalists” have made them out to be, is highly debatable – on present evidence. But present evidence is very thin indeed, since the necessary time frame of the debate is how long the danger of the nuclear cycle lasts,

and will have to be paid for, by someone. The answer is that while nuclear wastes are much smaller in volume than those from, say, coal mining, they are vastly more deadly to all living things, and for a long, long time. While the bulk of the stew of radioactive isotopes produced may cool in a few thousand, hundred, or even tens of years, the most radioactive half-lives measure in hundreds of thousands and millions of years.

From its post-World War II beginnings, “Atoms for Peace” had the strong reek of snake oil, a miracle technological cure-all for a civilisation apparently intent on exterminating itself – with nuclear weapons. But, civilianised, we were told peaceful nukes would gift us electricity “too cheap to meter”; tidy nuclear explosions would also effortlessly remake the stubborn earth by excavating harbours, canals, reservoirs and anything else we might dream of. Lethal radiation and contamination for thousands of years? A small detail, to be solved later. (Check out the US government’s old propaganda films for “Operation Plowshare” on *YouTube* to see how unbounded, and scary, these fantasies of omnipotence were.)

In the real world, nuclear technology has real costs: the melted flesh of Hiroshima and Nagasaki; untold cancers and deaths from radioactive fallout and contamination from bomb testing, reactor meltdowns and leaks; and land and water polluted for tens, hundreds, or thousands of years. Plus, it is true, the generation of

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*Somerset's Wilder Coast has a diversity of habitats and wildlife, 80% of which has environmental protection. It is also the location of Hinkley Point, the first nuclear power station to be built in the UK in more than twenty years*



substantial electricity, but at the price of ever-higher piles of lethal radioactive spent fuel accumulating around the globe. In the US alone, more than 85,000 metric tonnes of spent fuel from commercial power generation sit at 75 sites in 35 states, in shallow pools or steel cans, generally in the open. The piles grow by 2,000 metric tonnes a year. And despite a 40-year-old law committing the US government to build a permanent repository, no path to one exists. Taxpayers, most of whom did not use the electricity generated by the fuel, now pay a half billion dollars a year in penalties to utilities and will pay tens of billions more in coming decades. Globally, 250,000 tonnes are lying around, produced by 34 different countries, and the pile increases by 12,000 metric tonnes a year. Again, no path to permanent repositories, capable of safeguarding this mess for tens of thousands of years, exists.

From its inception, civilian nuclear power was based on prevarication and accounting fraud. Faced with the basic maths of a technology with incalculable present and future risks and a time frame of ownership many times longer than the entire history of human civilisation, investors balked at funding reactors that no insurance company would agree to insure. Even if they had, no consumer would buy power priced at its true cost. In the US, the Congress was forced to step in as the insurer, passing the 1957 Price-Anderson Nuclear Industries Indemnity Act, which as its name makes clear, capped corporate liability for nuclear “incidents”, putting future taxpayers on the hook instead. It also agreed to take custodianship of all spent fuel in perpetuity – which is a long time. At the height of the Cold War, when supporting a civilian nuclear industry appeared crucial to national security, the Act amounted to

the most extreme example of corporate socialism ever imagined.

No price for electricity generated by nukes could ever cover the true, full cost of the nuclear cycle – even if safety were, as Mr Stone assures us, nothing to worry about. Nuclear power is nothing more than poisoning the future while making future generations pay for it – forever. It is the antithesis of basic maths, basic ethical responsibility, market economics, and sanity.

It is one thing to advocate keeping existing reactors running during the climate emergency until clean energy can take over – the key questions being: how long, and at what price? But to argue for building new ones is a totally different proposition. Solving climate with nukes would require that thousands more be constructed, in a mad rush. Falling for this idea would make zombies of us all. ■