**Dangerous saviour**

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If you didn’t know better, you’d think Lloyd Marbet was a dairy farmer or maybe a retired shop teacher. His beard is thick, soft, and gray, his hair pulled back in a small ponytail. In his mid-seventies, he still towers over nearly everyone. His handshake is firm, but there’s nothing menacing about him. He lumbers around like a wise, old hobbling tortoise.

We’re standing in the deco lobby of the historic Kiggins Theater in downtown Vancouver, Washington, about to view a screening of ‘Atomic Bamboozle’, a remarkable new documentary by filmmaker Jan Haaken that examines the latest push for atomic power and a nuclear ‘renaissance’ in the Pacific Northwest. Lloyd, a Vietnam veteran, is something of an environmental folk hero in these parts, having led the early 1990s effort to shut down Oregon’s infamous Trojan Nuclear Plant. He’s also one of the unassuming stars of a film that highlights his critical role in that successful Trojan takedown and his continued opposition to nuclear technology.

I’ve always considered Lloyd an optimist, but this evening I sense a bit of trepidation.

“It concerns me greatly that this fight isn’t over yet,” he tells me in his deep baritone. He’s been at this for years and now helps direct the Oregon Conservancy Foundation, which promotes renewable energy, even as he continues to oppose nuclear power. “We learned a lot from Trojan, but that was a long time ago and this is a new era, and many people aren’t aware of the history of nuclear power and the anti-nuclear movement.”

The new push for atomic energy in the Pacific Northwest isn’t just coming from the well-funded nuclear industry, their boosters at the Department of Energy, or billionaires like Bill Gates. It’s also echoing in the mainstream environmental movement among those who increasingly view the technology as a potential climate savior.

In a recent interview with ABC News, Bill Gates couldn’t have been more candid about why he’s embraced the technology of so-called small modular nuclear reactors, or SMRs. “Nuclear energy, if we do it right, will help us solve our climate goals,” he claimed. As it happens, he’s also invested heavily in an “advanced” nuclear power start-up company, TerraPower, based up in Bellevue, Washington, which is hoping to build a small 345-megawatt atomic power reactor in rural Kemmerer, Wyoming.

The nuclear industry is banking on a revival and placing its bets on SMRs like those proposed by the Portland, Oregon-based NuScale Power Corporation, whose novel 60-megawatt SMR design was approved by the Nuclear Regulatory Commission (NRC) in 2022. While the underlying physics is the same as all nuclear power plants, SMRs are easier to build and safer to run than the previous generation of nuclear facilities – or so go the claims of those looking to profit from them.

NuScale’s design acceptance was a first in this country where 21 SMRs are now in the development stage. Such facilities are being billed as innovative alternatives to the hulking commercial reactors that average one gigawatt of power output per year and take decades and billions of dollarsto construct. If SMRs can be brought online quickly, their sponsors claim, they will help mitigate carbon emissions because nuclear power is a zero-emissions energy source.

Never mind that it’s not, since nuclear power plants produce significant greenhouse gas emissions from uranium mining to plant construction to waste disposal. Life cycle analyses of carbon emissions from different energy sources find that, when every stage is taken into account, nuclear energy actually has a carbon footprint similar to, if not larger than, natural gas plants, almost double that of wind energy, and significantly more than solar power.

“SMRs are no longer an abstract concept,” Assistant Secretary for Nuclear Energy Kathryn Huff, a leading nuclear advocate who has the ear of the Biden administration, insisted. “They are real and they are ready for deployment thanks to the hard work of NuScale, the university community, our national labs, industry partners, and the NRC. This is innovation at its finest and we are just getting started here in the US!”

Even though Huff claims that SMRs are “ready for deployment,” that’s hardly the case. NuScale’s initial SMR design, under development in Idaho, won’t actually be operable until at least 2029 after clearing more NRC regulatory hurdles. The scientists of the Intergovernmental Panel on Climate Change are already calling for fossil-fuel use to be cut by two-thirds over the next 10 years to transition away from carbon-intensive energy, a schedule that, if kept, such small reactors won’t be able to speed up.

And keep in mind that the seemingly prohibitive costs of the SMRs are a distinct problem. NuScale’s original estimate of $55-$58 per megawatt-hour for a proposed project in Utah – already higher than wind and solar which come in at around $50 per megawatt-hour – has recently skyrocketed to $89 per megawatt-hour. And that’s after a $4 billion investment in such energy by US taxpayers, which will cover 43 per cent of the cost of the construction of such plants. This is based on strikingly rosy, if not unrealistic, projections. After all, nuclear power in the US currently averages around $373 per megawatt-hour.

And as the Institute for Energy Economics and Financial Analysis put it: “[N]o one should fool themselves into believing this will be the last cost increase for the NuScale/UAMPS SMR. The project still needs to go through additional design, licensing by the US Nuclear Regulatory Commission, construction, and pre-operational testing. The experience of other reactors has repeatedly shown that further significant cost increases and substantial schedule delays should be anticipated at any stages of project development.”

Here in the Pacific Northwest, NuScale faces an additional obstacle that couldn’t be more important: What will it do with all the noxious waste such SMRs are certain to produce? In 1980, Oregon voters overwhelmingly passed Measure 7, a landmark ballot initiative that halted the construction of new nuclear power plants until the federal government established a permanent site to store spent nuclear fuel and other high-level radioactive waste. Also included in Measure 7 was a provision that made all new Oregon nuclear plants subject to voter approval. Forty-three years later, no such repository for nuclear waste exists anywhere in the United States, which has prompted corporate lobbyists for the nuclear industry to push several bills that would essentially repeal that Oregon law.

NuScale, no fan of Measure 7, has decided to circumvent it by building its SMRs across the Columbia River in Washington, a state with fewer restrictions. There, Clark County is, in its own fashion, beckoning the industry by putting $200,000 into a feasibility study to see if SMRs could “benefit the region.” There’s another reason NuScale is eyeing the Columbia River corridor: its plants will need water. Like all commercial nuclear facilities, SMRs must be kept cool so they don’t overheat and melt down, creating little Chernobyls. In fact, being ‘light-water’ reactors, the company’s SMRs will require a continuous water supply to operate correctly.

Like other nuclear reactors, SMRs will utilize fission to make heat, which in turn will be used to generate electricity. In the process, they will also produce a striking amount of waste, which may be even more challenging to deal with than the waste from traditional reactors. At the moment, NuScale hopes to store the nasty stuff alongside the gunk that the Trojan Nuclear Plant produces in big dry casks by the Columbia River in Oregon, near the Pacific Ocean.

As with all the waste housed at various nuclear sites nationwide, Trojan’s casks are anything but a permanent solution to the problem of such waste. After all, plutonium garbage will be radioactive for hundreds of thousands of years.

Excerpted: ‘The Forever Dangers of Small Module Nuclear Reactors’. Courtesy: Counterpunch.org