

The proposed Wylfa Nwydd nuclear power complex is yet another boondoggle to add to the mix of other similarly ill-conceived plants. (“In Wales, a Renewed Fervor for Nuclear” – Jan. 8, 2019.) As your article points out, albeit in the third-to-last paragraph, the U.K.’s Hinkley Point nuclear project is guaranteed a 50% higher price for its power than current rates. That will be taken out of the pockets of the ratepayers.

The \$19 billion price tag given now for Wylfa Nwydd will undoubtedly balloon, as have all modern nuclear plants. But comparing the price tag for this project to the London Array, a highly successful offshore wind farm serving the U.K. now, using some back-of-the-envelope calculations, we see the manifest wastefulness of new nuclear. The London Array has a 630 MW nameplate capacity – that’s the amount of electricity it generates at 100% capacity. But the capacity factor – the real measure of how much power a facility will generate – is 45%. So, the London Array pumps out about 283 MW of electricity on a regular basis. Its construction cost was about \$2.3 billion. For the same \$19 billion for the facility in Wales, you could build a project like the London Array generating 2,334 MW. Wylfa Nwydd will give you about 3,000 MW at 100%, but the capacity factor for nuclear is 90%, so make that 2,700 MW on an ongoing basis. If you take as a given that the Welsh project will come in at \$19 billion – and you shouldn’t – then the two outputs of power are about equal for roughly the same construction cost.

But, there are significant differences: There is no fuel cost for wind, and that for nuclear is considerable. There are no particular security or safety concerns for wind, and there are plenty for nuclear, as there need to be. Operations and maintenance personnel for wind are minimal, 850 estimated for Wylfa Nwydd. Is nuclear “carbon-free?” There is a tremendous amount of carbon-intensive concrete and steel that go into a nuclear plant. What are the timelines for deployment? Much, much quicker for wind than for nuclear. And there is no waste problem with wind. None. But a nuclear power plant generates lethal radioactive waste which has to be safely secured for tens of thousands of years.

The evidence is painfully clear at this late date that wind, solar, geothermal, conventional hydro, marine, and biomass outperform new nuclear in every way.