



## Supporters of Nuclear Energy

# Newsletter

No 247

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*26th July 2019 the 100th Birthday of  
James Lovelock CH CBE FRS, Patron of SONE*

James Lovelock is the doyen of the broad scientific study of the environment and its future including the part that nuclear energy should play. In the 1970s he developed the Gaia Theory, a description of the two-way dynamic relationship between life and its environment. His voice has always been independent and scientific, or, as some have preferred to see it, controversial. What we now see happening around the world shows that everyone should have taken what he said more seriously.

Last September I had the privilege of visiting Jim and his wife Sandy in their wind swept home overlooking the Dorset coast. We enjoyed a very positive discussion. His enthusiasm for nuclear energy and his interdisciplinary view of the environment are undimmed. Indeed this month he challenges us all further with his new book, **Novacene: The Coming Age of Hyperintelligence.**

We congratulate him on his centenary and wish him a very happy birthday.

### **“Yellow Cake”, a production by the Why Theatre Company**

It is a pleasure to recommend the work of the Why Theatre Company. <https://www.indiegogo.com/projects/yellow-cake--2/x/22004314#/>

Last February I received an email from Eleanor Neylon and Matt Attard, two graduates of RADA, who have set up this company. Eleanor comes from a medical family and is an arts graduate: Matt is a physics graduate from Leeds. They plan to put the question of nuclear power and public understanding of it on the stage. Their aim is to encourage the audience to question their own assumptions.

Matt and Eleanor came to Hinkley Point C with us; they engaged the audience before and after a public lecture that I gave in High Wycombe; they presented their plans to the SONE Committee at its June Meeting. There it was agreed that

their initiative is a most welcome development and SONE members should be encouraged to contribute to help them raise the seed money needed to get started.

No details of the production are available yet but they intend to grow the content organically based on experience with initial showings in UCL, Manchester and, hopefully, Oxford in the autumn. To this end, I understand, these showings will be followed by question and answer or panel sessions.

My contacts around the world have expressed enthusiasm. If successful here, the play could appeal elsewhere too. I suggest that this could be the kind of soft nuclear export that the UK can offer to turn world opinion. I hope that members of SONE will support the Why Theatre Company using a card and the above link, if they can.

In later Newsletters I will post information about the showings as it becomes available.

### **June News, selected items from World Nuclear Weekly News where further details and other reports may be found**

3 June Entergy's Pilgrim nuclear power plant in Massachusetts was shut down permanently on 31 May after 47 years in operation. The company, which is leaving the merchant power business, announced in 2015 that it would close the 680 MWe boiling water reactor early for economic reasons. The company said the decision to close the plant was the result of a number of financial factors, including low wholesale energy prices. Pilgrim entered service in 1972, and is currently licensed to operate until 2032.

5 June The drama and the facts about Chernobyl: Craig Mazin - creator of the mini-series Chernobyl for television network HBO about the 1986 accident in Ukraine - has warned against "reactionary garbage" about the show, stressing that he is a supporter of nuclear energy. In an interview with Slate published on 3 June, Mazin said "*there had been really dumb expectations the mini-series would show three-headed babies, and spread lies, and tell people that nuclear power is horrendous, and no, it's not. For a million reasons, this was not an anti-nuclear polemic. It's anti-Soviet government, and it is anti-lie, and it is pro-human being. But anyone who thinks the point of this is that nuclear power is bad, is just... , they've just missed it.*" However the WNN report goes on to agree with other knowledgeable

authorities who say that much of the series was simply invented to make an exciting story <https://www.forbes.com/sites/jamesconca/2019/06/27/how-hbo-got-it-wrong-on-chernobyl/>

- 7 June Uranium enrichment company Urenco has today held a ceremony to mark the official opening of its Tails Management Facility (TMF) at Capenhurst in the UK. The TMF will treat depleted uranium tails, a by-product of the enrichment process, by converting them from uranium hexafluoride into more chemically stable uranium oxide.
- 7 June **US DOE changes waste interpretation.** The US Department of Energy has published a new interpretation of high-level radioactive waste in which reprocessing waste streams are defined by their radiological characteristics rather than solely on how they were made. Up to now the DOE has managed nearly all reprocessing waste streams as HLW regardless of radioactivity in a one-size-fits-all approach. This, it says, has led to decades of delay, cost billions of dollars, and left the waste ‘trapped’ in DOE facilities in Idaho, South Carolina and Washington without a permanent disposal solution. “Recognising this failure, this Administration is proposing a responsible, results-driven solution that will finally open potential avenues for the safe treatment and removal of the lower level waste currently housed in three states,”
- 12 June Fermi Energia has launched a feasibility study on the suitability of small modular reactors for Estonia’s electricity supply and climate goals beyond 2030, following a financing round of EUR260,000 (USD290,076) from investors and shareholders. Partners in the research include universities in Estonia, VTT and Fortum Nuclear Services from Finland, and Tractebel of Belgium. Fermi Energia has selected four innovative SMR designs to be included in the feasibility study: Moltex Energy SSR-W300, Terrestrial Energy IMSR-400, GE Hitachi BWRX-300 and NuScale SMR.
- 14 June The Russian-designed VVER-TOI nuclear power reactor design has been formally certified as compliant by the European Utility Requirements organisation. Atomenergoproekt, a subsidiary of Russian state nuclear corporation Rosatom, announced the VVER-TOI design in 2010, developed using technical results from the VVER-1200 project. Rosatom describes the reactor design as the “logical development” of its so-called Generation 3+

units and an “evolutionary step” in improving the reactor vessel design of high-capacity plants.

- 18 June A ‘Call to Action’ for accelerating innovative solutions to sustain and advance the current operational fleet of nuclear power plants has been issued by the attendees of the *Global Forum on Innovation for the Future of Nuclear Energy*, held recently in Gyeongju, South Korea. The event was co-organised by the International Atomic Energy Agency, the Electric Power Research Institute, the UK’s National Nuclear Laboratory, the OECD’s Nuclear Energy Agency and Korea Hydro & Nuclear Power.
- 19 June The UK Energy Technologies Institute: *Update to the role for nuclear in UK’s transition to a low carbon economy* says there has to be a clear focus from all stakeholders on cost if new nuclear is to be commercially successful. Whilst large-scale nuclear reactors are best suited for baseload electricity, it said, small modular reactors and advanced modular reactors may be valuable for flexible dispatchable heat and power as high-temperature heat could be cost effective for hydrogen production.
- 28 June The second EPR unit at Taishan in China, a twin of Hinkley Point C, is connected to the grid. Construction began in 2010, one year after the first.
- 28 June The concrete basemat of the first EPR unit at Hinkley Point C has been completed.
- 25 June (from Nuclear Engineering International) UK-based Assystem on 16 May signed a Memorandum of Understanding with Uzbekistan’s Ministry of Energy to help with the country’s energy transition, which includes the target to double its electricity production by 2030, raising its installed capacity from 13GWe to 27GWe. Uzbekistan’s new energy mix will include civil nuclear production capacities and new production infrastructure based on gas and wind power. The agreement provides for a joint venture to be set up by year-end.

Wade Allison, Honorary Secretary  
Oxford, 2 July 2019

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