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ANA Annual General Meeting

The ANA Annual General Meeting was held online at 12 pm on Wednesday 14 August 2025 with 17 Members (15 Full Members) participating. Dr Mark Ho, ANA President, reported on nuclear developments in Australia, activities of ANA in the past year and plans for next year.

At home, Australia continues to supply uranium around the world, and the OPAL research reactor continues to demonstrate world-class performance. Over the past two years, the AUKUS program has steadily expanded Australia's nuclear capability. The Australian Submarine Agency is building its workforce and Parliament has legislated for the Australian Naval Nuclear Power Safety Regulator (ANNPSR).

Even though policy movement on civil nuclear power for Australia has been limited, momentum is gathering overseas to greatly expand the world's nuclear power fleet. The UK government has confirmed their commitment to build EPR reactors in Sizewell C, China approved 10 new gigawatt reactors and US is planning nuclear power plant restarts.

Against this backdrop, the ANA committee has kept focus on speaking with the public on the benefits of nuclear power with ANA committee members giving regular talks and appearances.

The ANA recognises the efforts of fellow pro-nuclear groups including Nuclear for Australia, Women in Nuclear, Minerals Council of Australia, WePlanet Australia, and UNSW nuclear innovation centre.

The ANA Committee for 2025-26 is:

President	Dr Mark Ho
Vice President	Ms Hasliza Omar
Secretary & Public Officer	Dr John Harries
Treasurer	Mr Mark Healy
Committee	Mr Richard Brown
	Ms Helen Cook
	Dr Richard Garrett
	Dr Mamun Haque
	Dr Joanne Lackenby

Recent Nuclear Energy Developments around the World: July to September 2025

Information sourced from World Nuclear News https://www.world-nuclear-news.org/ .

New Builds and Life Extensions

United States: The Palisades nuclear power plant has resumed operational status after previously having been shut down for decommissioning in May 2022. Palisades is now authorised to receive nuclear fuel and restart plant once technical specifications have been met. Palisades was licensed to operate until 2031, and now intends to submit a licence extension, which if successful, would extend the plant life to 2051.

NRC Reauthorizes Palisades Operating License (Holtec)

India: The first concrete for Unit 1 at the Gorakhpur nuclear power plant has been poured. Unit 1 is the first of four 700 MWe pressured heavy water reactors planned for the site.

China: The first safety concrete for Unit 1 at Jinqimen nuclear power plant, has been poured. Unit 1 is the first of six 1200 MW Hualong One units planned for the site.

Russia: Unit 1 at Kalinin has been granted a 19-year operating extension to 2044. Kalinin 1 is a VVER-1000 that began commercial operation in 1985.

United States: A life extension has been approved for Unit 1 at VC Summer, becoming the 13th US reactor to have a licence extended to 80 years.

United States: Early works for three US advanced or fusion reactor projects have commenced:

- Helion has commenced initial earthworks and construction for a 50 MWe or greater pulsed fusion device. The electricity generated will be supplied to Microsoft.
- Aalo Atomics has broken ground for its first experimental modular reactor, the Aalo-X. The plan is to complete construction and achieve first criticality by July 2026. Aalo-X is a sodium cooled reactor and a precursor to the Aalo Pod, a larger 50 MWe version.
- Oklo has broken ground for its first Aurora powerhouse sodium cooled reactor. The Oklo Aurora Powerhouse has a maximum power of 75 MWe.

Policy

United States: The US NRC has extended the duration of its licence design certifications from 15 years to 40 years, meaning already approved designs will now be suitable to build in the US for 40 years from certification. Individual projects still need site-specific approvals. Design certifications have been issued for the following designs:

- Advanced Boiling Water Reactor (ABWR)
- Advanced Power Reactor 1400 (APR1400)
- System 80+
- Advanced Passive 600 (AP600) and 1000 (AP1000)
- Economic Simplified Boiling-Water Reactor (ESBWR)
- NuScale Small Modular Reactor (US600)

United States: Denver airport is considering deploying an onsite SMR to help it to become “the greenest airport in the world and to be energy independent”. A feasibility study has commenced that will look at aspects such as long-term electricity needs, costs, funding options and risks amongst others.

World: Large energy consumers are talking to the nuclear industry with the aim of setting up private grids. Industrial consumers would benefit from a supply that is resilient, clean, reliable and secure, and the nuclear developer would benefit from simplified financing arrangements and committed partners. Colocation is already starting to emerge, particularly in the areas of data centres/AI.

World: After recently announcing the end of the ban on funding new nuclear energy projects, the World Bank has partnered with the IAEA to enhance support for countries that have nuclear energy within their energy strategy.

Continued Page 3

Recent Nuclear Energy Developments – Continued from Page 2

United Kingdom: The final investment decision has been signed by the UK Government for Sizewell C. Sizewell C will feature two 1.6 GW EPR reactors. The project will be carried out under a Regulated Asset Base funding model, meaning consumers will contribute to the cost of the new plant during construction. The plant will generate electricity to supply approximately 6 million homes for 60 years. It will largely be a replica of Hinkley Point C but is expected to cost about 20% less.

Malaysia: Malaysia has launched a feasibility study for the use of nuclear energy using the IAEA Milestones approach.

Taiwan: A referendum to restart Maanshan has ended with overwhelming support for the restart but low voter turnout, leading to rejection of the result by the election commission. 74% were in favour and 26% opposed, however the in-favour number of votes must also be at least 25% of the total number of voters. The turnout rate was just shy of 30%. Under Taiwanese law, the same proposal for voting cannot be submitted again within two years.

United States: Following the recent signing of several executive orders to increase the use of nuclear power, the US NRC and DOE have both made announcements towards streamlining the process for advanced reactor technology deployment. The DOE has launched a pilot program to speed up the construction and operation of test reactors under DOE authority outside of the national laboratories. The NRC has announced the outcome of three policy matters on microreactors that exclude microreactors from being "in operation" if certain conditions are meant, meaning microreactors can be fuelled at a factory and not be considered to be "operating".

Europe: The European Union has formally rejected Austria's bid to have certain nuclear and gas activities removed from the officially approved list of green investments.

Other

World: 2024 was a record-breaking year for nuclear energy production, generating 2667 TWh and surpassing the previous record of 2660 TWh in 2006. The average capacity factor worldwide in 2024 was 83%. In 2024, seven new reactors were connected to the grid, a further nine commenced construction, and four were shut down. Details on the performance of the worldwide nuclear fleet can be found in the World Nuclear Association's World Nuclear Performance Report 2025.

United States: Westinghouse has joined forces with Google Cloud to use AI tools to speed up the construction of new power plants and enhance operations at existing plants. 75 years of proprietary data, knowledge and expertise will be used by Westinghouse's generative AI system to optimise the deployment of its three reactor technologies.

Industry: Microsoft has become the first major tech company to join the World Nuclear Association.

Jo Lackenby ANA

NEA Small Modular Reactor Dashboard: Third Edition

The Third Edition of the OECD Nuclear Energy Agency Small Modular Reactor (SMR) Dashboard was published on 11 Sept 2025.

Interest in SMRs is growing worldwide, both in the private sector and among governments. NEA identified 127 SMR designs worldwide but 53 designs requested not to be assessed by NEA or are not being developed.

Private investment is surging, with an estimated USD15.4 billion of capital secured for SMR development and deployment.

Of the SMR designs assessed by the NEA, 51 designs are involved in pre-licensing or licensing processes across 15 countries. Seven designs are either operating or under construction.

Three SMR designs have secured full funding for their first-of-a-kind deployment:

- HTR-PM, a high-temperature gas-cooled reactor in China
- RITM-200S, a floating pressurised water-cooled reactor in Russia
- BWRX-300, a boiling water-cooled reactor in Canada

The supply of High-Assay Low-Enriched uranium (HALEU), is a key bottleneck for many designs.

Eighteen of the SMRs assessed by NEA are micro-reactors with an average electrical output of less than 10 MWe.

https://www.oecd-nea.org/jcms/pl_108326/the-nea-small-modular-reactor-dashboard-third-edition

The Second Export of Spent Nuclear Fuel from the OPAL Multipurpose Reactor

On 3 September three TN-MTR transportation casks, containing spent fuel arising from seven years of Reactor operation, were transported from ANSTO to Port Kembla. The transportation was performed at night to minimise disruption to road users.

At the port, the casks were loaded into an exclusive use vessel, which is now enroute to France. In France, the spent fuel will be transferred to the Orano reprocessing facility in Normandy, where unused nuclear material will be recovered and recycled.

Cask containing spent fuel elements in shipping container

The success of the operation was the result of meticulous planning from a wide range of experts across ANSTO, and collaboration between ANSTO and multiple state and federal agencies, including the AFP, NSW Police, Transport for NSW, ARPANSA, ASNO, AMSA and the Port Authority of NSW. ANSTO was also well supported by Orano, DG Air Freight, NSW Ports and DISR.

Several months prior to transportation the casks were carefully loaded with spent fuel. Highly skilled loading teams transferred the 23,000 kg casks into the OPAL Reactor building and, one at a time, lowered them into the service pool for underwater loading. After each cask

Convoy on way to Port Kembla, NSW

was loaded a shielded lid was installed and the cask was lifted from the pool to be prepared for transportation.

Preparations included draining, drying, decontamination, leak testing and radiological inspections. All operations were completed with minimal disruption to the production of nuclear medicine, irradiated silicon and neutrons for science.

The export enables the continued operation of the OPAL Reactor for many years to come.

Shipping Container being loaded onto ship

Mark Healy, ANSTO

Australia's Naval Nuclear Power Safety Regulator will be established on 1 November 2025

Australia's Naval Nuclear Power Safety Regulator will operate within a national regulatory system that supports the safety of people, the public and the environment, and will be established on 1 November 2025.

The draft regulations focus on licensing the facility and material activities necessary to support work associated with the current stage of Australia's nuclear-powered submarine program. Regulations for submarine-specific activities will be developed at a later stage.

There are two Designated Zones in the Australian Naval Nuclear Power Safety Act 2024: the Stirling Designated Zone at HMAS Stirling at Garden Island, Western Australia, and the Osborne Designated Zone at Osborne Naval Shipyard, South Australia.

Before a Designated Zone can be prescribed, the Act requires that public consultation occurs on the proposed new area.

Australian Submarine Agency 2 July 2025