

Building Australia's Nuclear Workforce: Education, Training, and the AUKUS Opportunity

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The Australian Nuclear-Powered Submarines Program presents a generational opportunity—and a formidable challenge—in workforce development. While Australia boasts deep expertise in critical nuclear disciplines, our domestic capacity remains limited. Scaling this sovereign capability to meet the demands of AUKUS, without undermining other nationally significant sectors, requires a transformative approach to nuclear education and training.

Since the AUKUS announcement in 2021, Australia's nuclear education landscape has evolved rapidly. New programs and partnerships have emerged across universities, government agencies, and industry, underpinned by decades of world-class research and access to cutting-edge infrastructure both locally and internationally.

This presentation highlights how the Heavy Ion Accelerator Facility (HIAF) at the Australian National University is being leveraged to train the next generation of nuclear professionals—from high school students to seasoned experts across diverse fields. We explore transdisciplinary training models that integrate nuclear regulation, safeguards, law, and systems engineering, reflecting the complexity of modern nuclear enterprise.

We will also examine the systemic challenges facing Australia's nuclear education ecosystem, including talent retention, infrastructure bottlenecks, and the need for sustained investment. Ultimately, we argue that a coordinated, long-term strategy is essential to build a resilient, sovereign nuclear workforce capable of supporting Australia's strategic ambitions.