



Australian Government



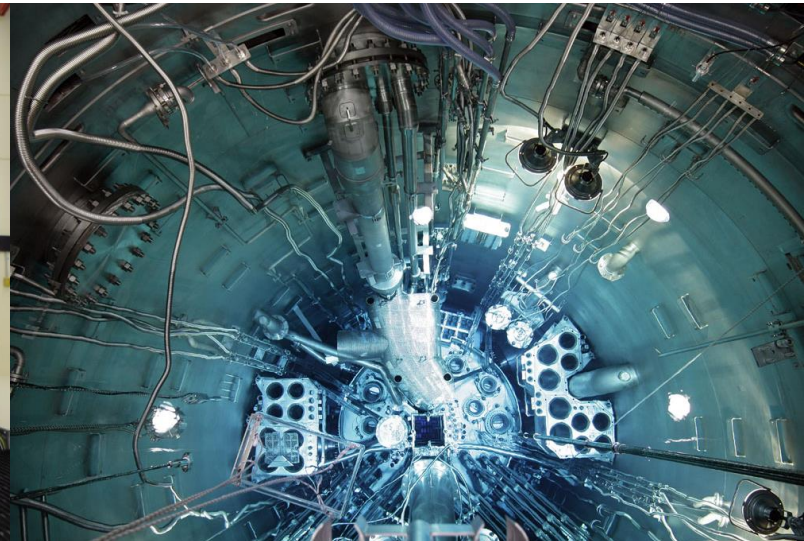
IGORR - IAEA Joint Conference 2017

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18th IGORR Conference & IAEA Workshop
ICC Sydney, Dec ember 3-7 , 2017, Sydney. Australia

Nuclear Industries and Operations in Australia

- Australia does not have a nuclear power industry; nuclear related activities/industries include:
 - Expanding uranium mining industry; three mines operating and a further three scheduled to begin production in the near future.
 - Seven cyclotrons for radiopharmaceutical production
 - Operation of a 20MW research reactor (OPAL) for radioisotope production, NTD Silicon and thermal/cold neutrons (ANSTO)



ANSTO overview

Formed in 1953

HIFAR critical 1958

>\$1 billion assets under management

Annual turnover > \$350 million

Circa 1200 employees; 300 Ph.D.'s

OPAL Reactor Critical 2006



OPAL Research Reactor

20 MW Open Pool Australian Light water reactor

Light water cooled and moderated

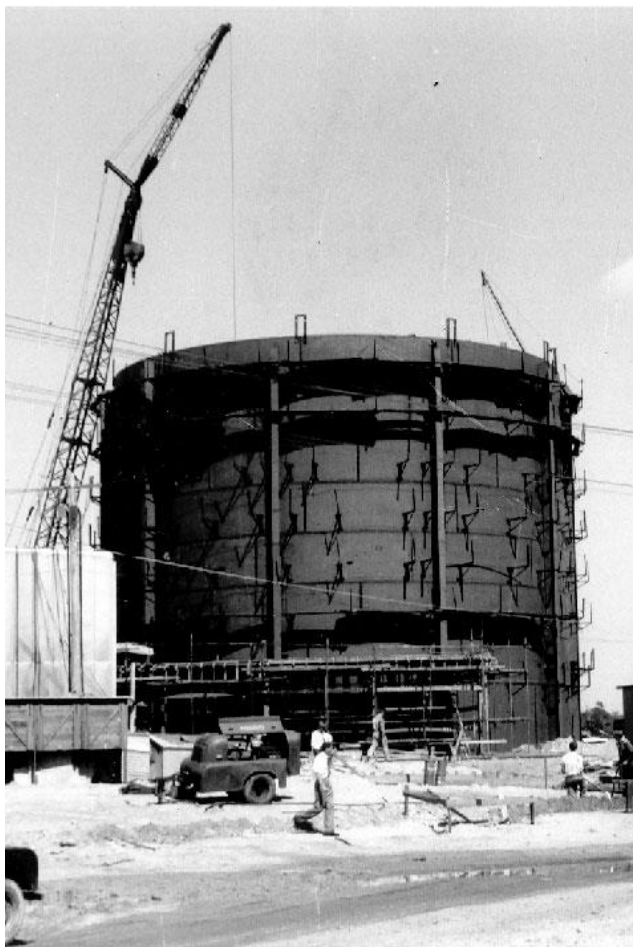
Heavy water reflector

Compact core consisting of 16 fuel assemblies

Nuclear medicine, neutron science and silicon irradiation

Celebrating 10 years of operation

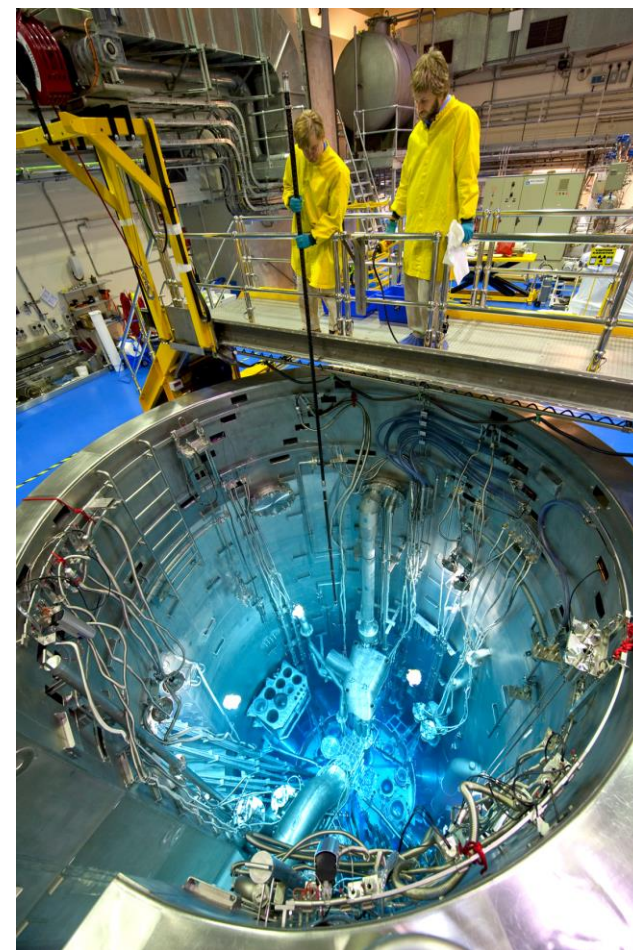
Australian Research Reactor History



5 HIFAR 1958-2007



MOATA 1961-1995



OPAL 2006 - Present

ANSTO Nuclear Medicine

- Fully operational Q1 2018
- Mo-99 facility; 3,500 6 day Ci per week
- Proven, reliable, LEU-LEU technology
- Integrated operations with OPAL Reactor
- 25% of World Mo-99 demand
- World's first full scale Synroc waste treatment plant



Synroc Waste Treatment Plant

Mo-99 Facility

ANM

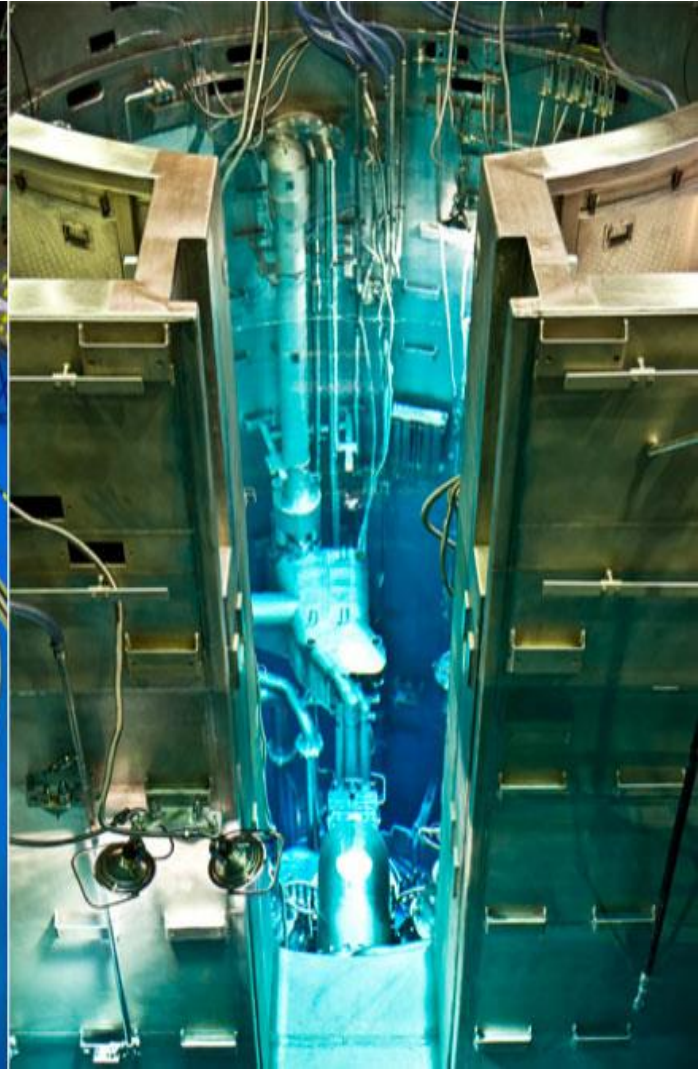
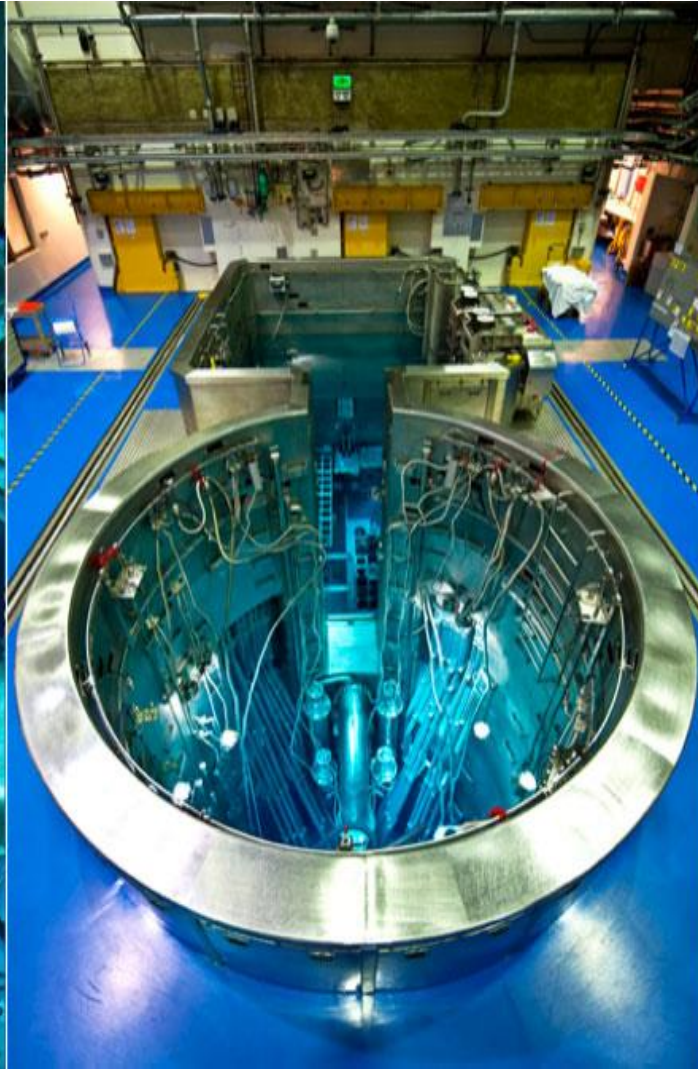
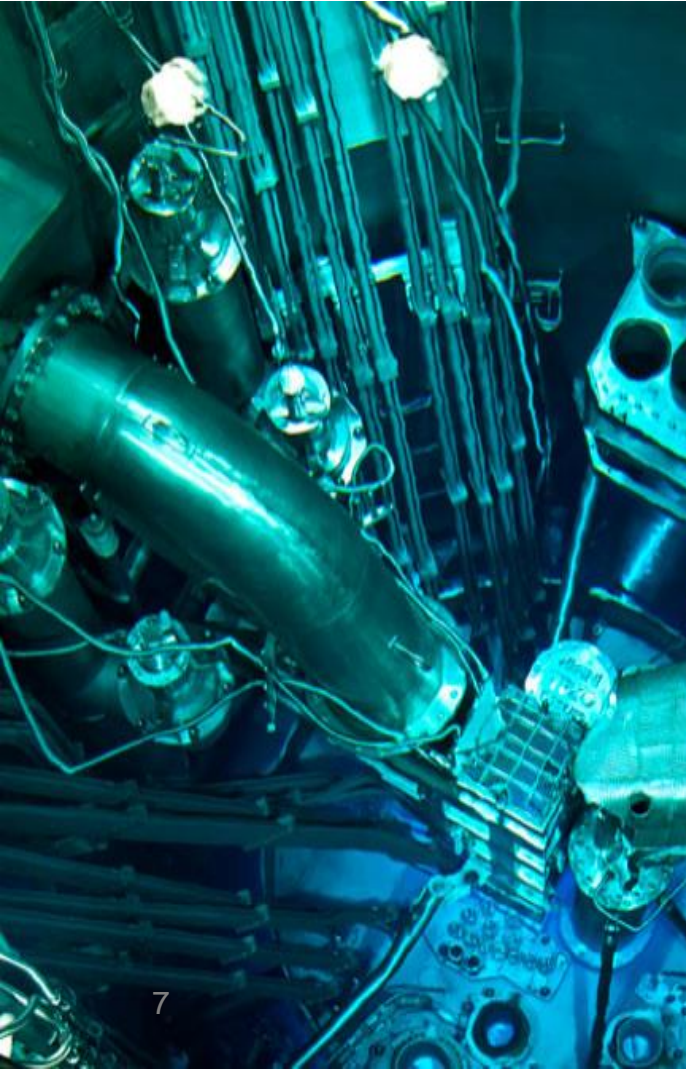


Synroc Waste Plant

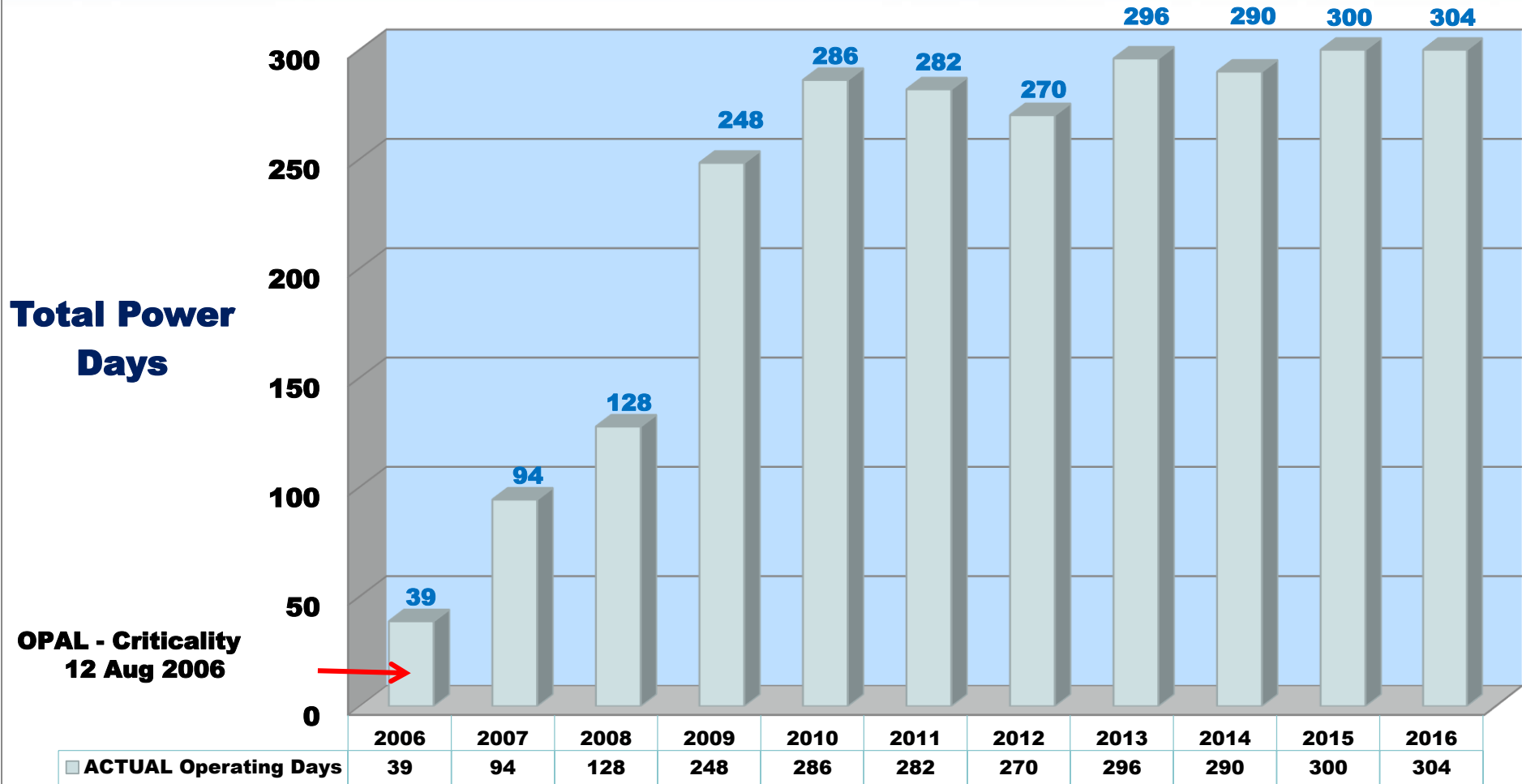
SyMo



LEU/LEU Mo-99



OPAL Operating Days at Power CY's (2006 - 2016)





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Ansto

Thank you

