NUCLEAR POWER AND FUEL CYCLE

The best known peaceful application of nuclear technology is nuclear power. Many countries see nuclear power as an affordable, reliable and clean source of energy that can help to mitigate the impact of climate change. It is a significant part of the world's energy mix and its use is expected to grow in coming decades.

The IAEA promotes the efficient, safe and secure use of nuclear power by supporting existing and new nuclear programmes around the world. It provides technical support, catalyses innovation and helps to build capacity in energy planning and analysis, and in nuclear information and knowledge management.



More than 500 scientists from 28 nations attended an IAEA conference on plasma physics and controlled nuclear fusion research in Salzburg, Austria, in 1961. The IAEA supports research on nuclear fusion.

Photo: IAEA



The decommissioning of the MERLIN research reactor in Germany in 2008.

Photo: Jülich Research Centre

IAEA Director General Yukiya Amano at the ONKALO nuclear waste repository in Olkiluoto, Finland, in 2012. The IAEA promotes the safe and secure disposal of radioactive waste.

Photo: Posiva





IAEA experts explain sustainable practices in phosphate mining and the potential extraction of uranium as a by-product at the Benguerir Mine in Morocco in 2014.

Photo: IAEA

Signing of the Host State Agreement on 27 August 2015 for the IAEA Low Enriched Uranium (LEU) Bank in Ust'-Kamenogorsk, Kazakhstan, scheduled to be built by September 2017. LEU is used to make fuel that powers most nuclear reactors.

Photo: Government of Kazakhstan





The construction site of the Barakah nuclear power plant in the United Arab Emirates in 2016. The IAEA assists countries using or introducing nuclear power to do so safely, securely and sustainably.

Photo: IAEA