

URANIUM-RARE EARTHS OPENING PRESENTATION

IAEA SUPPORT TO MEMBER STATES FOR SUSTAINABILIY OF NUCLEAR FUEL FOR NUCLEAR POWER PLANTS

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ABSTRACT

In January 2023, a total of 422 commercial nuclear reactors were connected to the electrical grid in 32 countries and globally an additional 57 reactors were under construction. Uranium demand is based on both the number of installed nuclear power plants as well as fuel cycle duration, enrichment level, burn-up and advanced fuel technologies.

The IAEA provides support to 175 Member States through a number of programmatic areas. To help ensure sustainability of uranium for the current and future fleet of nuclear power plants, the IAEA currently provides direct support to 52 Member States that are actively involved in development of the uranium production cycle. This includes prospecting, exploration, mine and processing facility development and finally decommissioning and remediation. To enhance support to Member States across all phases of the uranium production cycle, the IAEA published in January 2023 a Nuclear Energy Series Guidance publication titled "Milestones in the Development of National Infrastructure for the Uranium Production Cycle". This publication can be used by Member States to assess their own status of uranium production development against each of the milestones. This publication also sets the foundation for IAEA integrated uranium production cycle review missions, which upon request from a Member State, will review a Member State's progress in developing their national uranium production programme. The output of such missions will be a comprehensive final report outlining recommendations, suggestions and identification of areas of good practice. In addition, the results of such a review mission will form the basis for an integrated work plan, which the Member State may use a guidance in their development of national infrastructure for the uranium production cycle.

The OECD-NEA in collaboration with the IAEA is publishing the 2022 edition of "Uranium Resources, Production and Demand", also commonly known as the "Red Book". This government-sponsored publication, published biannually since 1965, provides an overview of global trends and developments in uranium resources, production and demand.

This presentation will provide detail on supply and demand forecasts for uranium based on the joint OECD-NEA/IAEA Uranium Resources, Production and Demand (Red Book) 2022 publication as well as provide a more detailed overview of IAEA global support to ensure a sustainable supply of uranium for nuclear power that meets social, environmental and economic requirements.

Keywords: Uranium, Mining, Supply, Demand, Sustainability, Nuclear Fuel, Nuclear Power