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Harmony - the future of electricity and nuclear delivering its potential

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Nuclear power is in demand globally and growing at its fastest rate in 25 years, with new countries and new designs coming on line for the first time. However, to meet climate and development goals nuclear must grow faster still. Harmony is the nuclear industry's vision for the future of electricity and sets the goal of building 1000 GWe of new capacity and providing 25% of global electricity in 2050.

What might be the consequences for fuel supply of such a nuclear programme? The 1250 GWe of nuclear capacity envisaged in 2050 would require about 200,000 tU annually, assuming similar fuel efficiencies to current reactors, and it would require nearly 4.5 million tU of cumulative consumption up to 2050. Sufficient uranium resources exist in the world to allow such a rapid expansion: the 2016 edition of the 'Red Book' identifies over 10 million tU of conventional and unconventional resources. More could undoubtedly be discovered with scaled-up exploration programmes. Of course, a very rapid expansion of the mining sector would also be needed to supply such an industry.

Country or International Organization

World Nuclear Association

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