



Abstract

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Nuclear energy and proliferation risks: myths and realities in the Persian Gulf

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The use of civil nuclear power is set for major expansion amongst the world's developing economies. The pursuit of nuclear energy technology offers energy-hungry developing nations access to reliable large scale electricity supplies with very low carbon emissions. But this climate friendly energy solution comes at a security price. Historically one third of the 30 countries that possess civil nuclear energy programmes have weaponized them. Security threats from the proliferation of nuclear weapons might become an important barrier to the further expansion of the global nuclear energy market. Nowhere is this tension more acute than in the Persian Gulf. Iran and the United Arab Emirates (UAE) illustrate how the establishment of civil nuclear energy programmes can pose different levels of security risk depending on a country's foreign policy. While the UAE has embraced international transparent nuclear safeguards, Iran has rejected the concerns of the international community and continues to develop uranium enrichment technology that may soon lead towards a viable nuclear weapon. Moreover the use of proliferation-resistant thorium rather than uranium as a nuclear fuel technology might significantly reduce the threat of plutonium weaponization in Arab states. The UAE nuclear energy model deserves the political support of Western nations as the best compromise between nuclear energy expansion and nuclear security threats. This article discusses the myths and realities surrounding the diversion of civil nuclear energy programmes for military use in the Persian Gulf region, and argues that proliferation of atomic weapons is a political choice, not a certain technical inevitability.

Keywords

Nuclear energy, nuclear weapons, proliferation, uranium, plutonium, thorium, Iran, UAE

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