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The "Nuclear Renaissance" and the Spread of Nuclear Weapons

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As interest grows around the world in nuclear power as an energy source that could help control greenhouse gas emissions, some have proclaimed the arrival of a "nuclear renaissance." But can the increased risks of more nuclear power be managed? The political crisis surrounding Iran's pursuit of uranium enrichment has exposed weaknesses in the nuclear nonproliferation regime. Also, al Qaeda's declared interest in weapons of mass destruction raises the concern that terrorists could acquire nuclear weapons by stealing materials from poorly secured facilities. Growth of nuclear energy would require the construction of many additional uranium enrichment plants. And the generation of more spent nuclear fuel without a credible waste disposal strategy would increase political support for reprocessing, which separates large quantities of weapon-usable plutonium from spent fuel. There is little evidence that the various institutional arrangements and technical schemes proposed to mitigate the security risks of a major nuclear expansion would be effective. This talk will focus on the measures necessary to allow large-scale global growth of nuclear power without resulting in an unacceptably high risk of nuclear proliferation and nuclear terrorism, and will discuss the feasibility of such measures.