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## **The Brazilian Nuclear licensing process for disruptive and innovative technologies**

One of the biggest challenges of this century will be to adapt the energy production to the country's needs. This production must harmonize low cost, reduced environmental footprint and low greenhouse effect gases release. An interesting concept is the Small Modular Reactor (SMR) which provides passive safety, low cost of operation and installation and long cycles with duration that can reach 8 years.

One of the biggest challenges for Brazil to overcome is the necessity to rethink the licensing process and the regulatory scope in order to not negatively impact the commercial costs and the innovative projects production schedule. The SMRs bring challenges to the reactor licensing process associated to the outsourcing, to the modular project's approach, to a strong decentralization of the project activities and to the safety analysis, building and commission offsite.

The article will present the Brazilian Nuclear Regulatory Body initiatives to prepare safety requirements for SMRs in harmonization with the current practices as well as cooperation among regulators, so that to provide a regulatory framework to provide for effective oversight of the nuclear power.

### **Country OR International Organization**

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### **Confirm that the work is original and has not been published anywhere else**

YES

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