



iThEC

INTERNATIONAL THORIUM ENERGY COMMITTEE

ADS and our Environment

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The Energy and Climate Challenge

Four statements:

- 1. We live in a world where the demand for energy and electricity is increasing**
- 2. We live in a world where the use of fossil fuels is threatening the environment**
- 3. We live in a world where the use of fossil fuels is not sustainable**

The Energy and Climate Challenge

4. We need innovative technological solutions to meet the “decarbonization challenge”.

- **This calls for** a cost-conscious approach to energy consumption, and higher energy efficiency
- the increased use of new renewable energies
- the development of new large power plants that are safe, environment clean and economical
- which nuclear to choose ?

Toward Innovative Nuclear Power

Thorium Fuel: $n + {}^{232}\text{Th} \rightarrow {}^{233}\text{Th} \rightarrow {}^{233}\text{Pa} \rightarrow {}^{233}\text{U}$

Accelerator Driven Systems (ADS)

Thorium fuelled ADS

iThEC, The international Thorium Energy Committee

an ADS experiment of substantial power

a high-power superconducting cyclotron design

ADS Applications

CO₂ sequestration

Radiopharmaceutical production , and material irradiation testing