



Introduction



Nuclear Projects & Facilities in South Africa at Present





Apart from several ancillary functions, the main function of Necsa is to undertake and promote research and development in the field of nuclear energy and radiation sciences and technology; to process source material, special nuclear material and restricted material; and to co-operate with persons in matters falling within these functions.



Koeberg Nuclear Power Station

Commissioned in 1984
Koeberg Power Station is capable of producing 1 800 MWe and is situated 30km northwest of Cape Town on the Atlantic coast.



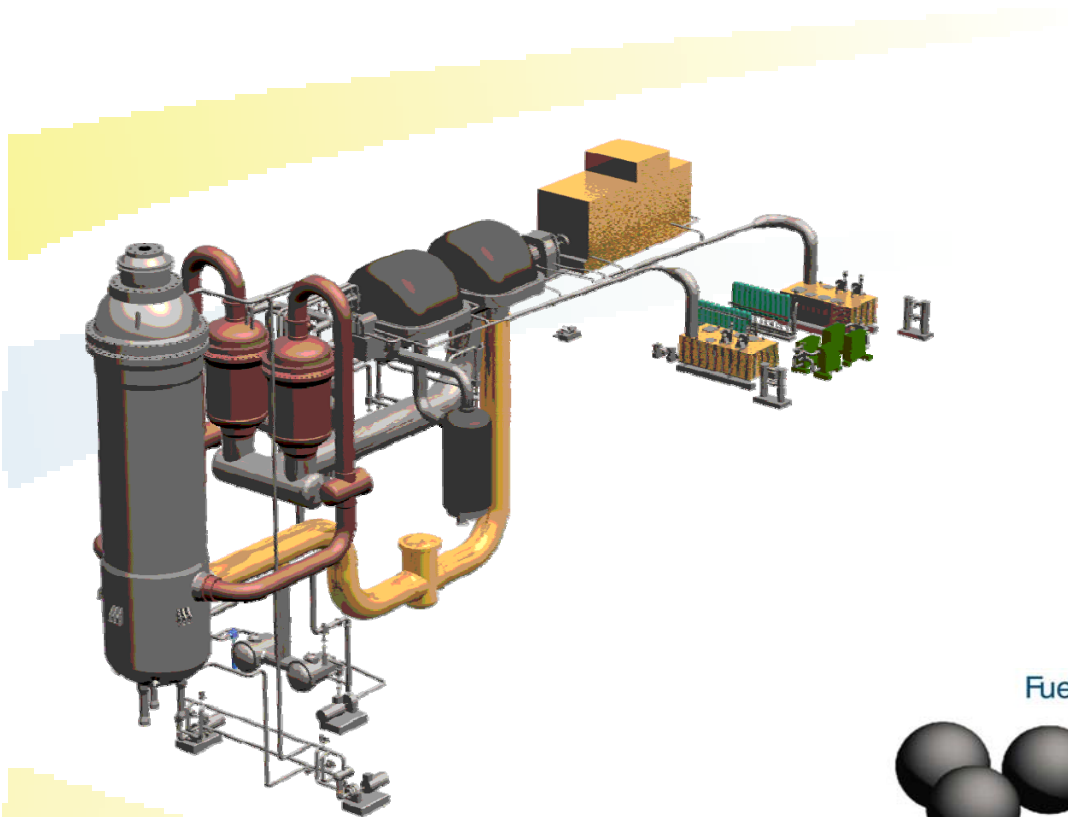
Additional Nuclear Power Stations

At present only 6% of the power generated is from Nuclear Power stations.

By 2030 it is expected to rise to 30%.

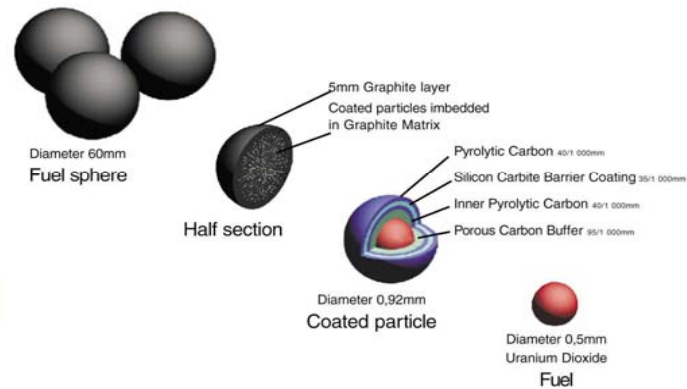
Eskom is expected to make an announcement on awarding contracts for the procurement of additional Nuclear Reactors shortly.





**More to follow
shortly.....**

Fuel element design for PBMR



Nuclear Energy Policy and Strategy

- Nuclear Energy Policy and Strategy for the Republic of South Africa

- Issued for Public Comment in July 2007
- Approved in June 2008



- **Vision for Policy and Strategy**

- To utilize industrial and technological leadership to secure alternative energy resources for the future through the development of a globally competitive infrastructure for the peaceful utilization of Nuclear Energy and Technology.



Strategic Actions on the Nuclear Fuel Cycle

- Uranium Mining and Milling
- Uranium Conversion
- Uranium Enrichment
- Fuel Fabrication
- Spent Fuel and Waste Management
- Reprocessing and Recycling



Strategic Actions on the Nuclear Fuel Cycle

- Uranium Mining and Milling
 - South Africa ranks 5th in uranium resources in the world; and 11th in production (WNA Market Report).
 - There is a need to increase capacity of uranium ore processing.
 - Government shall actively promote investment in uranium exploration and mining.
 - Government shall in very specific instances, make investments in these industries, to ensure security of nuclear fuel supply for South Africa.



Strategic Actions on the Nuclear Fuel Cycle

• Uranium Conversion

- South Africa will need to invest in world class conversion facilities.
- Government, through Necsa, shall undertake and lead the development of uranium conversion capabilities as part of the beneficiation of uranium.
- Private sector participation in the conversion process will be promoted.



Strategic Actions on the Nuclear Fuel Cycle

- Uranium Enrichment
 - Currently no uranium enrichment infrastructure or technological capabilities in South Africa.
 - Government's strategic intent is to develop national capacity in uranium enrichment as a part of uranium beneficiation.
 - Government, through Necsa, shall investigate the viability of developing its own uranium enrichment capabilities (commission a study).
 - Government will simultaneously actively seek to acquire established uranium enrichment technologies to ensure security of supply.



Strategic Actions on the Nuclear Fuel Cycle

- Fuel Fabrication
 - The South African facility for nuclear fuel fabrication for LWRs shut down in the 1990s.
 - PBMR is in the process of establishing a pebble fuel manufacturing facility.
 - Government, through Necsa, shall:
 - design a strategy to develop nuclear fuel fabrication capabilities and
 - Seek to obtain established fuel fabrication technologies to ensure security of supply.



Strategic Actions on the Nuclear Fuel Cycle

- **Spent Fuel and Waste Management**
 - In 2005 Government approved the Radio Active Waste Management Policy and Strategy for South Africa.
 - Legislation giving effect to the policy is being developed.
- **Reprocessing and Recycling**
 - Reprocessing of spent nuclear fuel and recycling of fissile materials for re-use will have to be considered.



Nuclear Industry Association of South Africa (NIASA) recently launched.

- **NIASA aims to**
 - To act as a public voice for the nuclear industry.
 - To actively promote the maximum local industrialization and economic clustering of nuclear manufacturing in South Africa.
 - To promote excellence and a culture of safety and security within the industry.
 - To promote skills development, job creation and Black Economic Empowerment through the nuclear industry in South Africa.



Nuclear Industry Association of South Africa (NIASA) recently launched.

- **NIASA aims to**
 - To facilitate coherence and to avoid duplication of effort in the development and expansion of the nuclear industry.
 - To promote public understanding of nuclear technology.
 - To act as a sounding board to Government on policy formulation.
 - To promote a common approach to research and related scientific issues and the role of universities.
 - To facilitate the solution of problems or obstacles faced by the industry.





Thank You



End