

Session 2.5

Sustainable Energy Development: Case of South Africa

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Benefits of IAEA (TCP) for South Africa

Context and Challenges

- The advent of democracy in South Africa required new energy policies to grow the economy and expand services to all citizens.
- Nuclear Energy policy of 2008.
- Integrated Resources Plan for Electricity (2010-2030) includes deployment of 9600 MWe of nuclear power (23% of SA's electricity generation mix by 2030).
- National Development Plan 2030 (phased decision making endorsed by Cabinet).

IAEA Contribution

- IAEA INIR mission conducted in 2013.
- IAEA EPREV mission conducted in 2014.
- National Radioactive Waste Disposal Institute launched in 2014.
- In addition to IAEA missions, South Africans benefitted from various technical training opportunities to expand existing nuclear skills base.



Impacts of IAEA Support for South Africa

- A robust energy policy.
- Recommendations of INIR, EPREV missions factored into SA policy and institutional arrangements.
- Research focus areas include nuclear waste, HTRs, nuclear medicine applications and nuclear forensics.
- A robust national safeguards programme.
- Mo-99 production process fully converted to LEU to minimize non-proliferation risks.
- SA is the hub for regional capacity development through the IAEA - AFRA arrangement.
- Continued participation in TC programmes to maintain and grow skills and expertise.



The Way Forward

- NNBP procurement for (9 600 MWe NPPs; MPR; NFC)
Localization, supplier development and skills will form an integral part of the envisaged nuclear new build programme.
- The national safeguards programme will be expanded accordingly.
- Envisaged growing needs in several related areas.
- Through the NNBP and identified growth areas SA will be enabled to fulfil various SDGs.

