



science
& technology

Department:
Science and Technology
REPUBLIC OF SOUTH AFRICA



SOUTH AFRICAN NUCLEAR HUMAN ASSET AND RESEARCH PROGRAMME

The South African Nuclear Human Asset and Research Programme



BACKGROUND ON SANHARP

In support of the South African government's vision for expanding nuclear energy in the South African energy mix, the Department of Science and Technology (DST) undertook to establish a coordinated programme to advance skills and innovation frontiers along the value chain of the Pebble Bed Modular Reactor (PBMR), ranging from basic and applied research in all applicable science and engineering disciplines, to manufacturing and distinctive aspects of waste management. The PBMR Human Capital Research and Innovation Frontier Programme (PHRIFP) was established out of a consensus of key stakeholders in nuclear energy. In February 2005, PBMR (Pty) Ltd was awarded a one-year contract to initiate the implementation of the Programme.

Since the initiation of the Programme, the South African government has reiterated its commitment to nuclear energy as a significant ingredient of the future energy mix. It is envisaged that the expansion of nuclear power will in the short to medium term come from conventional nuclear power technologies such as Pressurized Water Reactors.

Skills to support the future nuclear energy industry would need to be broadened to

support the entirety of the government's strategy for the industry, that is, the technologies that will be employed in the medium to longer term technologies, such as the PBMR.

The PMBR, being only one of a number of nuclear technologies, and given a number of applications of nuclear technology (beyond energy), a decision was taken to expand the scope of PHRIFP to address the skills needs of the entire nuclear industry. To this end, PHRIFP was renamed the South African Nuclear Asset and Research Programme (SANHARP) and the secretariat moved from the PMBR (Pty) Ltd in Centurion to the South African Nuclear Energy Corporation (Necsa) in Pretoria West and recently to the National Research Foundation (NRF) to be in line with other Department of Science and Technology (DST) programmes.

SANHARP STRATEGIC INTENT

Vision

To facilitate a broad-based national programme that will deliver on capacity building and



research and development initiatives for and in partnership with the nuclear sector in South Africa.

Mission

To initiate, facilitate and support education, learning, knowledge transfer and research programmes that will provide solutions to the current and future human as well as intellectual capital requirements of the South African nuclear sector.

STRATEGIC OBJECTIVES

1. To strategically position the development of human and intellectual capital for the SA nuclear sector on local and international platforms.
2. To promote teaching, research and innovation capacity in South African secondary and tertiary institutions in strategic areas of science, engineering and technology for the nuclear sector.

3. To facilitate nuclear skills development through skills transfer programmes, collaboration and cooperation as part of technology acquisition from local and international institutions.
4. To develop a critical research and skills base to support the South African nuclear sector.
5. To promote and ensure comprehensive public awareness and understanding of nuclear-related issues.

SANHARP PROJECTS

Schools Outreach Project

Seeks to ensure a pipeline of learners with a strong foundation in mathematics and science to take up undergraduate bursaries which are offered by the Programme.

The project currently offers bursaries to students from grade 10 to grade 12 in 32 Dinaledi Schools across the country. The students who



matriculate satisfactorily are then taken up in the Bursaries Scheme.

Bursaries Scheme

Offers full sponsorships to students in selected areas of science and engineering from undergraduate level to postgraduate level. There are currently more than 160 bursary holders in the scheme and the number is expected to reach 500 in the next 5 years.

Nuclear Hub Website

This project is dedicated to providing awareness on nuclear related issues and serve as an information hub for various stakeholders.

The Research Chairs

The management of this project is under the NRF's South African Research Chairs Initiative (SARCHi). SANHARP is mandated to establish research chairs in nuclear related technologies.

Communities of Practice

This project is aimed at supporting networking amongst stakeholder-groups and associations in the nuclear industry and academ



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