



energy

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REPUBLIC OF SOUTH AFRICA

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South Africa sends the first 50 trainees to China for Nuclear Power Plant Operations training

Government is responding to the country's needs for the development of specialised nuclear skills in preparation for the implementation of the expansion of the nuclear new build programme. The nuclear new build programme forms the integral part of a sustainable energy mix, pursued to ensure energy security. Fifty (50) trainees from the South African nuclear industry are going to China to take part in nuclear power plant operations training for a period of four (4) months as the first phase.

The nuclear new build programme is premised on the Nuclear Energy Policy of 2008; the Nuclear Energy Act 46 of 1999; and the Integrated Resource Plan (IRP) 2010-30 adopted in 2011. These policies, are meant to add a total electricity capacity of 9, 600 MW to the grid by 2030, with the first reactor unit connection made in 2023, well in time for the retirement of the aging coal fleet, in an effort to keep the lights on in a sustainable manner.

The National Development Plan enjoins us to do thorough investigations on various aspects of the nuclear power generation programme before a procurement decision is taken. As such, part of our recent pre-procurement work includes the conclusion of engagements with various vendor countries such as the United States of America, South Korea, Russia, Canada, France, Japan and China. These are the countries that have expressed interest in the roll out of South Africa's nuclear programme. The 2008 Nuclear Energy Policy calls for Pressurized Water Reactor nuclear technology, similar Koeberg Nuclear Power Plant, situated in the Western Cape. South Africa has been using this technology safely for the past 30 years.

In addition, Inter-Governmental Framework Agreements (IGFA) were concluded with all vendor countries, except Canada and Japan, whose agreements are at an advanced stage of completion. All these countries took part in three nuclear vendor parade workshops, which started in October 2014 and concluded in March 2015. The nuclear vendor parade workshops entail vendor countries presenting their nuclear technology offerings.

Following the conclusion of the nuclear vendor parade workshops, and in parallel with work being done in preparation for the commencement of the procurement phase, the first 50 trainees will travel to China to take part in nuclear power plant operations training for a period of four (4) months between April and August

2015. These trainees come from the major role players in the nuclear industry that continue to support the government in its ambitions to roll out the nuclear new build programme as per the country policy prescripts.

The training will take place at the Shanghai Jiao Tong and Tsinghua Universities following a skills development cooperation agreement signed in support of the country's nuclear new build programme between the Nuclear Energy Corporation of South Africa (Necsa) and State Nuclear Power Technology Company (SNPTC).

The training will be in the form of lectures as well as tours to some of China's nuclear facilities. Trainees will receive lectures in nuclear safety regulatory system, nuclear power plant related subjects such as physical characteristics, nuclear island system equipment, codes and safety oversight, steam power conversion system, material science, conventional island system equipment, thermodynamics and basis of reactor thermal hydraulics, radiation protection, electrical systems and equipment, generic mechanical equipment, instrumentation and control theories, water chemistry, operation theories, some basic knowledge of project management, and nuclear safety culture.

This training opportunity marks the first phase of a scope that aims to cover capability and technology in areas of nuclear power plant engineering, procurement, manufacturing, construction, commissioning, operation and maintenance and project management. The second phase of this training will see South Africa sending 250 trainees to China to be trained at various levels.

This first phase is a trial phase, which will be followed by a much intensive training programme that will cover on the job training at nuclear power plant construction sites, bachelor's degrees in all engineering, natural and social sciences, financial and project management programmes as well as post graduate courses and research collaboration between South Africa and the major developed countries that will include: France, Russia, China, USA, South Korea, Japan, Canada, UK and Germany.

Government remains committed to ensure energy security for the country, through the roll out of the nuclear new build programme as an integral part of the energy mix. Government remains committed to ensuring the provision of reliable and sustainable electricity supply, as part of mitigating the risk of carbon emissions.

The nuclear new build programme will enable the country to create jobs, develop skills, create industries, and catapult the country into a knowledge economy. Government remains committed to a procurement process that is in line with the country's legislation and policies.

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