energy
Department:
Energy
REPUBLIC OF SOUTH AFRICA

Media Statement: Nuclear Procurement Process Update

Pretoria, 14 July 2015

Good Morning Ladies and Gentlemen of the media.

Thank you for accepting our invitation.

This Nuclear Energy Policy approved in 2008, provided a framework within which; prospecting, milling, mining, the use of nuclear materials and the development and utilization of nuclear energy for peaceful purposes take place. Some of the key government objectives for the nuclear new build programme include:

- ***Attainment of global leadership and self-sufficiency in the nuclear energy sector in the long term;***
- ***Contribution to the country's national programme of social and economic transformation, growth and development;***
- ***Improvement of the quality of human life and to support the advancement of science and technology;***

In March 2011, Cabinet approved and promulgated a 20 year Integrated Resource Plan (IRP2010-30), which is the electricity plan of Government with a mixed energy agenda that puts nuclear at 23% (9600MW) of energy source by 2030. In accordance with this plan the first unit will be commissioned by 2023.

The National Development Plan, approved in 2012 enjoins us to conduct thorough investigations on various aspects of the Nuclear New Build Programme (NNBP) before a procurement decision is taken. In line with this policy prescript Government

undertook detailed studies on various aspects of the nuclear fuel cycle value chain, including amongst other, costs, financing, funding model, skills development, and economic impact of localisation. These studies have confirmed that this programme is fundable and will contribute positively to the economy of the country.

THE INTERGRATED NUCLEAR INFRASTRUCTURE REVIEW (INIR) REPORT

The South African Government, as the first nuclear operating state voluntarily invited the International Atomic Energy Agency (IAEA) to conduct the Integrated Nuclear Infrastructure Review (INIR) mission, which is an assessment of the country's infrastructure as it relates to readiness to start purchasing, constructing, and operating nuclear power plants; known as Phase I, II, III respectively. It is important to note that an INIR Review Mission is not an audit, but a peer review by independent experts from the IAEA. The Department of Energy, together with stakeholder government departments and relevant entities, conducted an Integrated Nuclear Infrastructure Review (INIR) in accordance with the IAEA guidelines, with a final mission report having being received on 30 May 2013.

The following are recommendations of the INIR:

1. South Africa should finalize its contracting strategy for new nuclear build.

   Progress Made: Contracting strategy has been completed.

2. In consideration of the future amendment to its nuclear legislation South Africa should explicitly address the Fundamental Safety Principles, including assigning prime responsibility for safety to the operator.

   Progress Made: Amendment of the NNR Act and NE Act is under review.

3. The Bid Invitation Specification (BIS) and related evaluation criteria should be completed as a prerequisite for the tendering and procurement process.

   Progress Made: To be finalised by end July 2015.

4. The designation of the Procuring Agency should be made in the near future so that it can initiate the necessary organizational provisions, including HR development.

   Progress Made This is completed – DoE is the designated “Procuring Agency”.

5. Once the Contracting Strategy has been finalized, South Africa should complete its financing arrangements for the new build programme.

   Progress Made: Studies completed and recommendations undergoing approval process.

6. South Africa should join the relevant international legal instrument(s) on civil liability for nuclear damage.

   Progress Made: Consultation with necessary stakeholders is currently in progress and on-going

7. South Africa should complete regulations on nuclear security and safeguards.

   Progress Made: Nuclear Security regulations completed, Nuclear Safeguards – Government considering options on transfer of the function.

8. South Africa should complete the process of revising its legislative framework to address the independence of the regulatory body, nuclear security and civil liability for nuclear damage.

   Progress Made: Benchmark studies on regulatory independence and institutional arrangements are completed and being processed with relevant authorities.

9. South Africa should develop and implement a national human resources strategy and plan to address required improvements in: technical subjects at secondary school level; graduation rates for university engineering programmes; and training of artisans in areas relevant to nuclear industry.

Progress Made: The Strategy has been developed and now it is being implemented.

10. South Africa should develop an integrated national Nuclear Fuel Cycle strategy, including Spent Fuel/High Level Waste disposal.

Progress Made: The development of strategies is completed.

STUDY TOURS:

As part of a preparatory stage, the Department of Energy undertook study tours to various nuclear vendor countries in order to familiarise itself with various technologies offered by these countries and lessons learned during their history of deployment of nuclear energy as part of their energy mix.

INTER-GOVERNMENTAL AGREEMENTS:

To date Government signed IGAs with several of these vendor countries that have expressed interest in the South African nuclear new build programme. To date Government has signed IGAs with China, France, Russia, USA and South Korea. Negotiations are underway to conclude IGA's with Canada and Japan. Each one of these IGA's lays foundation for cooperation, trade and exchange of nuclear technology as well as procurement. Each vendor country was focusing on its own capabilities taking into account the requirements of South Africa to achieve self-sufficient policy objectives. The IGA's also describe broad areas of nuclear cooperation and they differ on emphasis based on unique needs and capacity of each country. These were presented to CABINET for discussion and approval and recently have been tabled in Parliament and now ready for further debate and Parliamentary endorsement.

VENDOR PARADES:

South Africa professionals from Government departments, State Owned Entities, Universities (professors for nuclear engineering programmes) participated in the

vendor parade workshops. There were 50-80 South African nuclear professionals (experts) who participated in these workshops and thoroughly interrogated their technological offerings. The vendor parade workshops provided a platform for South Africa professionals to exchange views with their peers on the nuclear new build programme.

The vendor parade workshops covered key focus areas forming part of the entire nuclear programme:

- Nuclear Power Plant Technology and Construction,
- Multipurpose Research Reactor Technology and Construction;
- Financing and Commercial Matters;
- Manufacturing, Industrialization and Localization;
- Human Resources and Skills Development;
- Public Awareness and Information Centers;
- Safety, Liability and Licensing;
- Nuclear Fuel Cycle (Front and back end);
- Nuclear Siting and Permitting;
- Nuclear Non-proliferation Matters

This process was completed in March 2015.

A **Progress Report** appraising Energy Security Sub-Committee of Cabinet, The National Nuclear and Energy Coordination Committee (NNEECC) was compiled and processed and recently has been endorsed by CABINET.

Further work done in preparation for the Nuclear New Build Programme includes:

THE SKILLS DEVELOPMENT & TRAINING:

As part of the ramping out for readiness of the programme for the Nuclear New Build Programme, the national skills development activities have started:

China: 50 trainees from the Government, entities and industry have been sent to China for Phase 1 nuclear training in April 2015. Plans are underway to send an additional 250 trainees to China this year. Additionally, a Memorandum of Agreement on Skills Development was entered into between NECSA and State Nuclear Power Technology Cooperation of China.

Russian: has offered 10 new Scholarships for Master's Degree in Nuclear Technology. In addition to this, a Memorandum of Understanding Agreement has been concluded covering the training and development of 200 South African candidates at Russian universities and educational organizations.

South Korea: has an existing programme to train South African students for Master's Degree in Nuclear Engineering. So far 3 students graduated in 2013 and 2015 respectively.

France: has put in place 14 bursaries for young people coming from previously disadvantaged groups. Through this four-year engineering program in different universities, these young professionals will acquire the skills and expertise to support the South-African governmental effort in preparation of the new Nuclear build program. In addition, South-African engineers already engaged in nuclear activities will follow job training in France, equivalent to a total of 400 months. Necsa has also signed a Memorandum of Understanding with Electricity De France on Skills Development.

The negotiations on Nuclear Skills Development with the French government are at an advance stage that could see an establishment of a Nuclear Campus in South Africa.

FUNDING AND FINANCING MODELS:

Government has completed various technical studies in response to the National Development Plan directives. Inter alia, these include in depth studies into the cost of nuclear power, funding and financing models and economic impact of localisation, amongst others. It is important to note that government is still to negotiate the price tag in the procurement process which is why exact figures for the study cannot be

made available to the public at this stage. These studies were done to ensure that South Africa is a knowledgeable customer.

However, the current world experience for quoted numbers for real export would indicate an overnight cost of around 5 billion US dollars per 1200MW which is equivalent for 4200 dollars per kilowatt per reactor in new comer states. The examples include UAE, Pakistan, Turkey and Belarus. In countries with established domestic construction programmes (e.g. China, South Korea and India) the prices are in order of 2500 dollar per kilowatts are being quoted. Amongst the 70 plus reactors in the world, there are number of projects where because of the local market and political conditions, the project costs are higher than these figures.

Going forward, Government plans the following as part of the broad procurement process:

- To follow the approved procurement process that will include a competitive bidding process that is transparent and cost effective and in line with legislation.
- Start procurement in Second Quarter (July 2015)
- Procurement Process to be completed by end of 2015 financial year
- Select Strategic Partner or Partners by end of 2015 financial year

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.

ISSUED BY THE DEPARTMENT OF ENERGY

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