

Keynote Address delivered on behalf of by Minister of Energy, Ms Dipuo Peters, MP

“Nuclear Power’s Future for Africa” Conference.

Industrial Development Corporation Auditorium,

19 Fredman Drive, Sandown, Sandton,

29 May 2012, 9:05-9:30AM

Programme Director – Dr Kelvin Kemm, CEO Stratek Business Strategy Consultants

His Excellency Mr Kgalema Motlanthe, Deputy President of South Africa (who will give his address later via video link)

Adv Boyce Mkhize, CEO: National Nuclear Regulator

Mr Bobby Godsell, National Planning Commission

Representatives of Nuclear Energy, Mining and Construction Companies

Representatives of Institutions of Higher Learning

Representatives of Non-Governmental Organizations

Representatives of Government Departments and State Entities

Honourable Guests,

Ladies and Gentlemen

It is my pleasure to speak to you this morning. Having addressed a number of events dedicated to nuclear energy since 2009, I must admit that the audiences grow with each event, a sign that interest in nuclear energy as an important element of the balanced energy mix continues to grow.

The United Nations General Assembly declared 2012 as the ‘International Year of Sustainable Energy For All’. According to the UN, 1.4 billion people do not have access to modern forms of energy while another 3 billion people rely on biomass and coal as the main sources of fuel. The ‘Sustainable Energy for All’ initiative seeks to -

ensure universal access to modern energy services, reduce global energy intensity by 40% and increase renewable energy use globally to 30% - all these by 2030. These ideals have been part of South Africa's energy policies for a long time. The universal access targets, emissions reduction targets as well as the Integrated Resource Plan 2010-2030 tie in well with the aspirations of the Sustainable Energy for All initiative.

Let me remind you, a week after the Fukushima accident, we approved the IRP with 9.6 GWe Nuclear, with the proviso, that lessons from Fukushima be factored into our programme. Waiting for these lessons to materialize took time, and this is what cost us about a year delay. Also, the lessons learnt during Koeberg's 26 years of safe operation are valuable to guide the country for the coming nuclear programme.

Over a year has passed since the massive earthquake and tsunami that hit the north eastern coast of Japan. This resulted in the nuclear accident at Fukushima Daichii Nuclear Power Plant in Japan which led to the evacuation of more than fifty thousand. This goes to show that sector has learnt from Chernobyl, where within 3 months, 31 people died from Acute Radiation Sickness and others that were not evacuated in time, resulted in increased cancer deaths many years later.

After the accident at Fukushima, countries such as Italy, Germany, Spain, Belgium, Mexico, and Switzerland have indicated that their will to end nuclear power programmes. Contrary to above mentioned countries, South Africa, USA, France, Finland, United Kingdom (UK), Turkey, India and Vietnam are continuing in their plans.

Just for the record, phasing out nuclear does not come without consequences. New Scientist Journal states that in Germany, shutdown of nuclear power plants will push up German CO2 emissions by between 40 million and 60 million tonnes a year – about 6 per cent – depending on what replaces them. In Japan, a permanent shutdown would boost annual CO2 emissions by 60 million tonnes – or more than 5

per cent – as the nation draws extra power from burning fossil fuels, according to the country's Institute of Energy Economics.

As Government we acknowledge that all energy sources have advantages and disadvantages. It is our responsibility, to manage all resources to best benefit the people. We believe, even today, that nuclear energy is one energy source that is reliable for producing baseload electricity,

Let me take this opportunity to talk a bit about Shale Gas and the possible implications for the Nuclear Programme. In my view, these are not competing energy technologies, but complementary ones. Even if extraction of shale gas is found to be technically and economically viable in South Africa, and I hope that it will be, we need to use it for what it is most efficient. Firstly, direct heating – there are many industrial and residential applications. This alone will improve our efficiency of energy usage. Secondly, in the public transport industry – buses and taxis can easily be converted to gas. Thirdly, our capability of gas to liquids conversion at SASOL coupled with vast shale gas could significantly reduce our dependence on oil imports, strengthening security of supply of liquid fuels. In terms of jobs, the large number highly talented artisans such as welders, pipefitters and machinists from the nuclear programme could be used directly in the gas infrastructure programme. This will create sustainable jobs for decades to come. These are just some of the complementarities I see between shale gas and nuclear, so there is no reason for one to replace the other.

Government has been extremely busy with implementation plans for the projects identified in the Integrated Resource Plan. In this regard, in November 2011 we established the monitoring and decision making body called National Nuclear Energy Executive Coordination Committee (NNEECC) as envisioned in Nuclear Energy Policy of 2008. The Committee serves as the executive structure to lead, monitor and ensure oversight of the implementation of the policy, and is led by the Deputy President. The NNEECC is made of relevant Ministers, for example, Energy, Trade and Industry, Mineral Resources, Public Enterprises, Education, Treasury, Science & Technology etc.

Cabinet also approved the establishment of the Nuclear Energy Technical Committee (NETC) to support the NNEECC. It is comprised of the Director Generals

(DG's) from Departments represented in NNEECC, and chaired by Director-General of the Department of Energy.

In order to guide the programme of the Executive Committee, a Phased Decision Making Approach for the nuclear programme was proposed. This implies we will be implementing this programme in an orderly stepwise manner. A programme of this complexity requires a structured approach, as all of you would appreciate.

In terms of readiness, the Department of Energy has been leading the Integrated Nuclear Infrastructure Review (INIR) for the country, with our stakeholders namely National Nuclear Regulator (NNR), South African Nuclear Energy Corporation (Necsa), Eskom and all Government Departments that are needed for the implementation of the Nuclear Build Programme. This looks into 19 issues, namely:

- Policy and Political Position
- Safety
- Management
- Legislation
- Funding and Financing
- Safeguards
- Regulatory Framework
- Radiation Protection
- Electrical Grid
- Human Resource Development
- Siting and Support Facilities
- Environmental Protection
- Emergency Planning
- Security and Physical Protection
- Nuclear Fuel Cycle (Front End)
- Radioactive Waste
- Industrial Involvement
- Procurement

We are planning to invite the IAEA later this year to conduct an external assessment of our readiness, and apprise us of all the risks and gaps that need attention in order to ensure a successful programme.

The Department of Trade and Industry (the DTi) has been involved in the localization and industrialization strategy of the Build Programme. The DTi commissioned two studies, the first study looked at localization of the first two plants excluding the

heavy components and the second study is still on-going and it focuses on heavy components of the nuclear power station. A nuclear power plant build programme involves the commitment of a large amount of resources, both in terms of finances as well as manpower. It is our vision to localize a large portion of the supply of the power plant and its equipment. Expanding South Africa's nuclear power industry would boost job creation, particularly in the uranium mining and construction sectors.

Our aim is to have demographic representation throughout the nuclear value chain, in the private and public sector. Let it be known that South Africans are not going to be relegated to trench digging and concrete mixing. People, let me remind you that nuclear programmes are driven by political will, and political will is driven by public perception. If the broader South African population is not made an integral part of this programme, we will lose the necessary political will to continue with this programme. That is one of the most worrying risks for us. There is a need to disseminate accurate information about nuclear energy and other energy sources. This will empower citizens to make informed opinions about the origins of their electricity.

I am grateful for the role NIASA has played. Just in the past two months, NIASA has hosted two international seminars, the first was by Korean Nuclear Association for International Cooperation in March and it was followed by the Russian Rosatom in April. The objectives were to provide a platform for information sharing on their technologies and capabilities for possible partnerships during the Nuclear Build.

I would like to thank all the Government departments involved as well as the other stakeholders in the nuclear sector, for your continued support of the activities of the nuclear sector.

I wish you a successful and fruitful conference further.

Thank you.