

# **Nuclear Power**

## **An Essential Component of our Energy Mix**

**Director General: Energy**

**NIASA Convention 2013**

**14 August 2013, at 11:45-12:15**

**Boardwalk Hotel, Port Elizabeth**

Programme Director

**Mr Mcebisi Jonas**, MEC: Economic Development, Environmental Affairs and Tourism

, Dr Rob Adam, President of NIASA

**Dr Kelvin Kemm**, CEO: Stratek

**Mr Phumzile Tshelane**, CEO: Necsa

**Mr Knox Msebenzi**, MD: Niasa

**Adv Leslie Sedibe**, CEO: Proudly South African

**Mr Terry McGowan**, Worley Parsons

**Mr Bob Pearce**, Director of International Project Development AP1000

**Mr Andrew Kenny**, Energy Analyst

**Mr John Bendo**, Nuclear Energy Business Manager: ASME

**Mr Boris Arseev**, Vice President: Rosatom

**Mr Mandla Madwara**, President: Nelson Mandela Bay Business Chamber

All dignitaries present,

Ladies and gentlemen...

Sanibonani, Molweni, Goeiemore, Dumelang, and Good Morning.

Firstly, let me thank NIASA for hosting this event at this venue. Minister of Energy, Minister Ben Martins has indicated in the past, that South Africa has 9 provinces and it is inconceivable that all the activities have to take place in Gauteng. Well done.

For those who are not South Africans, we are currently celebrating a Women's month, although for me, as a woman in this sector, Women's Day is every day. Looking at the composition of the delegates, it clear that there is more work to be done. Without tooting my own horn, I must say I have been quite vocal in communicating government's decision, which is, nuclear energy is part of the energy mix, and will play a significant role in the diversification of our energy mix. It is in this vein that I recommend that more women be supported and encouraged to participate in this sector because they can be great ambassadors of nuclear energy

Programme Director, let me take this opportunity to engage with the industry on what Africa, specifically South Africa could achieve when we all join hands to better this continent. I am of the firm view that development of nuclear energy in South Africa is just but the beginning.

I need to remind everyone present here today that the Government of South Africa has long made a decision to implement the Integrated

Resource Plan (IRP) 2010-2030, and is committed to nuclear power as stipulated in the IRP.

A lot has been said and written about the IRP 2010 – 2030, in all forms of media. As you all know, South Africa is a vibrant country and it is one of the greatest democracies in the world. The right to express our views is enshrined in our Constitution. In this regard, there has been a lot of speculation about whether nuclear energy, as part of the solution, has to be deployed. As a government official, let me reiterate again, In March 2011, the Executive, that is Cabinet, decided that 9 600 MW of energy in this country will be developed using nuclear energy.

We have just obtained Cabinet approval to publish the Integrated Energy Plan. We intend to start public consultation next month. In parallel we are reviewing the IRP2010 – 2030. Preliminary results indicate that if we intend to reduce our carbon footprint and also have a vibrant economic growth, nuclear energy will be part of the solution.

To demonstrate our commitment to developing nuclear energy, since your last conference, we have completed the IAEA Integrated Nuclear Infrastructure Review (INIR). This was done for South Africa to honestly evaluate our infrastructure before we could say ‘South Africa is ready’ for nuclear expansion. We took that decision mindful of the fact that the last nuclear build was done in Koeberg Nuclear Power station more than 25 years ago and therefore we needed to be able to confidently say we are ready and work on those issues that are still outstanding. As you all

probably know, we are the first country amongst the nuclear operating countries to conduct this evaluation, and I am told others will follow suit shortly.

As you have heard, the National Nuclear Energy Executive Coordinating Committee (NNEECC) has been restructured towards more efficient and quicker decision making. This Committee is now headed by the President, His Excellency J G Zuma, and six Cabinet Ministers instead of the previous twelve. I would like to inform everyone that there's a lot of work happening in the background towards the rollout of the nuclear programme.

Amongst the decisions made by the NNEECC last year, is the Communication and Stakeholder Engagement Strategy. Resistance to nuclear energy has been part and parcel of this industry. We all know that the lack of information and knowledge is a primary source of fear in any setting and the nuclear sector is not exempt from this. This is why it is essential that there is active participation of Government in the demystification of nuclear energy applications, be it the power generation, medical, agricultural or industrial. We will do more to illustrate these through our communication and ask you as the nuclear stakeholders to assist us in this regard.

Another decision taken last year was the owner-operator of the new nuclear power plants being Eskom as the major shareholder. It is a known fact that nuclear power will be the most affordable baseload option after coal. Given our climate change commitments, and the fact that some of the coal fired power stations will retire around 2022 and require replacement, therefore nuclear power is becoming more of a necessity than an option.

To assist with obtaining good financing and bring in operational experience, we are looking at various ownership options for the nuclear power plants such as an investor or equity partner to join forces with Eskom in the nuclear new build.

That brings me to another point. The Department has been very active at seeking advisors to assist us in our preparations for the nuclear programme. I must add that after reviewing some of this work myself, some of the work that has been done has been less than satisfactory, which is a pity. Government needs high quality advice in order to take appropriate decision. We are of the view that nuclear energy can be deployed successfully, built on time and budget. Most of the Asian countries can attest to that. In that regard please watch that space carefully as there are many more advisory services we are seeking, before and during execution of this programme.

Other decisions relevant to the nuclear build programme will be announced in due course. We have already indicated that we anticipate finalizing the nuclear procurement roadmap by November 2013. The Government and State Owned Companies are preparing themselves for this massive project.

During our last Nuclear Energy Technical Committee meeting, one question that came up was that of the readiness of the local industry. I am not speaking of the only of the vendors who supply nuclear power plants, but our very own South African industry. The nuclear programme will stimulate massive industrialization. However the nuclear industry requires compliance with strict regulatory quality standards. From valve

manufacturers to pressure vessel designers, are we all on board and ready? One of the Nuclear Energy policy key objectives is the attainment of global leadership and self-sufficiency in the nuclear energy sector in the long term.

Hence localization, technology transfer and skills developments, job creation and transformation are some of the critical pillars we need to build our country's nuclear industry.

I trust much of these questions will be answered during the course of your conference proceedings. These events are also there to create the platform for awareness and assessment of our local industry readiness.

**Ladies and gentlemen,**

Once again I am personally pleased with NIASA hosting this convention in the Eastern Cape. The Department of Energy (DoE) regards the Province as the Energy hub of South Africa. Construction of wind turbines are underway in this region and right next to one of the earmarked sites called Thyspunt, under Kouga District Municipality. Local electricity production would add stability to the grid in the province can add value to the existing vibrant automotive industry supplying South Africa and abroad. This province has also got potential for the supply of petroleum. Some of our resources of shale gases in the Karoo form part of the Eastern Cape, and let us not forget the Refinery being earmarked for the Coega IDZ.

I trust that business people, tertiary institutions, local government and all role players are engaging to maximize their potential in the nuclear programme. There are industrialization policies from our sister Department,

Department of Trade and Industry (the dti). We are encouraging collaborations between public and private sectors to implement available strategies to establish our local industry.

In the past few years, we built Stadia for the 2010 World Cup, Gautrain rail construction, improvements of our road infrastructures and many other projects that show how capable we are, as the Industry. Through the Industrial Policy Action Plan 3 of the dti South Africa seeks to develop its own agenda to transform the country by industrialization to address our serious challenges of youth unemployment, poverty and gender imbalances.

There are calls on Shale Gas in South Africa to replace nuclear but these two energy sources are not competing rather are complementary. One can play a major role in electricity provision whereas the other provides us with a portable source of energy that can be used more efficiently directly. We are working on the policies to ensure efficient use of all our energy sources. This is why we prefer to talk of a balanced energy mix.

One of the projects that currently haunting us is Medupi power plant delays. A whole thesis can be developed on what went wrong on this project. For us as Department, we believe that there are valuable lessons that can be learnt and incorporated in future design of other energy project, especially our nuclear build programme. I therefore challenge NIASA to also look closely on these challenges and do introspection. Questions that NIASA need to ask is do we have enough of artisans and what is our plan to grow them if not? The truth is, there is a lot of homework to be done to see South Africa reach her full industrial capabilities. As I speak, there some staff of

my Department are at the Energy Postgraduate Conference 2013 being held at Ithemba LABS near Cape Town. The DST through the NRF are laying the groundwork for what is to be known as the Energy Human Capital Development and Knowledge Generation Programme. This is an expansion of the South African Nuclear Human Assets Resource Programme (SANHARP), which is a very successful pipeline programme for developing skills from rural high schools all the way to Post-Doctoral Level. One of your speakers here was one of the key founders and implementers of the SANHARP Programme, which changed the lives of talented South Africans for the better.

This is a challenge to reduce the unemployment of South African youth and I hope energy will contribute to reducing it, for better life for all.

I wish to remind you that in the coming months we are going to have more events in this Province, more especially on nuclear energy. During the first week of September the Department of Energy is hosting an African regional Nuclear Siting Workshop at the Nelson Mandela Metropolitan Museum. Then in October we are planning to participate in a Careers week being organised in this region.

Last but definitely not least, yes, I cannot let go of the Women issue in this industry. The WINGLOBAL conference is taking place in Gauteng during October this year. This is the showcase of the power of women in the nuclear industry from across the globe; it is our chance to host women in nuclear of the world. I will be there, and am looking forward to seeing your support of the event! Hope to see you all there.

Thank you chair.