Minister Malusi Gigaba, Minister of Public Enterprises
Mr. Brian Dames, CEO, ESKOM
Cde Mr Oupa Komane, Deputy General Secretary, NUM
Cde. David Macatha, Treasurer-General, NUM
Professor Gordon Sibiya
Mr Tristan Taylor, Earthlife Africa
Mr Kimitoshi Yahagi, from Japan
Mr Ivo Kouklik, Rosatom
Honourable Guests
Ladies and Gentlemen,

Good Morning
I am truly excited and honoured to join you at this long overdue engagement with labour on nuclear energy in South Africa. I’d like to extend my appreciation to the NUM for taking the initiative to make this happen. I feel comfortable that this is one of several platforms to discuss nuclear energy from a South African perspective, while drawing lessons from the experiences of other countries such as Japan, South Korea and Russia.

As you may be aware, last year Government approved the Integrated Resource Plan 2010-2030, which incorporates 9.6GWe of Nuclear power and 17.8 GWe of renewable energy by 2030. I will be frank with you and tell you that these two energy sources are not meant to compete against each other, but rather to complement each other. Every energy source has its pros and cons, its risks and benefits. We are a country that embraces diversity of our people, so why not embrace the diversity of our energy sources? Unlike others, we believe in the strength of diversity being far greater than the uniformity.
We cannot predict what the future holds in terms of the most favoured energy source, if there is such a thing. It is through diversity that we open our options to select and capitalise on whatever would be the optimal mix in the future. This is what our IRP strives to achieve. Let us not waste our energy debating one source over another. There is something more important to expend our energy on, which I will come to a bit later.

In November last year, Cabinet endorsed the establishment of the National Nuclear Energy Executive Coordination Committee, an executive body comprising of Ministers who have a direct critical role to play in the nuclear energy programme, ably led by the Deputy President. The nuclear programme, is not only about building power stations, it is about the following

- growing our knowledge economy – that is why we have the Minister of Science and Technology on board,
- beneficiation of mineral resources, especially uranium – the mandate of the Minister of Mineral Resources,
- Improving the standard of education and building a strong artisan programme – both Ministers of Higher Education and Training and Basic Education,
- Oversight of financing one of the biggest procurements in our history – we have to have our the Minister of Finance on board as well,
- Building a new industry of advanced manufacturing for localisation and export – who better than our Minister of Trade and Industry,
- Ensuring that financial benefits can be optimised for socio economic development – certainly a call for the Minister of Economic Development.

This level of integration between Government Ministries and Departments in a single programme has most likely never been seen before. It is a challenge worth overcoming, because the benefits are huge. A more integrated Government approach will only improve our efficiency of delivery, by eliminating duplication, and enabling cross pollination of ideas as well as joint efforts towards the achievement of the same programme. Once again, we can develop strength through diversity.
Due to the size and complex nature of this programme Cabinet has adopted the phased approach to decision making. All this implies is that a large decision is broken up into many smaller ones. The purpose of these smaller decisions is to get the ball rolling faster, and to more effectively monitor and manage the phasing in of the programme.

In rolling out this programme, South Africa adopts the IAEA Milestones approach. This approach addresses 19 critical elements necessary for successful implementation of a nuclear build programme. These range from national position, legislative framework, regulatory framework, nuclear safeguards, radiation protection, electrical grid, human resources development, environmental protection, emergency planning stakeholder engagement, nuclear fuel cycle, security and physical protection, industrial involvement and procurement. The milestone approach ensures that the country is able to make proper determination regarding the level of readiness at each step of the programme.

I don’t think there is any debate whether the nuclear industry would create jobs. What probably concerns NUM most is the possibility that nuclear energy would result in job losses in the coal sector or take away jobs from the coal mining sector?

- Firstly, the IRP shows us that nuclear does not intend to phase out the coal power generation capacity. In fact our coal generation capacity increases up to 2030.
- Secondly, there is such an international demand for coal, I am sure that all or production that could have been used for additional power stations will earn us valuable foreign exchange, thereby keeping the miners employed.
- Thirdly, it is the intent that the nuclear power industry would create additional jobs in the uranium mining and fuel manufacturing sector – an export market which currently lies underutilised.
- Fourthly, we are not only planning to operate nuclear power stations, but we plan to build, maintain and manufacture the components that run them – creating over four times more jobs than just operations.
Fifthly, the nuclear industry jobs are one of the safest from all the energy sectors – is that not what we want – jobs that can result in a safer workforce?

The list goes on. There are many other reasons why I can dispute the perspective that nuclear will result in loss of coal jobs, but I trust these are enough to move the discussion from an either/or perspective. Now this is where NUM would play a crucial role – It is not what we do, but how we do it. It is not just about building power stations, but how we build them. The same would apply to any other energy or infrastructure project – without thorough evaluation and feedback from the ground, we cannot ensure full beneficiation of a programme. We need you to ensure that transformation in this sector takes place, and that it is meaningful, and more than just about numbers. We need you to complain when our people are only being used for digging trenches as well as concrete works. The industry needs to know that exploitation of our people and resources will not go unnoticed, because you have more than just an ear in government, you have a symbiotic partnership.

Speaking of Government owned and controlled industry, the nuclear power industry is a prime example of this. This industry by its very nature needs to be a government led and owned one. The long timescales and large capital investment are not favourable for private investors who want to make quick and easy profits. The assurance of one of the lowest overall electricity costs and security of supply make it very much something that a Government would undertake – for the long term security of energy supply and industry development for the country and its people. As NUM appreciates, Government owned infrastructural development is necessary for a developmental state. Those economies that are driven primarily by the private sector are typically well developed. We cannot afford to let the development of our nation lie completely in the hands of private individuals who are concerned only about making profits for their shareholders. Our duty is to the ultimate shareholder, our people, the men and women who have no one but government looking after their interests.

There is a lot of concern about the large capital cost of nuclear power, R300 billion plus? These are typical scare tactics used by people who do not have the best interest of our people at heart. We should not be focused on capital costs, but overall
or levelised costs per unit of energy generated. When we buy milk we do not ask how much the farm costs and how much the grass costs, we ask how much does a litre of milk cost. The big commercial farms cost a fortune, but they give us the cheapest milk. It is called economies of scale. Small subsistence farms have their role, but they cannot compete in price with large scale farms. This is what nuclear power is – large capital cost, low overall cost. You can look at almost any fact-based survey; nuclear is one of the cheapest overall cost electricity options. In our case it could only be beaten by cheap coal. We do not have the luxury of large gas reserves yet or rich hydro resources. Another thing, after 20 years of operation, nuclear power stations become cash cows for the next 40 years of their operation life.

I also believe the various energy generating industries need to learn from each other and cross-pollinate ideas in order to make the energy sector more competitive and effective. Nuclear carries with it advanced manufacturing and quality standards that can be utilised to improve other industries. Renewable such as wind can teach the nuclear industry the benefits of smaller plants and the dynamics of how to establish power in off-grid locations. I know there are several small nuclear power reactors under development specifically for such applications. Let us learn to share and grow together. Once again, strength through diversity.

On the issue of waste. We believe that the cost of dealing with the waste from Koeberg nuclear power operations, a liability which we already incur could be reduced significantly by having a larger expanded nuclear power programme. Most of the cost associated with dealing with nuclear waste is due to the establishment of the final repository site. The size of the waste repository does not have a significant impact on the cost. I also want us to understand the volume of high level nuclear waste is small. All the waste from Koeberg during its entire lifetime would fit into this room. Albeit very dangerous, you do not need an entire province to store it. Just a geologically stable place and South Africa is largely situated on stable granite formation.

Another important thing to understand is that the cost estimates of dealing with nuclear waste is estimated to be less than 5% of the total lifecycle cost of nuclear power generation. And this is a very conservative number. Most waste has also not
been disposed of because 95% of the fuel is still usable after reprocessing. In fact, we should rather refer to high level waste and used fuel.

There are solutions to the problem of nuclear waste being pursued in countries like Finland, Sweden, and France. Finland already selected its waste site in 2001, and is currently undergoing characterisation. It is foreseen that this site will be ready to store waste in 2020. Similarly, in 2009, Sweden had already selected a high level waste repository site at Östhammar, near the Forsmark Nuclear Power Plant.

Let us work together to make this programme a success

I thank you