MINISTRY OF MINES AND ENERGY
GOVERNMENT OF THE REPUBLIC OF NAMIBIA

Remarks by

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MINISTRY OF MINES & ENERGY
REPUBLIC OF NAMIBIA

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REPUBLIC OF NAMIBIA
MINISTRY OF MINES AND ENERGY

OFFICE OF THE DEPUTY MINISTER

"Universal access to affordable, reliable and sustainable energy, underpins the Sustainable Development Goals (SDGs) and Namibia's aim to achieve 70 percent of the country's energy mix from renewable resources by 2020"

- **Hon. Geffrey Radebe, Minister of Energy of the Republic of South Africa,**

- **Hon. Rosemary Mbabazi, Minister of Youth of the Republic of Rwanda,**

- **Cabinet Ministers, Deputy Ministers and other government officials from the various governments here represented,**

- **Officials from the UNDP, UNEP and other UN Agencies,**

- **Representatives of the African Development Bank (AfDB),**

- **Representatives from the Standard Bank, International Financial Corporation (IFC) and other financial institutions,**

- **Representatives from Price Waterhouse Coppers (PWC)**

- **Eminent Academics and Researchers,**

- **Members of the Diplomatic Corps here present,**
- **Captains of the various industries and associations here represented,**
- **Other Representatives of the Private Sector and Civil Society here present,**
- **Distinguished invited guests**
- **Members of the Media,**
- **Ladies and Gentlemen,**
- **All protocol observed!**

Thank you for inviting me here to join you at this UNDP platform on responsible Business Forum on Sustainable Development Africa. I bring warm greetings from the 'Land of the Brave' – Namibia. Let me use this opportunity to thank the organisers, funders and convenor of this event.

Namibia is a country which is keen to share and benchmark with the rest of the continent and the world on transforming towards cleaner energies which can insure a safer global village. It goes without saying that Namibia's economy and especially the

energy sector are currently strongly hinged on that of South Africa and the Southern African Power Pool (SAPP).

To Namibia, we view this forum as a great opportunity to benchmark, invite and encourage investors to come to Namibia and explore the great energy potential in the country, especially in the renewable energy sector. Namibia is the country on the earth with the great levels of daily insolation and therefore solar energy development could be the next big thing in the region and the continent. And when we talk of solar, we are not only talking of building solar power plants (solar farms) but also manufacturing solar panels and all the other accessories related to solar power production and maintenance. The country could also see a development of other renewables including biomass energy both from biomethanation of waste and gasification of invader bush, hydropower (mini and mega), geothermal energy, tidal energy and wind energy.

On the potential for energy investment, Africa and indeed Namibia needs venture capitalists who are interested, willing and able to invest in energy development. There is a lack of credible venture capitalists who are willing and able to sponsor research, development and investment in sustainable innovative energy mix technologies.

Namibia direly needs standalone mini grids that can compensate for rural areas where the conventional grid cannot easily reach. Preferably these could generate power from renewable energy

sources and the excess could be fed into the conventional grid at the time when a connection transmission line is constructed.

Laws that block or frustrate independent power producers (IPP) in Africa and single buyer method should be scrapped to encourage and create more room for players in the electricity generation and supply sectors. Namibia for instance, is looking at introducing a revised independent power producer (IPP) Policy document

Africa is largely agricultural based thus use of renewable energy in powering farms would be ideal. This would save the other electricity for key industrial development and at the same time ensure sustainable food security.

Africa in general is plagued by restrictive kickbacks and outright corruption, which is a scourge that the continent should eliminate. Many potential investors are frustrated when they are blocked because they do not glorify the avenue of corruption.

Lack of innovativeness and stealing of intellectual property rights. In many instances, people who develop good ideas on the continent are simple people. Unfortunately, investors want to be seen to be associated with political heavy weights in the specific country. These political heavy weights are given shares by the ‘would be investors’ in these newly created prospective companies but because the authors of the ideas are tossed to the side, such good ideas never get anywhere in practicality because the key people with the nitty-gritty that could operationalise these ideas are left out on the streets/in the cold while their noble ideas are snatched from them.

Therefore, where as it is good to have political backing for industrious projects in countries, the authors of these ideas must never be left in the cold while their ideas are stolen. This is an intellectual curse to such noble ideas.

Ladies and Gentlemen,

We need to use renewables in farming development and food security and specifically promoting waste-to-energy (W2E) technology so as to ensure a clean environment using reliable and sustainable forms of energy.

We need to ensure interconnectivity between neighbouring countries on the African continent, so as to maximize the comparative advantages on aspects of physical geography.

We should continue to upgrade grid connectivity within the country and in-between power stations and isolated power grids.

On the aspect of energy efficiency as the first line of action, through NamPower, the Namibian Ministry of Mines and Energy distributed around one million energy saving bulbs, countrywide. In 2007, Cabinet issued a Directive to all Ministerial buildings to use solar-water-geyser systems for all state facilities.

Through the ministry of Mines and energy, Namibia came up with a solar revolving fund, with a low cost interest rate countrywide where individuals can apply for the soft loan, to cater for the following:

- Solar water pumping system

- Solar-water heating system, and,
- Solar-lighting.

This arrangement applies to the entire nation and not just in rural settings.

Namibia has also established a feed-in tariff concept which was approved and is working in Windhoek and Swakopmund so far. Here, individual household owners and a few industrial facilities use rooftop system and the surplus during the day is sold into the city grid and get a credit at night through the national grid supply.

Whereas, Namibia's environment would be ideal for solar energy development vis-à-vis hydropower and other renewable energy mixes, the most widely used renewable resource in Africa is hydropower.

Namibia has a potential for mega hydro at Baynes at the border of Namibia and Angola, along the Kunene River. It is a joint project between Namibian and Angola, with a capacity of 600 Megawatt of which 300MW are for Namibia and 300MW are for Angola. Due to the terrain, it is suitable that the powerhouse will be on the Namibian side of the border and the dam will be along the river for a distance of 40kms. It will not interfere with the famous tourist attraction site at Epupa Falls. This requires funding and technology, with the powerhouse and the dam.

The other investment opportunities are that we shall need to evacuate the power from Baynes to Ruacana substation where it will end up into the existing grid network of Namibia. Besides, we also need a 400KVA line which will take power from the Ruacana

substation into Angola. The significance of this 400KVA power transmission line is that it is the backbone of the Angola-Namibia Interconnection (ANNA) Project and also vice versa, it will link Angola to the rest of the Southern Africa Power Pool (SAPP). Once the Inga Project in the Democratic Republic of Congo (DRC) materialises, the ANNA line will be able to contribute to the evacuation of power from the Great Inga Dam to the rest of SAPP. Currently, Angola is in isolation from the rest of the SAPP. The ANNA line will be approximately 200kms maximum. The feasibility study, due diligence, Environmental Impact Assessment (EIA) and Roadmap are completed and ready.

Investment in the above-mentioned area will include:

- Construction of the Baines Hydropower Dam and infrastructure. The Namibian Government needs a partner in technology and financing.
- High tension (approx. 400KVA) transmission line to link Baines to Ruacana power stations. Distance is about 136kms.
- Construction of the 400KVA ANNA Line, for a distance of 200kms.

Besides, Namibia also a potential for small hydropower development along the Orange River at the border with South Africa, 5MW – 15MW per site, for almost ten sites and smaller ones along the Kavango and Zambezi Rivers.

Germany companies have so far developed approximately five revolutionary solar-diesel hybrid standalone grid systems in

Namibia, with the smallest being 55kw and the largest being around 300kw.

In addition, solar panels have been placed on the rooftop of Namibia Breweries with a capacity of 1Megawatt electricity production. Furthermore, most of the shopping centres and research centres in Windhoek City and partly in Swakopmund are using solar pv system during the course of the day and pumping the surplus into the city grid. This is to mention but a few.

Ladies and Gentlemen,

In 2016, the Namibian Government through the energy ministry issues 14 independent power producers (IPP) licences under the Renewable Energy Feed in Tariffs (REFIT) programme and out of the 14, ten have already been realised, selling directly to the utility company at the market related price at a cost reflective tariff (cost plus investment).

Besides the 14 licences, 20MW solar, 44MW wind and 37MW wind licences were issues, with an off-take guarantee from NamPower of between 15 to 25 years.

Various Regional Electricity Distribution Companies (REDs) have signed agreements with IPPs like Hopsol in Otjiwarongo town and Tsumeb. Hopsol is a Swiss-German Company.

Wind Power

Onshore, Namibia has minimal potential for wind energy development because mostly winds are stagnated at the conventional standard level of wind turbine towers, with the exception of Luderitz and Walvis Bay in Erongo Region along the coast. Namibia's coastline, especially in the area of Luderitz, has appreciable wind speeds which could sustain the production of wind energy.

Offshore, Namibia has a high potential of producing wind energy. Therefore, the country needs to invest more in training personnel, importing and manufacturing technologies that could be deployed in floating wind turbines offshore and sustainably producing wind energy therefrom as well as channelling it to a power station onshore. Additional investment could go into the possibility of a floating wind power house ship which could tap the power from the floating wind farm and then channel it to a booster onshore power station before it can be distributed elsewhere.

Mozambique has recently invested in an offshore wind farm and therefore there is no reason why Namibia cannot do the same, except in the absence of investors.

Solar and energy storage

Namibia has so far applied and tested solar power storage batteries at its solar-diesel hybrid mini-grids around the country. So far, these have proven to be very efficient. Nonetheless, we are thinking of introducing the sealed batteries which have a lifespan of

approximately 10years before total replacement. These are of a longer lifespan and cleaner/environmental friendly. So far, they are being supplied by Tesla, an American company and Varta AG, a German company.

Waste-to-energy

In Namibia, the aspect of waste to energy could consider four areas;

- At the Gammans water recycling plant, faecal matter is extracted and used to produce biogas, although on a small scale.
- Municipal waste at landfill sites could be biomethanated to produce biogas.
- Gasification and pyrolysis of waste tyres could also be applied to produce recycled rubber as well as flu gases for electricity generation.
- The country is also considering the aspect of using molasses and bagasse to generate electricity once the projected sugar mills become operational.

Besides the above, Namibian rangelands are struggling to cope with invader bush. However, this invader has a great potential to be used to generate electricity which can also be fed into the grid.

On National and international initiatives and associated opportunities for the private sector to energize the country, Namibia is in dire need of investors in the energy sector like in many other

sectors but we do not need investors who will end up asking Government to seed fund their projects instead of bringing in foreign direct investment (FDI). If you ask government to kick-start your funding then why can't government do the same with indigenous citizens? What makes you stand out as a foreign investor if you have no money and you are looking at borrowing from the very country you are claiming to invest in?

On the Regulatory and legal framework, Namibia's IPP policy framework has encouraged various IPPs to come in and develop project including those that have been highlighted above. Namibia's IPP policy is one of the best.

In Namibia, an IPP is guaranteed to be cleared to go ahead if you have

- Surety of funds
- Surety of technology
- Surety of off-taker and so far, an off-taker agreement is not a problem in Namibia.

As we note, Namibia is a sparsely populated country, with remote mine sites, private farms and government agricultural research and commercial production sites, covering vast areas of land. Therefore, off-grid, mini-grid and hybrid systems would be ideal for serving especially mining industries, agricultural applications and rural areas.

On financing and insuring energy projects, Namibia Government does not offer direct Government Guarantees for electricity producers. However, guarantees can be negotiated with commercial banks and energy off-takers like Regional Energy Distributors (REDs), NamPower, mining industries and other large producers of energy. This concept has worked with existing IPPs without any problem.

Furthermore, Namibia has potential sites for geothermal energy development, including Gross barman in Okahandja, Ai-is and Warambat in southern Namibia, and three sites in Kaokoland. Therefore Namibia is in need of modern technology for geothermal energy development.

In addition, we need technology that can harness methane from landfill sites.

In conclusion, I would like to say that Namibia is in dire need of investment in sustainable forms of energy. Therefore, we encourage investments in expertise, technology and finances in the energy sector, to be brought into the country.