



Speech By

Hon Jeff Radebe, Minister of Energy of the Republic of South Africa at the SADC Ministerial Workshop on the Regional Gas Infrastructure and Market Development held at Sandton Convention Centre, Johannesburg, South Africa on June 26, 2018

Programme Director: Mr Thabane Zulu, Director General of Energy, South Africa,

Honourable Ministers from SADC Member States,

Dr Thembinkosi Mhlongo, Deputy Executive Secretary Regional Integration, SADC Secretariat,

Members of the Diplomatic Corp,

Senior Government Officials,

International Partners,

Distinguished guests,

Ladies and Gentlemen.

Good morning

It is a great honour and pleasure to address you, on such an important workshop relevant to our continent and SADC Region in particular. I would like to congratulate my brothers and sisters from Mozambique who celebrated their Independence Day yesterday. Mozambique has been for many years a home away from home for most South Africans. I take special note and appreciate your presence at this workshop which is in line with the August 2017 Summit theme “Partnering with the private sector in developing Industry and regional Value Chains” in our case the gas value chain.

Why SADC needs more energy

The world population will grow to 9.2 billion by 2040. In Africa, population will grow from 1 billion to 1.8 billion during the same time, an increase of 0.8 billion, nearly a billion. Urbanisation is projected to increase from 40% to 56% and the economy is expected to grow by 6.2% leading the African Gross domestic product to rise 6 fold with a capita income of US10 000.00. This will not happen if we do not have sufficient energy capacity in the continent. At present, only 39% of the African population is electrified compared to 70-90 % in other regions. Access to modern energy services though increasing remains limited with more than 650 million people in the region without access to electricity and nearly 730 million relying on the traditional use of biomass for cooking. Energy poverty characterise our region.

The anticipated population growth will be made possible by supply of secure, clean and sustainable energy. Energy access is the “golden thread” that weaves together economic growth, human development and environmental sustainability. As a continent we need to ensure that we have universal energy access to clean, sustainable and affordable energy by 2030. This universal target should not elude us in the SADC region. As a region and individual member countries of SADC, we have identified gas an integral part of the regional energy mix and this workshop allows us to deliberate on the role,

infrastructure and market development requirements for the gas sector to take off.

Status of Gas

Global gas reserves

Natural gas is an adaptable fuel and supplies 22% of the energy used worldwide. It makes up nearly a quarter of electricity generation, plays a crucial role as a feedstock for industry, has fewer emissions of most types of air pollutants and carbon dioxide, and still produces an equal amount of energy.

Global gas consumption is projected to increase from 124 trillion cubic feet (Tcf) in 2015 to 177 Tcf by 2040. Production will be dominated by the Middle East, China, United States and Russia. However, in Africa and sub-Saharan Africa in particular, gas production has significantly increased. This growth has come from mainly West Africa. As a region, Southern Africa has huge gas reserves in Angola, Tanzania, Mozambique and Namibia.

Gas contributes the largest increase in world primary energy consumption, second only to renewable energy sources. The high flexibility of gas power technologies also makes gas a suitable complementary power generation technology to renewable energy technologies. Abundant natural gas resources and rising production which includes supplies of tight gas, shale gas, and coal bed methane contributes to the strong competitive position of natural gas. Recent discoveries of new supplies of gas, the remarkable speed and scale of shale gas development and decreasing gas prices below expectations has heightened the awareness of natural gas as a key component of energy supply mix in a carbon constrained world economy.

SADC Regional Gas reserves

A details analysis of our region shows that for instance, Angola's natural gas reserves are estimated at 11 Tcf, Mozambique has more than 180 tcf of gas discovered and there is potential for this to be doubled by 2030. Tanzania has made significant gas discoveries and currently has more than 57 Tcf of proven gas reserves. Namibia has 1.3 Tcf of proven gas reserves with an estimated potential of 9Tcf. South Africa, Botswana and Zimbabwe have significant unconventional gas reserves in the form of coalbed methane and shale gas.

Economic opportunities from gas

The natural gas reserves within the SADC region present a significant opportunity for industrialisation that can boost economic growth, create much needed jobs and attract new investments in the region and increase significantly energy access. This enormous opportunity can only be realised if the region develops the requisite gas processing, transportation and distribution infrastructure to supply the regional market so that SADC will not only limit itself to being a gas exporter.

The economic benefits of gas extraction, infrastructure and market development in the SADC region is to stimulate productive activity and contribute positively to gross domestic product. Furthermore, exploiting gas reserves, such as natural gas, shale gas and coal bed methane reserves would result in significant job opportunities and contribute billions of dollars to the regional GDP per year. Subsequent employment opportunities generated would alleviate poverty.

Gas is used in the residential and commercial sectors, it is used for domestic hot water production, space heating and cooking. In the industrial sector, it is used for process heating as well as feedstock (e.g., nitrogenous fertilizer production, gas-to-liquid). Natural gas is also used as a fuel for power generation and transportation. Gas usage as a vehicle fuel remains low, but is gaining more and more importance in other regions of the world. The majority of the population in SADC depends on solid biomass for cooking. The proportion is exceeding 90% for the rural population. Natural gas is an excellent

candidate as clean cooking fuel, but requires dedicated infrastructure (distribution network) to be efficiently supplied to the end user.

Compressed Natural gas (CNG) can be used as fuel for road transportation. Natural gas vehicle growth is particularly important. An important advantage of natural gas over diesel and gasoline is a lower level of emissions (particles, CO₂, NO_x and SO₂). The SADC region is a net importer of oil products and the retail prices of diesel and petrol are high. Hence, domestic natural gas could offer a competitive alternative which will also save on balance of payment.

SADC is depended on agriculture but regional agricultural productivity is very low compare to other developing countries. One of the main reasons is the lower use of fertilizers. This low use of fertilizers is essentially due to the relatively high retail prices for the farmers. The supply of fertilizers relies on imports and the transportation costs (including ocean freight, port costs and truck transport) significantly impact the retail prices. Local production of fertilizers using gas will stimulated economic growth.

Important questions to be asked if SADC is to tap the economic opportunities from gas development

When one visions the use of gas for re-industrializing the region there are glaring questions that come to mind:

- Do we have the policy and regulatory framework to provide an enabling environment to exploit our natural resources in the region?
- Do we have the gas infrastructure to transport the gas within the region to markets?
- Does the region have sufficient demand to pay for the infrastructure development?
- Will there be funding available for mega regional project?

Is it possible for SADC to develop a gas industrial complex?

The region has examples of regional projects that have been successfully implemented. The West African Gas Pipeline – involving Nigeria, Benin, Togo and Ghana and the gas pipeline from Mozambique (Temane/Pande) to South Africa (Secunda). These are small projects but still very encouraging examples of international and regional cooperation in the field of natural gas infrastructure in sub-Saharan Africa. As evidenced by these projects, there will be a need for policy and regulatory framework alignment to make the development of this infrastructure a reality.

Significant use of natural gas in the region has been in the industrial sector (gas-to-liquids, gas-to-chemicals). Natural gas is capable of providing electrical power, it can also provide direct heat and chemical feedstock for industrial processes, commercial and residential cooking and heating applications as well as an alternative fuel source for transport.

Climate change impact of gas

The low carbon emission profile of gas-to-power and its modular configuration provides an opportunity for use of gas for power generation in the region. With an average electrification rate of 35%, the SADC region has an opportunity to develop a cleaner, reliable power generation sector from the use of gas. The gas to power can also support the renewable energy projects in various SADC member countries. Gas market development need not only be anchored by power generation. Other large gas-use programmes like petrochemical industries can anchor gas markets.

Is the region able to access funding for the gas megaprojects

Exploitation of gas resources in the region needs to be complemented by financial resources. Attracting finance of the infrastructure and associated projects will require a good investment climate such as right regulatory

framework, enforcement of contracts, no corruption to attract investors and secure capital. Raising the capital is a major challenge and multilateral, private financial institution and Development Financial institutions have to be strategic partners who will provide the much needed funding to this project as well providing a sound and innovative funding models to accommodate individual member state financial circumstances. We have invited our commercial banks, the development finance institutions including the newly formed BRICS Bank for guidance.

Concluding remarks

I am pleased that as Chair of the SADC Ministers responsible for energy South Africa has been able to host this important works to assist us as Ministers of Energy to understand the challenges in putting gas gathering and processing facilities in place, building gas networks and developing effective markets and pricing systems that will enable the commercial scale use of gas for power and industrial use and general development of a gas market in the Southern African region at large. The workshop presents a great growth opportunity for industry players keen to invest in the SADC region. Furthermore the different experts on the programme will unpack this low carbon option to us addressing the challenges that we face, the market with dynamic in our region and share interesting solution-driven debates today.

I thank you.