



INTRODUCTION OF THE CAPRIVI LINK PROJECT BY MR PAULINUS I. SHILAMBA, NAMPOWER MANAGING DIRECTOR, ON THE OCCASION OF THE OFFICIAL COMMISSIONING OF THE CAPRIVI LINK INTERCONNECTOR

KATIMA MULILO, 12 NOVEMBER 2010

Your Excellency Hifikepunye Pohamba, President of the Republic of Namibia;
Your Excellency Rupiah Banda, President of the Republic of Zambia;
Your Excellency Seretse Khama Ian Khama, President of the Republic of Botswana;
Your Excellency Robert Gabriel Mugabe, President of the Republic of Zimbabwe;
Right Honourable Nahas Angula, Prime Minister of the Republic of Namibia;
Honourable Asser Kapere, Chairman of the National Council;
Honourable Ministers & Deputy Ministers from Namibia and the SADC region;
Honourable Members of Parliament;
Executive Secretary of SADC, Dr Augusto Salmao, and your delegation from the SADC Secretariat;
Honourable Governors of the Caprivi, Kavango and Otjozondjupa Regions, and from other regions;
Your Excellencies, members of the Diplomatic Corps;
Your Majesties, Chiefs of the Traditional Authorities in the Caprivi Region;
Honourable Regional and Local Authority Councilors;
NamPower Board of Directors and Management;
Chief Executives of utilities, and Head of Coordination Centre, of the Southern African Power Pool;
Captains of Industry;
Financiers, contractors and consultants;
Distinguished invited guests;
Members of the Media;
Ladies and gentlemen;
All protocol observed.

I have the great honour and privilege, as Managing Director of NamPower, to welcome you to our Zambezi substation, which also houses the converter station.

On 28 March 2008 we were here, at the same venue, to inaugurate the commissioning of the 220 kV HVAC transmission line from Victoria Falls in Zambia to Katima Mulilo in Namibia. I am pleased that we are back here again today to mark another important milestone in the development of our economy, the official commissioning of the Caprivi Link Interconnector.

Today I will provide you with background information that led to the investment decision in the Caprivi Link Interconnector and on the choice of technology. Please bear with me as I will now-and-then be referring to some technical and economic terms in this regard. Our Minister of Mines and Energy, Honourable Isak Katali, will provide you with more information about the project during the second phase of the inauguration program later this morning.

I regret to inform you, contrary to the expectations you may have, that you will not be able to view the converter station from inside as it is currently operational. This is because of our health and safety regulations that prohibit entrance of a building with high voltage equipment while in operation as this will expose us to high electro-magnetic radiation which is hazardous to our health.

Namibia is a net importer of electrical energy and will, for the foreseeable future, rely on electricity imports from the region. Therefore the investment of N\$3.2 billion in this project instead of building a power station may be questionable to some. However, the NamPower Board of directors considered all options available and eventually agreed on this project. Some of the reasons considered by our Board to arrive at this decision include the long term benefits of interconnecting Namibia with its north-western neighbours, providing a second north-south interconnector in the SADC region and connecting the Caprivi Region, that has been electrically isolated from the rest of Namibia, to the transmission grid of NamPower.

NamPower spent a long time on transmission studies to investigate various technology options considering the length of the planned Caprivi Link Interconnector, which stretches about 950km from Gerus Sub-Station outside Otjiwarongo in central Namibia to Zambezi Sub-Station here in Katima Mulilo. A consulting engineering firm, PB Power, was contracted to advise NamPower on the preferred technology choice that would maximize opportunities for wheeling of power to and from neighbouring countries in view of the transmission congestion on the eastern and north-southern corridor to South Africa. It was finally decided to build a 350kV HVDC system utilizing the latest HVDC Light technology from ABB capable of transmitting 300 MW in monopole mode

upgradable to 600 MW in bi-pole mode as demand increases and as trading opportunities evolve in the region.

In 2007 NamPower embarked on a competitive tender process for the procurement of goods and services from reputable and experienced contractors and service providers. ABB was appointed as the successful EPC contractor for the system engineering including design and installation of the two converter stations at Zambezi and Gerus. In addition to the standard HVDC Classic technology which is generally common around the world, ABB also offered the HVDC Light technology. This technology is best suited for the stability and reliability of the electrically weak transmission systems, such as those of Namibia and Western Zambia. The Caprivi region and Western Zambia benefited immensely from the application of this technology, as supply to these two regions can now be sourced from both directions at any time. In fact, with this interconnector, Caprivi has become one of the few regions with the most reliable power supply in Namibia.

Namibia is the pioneer of this new HVDC Light technology because of the following reasons:

- 1) For the first time operated at high voltages of $\pm 350\text{kV}$;
- 2) For the first time utilised for long distance overhead transmission;
- 3) For the first time feeding two electrically weak networks thereby improving stability of both national grids during dynamic disturbances and steady-state power transfers;
- 4) For the first time able to supply an islanded and/or passive network with all the different operational criteria requested, for example supplying Katima Mulilo from the Namibian grid with ZESCO supply being disconnected;
- 5) For the first time able to energise a dead network with all the operational criteria requested, for example energising Katima Mulilo and Western Zambia, or even Namibia's northern system once it experiences an outage;
- 6) Highest power transfer capability of a HVDC Light system to date.

Right from the start of the project NamPower took a strategic and conscious decision that no consultant and no contractor will work on their own, but that NamPower will continuously be present to ensure that we do intellectually and technically understand what will eventually be build, and that NamPower will be able to maintain such infrastructure. As such, during construction NamPower personnel were assigned as understudies to consultants and contractors, and they were continuously present to ensure that, as a company, we understand the project and are able of taking it over after commissioning. I am proud that the strategy has paid off; that NamPower has build up the necessary capacity

during the implementation phase and that we are now capable of operating and maintaining this infrastructure on our own.

Directors of Ceremony, Your Excellencies, Invited Guests, Ladies and Gentlemen

In summary, I would like to assure you that with the operational data and technical knowledge available, the decision to invest in an HVDC Light technology system for the Caprivi Link Interconnector was the correct one. Of course any new project with very complex technology like this one comes with teething challenges. However, I believe that Namibia has set a standard in the world with this pioneering investment and our people, who are now one of the few in the world to practically and theoretically understand this technology, could assist and advise other utilities in the region and beyond.

Finally, may I now take this opportunity to thank our stakeholders, particularly our Government for the support, as well as our sister SAPP utilities for their cooperation during the implementation of the project. I particularly like to thank the Governors, Traditional leaders and residents of the Caprivi, Kavango and Otjozondjupa regions for their cooperation. I also take this opportunity to thank and congratulate our Board, Management and the NamPower Project Team for a job well done. Finally, but not least, I express my gratitude to our financiers, consultants & contractors for their role in the project.

I sincerely hope that I was able to assure everyone present here and particularly the people of Namibia and Zambia that the investment in the Caprivi link Interconnector was a correct one; that it will improve reliability of power supply to the two countries and is a stepping stone in the strengthening and consolidation of bilateral and regional cooperation within the SADC region.

I thank you