

MINISTERIAL STATEMENT

NUCLEAR SCIENCE AND TECHNOLOGY PROGRAMME IN ZAMBIA

The Minister of Higher Education (Prof. Luo)

Mr Speaker, let me take this opportunity to thank you most sincerely for according me this opportunity to report to this august House the status of the Nuclear Science and Technology Programme in Zambia.

Sir, you will agree with me that the word ‘nuclear’ generally arouses negative reactions and feelings in many people. Surprisingly, even the most enlightened of people in Zambia view nuclear science and technology as something ‘dangerous’ and usually associate with atrocities and environmental disasters. When asked about their feelings on nuclear science, many Zambians respond in the negative, as most of them only associate nuclear science to the catastrophic effects of ‘Fukushima, Hiroshima and Nagasaki’.

Mr Speaker, these prejudices and negative sentiments are, in most cases, based on unsubstantiated perceptions, lack of knowledge, and in some cases, deliberate political sectional and economic interests. These sentiments associated with the safety of nuclear science and technology are almost always not supported by any empirical knowledge or data.

Although empirical data shows that nuclear energy is the safest, most reliable and one of the cleanest energy sources in the world, most people still view it as something inherently dangerous. For this reason, Mr Speaker, it is critical for the nuclear science and technology programme in Zambia to address and allay the negative perceptions of nuclear science and technology in the country.

Mr Speaker, the Patriotic Front (PF) Government in its party manifesto, on page 61, states as follows:

“ ... in the next five years, the PF Government shall promote investments in alternative energy sources such as thermal, electricity generation from coal as well as nuclear reactors.”

Sir, it is in this context that His Excellency the President of this Republic of Zambia, Mr Edgar Chagwa Lungu, during his Inaugural Address to this august House, announced that Zambia would pursue nuclear technology and its application as part of a diversified and sustainable energy mix to power her economy.

Mr Speaker, in keeping with the patriotic Front (PF) Manifesto, the basis upon which the Government was ushered into office, the Government is embarking on a nuclear science and technology programme.

Sir, allow me to take advantage of this opportunity given to me to address the House and, through it the nation, to just highlight some of the benefits of nuclear science. Zambia and many other countries in the sub-region recently suffered critical and painful power deficits arising from low water levels in our natural water bodies caused by the el-Niño. The power deficit arose because of the lack of investment and alternative energy sources as well lack of foresight to prevent future crises.

Mr Speaker, in order to avert future energy crisis, Zambia needs to actively move away from reliance on natural phenomena to assure sustainable economic development. Whilst Zambia must invest in other sources of energy, generations such as solar, geothermal, wind and coal nuclear energy must as a matter of priority, be included in energy mix to ensure sustainable and reliable off the grid energy.

Sir, nuclear power has many advantages as compared to the conventional hydro or coal power plants. For instance, although initial capital injection into nuclear power plant is relatively high, the operational costs are sufficiently low. On average, a nuclear plant has a life span of five to eight years implying a longer cost recovery period and making it possible to have cheap electricity at approximately US\$4 cents per kilowatt. Further, nuclear power plants can produce

electricity consistently even in cases of variation in weather patterns and drought. Thus, coupled with the abundant reserves of uranium in Zambia, this means there is a security and sustainability of nuclear fuel.

Mr Speaker, in addition, nuclear science and technology also supports a large number of high paying jobs thereby, contributing greatly to the tax base of this country. Most importantly, nuclear energy is environmentally friendly because there is virtually no green house gas emission.

Sir, it is worth noting that apart from the eventual electricity generation, nuclear technology offers Zambia a unique and exciting opportunity to begin to actualise the 'Smart Zambia' mantra by using nuclear science and technology in the non-power sectors in areas such as medicine, agriculture and the industry.

Mr Speaker, through this august House, I would like to inform the nation that nuclear science has also enabled the health sector to save many lives at the Cancer Disease Hospital. Through the science, national food security is assured through enhanced self-life for agricultural products. However, all this has been achieved through the importation of isotopes nuclear materials. Therefore, Zambia stands to gain by having its own nuclear science programme as it will not have to wait for imported isotopes to treat a cancer patient at University Teaching Hospital (UTH), who has been long waiting for chemotherapy treatment for months. It will also not have power outages as a result of insufficient water levels in its water bodies. Furthermore, the country can avoid food shortages through the promotion of high yielding and drought resistant varieties as well as an improvement in the self-life of the agro-products.

Mr Speaker, studies have reviewed that with the current rate of economic growth and the national rate of population growth, the demand for electricity is estimated to rise by 4.5 per cent per annum. On the supply side, it is estimated that the growth is around 3.9 per cent annum. It is, therefore, estimated that demand for electricity will sharply outstrip production by 2030 thereby posing a threat to sustainable economic growth.