

Opening address by Prof H Russel Botman, Rector and Vice-Chancellor of Stellenbosch University, at the African Bioenergy Convention, 17 March 2010

Ladies and gentlemen, it is my honour to say a few words at the start of this significant event, the African Bioenergy Convention, which forms part of the Global Sustainable Bioenergy Project.

What an exciting occasion this is. Coming up with ways to meet our energy needs is one of the many challenges facing humankind. If this can be done in a way that mitigates the global environmental crisis, there is hope for a sustainable future.

You are working on important issues – how future generations will live, what should drive the economy of the next decades, and how the human development of this continent will happen, without which the world will not become a better place. Africa has to shape up and take care of itself.

Let me start with the 2010 soccer World Cup, which kicks off in South Africa in just 85 days. One of the fears expressed in the run-up to the tournament has been that electricity blackouts would plunge some of the games in darkness. As you know, the capacity of our national electricity generator, Eskom, has been stretched to the limit of late.

So, earlier this month, BP, an official World Cup sponsor, announced it would be supplying millions of litres of diesel to power huge generators at each of the 10 World Cup stadiums. Diesel will also be powering all television broadcasts, as well as the approximately 600 inter-city buses in use during the month-long tournament.

Imagine that biofuels – not fossil fuel diesel – were to be used at the World Cup. What a boost for bioenergy and the biofuel industry that would have been.

Up to 20 billion litres of fossil fuel is burnt in South Africa annually, but the latest target set by the government for the biofuel component is 2%. Clearly there is much room for growth in this industry.

Over the past few decades, bioenergy has become ever more important. A number of factors have played a role in this. I will briefly mention two:

Energy security: The world's supply of fossil fuels is dwindling, and yet the demand for energy keeps on rising. Biofuels and other forms of bioenergy form part of a host of alternative sources of energy that is being developed to lessen our dependence on fossil fuels.

Sustainable development: Our natural resources are being over-exploited, and industrial pollution is causing climate change and global warming. At this pace, all life on our planet is being threatened. Bioenergy is considered cleaner, greener than fossil fuels.

Both these factors come into play here in Africa.

Poverty: This continent needs economic development – and therefore energy – to improve the lives of its people.

- Last year, 22 of the 24 nations lowest on the UN Human Development Index were in Sub-Saharan Africa.
- More than half the population of Africa live in extreme poverty – 51% survive on the equivalent of less than \$1.25 (US) a day.

The environment: Africa contributes the least amount of greenhouse gases globally, yet it is set to bear the brunt of climate change.

- It is projected that global warming will cause drought in some areas and floods in others.
- This will negatively affect agricultural output and human settlement patterns.

Bioenergy can potentially play an important role in helping Africa deal with these challenges.

However, there is another major public policy area that is linked to bioenergy – though often on the negative side of the balance sheet – namely:

Food security: The rising use of food crops, such as maize, sorghum and wheat, in the production of biofuels have led to fears about the supply and cost of agricultural production for human consumption.

Again, this is of great concern in Africa, where **hunger** and related health issues are huge problems:

- According to the UN, 29% – or nearly one third – of Africa’s population suffered from undernourishment in 2008.

The South African government recently ruled that maize could not be used in the production of bioethanol – unless production increased significantly. Maize is a staple food, and there are fears that prices would rise if harvests were used to produce fuel. This has dashed the hopes of many in the industry.

However, as has been pointed out by several players, the production of biofuels **from non-food crops** can provide alternative markets to the agricultural sector. This will provide a new lifeline to the agroforestry sector in Africa.

The experts say that bioenergy is one of the most labour-intensive renewable energy options. This means biofuel production will provide new opportunities for job and wealth creation to subsistence farmers and unskilled labourers.

In this way, bioenergy could help combat poverty and related conditions and thereby improve the lives of Africa’s people.

At Stellenbosch University, we firmly believe that science should serve the needs of society. We call this our **pedagogy of hope**.

As a tertiary institution, our core activities are teaching and learning, research and community interaction. As part of our new vision, we have distilled five themes from the **international development agenda** to guide everything we do, namely:

1. Combating **poverty**
2. Promoting human dignity and health
3. Promoting democracy and human rights
4. Promoting **peace and security**
5. Balancing a **sustainable environment** with a **competitive industry**

Bioenergy cuts across several of these themes. I have mentioned how it could:

- Combat poverty
- Promote environmental sustainability
- Spur economic growth and a competitive industry

In addition, it could:

- Promote peace and security

An Africa less dependent on fossil fuels is potentially a continent relieved of some of the geopolitical tensions that come with oil fields. Bioenergy can thus help to stabilise Africa.

At Stellenbosch University, we have come up with a range of projects that form part of our Overarching Strategic Plan of becoming a centre of hope for Africa.

- “Energy and the Environment” is one of these key projects. Located in our Faculty of Engineering, the aim is to promote development with a limited environmental footprint.

Prof Emile van Zyl, who holds the “Chair of Energy Research: Biofuels and other clean alternative fuels”, and his team are leading efforts make the world a better place through the practical application of good science.

Prof Lee Lynd of Dartmouth College in the US, the founder and current chairperson of the Global Sustainable Bioenergy Project, is also attached to Stellenbosch University. His appointment as Extraordinary Professor in our Department of Microbiology has just been extended until 2012.

It is important that universities, as knowledge drivers, are centrally involved in initiatives such as bioenergy because the challenge is to pioneer a new path for a new future.

Ladies and gentlemen, I am sure you will be exploring the issues I have mentioned – plus many more – in detail in the course of this convention. You will also be testing the hypothesis that “it is possible for bioenergy to sustainably meet 25% or more of the future demand for energy services from managed lands, while preserving wildlife habitat and maintaining environmental quality”.

This is an ambitious agenda, in light of the fact that biofuels provided just 1,8% of transport fuel globally in 2008. But I have no doubt that you will give it your best shot. I wish you fruitful discussions and look forward to seeing your resolutions.

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