



Overview of the Policy and Regulatory Framework Pertaining to Biofuels in South Africa

ACP S&T Programme:

Kick-off Workshop on Sustainable Non-Food Sources of Oil

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IMBEWU

- A Johannesburg (South Africa) based legal specialist sustainability legal consultancy.
- Provides services to the South African and international markets.
- Employs six lawyers all specialising in an aspect of environmental, climate change or health & safety law.
- Climate Change and CDM Specialist Legal Consultancy Unit.
- Collaboration with Warburton Attorneys.
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Overview of Presentation and Limitations

- **Mandate**: Overview of the policy & regulatory framework pertaining to biofuels in South Africa. **Particular focus on the legislative restrictions in South Africa in terms of the commercial use of biofuels generated from micro-algae, *jatropha curcus*, biogas and CHP engines.**
- Environmental legal regime applicable to Biofuels, either directly or indirectly, is extensive, due to cross-cutting nature of a viable biofuel industry. Therefore, presentation is limited to those legal regimes directly applicable to biofuels and those indirectly applicable that must be considered.

Policy and Regulatory Framework

- **Energy**
 - Renewable energy policies in relation to biofuels;
 - Biofuel Industrial Strategy.
- **Biodiversity**
 - Biodiversity policy and regulatory regime in regard to biofuels:
 - Alien & Invasive Species;
 - Threatened and Protected Ecosystems
 - GMOs?
- **Food Security & Biosafety**
 - Food Security and Biosafety policy and regulatory regime in regard to biofuels.
- **Climate Change**
 - South Africa's policy response to climate change:
 - Long Term Mitigation Scenarios Strategy and the role of biofuels;
 - Proposed Climate Change policy.

Policy and Regulatory Framework Cont.

- **Water**
 - Water availability & licensing requirements into National Water Act 36 of 1998.
- **Petroleum & Fuel industry**
 - Petroleum Products Act, Amendment Acts & Regulations
 - Manufacturing licence & requirements
 - Petroleum Pipeline Act
 - Gas Act & Regulations for bulk gas transmission, storage, distribution, liquefaction and re-gasification
 - SANS fuel standards applicable to biofuels.
 - National Environmental Management: Air Quality Act 39 of 2004
 - Not only in relation to petroleum industry & motor vehicle emissions standards;
 - May have implications for biogas projects & CHP engines, as NEM:AQA will replace the Atmospheric Pollution Prevention Act & these projects may require a licence.

Renewable Energy Policy & Regulatory Framework

- Governed by DE, formerly the DME.
- Several Renewable Energy Policies relevant to biofuels.
- White Paper on Energy Policy for the Republic of South Africa, 1998:
 - Biomass listed as potential renewable energy source.
- White Paper on Renewable Energy, 2003:
 - Policy target of 10 000 GWh of renewable energy contribution to final energy demand by 2013;
 - Biomass & biofuels again highlighted as alternative energy sources having high potential to achieve target & suggests a fiscal incentive for production of biofuels produced from biomass in the form of a 30% reduction in the Fuel Levy.
 - Renewable Energy Summit 2009: **only 3% of target achieved!**

Renewable Energy Policy & Regulatory Framework Cont.

- National Biofuels Industrial Strategy, 2007:
 - Primary objective: create jobs in the energy - crop and biofuels value chain in the former homelands, and to act as a bridge between the 1st and 2nd economies.
 - To operate over a period of 5 years (i.e. pilot phase).
 - Target: 2% penetration level in national liquid fuel supply by 2013.
 - Specifies certain crops for production (1st generation):
 - **Bioethanol:** sugar cane & sugar beet;
 - **Biodiesel:** sunflower, canola & soya beans
 - Strategy specifically excludes **maize** & ***jatropha*** on grounds of food security & environmental concerns, respectively, however Strategy provides that further research is required.
 - Strategy envisages the use of 1.4% of the total arable land in SA, of which 1% located in the former homelands is under utilised

Renewable Energy Policy & Regulatory Framework Cont.

- National Biofuels Industrial Strategy, 2007 cont.:
 - Does not support development of industry based on imported feedstocks.
 - All biofuel producers require manufacturing licence to PPAA.
 - Feasibility study findings highlighted incl. the extent of the industry dependent on *inter alia* the extent government support, especially investment environment.
 - Suggests R4 billion investment required over 5 years to reach 2% target.
 - Strategy premised (& dependent) on various partnerships along value chain & across affected sectors, e.g. agricultural assistance programmes, contracts between producers & oil companies, and the creation of a market for biofuels.
 - Only biofuels plants that have been identified to assist in achieving the initial target will be supported and their **location** will be a condition of the issuing of a manufacturing licence. The plants will be located throughout the country depending on the investor's choices and also as per the conditions of licences

Renewable Energy Policy & Regulatory Framework Cont.

- National Biofuels Industrial Strategy, 2007 cont.:
 - Recommends fuel levys for biodiesel & bioethanol (50% & 100% respectively).
 - Highlights challenges regarding water availability & pollution.
 - Does not favour enforcing / mandating uptake & blending in pilot phase.
 - R&D into alternative feedstocks, development of energy crops, improvement of known technologies & **developing, supporting & piloting second generation technologies** is supported by the Strategy.
- **Criticism?** Focus of strategy & overly dependent on ability of emerging farmers to overcome difficulties; 1st generation tech only & food crops used as feedstock; no mandatory targets; binding nature?

Renewable Energy Policy & Regulatory Framework Cont.

- National Biofuels Task Team: Criteria for manufacturing biofuels
 - Confirms that all biofuel manufacturers, including pilot projects, must obtain manufacturing licence in terms of the PPAA.
 - Crops used for production of biofuels must not have negative environmental impacts on South Africa during **processing and storage**.
 - The production of feedstock under irrigation will only be allowed in exceptional circumstances and a detailed motivation will have to be provided. Water that is currently used for gainful irrigation will not be considered for a new water license for biofuels production purposes.
 - Feedstock must be cultivated and sourced from the designated areas (proof).
 - All biofuel products and producers must meet the prescribed SANS specifications and standards.
- REFIT, Phase I &II (Electricity generating alternative fuel sources)
 - Financial incentive to drive the uptake of renewable energy projects by IPPs to assist achieving RE target & beyond in a phased approach.
 - All RE generators require a Generation Licence ito Electricity Regulation Act.
 - Landfill gas (phase I), Solid biomass & biogas (phase II) included in tariff.

Biodiversity Policy & Regulatory Framework

- Biodiversity & conservation fall under the mandate of DEAT (now DWEA).
- Biodiversity issues governed by the National Environmental Management: Biodiversity Act 10 of 2004 (NEM:BDA).
- Framework act & Specific Environmental Management Act.
- Purpose of NEM:BDA *inter alia* manage and conserve biological diversity and the components of such biological diversity & the use of indigenous biological resources in a sustainable manner.
- Biodiversity legal regime under NEM:BDA is extensive.
- The following aspects of the regime are relevant to biofuels:
 - National Biodiversity Framework (2009);
 - Draft Alien & Invasive Species Regulations (**2009**);
 - Draft List of Threatened Ecosystems (2009).

Biodiversity Policy & Regulatory Framework Cont.

- National Biodiversity Framework, 2009:
 - Framework required to be developed in terms of the NEMBDA.
 - Purpose of framework: provide a framework to co-ordinate and align the efforts of the many organisations and individuals involved in conserving and managing South Africa's biodiversity, in support of sustainable development. Focus on development & conservation concepts working together & not in opposition.
 - NBF aims to:
 - focus attention on the most urgent strategies and actions required for conserving and managing South Africa's biodiversity; and
 - point to roles and responsibilities of key stakeholders, including key organs of state whose mandates impact directly on biodiversity conservation and management.
 - The heart of the NBF is a set of 33 Priority Actions, which provide an agreed set of priorities to guide the work of the biodiversity sector in South Africa for the next five years.

Biodiversity Policy & Regulatory Framework Cont.

- National Biodiversity Framework, 2009 cont.:
 - Framework expressly provides that “*the private sector, particularly those production sectors whose activities contribute to the major pressures on South Africa's biodiversity, such as loss of natural habitat, over-abstraction of freshwater resources...*” etc. are to use the framework.
 - The cultivation of biofuels is specifically considered a production sector whose activities contribute substantially to the major pressures on South Africa's biodiversity, and thus has an important role to play in contributing positively to biodiversity conservation.
 - Working with the key production sectors like biofuels is a priority task, with the 2013 target of developing biodiversity-friendly practice guidelines.
 - Specifically notes that there is an urgent need to develop biodiversity-friendly guidelines for the biofuels sector.

Biodiversity Policy & Regulatory Framework Cont.

- Draft National List of Threatened Ecosystems, 2009:
 - Not of great importance now, merely to note that the DWEA is going through the process of identifying threatened ecosystems in need of protection **outside of the traditionally protected areas** in accordance with the NBF that will potentially have an impact on the biofuel industry, particularly its location.
 - The purpose of listing threatened ecosystems is primarily to reduce the rate of ecosystem and species extinction. The purpose of listing protected ecosystems is primarily to preserve witness sites of exceptionally high conservation value.
 - 4 main implications of listing ecosystem:
 - Planning related implications, linked to the requirement in the Biodiversity Act for listed ecosystems to be taken into account in municipal IDPs and SDFs;
 - Environmental authorisation implications, in terms of NEMA and EIA regulations;
 - Proactive management implications. in terms of the Biodiversity Act;
 - Monitoring and reporting implications, in terms of the Biodiversity Act.

Biodiversity Policy & Regulatory Framework Cont.

- **Draft Alien & Invasive Species Regulations, 2009:**

- Specifically in reference to legal status of *Jatropha Curcus*. Will also consider its status in terms of the Conservation of Agricultural Resources Act 43 of 1983 (specifically in terms of Regulation 15 of CARA Regs).
- *Jatropha* listed as a category 2 **invasive** species in terms of s70 of the Act, but is **not** on the list of invaders in terms of Regulation 15 of CARA Regulations. Category 2 means that it is regulated by area & therefore requires a demarcation permit.
- Status therefore **pending!** However, pending status will always be taken into consideration by any issuing authority.
- **R29:** Certain restricted activities applicable to category 2 invasives, eg:
 - importing a specimen into the Republic;
 - growing a specimen, or allowing it to grow or multiply;
 - breeding or in any other way propagating a specimen or causing it to multiply;
 - allowing a specimen to grow, breed or multiply.

Biodiversity Policy & Regulatory Framework Cont.

- **Draft Alien & Invasive Species Regulations, 2009:**

- Regarding demarcation permit, it must state the area for the restricted activity – not riparian habitat!
- However, **R30** allows for a person / OoS to make application for a specific area to be demarcated to carry out specified restricted activity. If area has been demarcated, will not require a demarcation permit for that specific activity in the demarcated area.
- To demarcate an area, will have to undertake a risk assessment in accordance with Chapter 6 of the Regulations, and the applicant will be responsible for monitoring compliance with conditions of demarcation by all persons utilising demarcated area.
- **R17:** If carrying out restricted activity for scientific, commercial purposes, must register as a registration body. Registration requirements are clearly set out.

Water Regulatory Framework

- Water regime governed by the National Water Act, 1998.
- S21 lists the water use activities that will require a Water Use Licence, including the taking of water from a water source & using waste water or water containing waste for irrigation.
- However, SA's water allocation is approximately 98%.
- Ecological reserve not maintained or supplied.
- Assurance of water supply is lower than acceptable.
- Biofuels manufacturing criteria rules out the issuing of water licence for irrigation for biofuel production.
- Availability of water and the likelihood of available water being used for the biofuel crops set out in the Biofuel Strategy is a major barrier.

Food Security Regulatory Framework

- Governed by DAFF.
- Also concerns “biosafety” i.e. GMOs.
- A word on GMOs:
 - Legal regime well established through Genetically Modified Organisms Act, 1997 & regulations.
 - To import, export, develop, produce, use, release or distribute GMOs, require permit.
 - Risk assessment
 - Registration of facility
- DAFF has an Integrated Food Security Strategy (2002), however no direct **legal** link to biofuels – there is of course a link between FS and biofuels.
- In the DAFF Strategic Plan & Budget briefing in 2009, it was stated that the department’s biofuel strategy is in the process of development & is not ready for implementation. Department also fast tracking the impact analysis of biofuels for strategy. Department looking at developing agricultural commodities that don’t compromise food security.

Climate Change Regulatory Framework

- Currently, no policies in place, however the Climate Change Response policy is anticipated to be released by the end of 2010.
- Most important document to be considered is the LTMS. The overall aim of the LTMS is to “contribute to setting the pathway for long-term climate policy for the country and to inform South Africa negotiating positions...(and)...deliberations towards a legislative package which will give effect to SA policy at a mandatory level”.
- Ito LTMS, renewable energy can play an extensive role in reducing SA’s emissions, including biofuels.
- Extent of RE and biofuels to combat climate change should be set out in the Climate Change Response policy.

Conclusions

- Availability of land and water & their respective legal regimes are very important considerations.
- Generally speaking, the investment environment still needs to be created
 - More subsidies for producers and for R&D;
 - More standards for industry;
 - More legal certainty.
- Generally, it is unclear what will happen once the “pilot phase” of the Biofuels Strategy is over.
- Climate change policy will potentially provide great impetus for biofuel industry BUT will be require a more integrated & comprehensive approach than has currently been taken.
- A new strategy / policy with a different focus? Role of 2nd generation tech?

Conclusions

- At the RE Summit of 2009, the following was provided relating to biofuels:
 - “Regulations to govern the promotion and development of the biofuels industry including the sustainable feedstocks to be used by the country based on scientific outcomes and international best practice and experience, blending levels etc, must be finalized.
 - Regulations for biofuels must provide for a medium term transitioning (i.e. A bridging strategy) from a fossil fuel based transport sector to a low carbon transport sector; and
 - Biofuels regulations and guidelines must provide for the development of appropriate projects, taking into account the constraints of the macro-economic environment (water resources, land productivity, food security, job creation and sustainable livelihoods)”.

Thank you

