



PISCES Policy Brief No. 1 December 2008

Policies and Regulations Affecting Biofuel Development in Kenya

By Benard O. Muok,
Shadrack Kirui, Daniel Theuri
and Judi W. Wakhungu

PISCES

Policy Innovation Systems for Clean Energy Security (PISCES) is a five-year Research Programme Consortium funded by the UK's Department for International Development (DFID) to develop new knowledge for the sustainable use of bioenergy to improve energy access and livelihoods in poor communities. PISCES is led by the African Centre for Technology Studies (ACTS), Kenya with lead partners Practical Action, M.S. Swaminathan Research Foundation (MSSRF), the University of Dar es Salaam and the University of Edinburgh, together with a network of national and international partners and collaborators.

Policy Working Group (PWG)

The Policy Working Group (PWG) of PISCES is an expert working group whose objective is to develop a consultative and participatory policy methodology to discuss the policy issues and guide policy statements on bioenergy. The group, with focus on Kenya and Sri Lanka, aims to achieve this by bringing together policy makers, stakeholders and experts to develop a combined methodology on participatory policy dialogue and apply the same in developing bioenergy policy.

Abstract

The growing increase in international oil prices and the push towards cleaner energy sources has created an urgent need to shift from high-cost fossil oil to cost-effective biofuel. Currently, there are several biofuel, and particularly biodiesel, activities on the ground, with NGOs such as Green Africa Foundation and Vanilla Development Foundation leading the way. However, the development of biofuel in Kenya is currently hampered by lack of policy frameworks. The Government of Kenya (GoK) has made several initiatives to address this gap. For example, the GoK Sessional Paper No. 4 of 2004 on Energy seeks to encourage wider adoption of renewable energy technologies. The Energy Act of 2006 mandates the government to pursue and facilitate the production of biofuels. Though the government is yet to adopt a biofuels policy in response to its mandate under the Energy Act, an initiative has been taken to develop a comprehensive biodiesel strategy. The Ministry has constituted a National Biofuels Committee which is currently addressing biodiesel issues. The membership of the National Biofuels Committee includes public sector, private sector and non-governmental organization participants in the energy value chain. The committee has produced a draft biodiesel strategy which is now awaiting cabinet approval. No similar efforts have begun regarding the bioethanol industry. Though there are some initiatives being undertaken by the government to develop a policy framework for biofuel development, much remains to be done to develop regulations and standards that will promote and regulate the biofuel industry in Kenya. The biofuel industry cuts across several sectors that are governed by different policies, all of which need to be harmonized to speed up the industry in the light of sky-rocketing fossil fuel prices.

Introduction

Biofuels have assumed significant importance globally as the world addresses changing patterns in energy supply and demand. Growing world energy demand, the insecurity of long-term supply and the consequences of increasing fossil fuel prices as well as the demand for reduced

Greenhouse Gas (GHG) emissions are driving governments to look for alternatives. Biofuel is seen by many as a clean form of energy in an era of unstable oil prices and concerns over carbon emissions.

Kenya has not been left behind in the effort to develop biofuel industries. There are currently plenty

of biofuel, and particularly biodiesel, activities on the ground, with a number of NGOs, government ministries and agencies, and individual entrepreneurs engaged in the development of biodiesel crops and associated processes. These efforts are, however, frustrated by the absence of a national strategy that would harness and coordinate the efforts and resources on the ground. Before creating a biofuels policy framework in Kenya, there is need to assess the existing policies and regulatory regimes.

This is a report of the literature on current laws, policies and regulatory requirements as they apply throughout the biofuels production life cycle. The review covers relevant laws and regulations of the Ministries of Agriculture, Energy (specifically the Renewable Energy Department), Environment and Natural Resources as well and Trade and Industry as they relate to the status and on-going initiatives addressing biofuel development in the country. Also covered in this report are current initiatives by the Government of Kenya (GoK) in creating a policy framework for the development of biofuel industries in the country.

Policies

Sessional Paper No. 4 (GoK, 2004) on Energy seeks to encourage wider adoption of renewable energy technologies, thereby enhancing their role in the country's energy supply matrix. The Policy recognizes the potential for production of biodiesel in particular from locally grown crops and, in order to utilize biodiesel, observes that a system for production, distribution and use will need to be put in place. It recognizes

the need to set aside land for the production of energy crops from which biofuels can be produced, and to formulate strategies to optimize land use and to harmonize the existing land use policy with the energy policy. It also calls for resources to be mobilized for research and development that will facilitate its introduction as a motor fuel blend in the medium term (GoK, 2004).

The Energy Act of 2006 mandates the government to pursue and facilitate the production of biofuels, but does not articulate how this should be accomplished. Liquid biofuels are only accorded a passing mention in the Act (GoK, 2006a). The government has yet to adopt a biofuels policy in response to its mandate under the Energy Act.

The policy on Arid and Semi Arid Lands (ASALs) indicates that available opportunities for investment in these areas have not been utilized (GoK, 2005). Mainstreaming the jatropha value chain initiatives into ongoing activities in the ASALs can be pursued with a view to achieving the objectives of this strategy. The Strategy for Revitalizing Agriculture (GoK, 2006b) offers development opportunities through the Agriculture Product Value Chain which aims at developing business linkages through new extension approaches between producers, suppliers, processors and the market. It also recognizes the importance of new and emerging crops including Jatropha.

The country's vision 2030 aims at industrializing the agricultural sector through enhanced agro-processing and value addition to crops.

Legislation and Standards

The relevant legislation is the Energy Act 2006. Other legislation expected to impact on the biofuel industry includes the Forest Act 2005, Agriculture Act, Trade & Industry Act and the Water Act. Biofuel activities clearly fall under the provisions of the Energy Act and may be regulated accordingly. This legislation embraces petroleum, electricity and other forms of energy. It encourages enhancement of incentives to the private sector and promotes prudent regulation of the energy sector. It allows duty free importation of energy hardware to promote widespread usage. It also allows renewable energy systems not exceeding 3 MW (or, if operating in hybrid mode, systems in which the oil fired component does not exceed 30% of the total capacity) to operate in any area of the country without any license, irrespective of any other existing distribution license. It provides for the determination of energy prices by market mechanisms and regulate only where necessary. The Act empowers the minister to promote development and use of renewable energy technologies including biodiesel and bioethanol.

The role of regulating the energy sector is vested with the Energy Regulatory Commission (ERC) (GoK, 2006a). The Energy Act authorizes the Commission to issue licenses and permits for all undertakings and activities in the development and use of biofuel, and makes proposals to the minister for regulations which may be necessary. The Commission, in liaison with Kenya Bureau of Standards (KEBS), formulates,

enforces and reviews environmental health safety and quality standards as well as regulations, codes and other standards for the biofuel industry. It also protects the interests of consumers, investors and other stakeholder interests, and is responsible for monitoring and ensuring the observance of the principles of fair competition.

The ERC has been given the explicit authority to regulate biofuels production and distribution, in addition to more traditional forms of energy such as electricity and petroleum products. The Act explicitly requires a license for the generation, import, export, refining, transmission, distribution, sale, storage or transport of electricity and petroleum. Significantly, no such requirement for a license or permit is included in the section governing biofuels. This omission seems prudent, given the nascent stage of the biofuel industry in Kenya and the need to adopt rules that support, rather than suppress, the development of the new industry. However, a licensing requirement is probably wise once commercial production and sales begin.

The underlying purpose of fuel quality and blending standards is to protect consumers from harmful products. The Energy Act generally supports the production, sale and use of biofuels. However, current gaps and vagaries in the law make it unclear whether, in the absence of clear standards from the Kenya Bureau of Standards (KEBS), it is permissible to produce, sell or use biofuels.

For example, Section 115 of the Act states that:

No person shall use or employ for or in connection with any of

the purposes of producing, generating, transforming, transmitting, distributing, supplying, or importing, exporting, transporting, refining, storing, selling or using, any form of energy, any mode, material or apparatus other than that which complies with the specification or standard of the Kenya Bureau of Standards or where no such standard exists, any international standard approved by the Kenya Bureau of Standards.

With regard to biofuels, none of the above-listed activities are permitted if they are conducted in a way that contravenes any specification or standard adopted by KEBS. It is however not clear whether such activities can occur legally if no such specification or standard has been established. As it stands, the law seems to indicate that KEBS should adopt relevant standards before commercial biofuels activities begin on a large scale, and certainly before they are sold for use by the general public. KEBS has already adopted standards for a 10% ethanol blend with petrol, which means that commercial fuel ethanol production is lawful as long as the fuel meets the standard. No similar standard exists for biodiesel in Kenya, although several international standards could easily be approved.

Once biofuels are lawfully produced, a petroleum license is required for blending them with petroleum products, and such blending is also subject to approved KEBS standards. The ethanol blending standard cited above would permit the blending of 10% ethanol with 90% petrol;

however, a similar blending standard would be required before biodiesel could lawfully be mixed with diesel. It would be wise to review all existing Kenyan and international biofuel quality and blending standards, and adopt appropriate ones for each category of fuel, before wide-scale production occurs. Fortunately, the Energy Act creates the framework for doing so without needing to enact new legislation.

The Energy Act delegates broad authority to KEBS to determine fuel quality and blending standards for biofuels. According to the Environmental Management Coordination Act (EMCA) (GoK, 1999), KEBS is required to conduct an environmental impact assessment (EIA) analyzing the environmental impact of any biofuels standards it proposes. The EMCA also requires that KEBS provide public notice and opportunities for public comment before it finalizes its decisions.

Many aspects of biofuels production have direct and indirect environmental implications. As a result, various regulations are in place to protect land, water, air, genetic biodiversity and other resources. In terms of setting new policy, the National Environmental Management Authority (NEMA) is mandated to create incentives for the promotion of renewable sources of energy. This is to be effected through a Committee of NEMA known as the National Environmental Action Plan Committee (NEAP), which has been empowered under the EMCA to recommend appropriate legal and fiscal incentives that may be used to encourage the business community to incorporate envi-

ronmental requirements into their planning and operational process. While the small-scale planting of biofuels crops may not require any environmental permits, large-scale biofuels plantations will require environmental impact assessments (EIAs) and licenses (EIALs). Risk assessments and performance trials may also be required for new crops under the Seeds and Plant Varieties Act.

Current initiatives to develop policy framework for biofuel industry development

The biofuels industry in Kenya has been the domain of the Ministry of Energy. However, given the fact that the raw materials are agricultural in nature and the choice of *Jatropha curcas* (which is considered to fall between a shrub and a tree) as a feedstock crop, both ministries of agriculture and forestry may also play a major role in biofuel development. Other active actors in biodiesel

development activities include the ministries of Trade, Industry, Water Development, Transport, Environment and Natural Resources (Kenya Forest Service), Vanilla Development Foundation and the Green Africa Foundation. The Ministry of Energy (MoE) is the lead institution entrusted with the mandate and responsibility of facilitating the provision of secure and sustainable supplies of energy for socio-economic development. The Ministry has constituted a National Biofuels Committee which is currently addressing biodiesel issues. The membership of the National Biofuels Committee includes public sector, private sector and non-governmental organization participants in the energy value chain.

The MoE through its National Biodiesel Committee, has produced a draft biodiesel strategy. No similar efforts have begun regarding the ethanol industry. The aim of the draft biodiesel strategy is to develop biodiesel in conformity with broad national objectives.

It has the following major objectives:

1. The MOE, in liaison with the Ministry of Cooperative Development and Marketing (MOCMD) will facilitate the formation and registration of the Kenya Biodiesel Development Association (KBDA). This will be an apex body and the lead institution in bringing together all major players in the supply chain, namely producers of planting materials, feedstock producers, processors, marketers and distributors, and large consumers. Feedstock producers will be either large scale producers or small scale. The small scale producers will be organized as biodiesel cooperative societies or common interest groups.
2. The KBDA will provide a one stop shop for biofuels issues and will thus collaborate with other relevant institutions in research and development, seed certification and product quality assurance and marketing.
3. The constitution will be formulated to cater for both biodiesel and bioethanol.

Acknowledgement

Although this research is funded by DFID, the views expressed in this article/report are entirely those of the authors and do not necessarily represent DFID's own policies or views. Any discussion of their content should therefore be addressed to the authors and not to DFID. We wish to thank Steven Hunt and Colin Pritchard for their useful comments.

Bibliography

- GoK (2006a). Energy Act.
 GoK (2006b). The Strategy for Revitalizing Agriculture.
 GoK (2005). National policy for the sustainable development of arid and semi arid lands of Kenya.
 GoK (2004). Sessional Paper No. 4 on Energy.
 GoK (1999). The Environmental Management and Coordination Act. Environmental Impact Assessment and Audit Regulations Kenya Gazette Supplement No. 56.
 Ministry of Energy (2008). Strategy for the Development of the Biodiesel Industry in Kenya (2008-2012). Final Draft.

For further information contact:

Project Manager, Bernard O. Muok
E-mail: b.muok@acts.or.ke, info@acts.or.ke, Website: www.pisces.or.ke
Phone: +254 20 712 68 90/95, Fax: +254 20 233 90 93