COMISIÓN NACIONAL DE ENERGÍA

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Current biofuels trends in Dominican Republic

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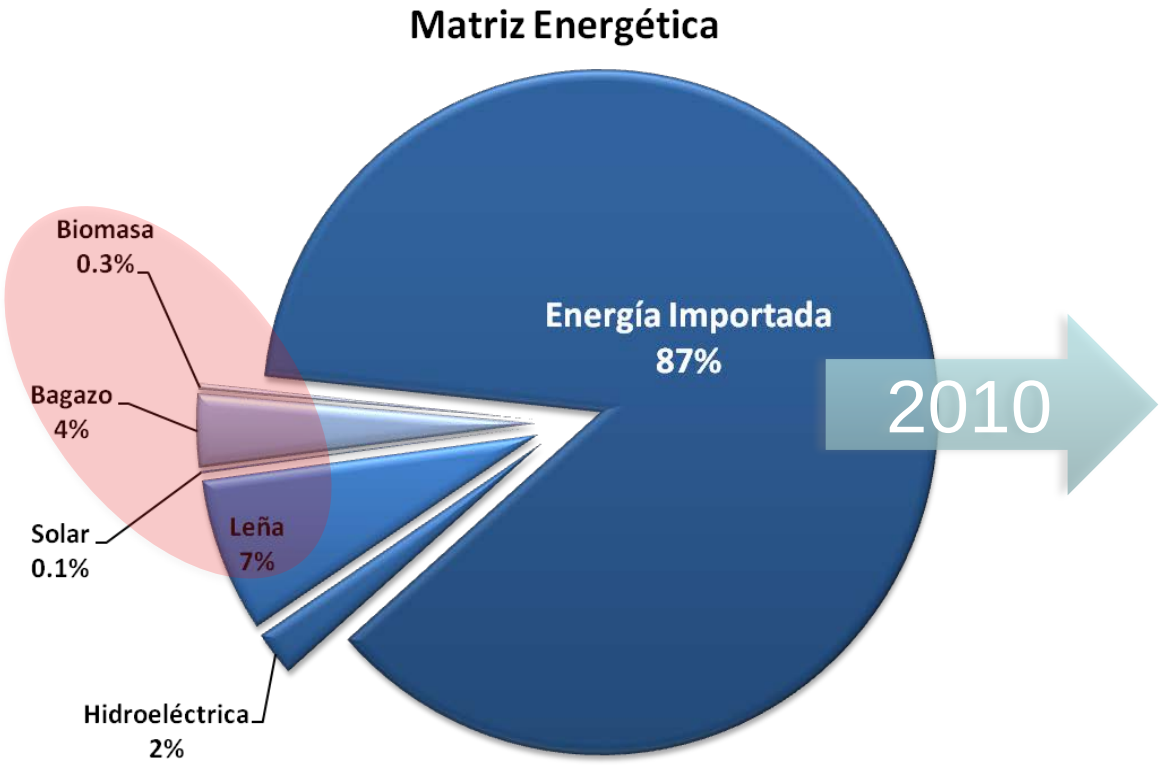
Dominican Energy Matrix

Dominican Republic is highly dependent on imported fossil fuels(an 87% share of the consumption matrix). As of 2010 it amounted to total imports of 51.7 Millones bbls. which translates into US$3,465 MM *.



Hidrocarburos
- **51.7 MM Barriles**
- **3,465 MM US$**

* Source::Foreing Exchange Department, Banco Central de la República Dominicana.

Major biofuels barriers

- Lack of knowledge and information (regarding technologies).
- Scarce development of agricultural side of production chain.
- Lack of knowledge of decision makers regarding biofuels issues.
- Normative Gap.
- Oligopolic Sugarcane Industry.
- Lack of interinstitutional integration(including private sector).
- No local financing and lack of “warrant fund” for biofuels projects.
- Little access to foreign financing and cooperation.
- Little Regional Integration
- Absence of a local liquid biofuels market(Need for a blending Mandate).
- Fledgling Biomass Market.(Only three suppliers with high dependence on residual biomass with high degree of geographical dispersion)

Energy crops

a) Existing energy crops:

•Jatropha curcas (non-edible oil crop)

•Sorghum bicolor (Sweet sorghum: Bioethanol), at a trial stage.

•Saccharum officinarum: 100% for sugar production.By-products: a) bagasse used for cogeneration,meeting mill energy needs during harvesting season and b)molasses: used mostly by rum distilleries and to a lesser degree as livestock feed.

•Dedicated energy crops: C-4 grasses such as King Grass, at initial stage of development.

•Elaeis guineensis(Oil Palm): grown for edible oil production only.

There is a modest waste vegetable oil based biodiesel production, but it does not have a critical mass to make a significant cotribution to the development of a biodiesel program(barely a 2% of total yearly consumption).

b) Potential Oil Crops:

• Copaifera langsdorfii (Copaiba: non-edible crop oil).

• King Grass, Arundo donax : (C-4 biomass grasses)

Normative activities

- Approval of Law 57-07 and its Application, which are meant to encourage and facilitate the development of Renewable Energy Projects(Including Biofuels).
- Resolution MIC:163-CNE:522, which authorizes blending up to a 20% of biodiesel(B-20) with diesel starting 1/31/2010 (With an initial blending level of 5%). Rather than a Blending Mandate it is a Blending Authorization).
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- **Ongoing activities:**

  Biofuels Blending and Commercialization Norm (National Enegy Comision- Ministry of Trade and Commerce) Pending task: Socialization with REFIDOMSA(Dominican Petroleum Refinery).

Projects under development

- KOAR ENERGY DOMINICANA was granted a Definitive Concession for the development of a biomass based electric generation project with an installed capacity of 1 MW. The biomass convertion technology is gasification using a “Downdraft Gasifier” to produce Synyhesis Gas to generate electricity under the concept of “Distributed Generation”.
- Globasol Biofuels, S.A., was granted a Definitive Concession for the development of a Biodiesel project based on the non-edible oil crop Jatropha curcas and to a lesser extent Castor Plant with an estimated planted area of 37,000 has. and a projected annual production of 18MM galons.
- RJS GROUP,was granted a Definitive Concession for the development of a Sweet Sorghum based Bioethanol project. Projected planted area: 45,000 has.
- Induspalma Dominicana, S.A., was granted a Provisional Concession to carry out the prospective studies for the installation of a Lagoon Biodigester which will produce biogas from palm oil residues. 1 MW installed capacity.
- Norte Biodiesel, S.A., was granted a Provisional Concession to carry out studies aimed at increasing its biodiesel production up to 438,000 gls./yr.

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Projects under development

- Sociedad Comercial Cristóbal Colon (Sugar Mill),was granted a Provisional Concession for the instalation of a 7 MW Turbogenerator in order to guarantee a reliable electric generation from the bagasse during the whole harvesting season(November-May).

- Stimulating industrial competitiveness through biomass-based, grid-connected electricity generation (**GEF-ONUDI-CNE-CNZFE-Otros… OEA?**).Biomass based electric generation. Projected Installed capacity: 3 MW. Convertion technology: three possible choices based on boimass boilers(Rankine cycle).This projecto will be developed by a textile industrial consurtium.

- Bioenergy Program Support Complementary Studies (Technical Cooperation ATN/OC-12919-DR granted by the **Interamerican Development Bank),** which makes for a valuable input for the development of a sugarcane based Biorefinery.

- Programa Institucional de Biocombustibles en flota vehicular.

- Programa de identificación de potenciales de Biomasa y su aplicación en los sectores productivos.

Suggested strategies

- Development and/or improvement of agricultural side of biofuels production chain(including incentives to small-medium farmers).
- Creation and encouragement of local biofuels market (staring with a 5% Blending Mandate).
- Creation of a Private-Public Alliance made up of Academic (Universities) and Goverment Institutions such as the Ministry of Agriculture, The State Sugar Consortium, The Sugar Institute , etc. Creation of a Task Force to facilitate and speed up the issuance of Permits.
- Encourage the creation of a local biomass market in connection with the industrial sector´s growing demand for biomass as feedstock as a result of their switching from fuel oil based boilers to biomass boilers as evidenced in the textile industry and more recent developments in distilleries(rum production) and industrial laundry services.

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Thanks for your attention!

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