

ANNEX I

Public Education and Outreach Plan

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1. Introduction

Agriculture-based fuels, such as bioethanol and biodiesel could be produced in Jamaica. Development of this local industry would boost the local economy and reduce greenhouse gas (GHG) emissions, among other benefits. In order to expedite this development, a biofuels policy is considered necessary and a draft policy has been produced. Essential to an effective biofuel policy is a corresponding, comprehensive education and outreach program to provide the necessary basic information, tools, and specialist knowledge needed to educate and raise awareness of biofuels among key stakeholders and to garner support and overcome key technical and social barriers. The program must contain a number of components addressing: broadly based education for a number of target audiences, more focused education related to capacity building and skilled-labor building, hands-on experience, workforce development, and community outreach. Above all it must create the opportunity for Jamaicans to become self sufficient in terms of the long term capabilities and skills needed for domestically-produced, sustainable biofuels.

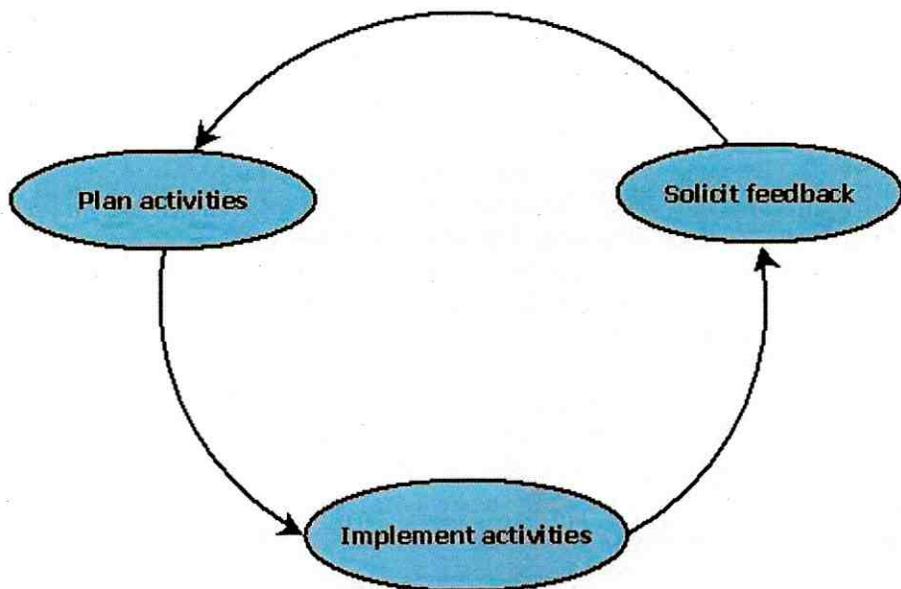
This document outlines such a campaign for biofuels education and awareness in Jamaica based on input gathered in meetings with stakeholder groups and government agencies, including regular communication with the Jamaica Biofuels Task Force. This document is presented as a proposed starting point for Jamaica's biofuels education and outreach campaign. Options are presented for management, targeted stakeholder groups, and activities that must be weighed against their different costs and the capacity to carry out each option.

2. Campaign Development

The development of this education and awareness campaign has three stages:

- (1) Scoping Assessment
- (2) Plan Development
- (3) Implementation

The first stage, the scoping assessment, was conducted through a literature review and consultations with key stakeholders, between May and August, 2010. The information presented in this document is a first attempt at the second stage, the education and outreach plan development, and is based on information gathered in the first stage. Although this document is inherently static, the ongoing education and awareness campaign will need to be dynamic with continuous monitoring and adaptation based on feedback and results. As part of the plan presented here, it is recommended that the campaign return to the first stage to conduct a baseline investigation to assess the current level of awareness of biofuels in Jamaica. Furthermore, the education and outreach campaign is not independent from other biofuel development activities – it must be integrated with other developments in the biofuel industry as much of the information disseminated must come from studies on the biofuels industry in Jamaica and other research and development activities, so those aspects of the campaign cannot be prescribed until the studies and research have been completed. The information presented here should, therefore, be viewed only as a starting point in assessing the needs and options for a biofuels education and awareness campaign, with the understanding that revisions will be made as feedback is gathered and more stakeholders are consulted.



In the scoping assessment, input was collected from the individuals and organizations listed in Table 1 (conversations further detailed in Appendix 4) about the following questions:

- Who are the key stakeholders?
 - What do they already know? What are their concerns?
 - What are the main issues that this campaign should address for each?
- What education and outreach activities may be useful in reaching these stakeholders?
- Who/what organizations are already doing education and outreach on these issues?
- Who/what organizations may have local capacity to do education and outreach on these issues?
 - What resources/capacity do they have already?
 - What activities are they already doing?
 - What support would they need to undertake a new aspect of the campaign?

Contact	Organization/Role	Date
Dr. Betsy Bandy	Ministry of Energy and Mines	On-going
Dr. Leahcmin Semaj	The Job Bank – Ideators & Resultants in Human Behaviour, Productivity and Psychometric Testing	July 8, 2010
Alternative Energy Course Students	University of West Indies Alternative Energy Summer Programme	July 21, 2010
Taskforce Members	Biofuels Taskforce	July 21, 2010
Omar Azan	Jamaica Manufacturers' Association	July 22, 2010
Imega Breese		
Karl James	Sugar Industry Association	July 22, 2010
Michael Hewitt	PetroJam	July 22, 2010
Gladstone Ivey		
Nicole Smith		
Taniquea Callam - MEM	Participated in education and outreach for the E10 rollout	July 23, 2010
Nicole Smith -		

Petrojam		
Marcia Browne – PCJ		
Rex Demafelis	Worked on education and outreach campaign for biofuels in the Philippines. Consultant on Biofuels and Industrial Process Optimization with UN-FAO and USAID. Consultant on Biofuels, Solid Waste and Wastewater Management, Process and Plant Design to numerous institutions in the Philippines. Department of Agriculture- Bureau of Agricultural Research Technical Adviser on Biofuels. Convener of the UPLB Alternative Energy RDE and chair of the Department of Chemical Engineering in the College of Engineering and Agro-industrial Technology (CEAT).	August 8, 2010
Mr. Trevor Barnes	Jamaica Gasoline Retailers Association	August 23, 2010
Vicki Walker	Winrock International – Empowerment and Community Engagement Unit	August 24, 2010

2.1 Previous Biofuels Education and Awareness in Jamaica

An earlier education and awareness campaign for biofuels was carried out in Jamaica along with the rollout of E10. This campaign had two phases: the first phase lasted one year, beginning in November 2008 with the 87 octane rollout, and the second phase accompanied the 90 octane rollout the following year. This campaign consisted of several strategies for informing fuel consumers about biofuels and for addressing concerns that they had. The scope and experiences of this earlier campaign provide a good starting point and useful insights from which to develop the new public outreach program described in this document.

The Petroleum Corporation of Jamaica led the earlier campaign, which consisted of:

- A pilot study and public demonstrations of biofuel, specifically E10 and flex fuel vehicle use
- Distribution of technical information
- Stakeholder group meetings
- E10 hotline where consumers with questions and comments could call and get information
- Ad campaigns utilizing print and electronic media as well as billboards
- Media interviews
- Press conferences
- Sensitization workshops for specialized focal group
- Family fun day
- Posters, brochures and flyers
- Feature stories in the newspapers

In talking with both those involved with the campaign and stakeholders whom it targeted, the following themes arose as to how it might have been improved:

- Run over a longer period so that the initial awareness is well reinforced; engagement should be early and on-going
- Target a group of stakeholders broader than just consumers (although it is important to note that for both phases of the E10 rollout the JGRA, marketing companies, etc. participated in stakeholder meetings)
- Operate under a more organized structure with tasks and responsibilities assigned
- Get the media involved as early as possible by providing the basic facts, answering questions and countering misinformation
- Make the public more aware of what is going on before final decisions on policy and regulations are taken

The approach to developing stage two of the current campaign is to build off what has been done previously, both in the E10 roll out and other education and outreach activities, in order to use what capacity already exists in Jamaica and to strengthen it in order to meet the needs of such a campaign in Jamaica.

3. Barriers

Anticipating and planning for the barriers to public education and outreach is a critical step in the campaign development. Potential barriers are:

- Financial (the success of the campaign depends on a concerted, coordinated effort to educate and reach out to all stakeholders. This requires funding of many different activities and staff)
- Staffing (the campaign requires certain staff to coordinate and manage the multiple activities. Without enough staff and support for the staff, activities may fall to the side)
- Biofuels readiness (parts of the campaign cannot move forward until there is a market for domestically-produced biofuels, until there are technical solutions for problems that arose previously, or until incentives are in place)
- Misinformation and direct opposition from alternative interests (may cause confusion and misconceptions about biofuels in Jamaica, thereby counteracting the efforts of the campaign)
- Bureaucratic delays (biofuels development in Jamaica requires several political, technical, business, financial and education activities to move forward together. Bureaucratic delays may occur in any number of organizations critical to these activities which then delay several connected activities)
- Lack of monitoring (without adequate ongoing monitoring, feedback and adaptation of the campaign, the campaign will be less effective)

4. Stakeholders

The following section describes the stakeholders that the education and outreach campaign must address. While all the stakeholder groups listed here must be addressed, there should be a stratification of groups to ensure that priority stakeholders (e.g., the general public, government, and media) are addressed first. How these groups are stratified must be determined by the campaign leadership.

1. General public

The general public primarily refers to the collective group of fuel consumers, such as personal vehicle owners, large fleet operators industry, manufacturers, etc. The main opposition to biofuels from this group stems from concerns about vehicle performance when biofuels are used. A lot of these concerns were expressed at the initial E10 rollout, but they soon died down. There has also been some opposition to growing sugarcane for ethanol because of a preference for its use in rum. Acceptance by this group is critical to the success of biofuels in Jamaica as public resistance to biofuels could prevent successful deployment and misunderstandings about biofuel use and handling would be dangerous. Multiple strategies that target different populations and are implemented over different timeframes must be utilized in order to have a sustained and far reaching impact.

Issues to address:

- (a) What biofuels are and how they differ from alcohol, gasoline and diesel;
- (b) Why biofuels/what the benefits of blending biofuels are, including the link between biofuel development and improved roads and infrastructure, direct and indirect jobs, investment and economic development, environmental impacts;
- (c) What changes they will see (e.g. costs, vehicle performance), problems that may arise/have arisen and how to address those problems;
- (d) Demonstrate an understanding of issues that have arisen with the E10 roll out and what has been/will be done to improve the situation. Also, how future potential issues are being preempted;
- (e) Biofuel developments in Jamaica and the course of action that is adopted;
- (f) How Jamaica can maintain and grow its existing granular sugar and rum production for domestic and export markets where profitable returns are possible while also producing bioethanol and biodiesel;
- (g) Information to control the spread of misinformation (prepare for and manage false information);
- (h) Where to go for more information.

2. Sugar mill and estate owners

This is a relatively small group comprising sugar mill and estate owners who are either already in the private sector or all will be once the GoJ divestiture of its sugar cane mills and

estates is completed. The large mill and estate owner of Bernard Lodge, Moneymusk and Frome, will likely provide education and awareness within its own organization directed to their corporate planning objectives. However, it is possible that input from experts in bioethanol from sugar cane may be sought for guidance on, for example, extending the cane season and maximizing electricity revenue. The owners of the remaining smaller mills may need outreach regarding the decision of whether to participate in the ethanol industry and, if so how, to optimize their returns. Opening a dialogue with all of the mill owners early during the education and outreach campaign is desirable.

Issues to address:

- (a) Options to produce ethanol along with granular sugar and molasses;
- (b) Options to become a year round supplier of electricity to the grid using energy crops out of the cane harvesting season;
- (c) Options to extend the ethanol production beyond the cane harvesting season;
- (d) Opportunities to attract investment (e.g. which organizations are experienced with this type of investment);
- (e) Biofuel policy developments;
- (f) How biofuels will affect business;
- (g) How to get information to make decisions about producing for ethanol;
- (h) Provision of feasibility studies for pilot plants;
- (i) How to maintain and improve yields (e.g., irrigation, fertigation, improved varieties, replanting, etc. – Occurs after research is done on the appropriateness of these techniques for the particular locations);
- (j) Varieties of sugar cane and sweet sorghum that mill owners may require under future scenarios;
- (k) Problems with cane burning and what alternative options exist;
- (l) Plant water requirements and best irrigation practices;
- (m) Fair labor practices and labor laws;
- (n) Sustainability (with emphasis on environmental impacts, labor and other social issues, and issues associated with best management practices);
- (o) Pest and disease management strategies (including organic approaches);
Benefits the sugarcane farmer will see from biofuels.

3. Sugarcane farmers

This category includes smallholders and large sugarcane farmers, as well as others involved in growing sugarcane. Outreach for this group of stakeholders aims to improve sugarcane yields, make growing it more efficient, and promote best practices (economic, environmental, and social – including labor laws and health and safety of workers). Trainings and information dissemination will build confidence in the expansion and longevity of the ethanol and sugarcane industries in Jamaica.

Issues to address:

- (a) How to maintain and improve yields (e.g., irrigation, fertigation, improved varieties, replanting, etc. – Occurs after research is done on the appropriateness of these techniques for the particular locations);

- (b) Varieties of sugarcane and sweet sorghum that mill owners may require under future scenarios;
- (c) Problems with cane burning and what alternative options exist;
- (d) Plant water requirements and best irrigation practices;
- (e) Fair labor practices and labor laws;
- (f) Sustainability (with emphasis on environmental impacts, labor and other social issues, and issues associated with best management practices);
- (g) Pest and disease management strategies (including organic approaches);
- (h) Benefits the sugarcane farmer will see from biofuels;
- (i) Information on long term supply contracts and pricing structures currently being used in other countries;
- (j) Information on bioethanol experiences in countries that produce ethanol domestically from sugarcane, such as Brazil and Philippines.

4. Farmers growing biofuel feedstock other than sugarcane

As for sugarcane farmers, education and outreach for farmers who are considering or have begun growing other biofuel feedstocks involves training on best management practices and information dissemination to ensure profitability and build confidence in the biofuel industry as a long term market. In the case of crops new to the farmer, as many of the prospective biodiesel crops are, there is the added element of introduction of the feedstock and farming techniques. In addition to showing farmers how to grow the crops and supporting them as they become accustomed to them, there may also be a need for education to overcome cultural barriers to deciding which crops the farmer grows.

Issues to address:

- (a) Crop characteristics and guidance on the process from variety selection, land preparation and planting through harvesting and transport;
- (b) How to maintain and improve yields;
- (c) Sustainability issues associated with various agricultural practices;
- (d) Pest and disease management strategies;
- (e) Plant water requirements and best irrigation practices
- (f) Benefits the farmer will see from biofuels;
- (g) Information on long term supply contracts and pricing structures currently being used in other countries;
- (h) Information on recent market failures (e.g., Some US based soybean refineries) and successes (e.g., Some Brazilian biodiesel refineries).

5. Potential waste vegetable oil suppliers

The Draft Biofuel Policy speaks to percentage of biodiesel being produced from waste vegetable oil. Therefore, potential suppliers of this feedstock (e.g., restaurants, large hotel chains, etc.) ought to be engaged.

Issues to address:

- (a) What waste vegetable oils are of value as a biofuel feedstock;
- (b) Standards for waste vegetable oil that is supplied;
- (c) Collection procedures for waste vegetable oil;
- (d) Benefit to the supplier of providing or selling their waste vegetable oil (e.g., potential disposal cost saving, possible revenue from sale, and corporate social responsibility and corresponding advertising benefits).

6. Repair shop owners and mechanics

Vehicle repair shop owners and their mechanics must be kept up to date as to the problems that biofuels may cause in vehicles and how to remedy them. Their understanding of these issues is critical to ensuring biofuels work properly in vehicles. Their ability to communicate those issues to their customers is critical to the success of the general public campaign. This group has been very receptive to ethanol use in vehicles because it is cleaner to work with and this group has been valuable in educating their customers.

Issues to address:

- (a) What problems biofuels may cause in vehicles (updated as discovered);
- (b) How to fix those problems;
- (c) Common concerns their customers may have and how to address them.

7. Used and new vehicle dealers

Vehicle dealers in Jamaica control the incoming vehicle fleet and their compatibility with biofuels.

Issues to address:

- (a) Which types of cars can use biofuel;
- (b) Details of the warranties for each vehicle when biofuels are used;
- (c) What the state of the biofuel industry is and what opportunities it presents for them (e.g. increasing numbers of FFVs are being purchased).

8. Biofuel Producers

This applies mainly to biofuel producers who are expected to buy feedstock from a farmer or consolidator and produce biofuel to sell to fuel wholesellers. Biofuel refineries would primarily be involved in the education and outreach campaign from the side of conducting education and outreach and providing information to others doing so. Pathways for information sharing about biofuel refineries processes and technology improvements are already established and therefore outside the scope of this report. However, education and outreach must also be conducted to this group to establish a dialogue on the outreach

activities and what the concerns of other stakeholder groups are. Furthermore, they ought to contribute to the campaign what benefits they are creating for the communities around them and the country as a whole.

Issues to address:

- (a) What questions and concerns the public has that biofuel producers can help to address;
- (b) Updates about the status of other components of the biofuel industry;
- (c) Details of the education and outreach campaign.

9. Fuel distributors, gas station owners and managers, and pump attendants

Training and education is necessary to build the capacity of fuel distributors and gas station owners and managers in order to control the quality of the fuel and maintenance of the equipment.

Issues to address:

- (a) What problems biofuels may cause in distribution and station equipment (updated as discovered);
- (b) How to fix those problems;
- (c) What the fuel standards are and how to test the fuel to see if it meets the standards;
- (d) Common concerns their customers may have and how to address them;
- (e) What are the fuel standards and how to monitor and meet them;
- (f) What the state of the biofuel industry is and what opportunities it presents for them (e.g. increasing number of stations selling higher blends), including any programs that are available for them to participate in.

10. Elected officials and government agencies

As those responsible for the development and implementation of policies, regulations, and legislation that affect biofuels through incentives, regulations, pricing schemes, land use policy, energy policy and so on, it is critical that elected officials are aware of the essential aspects of biofuels, their benefits for Jamaica, how they relate to other uses of crops and land, what barriers they face, and what the role of government can be in their successful development. Furthermore, a coordinated effort with open and on-going dialogue will result in more effective and efficient policy making.

Issues to address:

- (a) What biofuels are;
- (b) How biofuels benefit Jamaica/rationale for biofuel development;
- (c) What policies impact biofuels, including biofuel policy, land use policy, etc.;
- (d) Balance of payments, financial and fiscal issues at the country level;
- (e) How infrastructure improvements impacts biofuel industry, and other agriculture;
- (f) Importance of a coordinated effort;

- (g) Information on long term supply contracts and pricing structures currently being used in other countries;
- (h) Information on recent market failures (eg. Some US based Soyabean refineries) and successes (eg. Some Brazilian biodiesel refineries).

11. Potential investors, banks, and other approved financial institutions

While not the main focus of this campaign, potential investors in biofuels and related infrastructure are critical for overcoming financial barriers to biofuel development.

Issues to address:

- (a) Preparation of summary descriptions of policies, regulations, and incentives that impact biofuel financing;
- (b) Outreach to the investment community to provide a better overall understanding of the main components of a successful biofuel program;
- (c) Information on long term supply contracts and pricing structures currently used in other countries.

12. Fishing community, boat owners, and coast guard

Education and outreach to this group will follow technical solutions to the problems that arose during the E10 rollout in the marine environment. It will have to build confidence that those issues have been resolved. In the mean time, education and outreach to this stakeholder group will consist of updates as to the advances of biofuels for marine vehicles.

Issues to address:

- (a) How biofuels will affect them;
- (b) How previous problems have been addressed;
- (c) What potential problems still may arise and what to do;
- (d) Why biofuel development is occurring;
- (e) What the plan of action is, both in general, and as related to marine vehicles.

13. Motoring Clubs

Education and outreach to this stakeholder group will be similar to that of the general public and the marine community: what is happening with biofuels in Jamaica and how it will affect their vehicle fleet in particular.

Issues to address:

- (a) How biofuels will affect them;
- (b) What potential problems still may arise and what to do;
- (c) Why biofuel development is occurring;

- (d) Demonstrate an understanding of issues that have arisen with the E10 roll out and what has been/will be done to improve the situation. Also, how future potential issues are being preempted;
- (e) Where to go for more information.

14. Academic and research community (Including universities, Bureau of Standards Jamaica, etc.)

There is a wide range of institutions involved with, or with the potential to be involved with, biofuels research and development. The biofuels industry would benefit from the creation of a forum for collaboration and information sharing amongst this community. Education and outreach to this community aims to foster collaboration and to create opportunities to build off of what others have learned.

Issues to address:

- (a) What biofuels research and development is occurring and what has come out of it;
- (b) Areas of research and development that organizations are looking for collaboration on;
- (c) What technological problems are arising in biofuels production, distribution and consumption;
- (d) What the general public is concerned about with biofuels;
- (e) What relevant research is happening globally.

15. Media

As well as a channel by which to conduct public education and outreach, the media is also a stakeholder group on its own. As such, and due to its daily need to provide public information, it is important to keep the media informed of developments on a frequent basis and establish good lines of communication. By providing factual information and being responsive to enquiries that may well have a press deadline urgency associated with them, misinformation can be avoided and a consistent message achieved. The issues to address for the media are the same as for the general public, however they will be targeted slightly earlier and an on-going dialogue for information sharing will be established.

Issues to address:

- (a) What biofuels are and how they differ from alcohol, gasoline and diesel;
- (b) Why biofuels/what the benefits of blending biofuels are, including link between biofuel development and improved roads and infrastructure, direct and indirect jobs, investment and economic development, environmental impacts;
- (c) What changes they will see (e.g. costs, vehicle performance), problems that may arise/have arisen and how to address those problems;
- (d) Demonstrate an understanding of issues that have arisen with the E10 roll out and what has been/will be done to improve the situation. Also, how future potential issues are being preempted;
- (e) Biofuel developments in Jamaica and the course of action that is adopted;

- | |
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| <p>(f) Information to control the spread of misinformation (prepare for and manage false information);</p> <p>(g) Where to go for more information.</p> |
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5. Management of the Campaign

Before describing the proposed activities, the management of the campaign must be established. As an example, in the Philippines, biofuels education and outreach was initially run by several different agencies, including the Department of Energy (education on processing), Department of Agriculture (education on feedstock development), Department of Science and Technology, Department of Finance (education on financing), as well as several universities. These separate entities did not work together. Then, in 2006, a biofuels law was implemented which established a National Biofuels Board that took responsibility for coordinating and running a unified biofuels education and outreach campaign. Having this Board manage the campaign led to a more effective, concerted effort that complements and integrates all the information disseminated (Demafelis, pers.comm.).

As the campaign proposed here consists of many separate components that must be run by different organizations, targeting different stakeholder groups, the creation of a central biofuels education and outreach team is proposed. This team could fall under a government agency, such as the MEM. It must be comprised of at least one leading individual whose full time job is to manage the campaign activities. In addition to a team leader, recommended roles include a media and PR contact and a Fact Team leader. It is also recommended that PR firms be involved for soliciting feedback from targeted stakeholder group to determine effectiveness of the campaign and areas for improvement, recommend courses of action, and train the Media and PR Contact on messaging. Two PR firms could be involved, one with a technical focus, and one with a non-technical focus. There are several organizations and government departments that we propose could also participate in education and outreach activities based on their established connections with different stakeholder groups and experience or capacity for education and outreach.

The importance of having a coordinated effort and message that has consistent information and adapts uniformly in response to new concerns raised and developments occurring in the biofuel industry must be stressed. Development of a branding campaign and key messages was initially intended to be included in the plan development stage. However, as the education and outreach plan developed, it was decided that strategizing a biofuels education and outreach campaign and defining a management team was more relevant for this stage of work and that the branding and message development would best take place early in the implementation stage. To have the greatest impact, the branding campaign must take into account the beliefs, needs, and concerns of the target population and the local campaign management team would be best positioned to do this. Consequently, it should be developed after this team is established based on agreed upon objectives and approach, perhaps with the guidance of a local PR firm. A basic slogan and logo would be recommended. Some points that could be emphasized in the messaging include: domestic biofuels for the future of Jamaica, strengthening and diversifying the sugarcane sector, leadership in sugarcane, decreased dependence on foreign fuels, job creation, rural development, and cleaner energy. Key selling points include availability of land, technical expertise, history of sugarcane production, and demand for fuels. Some resources where examples of branding and messages developed for biofuels in other countries can be found in Annex Ic.

The positions and organizations to be involved in the campaign are described in the table below.

Proposed Position	Description
<u>Education and Outreach Leader and Education and Outreach Officer (new position)</u>	Oversees the entire education and outreach campaign, coordinates between leaders of different activities and keeps them aware of new developments or issues to address. Manages the budget.
<u>Media and PR contact (new position)</u>	In charge of involving the media early on, establishing connections with media outlets, and serves as point of contact for the media when news about biofuels arises.
<u>Fact Team Leader (new position)</u>	Responsible for communicating with researchers and technical experts in the field to compile the most up-to-date factual information about biofuels for outreach activities, in response to questions and concerns received from stakeholders, and to counter misinformation as it arises.
<u>PR Agency/ies (subcontractor)</u>	A reputable PR agency/ies with a solid track record in surveying public opinions, communicating social issues and social marketing in Jamaica. They would also be charged with soliciting feedback from the public and various stakeholder groups to understand public perceptions of biofuels in Jamaica and then recommend the most effective ways to communicate to different stakeholder groups.
<u>Government Partners</u> Department of Cooperatives and Friendly Societies, of the Ministry of Industry, Investment, and Commerce Ministry of Agriculture and Fisheries Ministry of Education Ministry of Energy and Mining Ministry of Finance Ministry of Forestry Ministry of Labor and Social Security National Environment and Planning Agency National Land Agency Parish Councils Transport Authority of Jamaica Sugar Industry Authority	Several government agencies and departments are responsible for activities related to biofuels production, distribution and consumption. These agencies and departments already have relationships with those directly involved with each of these processes and therefore can manage various biofuels education and outreach activities through activities they already manage or new programmes.
<u>Energy Organizations</u>	These organizations have experience managing public

Jamaica Broilers Jamaica Public Service Company Limited JEPCO (ED&F Man) Petroleum Corporation of Jamaica PetroJam Ltd. PetroJam Ethanol	education and outreach campaigns on energy issues as well as conducting technical trainings for those involved in fuel production, handling and distribution.
<u>Non-Governmental Organizations</u> Association of Women's Organizations in Jamaica Independent Jamaican Council for Human Rights Jamaica Conservation Development Trust JAMPACT National Environmental Societies Trust Northern Jamaica Conservation Authority	These NGOs and groups of NGOs have established relationships in communities across Jamaica and have experience with education and outreach that advocates for women, the environment, youth, and other groups/issues that an education and outreach campaign may need to target specifically.
<u>Research Groups and Universities</u> Bureau of Standards Jamaica Caribbean Maritime Institute Centre for Excellence for Advanced Agriculture College of Agriculture, Science and Education Mico University College Northern Caribbean University Sugar Industry Research Institute University College of the Caribbean University of Technology University of the West Indies	Research organizations and universities conduct research and development activities that may advance biofuels in Jamaica and provide the factual information that forms the basis of an education and outreach campaign. Universities can also train professionals and students who will become those working in all stages of the biofuel production process as well as different users (e.g., Caribbean Maritime Institute trains fishermen and boat operators).
<u>Trade Associations and Professional Organizations</u> All-Island Cane Farmers Association Chamber of Commerce Consumer Affairs Commission Gasoline Retailers Association Jamaica Agricultural Society Jamaica Association of Sugar Technologists Jamaica Cane Products Sales Limited Jamaica Estate Cane Growers' Association	Trade associations and organizations that represent a group that will be affected by biofuels can communicate messages of the campaign and keep their members updated about developments in the biofuels industry. They can also provide feedback on biofuels on behalf of their members. Additionally, many have experience conducting trainings for their members.

Jamaica Fishermen Cooperative
Union
Jamaica Manufacturers'
Association
Jamaica Millennium Motoring Club
Jamaica Sugar Cane Growers'
Association
Jamaica Teachers' Association
Jamaica Used Car Dealers
Association
Jamaica Yacht Club (and Montego
Bay Yacht Club, Negril Yacht Club,
Jamaica Yachting Association, etc.)
Press Association of Jamaica
Sugar Industry Association
Sugar Manufacturers' Corporation
of Jamaica
Sugar Producers' Federation of
Jamaica

6. Plan of Work

The activities of the Jamaica biofuels education and outreach campaign shall be built around the following principles, which were identified as critical in the needs assessment meetings as well as by previous Winrock experience with education and outreach campaigns:

- Early and on-going stakeholder engagement
- Regular monitoring and evaluation
- Skills building and development of human capacity

Engaging the public in the campaign early is a concept that was practiced to an extent in the previous biofuels education and outreach campaign. Meetings were held to get stakeholder feedback and a hotline was set up for anyone with questions or concerns to call to find answers. However, awareness faded after time as the campaigns' activities were reduced. This allowed opportunity for the spread of misinformation.

Similarly, those involved in the education and awareness campaign in the Philippines stressed the importance of early and ongoing public engagement. Rex Demafelis explained that while it may be easier at the start of a biofuels policy to not fully engage the public, it pays off in the long run to know the public concerns and be able to respond to them – this builds confidence both among the public and among agencies involved in the biofuels industry. He said that if he were to do one thing differently it would be to conduct a feasibility and viability study of biofuels production at the very beginning of the campaign because they received many questions that those studies would have been able to answer right at the beginning.

The Jamaica Manufacturers' Association also echoed this sentiment, saying that they are not particularly against any form of energy, they just are against using new energy sources without keeping the public informed of what is being considered and what developments are taking place.

Proposed activities to include in the education and outreach campaign are as follows:

Education and Outreach	Objectives	Description	Target stakeholders	Leader of activity
Activity Activity 1: Transparency - Status of biofuels policy and development	Explain what the government is doing, why there is a biofuel policy, what it consists of, and any developments that occur.	<ul style="list-style-type: none"> Public meetings to introduce biofuels and biofuel policy developments. Conducted through community groups and associations. Regular flow of information through newspaper and radio announcements, as well as the listservs of participating organizations and a central website. TV and/or radio interviews to address questions publicly. 	<ul style="list-style-type: none"> General Public Sugarcane Estate Owners Farmers Potential Investors 	<p>Media and PR Contact, working with:</p> <ul style="list-style-type: none"> Trade associations Non-governmental organizations <p>Fact Team, working with:</p> <ul style="list-style-type: none"> Trade associations and industry groups who work with fuel consumers Department of Education and individual schools PR firm (for messaging)
	Activity 2: Biofuel Basics	Explain what biofuels are (and how they are distinct from consumable alcohol), problems they may cause, ways to deal with those problems.	<ul style="list-style-type: none"> Establish a unified message, image, and branding for the campaign. Prepare and Distribute basic information to the public, specifically to road vehicle users (address marine vehicle users separately), elements of which include: 	<ul style="list-style-type: none"> General Public Sugar Estate Owners Farmers <p>Note: Much of this information has already been created from the previous campaigns, so could be reused or updated and reissued.</p> <p>>Marketing materials, such as posters, flyers and information sheets (as made in the previous campaign).</p> <p>>Media, such as radio, television and newspaper placements, as well as possibly a mobile phone messaging campaign. Also, skits, jingles, and Energy Expo for radio-based offerings.</p> <p>>Website center of information, could be modeled after JPS's: http://www.myipsco.com/media_centre/index.php.</p> <p>>Questions and answers through</p>

phone hotline and email address with answers made available online, website, public forums, and other methods for receiving and responding to concerns and questions.

>Series of radio debates where questions can be called in and responded to while others listen.

>Public forums with opportunities to have questions answered by experts. These could take place across the country, targeting different stakeholder groups.

- Education "sessions" in primary and secondary school to introduce biofuels and safety practices.

>Science competitions

- Success stories from Jamaica (demonstrate vehicle use with a particular large fleet, have people share experiences at public forums, etc.).

- Success stories from other countries by adding their stories to the other activities in this category.

- Provide clear information about commonly occurring problems and how to fix them or where to go to have them fixed, through the other activities in this category.

Activity 3: Ensuring Factual Accuracy

- | | | | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|-----------------------------------|
| Control the spread of misinformation and false rumors and ensure that scientifically accurate information is distributed to ensure proper use of biofuels. | <ul style="list-style-type: none">• Maintain awareness about misconceptions about biofuels that exist by studying monitoring survey outputs and hotline, email, and interview questions.• Research and provide factual information | General Public | Fact Team, working with PR Agency |
|------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|-----------------------------------|

to counter misinformation or clarify points of confusion. Incorporate this information into what is provided through the FAQ information.

Activity 4: Media outreach	<p>Involve the media early and establish a relationship between the media and the education and outreach leadership team so that the media knows what is going on and are an ally, rather than allying with the opposition groups.</p>	<ul style="list-style-type: none">• Establish a unified message and image for the campaign.• Engage media outlets in Transparency and Biofuels Basics and FAQs activities, ensuring that the issues are well understood.• Make Media and PR Contact readily available for questions from the media, to clarify any confusion, and address any misinformation that may come through the media.• Points to focus on for media outreach messages:<ul style="list-style-type: none">>Price benefit (which was the focus in previous campaign)>Environmental benefit>Performance element of ethanol blends <p>>Long-term benefits</p>	<p>Media and PR Contact with the Press Association of Jamaica</p>
Activity 5: Best practices for biofuel agriculture and technological trainings	<p>Improve feedstock production efficiency by improving yields and managing inputs, while improving soil quality and developing the skill set of farm workers and farmers.</p>	<ul style="list-style-type: none">• Initial training workshops in agricultural communities on what best practices exist for improved feedstock production (i.e., improved yields, reduced inputs, waste management and recycling, etc. The Sugar Industry Association has done this on a smaller scale already).• Explain why it is worthwhile to change their practices and increase production - <p>Small scale farmers, large scale farmers, sugarcane estate owners, and students of relevant degree programs.</p> <p>MoA Outreach Program and the Centre of Excellence for Advanced Agriculture, with:<ul style="list-style-type: none">• Sugar Industry Association• Jamaica</p>	

<ul style="list-style-type: none"> • but first, the necessary steps need to be taken to ensure that it will actually be worthwhile. • Initial training workshops to introduce new feedstocks. <p>>Explain why it is worthwhile to grow new feedstocks - but first, the necessary steps need to be taken to ensure that it will actually be worthwhile.</p>	<ul style="list-style-type: none"> • Establish demonstration farms and learning centers where the trainings can take place, where best practices are demonstrated, and where research can be done on best practices specific to the regions. Can also demonstrate that agriculture can complement food and community enterprise. • On-going information exchange as best practices evolve. • Agricultural extension programs with specialists from the region hired as extension workers that visit farms that have participated in trainings to offer advice and answer questions. • Fora to share experiences and lessons learned. • International exchanges for those who will conduct trainings. • Bring in experts from other countries to contribute to trainings. • Incorporate best practices training and education into relevant university curricula, including classes, degree programmes, research opportunities,
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Activity 6: Technological trainings (non-agricultural)	<p>Explain what the standards are for biofuels and how to monitor and control quality.</p> <p><i>Note: a discussion must be had to determine whether this activity should be under public or private leadership. The activities listed here could be carried out by this campaign if it is publicly led, or could be supported by the campaign if it is industry-led.</i></p>	<ul style="list-style-type: none"> Provide an up-to-date lists of vehicles which can use different blends of ethanol and biodiesel. Provide kits to test fuel quality or incentives or mandate to buy them. International exchanges on biofuel distribution and handling. In-country training on biofuel distribution and handling. Incorporate best practices training and education into relevant university curricula, including classes, degree programmes, research opportunities, internships, and international exchanges. Could establish certification schemes for those working in fuel distribution and sales. 	Fuel producers, Ed. and Outreach working with Petrojam, Gasoline Retailers Association and universities (domestic and abroad)	
Activity 7: Biofuels for communities	<p>Ensure that socioeconomic benefits of biofuels are realized and address issues of project fatigue.</p> <p><i>Note: It is necessary for the management team and relevant stakeholders to have a discussion on how best to ensure communities benefit from biofuel industry growth, ensure jobs and trainings reach a range of people (across genders, smallholder vs. large farmer, economic levels,</i></p>	Rural Communities	Parish Councils, Non-Governmental Organizations	

etc.), and that labour laws are complied with, in order to determine what will take place under this activity.

Activity 8: Biofuels information for policy makers	Share knowledge between government departments, with the aim of supporting outcomes from agriculture, energy industry, land use planners, manufacturing, and other industries. Coordinate efforts related to biofuels, energy, agriculture and land use.	<ul style="list-style-type: none"> Interagency meetings and discussions to share knowledge and developments. Targeted fact sheets. Information sessions at offices/agencies. 	Relevant government agencies and policy makers	Education and Outreach working with various government departments and agencies
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Activity 9: Biofuels for the marine environment	With the E10 rollout there were significant challenges in the marine environment, hence, when/if technological issues are overcome and biofuels are reintroduced, education and outreach will have to boost confidence in the marine environment that the issues have been resolved as well as explain why they have been reintroduced and what vehicle owners and operators can expect.	<ul style="list-style-type: none"> Distribute basic information on why biofuels, what changes they will see and how previous issues have been overcome. Information distributed through: <ul style="list-style-type: none"> - Marketing materials, such as posters, flyers and information sheets (as made in the previous campaign). - Media, such as radio, television and newspaper placements, as well as possibly a mobile phone messaging campaign. - Website center of information, could be modeled after JPS's: http://www.myipsco.com/media_centre/index.php. 	Water vehicle and operators owners	<ul style="list-style-type: none"> Fisheries Division of the MoA Fishermen Cooperative Yacht clubs Caribbean Maritime Institute JDF Coast Guard
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- Questions and answers through same phone hotline and email address with answers made available online, website, public forums, and other methods for receiving and responding to concerns and

	<p>questions.</p> <ul style="list-style-type: none"> - Public forums with opportunities to have questions answered by experts, targeting water vehicle owners and operators. - Demonstrations at marinas. • Provide clear information on about commonly occurring problems and how to fix them or where to go to have them fixed, through the other activities in this category. 	
Activity 10: Monitoring and accountability	<p>Solicit feedback on public perceptions, what real problems are occurring and provide outside perspective of ways to improve outreach.</p> <ul style="list-style-type: none"> • Obtain feedback on what public perceptions of biofuels are, what real problems are occurring, what misconceptions exist, and the effectiveness of different outreach activities. - Survey end users on perceptions and experiences - Study questions received through hotline and other feedback mechanisms • Survey of farmers on adoption of best practices, resulting change in yields, how decisions are made, etc. 	PR or polling or market research business that is not involved in the implementation of any of the other activities
Activity 11: Feasibility studies, Research and Development	<p>To provide data and factual information for the campaign. The studies and research are not done as part of this campaign, but the results are integral to it.</p> <p><i>Note: the leader of this activity must be determined by the</i></p>	<p>To inform other campaign activities</p> <ul style="list-style-type: none"> • On-going research on the feasibility of biofuel feedstocks, technologies, use, etc. • Distribution of the results of feasibility studies by way of public forums and reference to them in the fact sheets and hot line responses. Make publicly available on line.

campaign management team.

Annex Ia. Preliminary timeline for year one of the campaign
 (to be reviewed/revised quarterly)

ID	Name	Start	Finish	2011												
				Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan
	Initiation	1/3/2011	9/1/2011													
	Identify individuals in org/agencies to run acti	1/3/2011	3/1/2011													
	Finalize budget	1/3/2011	3/1/2011													
	Secure funding	2/1/2011	8/1/2011													
	Hire key staff	2/3/2011	4/1/2011													
	Hire and train support staff	5/1/2011	9/1/2011													
	Materials Preparation	2/15/2011	3/30/2011													
	Create radio, newspaper and television ads	2/15/2011	3/30/2011													
	Create factsheets, posters, flyers, etc.	2/15/2011	3/30/2011													
	Factshets for policy makers	2/28/2011	3/15/2011													
	Create central website of the campaign	2/15/2011	3/15/2011													
	Set up question hotline and email address	2/28/2011	3/15/2011													
	Public Forums	4/15/2011	1/13/2012													
	On-going public meetings	4/15/2011	1/13/2012													
	Radio and/or TV Interviews	4/15/2011	1/13/2012													
	General Information Dissemination	3/1/2011	12/31/2011													
	Notify government and media contacts	4/1/2011	4/10/2011													
	Press Releases and Listserv Notifications	4/17/2011	4/28/2011													
	Publication of Biofuel FAQs on Websites	3/1/2011	3/15/2011													
	Newspaper Ads	4/1/2011	12/31/2011													
	Radio Ads	4/1/2011	12/31/2011													
	TV Ads	4/1/2011	12/31/2011													
	Distribution of Fact Sheets, Flyers, Posters	4/1/2011	12/31/2011													
	Education sessions in primary and secondar	9/15/2011	11/15/2011													

ID	Name	Start	Finish	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan 2011
	Inter-government agency information press	4/10/2011	4/15/2011													
	Inter-government agency biofuels meetings	6/1/2011	12/31/2011													
	Question and Answers	4/17/2011	12/31/2011													
	Hotline	4/17/2011	12/31/2011													
	Email/Website	4/17/2011	12/31/2011													
	Radio call in	5/15/2011	11/15/2011													
	Biofuel use demonstrations	4/15/2011	10/15/2011													
	Use in some demonstration vehicles that are	4/15/2011	7/15/2011													
	Adoption by a demonstration fleet of vehicles	8/15/2011	10/15/2011													
	Agriculture best practices	3/15/2011	12/31/2011													
	Establishment of demonstration farms	3/15/2011	8/15/2011													
	Train extension workers	4/30/2011	6/30/2011													
	Training sessions for farmers	6/30/2011	12/31/2011													
	Agriculture extension workers visit farmers a	6/30/2011	12/31/2011													
	Research and development	4/15/2011	12/31/2011													
	University curriculums	4/30/2011	12/31/2011													
	Research and discuss how to incorporate bi	4/30/2011	12/31/2011													
	Incorporate biofuels into degree programs	9/15/2011	12/31/2011													
	Connect students with relevant internships a	9/15/2011	12/31/2011													
	Monitoring	2/15/2011	9/15/2011													
	Survey of public perspectives - baseline	2/15/2011	2/28/2011													
	Survey of public perspectives and outreach s	8/15/2011	8/31/2011													
	Adjust campaign accordingly if needed	9/1/2011	9/15/2011													
	Survey of baseline agricultural practices	2/15/2011	2/28/2011													

ID	Name	Start	Finish	2011											
				Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	Survey of farmers' adoption of best practices	8/18/2011	8/31/2011												
	Adjust campaign accordingly/if needed	9/1/2011	9/15/2011												

Annex Ib. Budget

The budget below is presented in two parts. The first part is a “core” budget that contains estimated costs required to initiate the education and outreach program but not to complete any of the activities, aside from Activity 10: Monitoring and Accountability. The costs are presented on an annual basis. They are indicative values and should be reevaluated before going forward. The second part of the budget is presented as a template, with only limited costs listed, containing the activities that the education and outreach team must plan further before developing a budget for. The budget for this second part should be developed by the team within the first few months of the program. The amounts will necessarily depend on what sources of funding can be established, the magnitude of the funds and the relative priorities that the team establishes based on its early work.

Annual Budget Part 1: Core activities

Staffing			
	Budget (Jamaican \$)	Quantity	Total (Jamaican \$)
Education and Outreach Lead	2,800,000	1	2,800,000
Education and Outreach Officer	1,500,000	1	1,500,000
Administrative Assistant	600,000	1	600,000
Media and PR Contact	1,800,000	1	1,800,000
FAQ Team Leader	1,800,000	1	1,800,000
Hotline and email question staff	700,000	1	700,000
Expert advisors	84,800/day	120 days worth	10,176,000
Office and travel costs	100% overhead		19,376,000
Total			38,752,000

Activity 10: Monitoring and accountability

	Budget (Jamaican \$)	Quantity	Total (Jamaican \$)
Public opinion, every 6 months for first 2 years, annually thereafter – 1500 sample size	1,500,000	2	3,000,000
Agricultural practice, every 6 months first 2 years, annually thereafter – 1500 sample size	2,000,000	2	4,000,000
Total			7,000,000

Annual Budget Part 2: Illustrative template to be completed by Campaign Team

**Activity 1: Transparency -
status of biofuels policy and
development**

	Budget (Jamaican \$)	Quantity	Total (Jamaican \$)
Meeting costs			
Radio ads	5,000-6,000		
Newspaper ads	50,000-200,000		
Television ads	65,000		
Total			

Activity 2: Biofuels Basics

	Budget (Jamaican \$)	Quantity	Total (Jamaican \$)
Posters (printing and distribution)			
Fact sheets (printing and distribution)			
Radio ads			
Newspaper ads			
Television ads			
Creating and maintaining website			
Meeting costs	Combine with activity 1		
Materials for education sessions in elementary and secondary schools			
Hotline staff training			
Establishment of the hotline			
Initiation of a biofuels use demonstration project in a few vehicles			
Initiation of a biofuels use demonstration project in a fleet of vehicles			

**Activity 5: Best practices for
biofuel agriculture and
technological trainings**

	Budget (Jamaican \$)	Quantity	Total (Jamaican \$)
Establish demonstration farms	50,000,000 ¹²		
Conduct farmer training workshops at demonstration farm or community center			
Extension workers training¹³			2,530,000
Extension workers salaries	800,000	4	3,200,000
Extension worker transportation to farms			
Community meetings/discussion forums on agriculture best practice topics			
International exchanges for students and extension workers			
Fund research opportunities and internships for students at the demonstration farms			

¹² Cost is estimated for 40 farmers at 2 locations, including the land lease and preparation, nursery establishment, equipment and machinery, water storage, construction/refurbishment of a classroom, 2 farm managers and a project manager, and classroom and office equipment.

¹³ To independently establish a one-year training program for extension workers would cost in the region of \$2.5 million. If the training were divested to the Ebony Park HEART Academy, in Toll Gate, Clarendon, it would cost more than \$1.1 million. Ebony Park HEART Academy serves the parishes of Clarendon, St. Catherine, and St. Elizabeth, the country's "bread basket". It would cost \$3,000 per annum per student, as the program is heavily subsidized by the government.

Activity 6: Technological trainings (non-agricultural)

	Budget (Jamaican \$)	Quantity	Total (Jamaican \$)
Quality control trainings for fuel distributors			
Trainings for gasoline retailers			
Vehicle information sheets			

Activity 8: Biofuels information for policy makers

	Budget (Jamaican \$)	Quantity	Total (Jamaican \$)
Fact sheets (printing and distribution)			
Conducting inter-agency meetings			

Activity 9: Biofuels for the Marine Environment

	Budget (Jamaican \$)	Quantity	Total (Jamaican \$)
Posters (printing and distribution)			
Fact sheets (printing and distribution)			
Radio ads			
Newspaper ads			
Television ads			
Meeting setup costs			
Initiation of a biofuels use demonstration project in a few marine vehicles			

Annex Ic. Useful resources for education and outreach campaigns

The following table contains a list of websites from US trade associations, government agencies, private companies, and non-profits that provide examples of the type of information outreach conducted in the US (note that the organizations are working independently, not in a coordinated campaign as proposed in this document). Although this information is all available online, it provides a sense of what can be made available in print form, as well as on websites, as part of biofuels education and outreach activities and examples of public messages around biofuels.

Organization	Website	Target Audience	Comments
US National Biodiesel Board	www.biodiesel.org	US Biodiesel Industry	The “Resources” section of this website contains useful information for the biodiesel industry and the public on all aspects of biodiesel in the US. Of particular interest are their fact sheets (http://www.biodiesel.org/resources/fuelfactsheets/default.shtml).
US Renewable Fuel Association	http://www.ethanolrfa.org/	US Ethanol Industry	The “Resource Center” section of this website contains useful information for the ethanol industry and the public on all aspects of ethanol in the US, including a page of reports and studies (http://www.ethanolrfa.org/pages/reports-and-studies) and a guide for mechanics (http://www.ethanolrfa.org/page/-/rfa-association-site/ChangesinGasolineManualIV-UpdatedLogo.pdf?nocdn=1)
Growth Energy	http://www.growthenergy.org/		Contains an enormous amount of information that is publicly accessible, including reports on research and policy (http://www.growthenergy.org/ethanol-resource-center/research-reports/) and informational brochures (http://www.growthenergy.org/ethanol-resource-center/informational-brochures/).
	www.ethanolretailer.org	US ethanol and gasoline retailers	This website by Growth Energy has many useful links targeted at this group, including a page of frequently asked questions (http://www.e85fuel.com/frequently-asked-questions/) and a checklist for installing or converting equipment for various ethanol blends (http://www.ethanolretailer.com/images/uploads/Pump_Checklist_Final.pdf).
	http://www.drivingethanol.org/ethanol_lane.html	US general public	This website is an example of an interactive educational website that is used to introduce the US general public to all aspects of biofuels.
US Department of Energy	http://www.afdc.energy.gov/afdc/etha	Biofuel stakeholders	Lists all of the Federal laws and incentives related to biofuels on their website, for those involved in the biofuel lifecycle to find out what impacts them.

	<u>nol/incentive s laws feder al.html</u>		
US Department of Transportati on	<u>http://www. phmsa.dot.g ov/staticfiles/ PHMSA/Do wnloadableFi les/Advisory %20Guidanc e%20Ethanol %20Gas%20 MixturesSA1 6.pdf</u>	Emergency Responders	Provides advice on how to handle emergency responses involving ethanol and gasoline fuel mixtures.
Ecology Center	<u>http://www. ecologycente r.org/factshe ets/biodiesel. html</u>	Public	Pulls together resources and presents basic information about biodiesel for the general public.