From: Peggy [rpk@gvtc.com]
Sent: Sunday, November 06, 2005 6:26 PM
To: corridoreiswebmaster@anl.gov
Subject: Energy Corridor Programmatic EIS Question about Web Commenting
Attachments: State Planning.pdf

Thank you for the opportunity to comment. Four different state governor's and/ or legislators have requested comments from our company. We began forwarding the corridor concept over a year ago. In as much as we are the only company that offers small to midsized biofuels processing facilities (one million to 12 million gallons per year) for total biomass processing across the entire United States, you will be seeing and hearing more about us in the near future. Thank you for reading our comments and learning more about bootstrapping small communities into the real biofuels future. A pdf file is attached. We appreciate your support.

Best wishes,
Peggy

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Biofuels Development Plan ©

Ethanol from Biomass—America's 21st Century Transportation Fuel

Authorities and political stakeholders need to understand ramifications related to the intricacies of long-term action regarding biofuels. Flexibility in change is paramount to an emerging industry. Therefore, the recommendation for wording of incentives or restrictions needs to include a vision of a future beyond immediate application.

State senators, representatives, governors, and federal politicians seek to find the best possible solution for long-term goals. Copies of existing legislation that could be used as a model for newly emerging state criteria can be forward-thinking and are evolving beyond original concepts to include new perspectives. Initiatives include such things as tax rebates based on production facility capacity for construction costs of a plant and/ or incentives for production itself such as 12 cents a gallon produced. The effect may be similar, depending on value of construction verses capacity for production. Actual production is a real factor to consider beyond all other concerns. Keeping the incentive tied to production encourages low-cost facilities design. Consumer benefits can fare better when the incentive is tied to production. This also stimulates the producer to maximize efficient production.

In the future characteristics for the fuel itself can change. Therefore the Renewable Fuels Association wisely advises to not push for 'blending demand' legislation. This extremely important consideration is based on the reality that imported and interstate commerce can affect point-of-site and point-of-use differences which can greatly affect either the producer (if local) or the distributor of the fuel. The capacity to fulfill demand can change over time and networking interstate commerce or global markets are important considerations. The supplier/ purchaser link can affect immediate profits as well as long-term goals and assist emerging producers. A state should implement strategies to assist their internal markets. (See blending comments.)

Please consider legislation to assist state production of biofuels and consider providing flexible alternatives for long-term goals. Attached to this letter of introduction is a narrative that further explains long-term development and goals that forward national security, self-sufficiency, and economic development. Thank you for your consideration. This emerging industry and the public appreciate your help.

Sincerely yours,
Peggy Gates Korth
VP Development, BioFuels Energy Corporation

Topics in Attached Narrative:

Legislation and Long Term Solutions to Assisting The BioFuels Industry
By Peggy G. Korth, VP Development, BioFuels Energy Corporation
August 2005

Introduction and Background: Timelines to secure long-term stability for the emerging biofuels industry, reduce market volatility in energy crops, and assist in new innovations for fuels and fuel use requires an overview beyond immediate legislation. Highlights and explanations in this document are important to biofuel producers, farmers, importers of foreign produced biomass energy fuels, and the all important energy efficient developments in vehicle use and electrical generation.

When asked "What legislation would you like to see, and in what timeline?" the answers do not come quickly. Part of going through the thought process, especially to meet requirements to receive support from the state, includes understanding the potential for the use of this state's biomass resources. Without a formal feasibility study based on forward-thinking applications of total biomass use, probable recommendations are available by evaluating existing crops, vegetative waste, woody biomass, and the potential for new energy corps to become a mainstay to agriculture within this state. The potential is enormous—far beyond the limited scope of existing records based on previous production and utilization. Even progressive research groups can be limited in their ability to accurately predict available renewable resources as they are tied to existing records based on traditional crops, historic processing of soon to be outdated production modalities, and internal bias.

Addressing the remarkable set of energy transitions takes courage. Forwarding policies and procedures that work directly for the people and by the people can change rural America and greatly impact our energy supply with renewable biofuels. Through widespread interactive media, the populace intellectually grasps innovative technologies and understands necessary implementation to solve their needs. However negative pre-existing and inaccurate historical partiality also sway them. Emerging technologies based on biofuel energy can expand to supply abundant fuel for automotive and electrical power generation. Changes are happening with or without guidance. Therefore, taking steps that immediately offer sound logic, wise compliance, and socially stimulating return to basic values can bring reason and direction to our current energy dilemma.

Awareness is the key to consumer acceptance. **Education** is the key to safe and successful implementation. Fostering a multi-pronged approach for agricultural, forestry, biofuel production, automotive and electrical generation development of new processes stimulates economic development and self-sufficiency in pro-active execution of technological development. Awareness and education are necessary to prevent over-reactive responses, the decline of our socio-economic standard of living, and prevention of social upheaval. Biomass conversion into fuel ethanol technology exists and is available to qualified participants **NOW.**

Currently, government recognition of applicable automotive adaptation technology is at a standstill due to regulative restraints and those restraints are not couched in safety or environmental concern, but in power and industry control. Political and existing industrial agendas impede adaptation behind global standards and efficient fuel use. The government has also been selective in promoting limited processes and solutions that cater to big business. The time to institute grass-roots solutions is now returning power to agrarian roots. One important

understanding is that local communities and farmer coops can supply relief for their own areas. Many small to mid-sized biofuel production facilities are being constructed. These facilities can be networked into a force-multiplier beyond the mega facilities of the corporate giants. And recognizing the value of the large facilities is also valid in addressing a metropolitan glut for increased fuel supplies.

Public leaders need to promote systems that work for the composite whole of all citizens's needs and continuously redefine a roadmap to success. This document offers ideas that expand opportunities for individuals, communities, states and spill over into bringing the United States back into equilibrium. Threats to our economy and ecology bequeath both challenges and opportunities. Points of interest will be addressed by first acknowledging perceived and prospective problems, then recommending both recognized and not here-to-fore acknowledged collateral solutions to current trends in problem solving.

Fuel ethanol feasibility dissemination, awareness, and training projects can rapidly forward an overall plan. Therefore, one primary step includes acknowledgment and support of educational efforts. These efforts EXCEED university-based or institutional formats. Developing **community-college level programs** for the future is important. Please consider augmenting community and technical state-supported colleges with new programs focused on technical training for this emerging industry. However, at this time simple educational and promotional media transmission can enlighten and encourage department awareness through existing statewide channels.

Who needs to be involved in rural economic development? Answer: All levels of agricultural influence. Historically, the Department of Energy has been politically biased in behalf of existing infrastructure. The embarrassment of exposing government and university partiality causes concern to Americans for a global standard. Understanding options and feasibility will assist to change department attitudes to open their minds and influence to encourage start-up alternatives. In as much as federal interests have so far failed to address wise public action, we now turn to our state representatives to request a better vision.

Largely, a new paradigm revolves in restructuring antiquated bias promoted by competitive industries. Education and media can help. The most influential and supportive channel of influence can be a state's Department of Economic Development. Rural economic development for agricultural interests is obvious. Distribution of the biofuels products, employment of facility operators, and community self-sustaining efforts can revitalize the economy in general.

The Corridor Concept—A successful journey begins with a step in the right direction. The greatest immediate impact for expansion of new fuels is to develop fueling stations along well-traveled corridors. Communities that produce new-fuels will also have the opportunity to use their production thereby further expanding availability. However, the first to use fuel ethanol as the primary ingredient in blended fuels or as a low-proof economical fuel alternative will be **fleet sales**. Many industrial and government vehicles can utilize blended fuel ethanol (E85 is the most common standard for the United States). It is possible to further advance those vehicles to run on low-proof fuel ethanol thereby extraordinarily reducing fuel production costs.

Keys to greater production or addressing production and distribution concerns include the following:

- Low-cost, small to mid-sized facilities allow community-based biomass production with small financial risk.
- Community leaders can implement systems that address multiple problem-solving issues, i.e. handling waste vegetation, producing fuel ethanol, and promoting economic development with a start-up industry.
- Having a greater number of fuel ethanol production facilities spread across a state includes these benefits:
  1. decreased distribution expense; increased distribution locations
  2. diversity of feedstock based on local biomass availability
  3. increased interest for conversion or purchase options of vehicles
  4. pump-price cost control with 'lowest' available pricing
  5. diversity in fuel products
  6. reduction in environmental impact
  7. instituting a 'local' self-sustaining economy
  8. providing for the community by the community for necessary emergency fuel back-up energy
  9. potential for collateral electrical generation including generating emergency back-up electricity
  10. potential to generate electricity from a non-polluting source.
  11. increased fuel ethanol production capacity state-wide
  12. networking groups to service corridor routes and servicing fleet needs (can be focused on government vehicle needs and/ or interstate commerce or metropolitan needs)

First and foremost it is imperative to understand that total biomass conversion into fuel ethanol production DOES NOT REQUIRE genetically modified microbes. Effective processing is being demonstrated daily and is innate in nature. If and when new biological breakthroughs assist production in a reasonable and affordable manner, then those biotechnological means may be applied. However, at this time, processing is not only possible, but also economically feasible utilizing nature's bountiful and already existing microbes. Reproduction of microbiological cultures may remain proprietary within commercial application and are disseminated throughout qualified processing associates. Moreover, a variety of microbiological cultures are known to accelerate targeted biomass reduction into glucose for conversion into fuel ethanol. The primary inhibiting factor for all new or expanded development is economic control. It is possible to remove that control thereby removing limitations on fuel blends and fuel ethanol proof requirements, limitation on processing local biomass, limitations on automotive enhancements with compliant environmental upgrades, limitations on communities becoming self-sufficient, limitations on farmers in a global market, and limitations on foreign dependency.

Advancing total biomass production includes recognition of multiple production and usage systems and the ability of entrepreneurs to have equal access and encouragement for facility development. At this time many of the promotional legislative actions and exiting policies are geared toward big business and do not assist or promote entrepreneurs or self-sufficient action by small community-based groups. Having a government dedicate its resources to **one** alternative fuel production regime inhibits competitive advantages for reducing costs, expanding markets, or including a greater number of participants. Respectful and professional competition can be healthy and was the American way of the past. True public servants recognize that there is room for many participants and adequate wealth to be shared.

Distribution is a part of your overall plan. And this plan MUST include potential production within your state or the state will be subject to corporate domination and/ or import availability. Generating excess fuel in a location close to a distribution point reduces transportation cost of the fuel and keeps profit margins competitive. Therefore, a state's ability to participate in distribution includes facility production plans. Biofuel distribution should be coordinated through both independent and corporate channels. Areas of distribution can be competitive thereby assisting local growers in profitability. Visualizing a distribution plan, needs to include incentives for distributors, blending locations, and groups that only want to supply their individual needs, such as communities that make their own fuel for their local government vehicles or parks and wildlife maintenance, or electrical generation emergency backup. Please assist in developing cohesive and doable business objectives for both large and small production concerns. Focusing on various trade routes or corridors such as primary interstate distribution locations is wise. Be aware and amiable to many different levels of distribution networking including potential blending facilities, tax credits, and variations in fuel content. Management of this interest can kill innovation if it is not flexible. Furthermore, some areas must consider import and export potential.

Blending: The corridor concept includes facilitating the blending of anhydrous fuel ethanol with petroleum at locations most convenient to either distribution or production centers--whichever is most cost effective for the existing infrastructure. Blending by percent is NOT difficult and does not require a chemical engineer to monitor the mix. Obtaining the American Standards (ASTM) certification is possible with simple testing protocol. When compatible anhydrous fuel ethanol and petroleum are pumped simultaneously into a storage or transport tank, the compatibility of molecular attraction allows sufficient and immediate blending of fuel to the proper proportions as metered by the blending conduit. Consumer rights need to include eliminating unnecessary restrictions made to control fuel and fuel pricing. If a community produces fuel ethanol at a low cost, then the blending of that fuel either at the distribution site or at the production site will guarantee the best market value. Anything else is unnecessary corporate dominance in an attempt to further throttle our citizen's ability to be self-sufficient and restore economic stability.

BioFuels Industry Example: *Note: The next portion of this description contains information about technological developments of bio-fuel production associates from BioFuels Energy Corporation (BEC).* Small to midsize fuel ethanol production facilities will promote statewide use of clean energy technology; Assistance in setting up a demonstration of an innovative processing technology for exemplary community-based projects is needed for each state. A number of states have facilities planned or under contract for construction. Advantages of local demonstration facilities are as follows:

- Supply fuel ethanol for local use from a area processing center
- Provide a location for technical training workshops
- Demonstrate effective, low-cost alternative feedstock production processing
- Demonstrate efficient small, low-cost production facility processing
- Augment fuel supplies as a local resource
- Provide jobs as the system expands
- Reduce waste and make use of waste materials
- Improve environmental quality and enhance public health
- Reduce emissions of air pollutants
- Lessen dependence on foreign oil by providing greater energy security/ independence

Small local facilities immediately address a primary three-fold effort—feasibility, awareness, and training. As a renewable energy project, area-wide efforts will not only bring the technology of processing waste biomass into use, it will also demonstrate innovative new processing technology not here-to-fore used in this state and build an alternative fuels awareness plan that can be fostered through both agricultural and energy related conduits such as county agents, and then train potential community coalition leaders to set up and operate community fuel ethanol facilities. Biomass processing is rapidly changing and this state has the natural, raw, **renewable** resources to become a leader in energy crop development, value-added woody biomass conversion, and agricultural waste processing.

Funding more feasibility studies will not get the job done. It is time for demonstrations and building production facilities. Interested associates already gather the necessary data and statistics to confirm small production capacity. Moreover, the ability to offer facilities that can grow (enlarge) with a project and a group's ability to process their waste biomass or encourage farmers to increase production of energy crops is important to an emerging industry. As promoted by BioFuels Energy Corporation, a future producer of local biomass processing, for this state-wide plan development, facilities that cost as little as $3.00 per annual gallon capacity to produce anhydrous fuel ethanol or advanced biodiesel for volumes of 125,000 per year, 1 million gallons a year, and 4 million gallons a year are ideal starting points for community-based projects. Additionally, fuel production costs for total biomass processing are recorded for sums of thirty to fifty cents a gallon depending on feedstock availability and location. Benefits and enhancements highlight a new biomass processing technology to reduce costs and speed the water extraction process for final finishing of fuel ethanol. The system can impact the local economy to provide cost competitive, non-polluting fuel alternatives answers for current nation-wide concerns and literally gives power back to the people!

A <u>State Biofuels Development Plan</u> fulfills project goals

- Wise use of vegetative waste to produce earth-friendly alternative fuels
- Rural and agricultural economic development in a down economy—alternative income
- Introduction of a new industry that can be replicated throughout the state and nation.
- Processing design that can be expanded and re-instated in a capacity-related design in rural economic develop to additional locations with low initial capital cost. *Note: The proposed facility can operate in batch increments or as a continuously active processing unit.*
- Awareness programs to demonstrate a) Environmental impact b) Economic forecasting c) Clean Cities compliance and more.
- Exemplary small start-up facility that serve as a training center in this state.

Steps to Implement the Plan: Address specific sectors with information that matches their needs for essential industry development. Government cannot assist in dissemination until their leaders understand their roles in fulfilling overall objectives. Potential participants include the people who produce or collect the biomass, future potential facility owners and operators, and the consumer. Therefore the first step is in elevating awareness and education. Current media and previous bias continues to color misconceptions negatively. Therefore, the new campaign must relate new and relevant goals with encouragement to accomplish those goals. Working through state agencies will provide necessary channels for information dissemination.

<u>Awareness:</u>

Contact state agencies to assist in developing and implementing overall goals.

Contact county agents and city managers to encourage development and implementation of goals.

Education:

Supplement industry dissemination NOW
Encourage public participation NOW
Create Community College-based certification programs in alliance with the industry in general. Include new innovations and emerging technologies in incentive programs

Feasibility/Demonstration

Feasibility is no longer an issue. No more time or money needs to be spent on feasibility. Theoretically and with pilot projects feasibility is already established. It is time to move forward with demonstrations when applied to novel applications and the building of facilities. However data collection is necessary to estimate facility size, manpower to run the facility, and initial estimated capacity. This information is basic to business-plan development for the start-up facility. Statistics exist to evaluate data. If such groups as county agents or city planners need to learn how to evaluate this data, then educational seminars can bring groups up-to-speed. Government assistance will assist in training or educating government employees.

Awareness program: State agencies can work directly with Councils of Government to promote rural economic development in both biomass production and biofuels processing. Alternative energy and its impact on the community in which it is produced can jump-start fuel sales, building production facilities, and wise utilization of agrarian and vegetative waste for total biomass processing *Note: huge amounts of yard waste and healthy forests initiatives generate billions of tons of biomass that can be utilized.* An education and awareness program is needed to more fully involve the community and its residents. Outreach can start within government channels and could expand to include: 1) public service announcements for commercial and public radio stations 2) short, focused media programs for the audiences identified with either PowerPoint or Videos distributed by CD or DVD; 3) printed messages. A funded awareness program can bridge a lack of understanding between citizen and environmental groups regarding the difference between biomass from forest stewardship activities and unsustainable forestry practices. Moreover, the awareness project informs agricultural interests about additional feedstock sources. Rural economic development can now include small farmers as well as industrial agribusiness. Each supports the other in the biofuels industry. The awareness program includes all team members, government supporters from the above-mentioned groups, and specialists in adult community education.

Training and Workshops: Do not limit current industry-based education and workshop projects. Qualified training is available from industry resources and is growing. *Example: BioFuels Energy Corporation trains biofuels facility operators. Potential facility operators can be trained in a five-day, hands-on training workshops in Raymondville TX at the Raymondville BioFuels manufacturing facility. The training session will operate batch lots on biomass processing from forest slash establishing additional feasibility data/reports during training.* Additionally, training tools include distribution development. Fuel blending facilities and new or adaptation of consumer pumps are necessary. Media that highlights consumer choices can be offered to vehicle dealerships sales people. Awareness activities can be designed for government officials and community organizations. Newsletters can be focused on rural economic development and coordinating forestry stewardship contracting for the governor's task force.

New Mexico Example: Local biofuels development participants have formed an informal task group including community leaders such as Mike Nivison, the county commissioner, Barbara Luna, New Mexico District Forester for the Capitan District V. (7 counties DeBaca, Roosevelt, Lincoln, Otero, Chavez, Eddy and Lea), and local business leaders. Peggy Korth and George Oerther, BEC members collaborate with all members to analyze data. Of the various funding options, this group elects to lease the facility from BEC. The BEC team is responsible for capital cost estimates to construct community-based small facilities and operational costs (feedstock, disposable products such as enzymes, yeast, acid, and water will be delivered and stored for demonstration use) and a facility-processing plan. Studies on automotive and distribution criteria and analysis can be made available. General proportional auto flex fuel ratios, government fleet cars, and the ability to upgrade existing vehicles to utilize biofuels addresses estimated fuel supply for the local area.

Rural opportunity for fuel ethanol and biodiesel means understanding options, selecting a doable plan, and showing communities that it is possible to satisfy community needs in areas where renewable biomass is available. Clean energy does not require multi-million dollar investments. Viable small community operated coalitions can double small still capacity through innovative design adaptation and is available for communities that desire self-funding in the future, developing new markets for biomass and forest restoration activities for rural economic recovery, community self-sufficiency, and two-fold ecological impact: a new clean energy source and waste utilization. Forestry thinning augments watershed and ecosystem functions, development of new products and markets for agriculturally-based products and provide an opportunity to refine agricultural commodities and products to increase their value in the marketplace benefiting a wide range of agricultural producers from family farms to agricultural businesses, and cooperatives to associations… plus all the Department of Energy benefits mentioned in the introduction.

Background on Economics and Existing Legislation: *The following information is included by way of reference and not intended to be a recommendation of applied wisdom or guidance for state incentives.*

In sheer dollar terms, the biggest clean energy perk in the bill was a two-year extension of a tax credit critical to companies that produce power from renewable sources — an allocation worth $2.7 billion. The bulk of those funds will promote the construction of new wind farms, a boon to utilities and wind turbine manufacturers, while the remainder will assist biomass, geothermal and hydroelectric companies. The bill does create a new category of tax credits known as clean renewable energy bonds, or CREBs, that have an estimated value of $400 million. These tax-exempt bonds can be issued by local governments or electricity cooperatives to help pay for wind, solar, biomass and other specified projects. An additional $194 million will go toward the two-year extension of excise- and income-tax credits for manufacturers of biodiesel, a soybean derivative that is blended with regular diesel.
Example: Brinkmann and other farmers also stand to gain from a provision that mandates the annual use of 7.5 billion gallons of ethanol, a corn derivative, by 2012. **Corn's reign as king of fuel ethanol is limited. The newly emerging cellulosic processing can immediately process a far greater abundance of biofuels for our national energy consumption. Total biomass processing is the way of the future for fuel ethanol. Furthermore, fuel ethanol an be used in producing biodiesel.**

Media Quotes: Historical changes began with new vision yet, the roadmap already needs updating. On Monday in Albuquerque, New Mexico, President Bush will sign the Energy Policy Act of 2005. The importance of the bill, which was four years in the making, is not in its immediate impact. It will have little or none. The bill's significance lies in the groundwork it lays for a cleaner environment, greater

energy independence and the development of alternative fuels.

Since at least the mid-1960s, Congress has simply toyed with alternative fuel legislation and energy conservation. Even the Middle East oil embargo of the 1970s and the subsequent gas shortage only made Americans, as a whole, temporarily interested in the issues. Now, with oil having broken the $60-a-barrel barrier and 15-mile-to-the gallon SUVs out of favor, Congress appears to have gotten serious with the most comprehensive energy bill in two generations.

On the alternative energy front, the bill addresses a wide array, rather than concentrating on just a few of the more popular alternative fuels. Tax incentives are provided for producing energy from renewable resources with wind, biomass, geothermal, irrigation power, landfill gas and trash combustion technologies.
An increase in ethanol use is targeted through 2012.
New regulations will promote greater use of hydro power.
$3.7 billion will be invested in hydrogen and fuel-cell technology.
The bill increases investment tax credits for the purchase of solar equipment, an infinitely renewable resource. In the area of conservation, the bill:

- Sets or raises efficiency standards for appliances millions of Americans use daily.
- Provides tax incentives for energy-efficient construction of homes and offices.
- Offers tax credits for the purchase of energy efficient equipment for the home like water heaters, heat pumps, furnaces and air conditioners.
- Commits the federal government to higher energy-saving standards in its buildings.

Among the more notable provisions of the bill is an emphasis on promoting alternative-fuel and hybrid vehicles. Tax credits for the purchase of such vehicles range from $2,000 for personal cars to $40,000 for buses.

Another important provision is the attention the bill pays to updating the electric grid to prevent future blackouts like the one that hit New York and parts of Canada last year. It also strengthens federal regulations to prevent companies like Enron from manipulated energy prices something that cost California ratepayers millions of dollars in inflated costs.

While there is much to be encouraged by in the bill, it has its detractors. Despite its vastly improved safety record, efforts to revive the nuclear energy industry are under attack. There are those who believe the bill is too comprehensive and, therefore, unrealistic in its effort to promote alternative fuels. At the same time the bill has been criticized for investing too much in specific technologies like hydrogen and ethanol.

Environmentalists are pleased with provisions to promote energy conservation, but disturbed that the nation's drivers will not be forced by law to use less gasoline while traveling the roadways.
Also under attack, from both the right and the left, are tax incentive provisions. The right thinks they are too expensive and the left objects to any for the business community.

On balance, however, the bill has the support of many of the usual Bush critics. "It is not a perfect bill," Democratic Rep. John Dingell of Michigan told The Associated Press. "But it is a solid beginning to developing an energy strategy for the 21st century."

Kateri Callahan, president of the Alliance to Save Energy, praised efforts to "increase the use of energy efficiency technologies to extend our nation's energy supplies." Even the bill's journey through Congress showed bipartisan support with the Senate overwhelmingly backing the effort, 74-26. Ditto in the House, 275-156.

No one in Washington has said much of late about the spiraling cost of gasoline. That's because there is nothing the federal government can do about it, at least in the short term. The immediate answer lies in

the hands or gas tanks of the consumer. "Either stop driving so much or put up with the gas prices and don't complain." For over half a century, American drivers have had an insatiable appetite for gas, gas at very cheap prices.

Now that this petroleum product is no longer an incidental expense, Americans are coming to understand what Europe has known for decades gas is a precious commodity. As such, it is up to each driver to decide if avoiding car pools and buying gas guzzlers is really worth it.

Facility Expense and Construction: Cost estimates for building a distillery continue to be based on antiquated, traditional designs. Production cost estimates are based on genetically modified microbes or partial glucose extraction from grains. Therefore, to stimulate cost containment, state and federal incentives should be based on production, distribution, and equipment utilization upgrades/ improvements and innovative design. The public can take better advantage of the end product, expense, and forwarding grass roots economic stability with better incentives.

Biodiesel. Similarly to fuel ethanol, the biodiesel industry can benefit from small to midsized facilities as well. BEC is developing a dual production technology to utilize fuel ethanol in the production of biodiesel thereby providing a 'safer' production modality and faster biodiesel availability. The use of methanol is toxic and cumulative to production technicians. Therefore, utilizing fuel ethanol instead of methanol provides a safer production modality. Moreover, in countries that do not allow alcohol production, it is imperative that the chemical process be just that... an interim step to produce their biodiesel. Patents are pending on a proprietary process that has proven to produce a biodiesel product that does not gel at 17^{0} below zero, thereby taking biodiesel use to a new standard of public use. The biodiesel production community is closely related to the fuel ethanol community and together they address our national energy concerns. Energy crops are many. Farmers need security in market sales. By having community-based facilities, the communities can weather the storms of a volatile economy and political intrigue. Critical analysis of crop potential is essential to facility construction size and feasibility. Therefore, county cooperation with farmers and interested community-based projects are essential to forward the small to mid-sized production facility concept.

The Bio-diesel aspects are very important to all of us and to nearly every situation where we will want to install facilities (at least at this point). We are also looking at the possibility of co-locating a cattle feedlot in those areas where it could be functional or needed. Participation in strategy planning sessions should involve multiple interests.

Self-sufficiency in Energy Demands: A long-term goal is to master-mind incentives based on rural economic development and address local need so that it is not necessary to import fuel into the region. Many states can achieve this goal. The current limited funding opportunities for some states have focused attention on gasification or propane as short-term fixes. Yet now, it is possible to expect to have facilities operational to meet the initial 'blended fuel' demands of the State and some surrounding regions as well within a few years. By spreading production facilities across the State and encouraging locally-owned and community supported projects either through a localized cooperative or an incorporated community ownership plan, new answers to existing problems can come to fruition. Small regional communities can prosper over the long term—locally-owned allows the money generated/produced and spent on support of local production gets returned to that local area which offers a significant return for all parties; agricultural producers, community infrastructure supporting a facility, local employment,

distribution of locally produced product to a local market (which may or may not include an interstate highway section), local fuel retailers and the consumers. By reducing all transportation and distribution costs (raw feedstock in and finished product out) will help reduce the final 'at the pump' product cost for the consumers. Healthy forest activities and watershed vegetation control can produce an abundance of waste woody biomass—an abundant, renewable energy source. (See reference to excess woody biomass utilization).

Considerations for systems and networks that overlap each other include cooperation with other States as well as some portions of Canada, and all of the Americas. Therefore, export and import can be seasonal issues depending on supply and demand. Coordinating fluctuations within regions can assist overall goals. Broad-based planning for regions such as western state cooperatives may be considered.

Locale benefits the foundation for rural economic development that supports farmers to restore value to the land. All business plans evolve and they must change to fit our emerging economy and fuel availability. Being a part of a larger network allows greater flexibility for growth. Therefore, planning allows growth for all aspects of the emerging industry. The BIG PICTURE, starts with statewide plans for each state government. The greatest strength comes in cooperating with independent business people who can use their creativity and secure a stable market, assist each other/ collaborate, and be a part of something much larger so that we are not all swallowed by Corporate America/ Europe/ World.

Automobile Compliance: State legislation could consider overriding national legislation when the national legislation inhibits environmental and economic development of new automotive technologies.

Conclusion: Government leaders can assist to overcome antiquated limitations that do not apply and assist in debunking myths of limitations. Solve immediate energy problems by supporting emerging small and mid-sized biofuel expansion. Scientists are becoming pro-active in speaking out about obvious flaws in policy. Concerned citizens join the chorus. In concert, we have a chance to change unsustainable ways of living and implement reasonable alternatives. Professionalism is the duty of the scientific reporter, the innovator, and the political powerhouse that controls execution of the new paradigm. Opening our eyes as to what is going on in the world and adapting earth-friendly solutions are doable starting right now. The leaders who will be remembered are the ones that not only care but open the doors to successful implementation of appropriate tools and techniques.

1. **The Corridor Concept**
2. **Total Biomass Processing of Vegetation to Make Abundant Renewable Fuel Ethanol**
3. **Automotive Conversion without Pollution Potential**
4. **Pollution Free Electrical Generation.**