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8/11/08

Mary. D Nichols
Chair, California Air Resources Board
Sacramento, CA 95814

Dear Chair Nichols

KPC Gemb is grateful to you and the dedicated ARB board members for framing the issues in the appendices of the scoping plan. We enjoyed the opportunity to proffer our comments to the Scoping plan. As we mentioned in our previous response, as a California firm that has a broad global experience in presenting energy solutions for GHG emissions and global warming, we are particularly proud that Californians are leading our nation in creating energy solutions and products which will protect and sustain our environment and provide Americans with a secure and sustainable energy supply.

In examining the appendices, there is a clear goal of ARB to reconcile several market trends, such as the May 2008 WCI draft recommendations and related statutory authority such as AB 1493 and the quest to integrate the Low Carbon Fuel Standard (LCFS) into the Californian transport sector. ARB diligently attempts to cover each sector of California's commercial and residential activity to project coherent and consistent strategies and policies that will produce the GHG emissions reductions.

A proposal that is contained in Appendices C is the carbon fee. At first glance this proposal seems to meet ARB's attempt to reconcile the various measure currently being developed to reduce GHG emissions. Such a proposal is certainly popular with several credible and distinguished advocates. Several of the comments submitted to your esteemed board have proffered the carbon tax/fee as the means to reduce emissions.

It certainly has an intuitive appeal. Its very attractiveness is rooted in its simple and precise methodology. GHG emitters are taxed to the point where the choice of a renewable source and development of technologies becomes the most attractive means of energy production. The fees earned through the taxes will allow the State to operate a superfund for the development of renewable energy sources and new technologies.

The problem with this solution as a stand-alone solution is it's very simple properties. As we Californians know all too well the lack of a federal energy policy has created not only a condition of abject neglect in the area of GHG emission reductions but absolute impediments to the implementation of state regulation of GHG reduction statutes such as AB 1493. As such we must execute the goals of the carbon tax in an adroit and skillful manner or the regulations could result in capital flight. GHG emitting industry could relocate to a less taxing state. The proposed regulations would be subject to protracted legal challenges if industry can viably assert that such a carbon fee violates HSC § 38501 (h).

A carbon fee should be developed within the scope of a broad and viable Cap & Trade system that allows for transactional solutions for each sector covered in Appendix C. The carbon fee should be incorporated in the successful market driven sale of the renewable energy source and or derivative.

Cap and Trade is featured prominently through the appendices of the Scoping Plan. In our earlier submission of 8/1/08, we have previously addressed our global experience in the Carbon Markets and how a successful Cap & Trade program can reduce GHG emissions by providing the funding from the market place for the upfront cost of renewable energy. The successful market solutions provide the minimized cost and maximum benefit to the Californian economy as dictated by AB 32. A successful close of a market transaction of an environmental derivative of an energy efficient project or a renewable energy project will provide the less painful carbon fee/tax needed for state cost and investment.

However, in order to maximize the benefit to the Californian economy, ARB must resist the proposal that only the electric and gas producers and sellers are able to participate in California's Cap & Trade program. This artificial barrier to the market will allow the production and distribution of energy to be concentrated in the defacto monopolies. The County of Los Angeles presented a compelling case, in their comments to the Scoping Plan, through their attorneys Manatt Phelps Phillips, concerning the impediments that artificial barriers erected in favor of the utilities have rendered to the reduction goals of GHG from renewable energy sources. In fact the case presented by counsel is so strong and axiomatic that it is worth restating. As Manatt Phelps Phillips state, "Customer-owned renewable generation is, at best, a low priority for utilities, and often, the utilities appear to impede the installation and use of this renewable generation. These impediments include electrical interconnection complexities, rate inequities, lack of technical support, and lack of a "feed-in tariff." The utilities may impede

customer renewable generation because they have no real incentive to assist in developing more renewable distributed generation.”¹ Unless ARB creates regulations that remove these impediments, than renewables will not develop. Onsite CHP and generation will not occur. On page C73 of the appendices, ARB states its goal for CHP production of 4000MW by 2020. If export sales for excess capacity are impeded and crippling connection fees are imposed, why would facility management approve the expenditure of CHP or trigeneration plants? If developers, urban designers, local governments, and facility management are precluded from participating in Cap & Trade market, how can California reach its 4000MW of CHP? If the utilities are going to continue the policies of business as usual, it is inconceivable that California will reach the 33% renewable energy source by 2020. The ownership and production of energy must be more diversified if California is going to meet its goals. A broad entrepreneurial Cap & Trade market which allows the producer, of the renewable energy or the saved energy through CHP, Trigenation or Energy Efficiency projects, to raise capital in the markets will create the synergy needed to meet the targets of AB 32.

In assessing the need to lower GHG emissions by implementing energy efficiency projects, ARB notes in the appendices C on page C-64, “ achieving new levels of energy efficiency would require novel approaches”. However, the use of novel approaches can be counter productive if there are too many novel theories and approaches which do not have the fungibility to meet several goals in several sectors. As stated in appendices C on page C-54, California imports 25 to 30 % of electricity, which is consumed in state. Yet more than half of the GHG emitted from this sector are produced from this source. There is a novel solution that other governments have explored and is fungible to carry GHG emission level reductions through several sectors, Jatropha Curcas (JCL). JCL is a fungible product and solution, which can meet several sector targets. It has the potential to expand the California fuel stock to the point that California becomes independent of imported fuel sources.

Jatropha Curcas is a non-edible tree and or bush which is non invasive to native plant life. It originates in the Caribbean and is capable of growing in arid climates. It seed oil content is nearly 40%, one of the highest for biomass stock. The fact that it is a nonfood stock that can grow in varied California soil conditions, including sandy, provides a diverse plantation strategy. The plant can produce oil seed with less than 25 inches of rain and can survive extended periods of drought.²

According to renowned German biologist, Richard K. Henning, JCL plantations prevent soil erosion and desertification and have been successfully utilized in African projects for this component of sustainability. A strategy of hedge row plantation of JCL plants on crucial crops sites is a strong non- chemical methodology to prevent crop damage from deer, rabbits and

¹ The quote is taken from the 8/1/08 Comments of the County of Los Angeles to the AB 32 Draft Scoping Plan. Submitted by Manatt Phelps Phillips.

² Equator Energy Study of Jatropha Curcus L in Sub-Saharan African Countries by Giovanni Del Grecco and Laurens Rademaker

rodents. As the University of California report indicated damage to California agricultural products by foraging animals present a challenge to the agricultural industry.³ JCL plants have an established track record of protecting food crops from pest damage in a natural and sustainable manner.⁴ The crude yield from *Jatropha Curcus L* is the most promising of biodiesel feed stocks. One hectare of the crop produces 2-3 tons of oil. Most biofuels from food stock such soybeans only produce 1-2 tons of oil.⁵ Another attractive component of this fuel is that it is carbon neutral.

As we disclosed in our previous comments on the scoping plan, KPC Gemb is a global energy firm that is experienced in GHG gas emission solutions and renewable energy in North America, Europe, Asia and Africa. Our Sacramento office has pushed the firm to bring our global solutions to the ARB process of implementing AB 32. One such solution is our firm's experience with *Jatropha* in Rwanda. Our UK partnership has created and implemented the Kigali goals of bringing renewable energy to this landlocked country in the midst of reconstruction after the horrors of the war. All energy in Rwanda is currently generated by oil imports. The impoverished nation expends precious resources on this expensive commodity. The *Jatropha* plantations, the oil yields and the refinery will deliver sustainable energy independence to Rwanda. We have also created financing options based upon the entrepreneurial carbon markets. The carbon neutral fuel source from the *Jatropha* will create approximately 5 million carbon credits from the CERS generated from this CDM project.

Our experience in Europe presents another solution that we can bring to the discussion. Community based developments, which produce energy that is carbon neutral. European developments are subject to local regulations, which implement Kyoto protocols. We can learn from their experience in using robust carbon markets to create the financing methods for low carbon or carbon neutral energy sources. An example of this can be found in the Belgium town of Merksplas. Due to the regulations dictating, GHG emissions and strong European entrepreneurial carbon markets, several entities including local agricultural entities formed a Joint Venture to build a *Jatropha* fueled CHP plant. According to Ronald Westerdijk, the business development manager for the Benelux countries of Wartsila, the Finnish Firm that provides the plant for the Joint Venture, the project is attracted to the *Jatropha* oil because it is carbon neutral and does not compete with food stocks. The Merksplas plant will provide 9 MW of electricity, which is sufficient to serve 20,000 homes⁶

It is eminently clear how the novel solution of creating *Jatropha* oil fields in California can be used in conjunction with robust markets to achieve the goals of AB 32 in the several sectors identified by ARB. In fact the *Jatropha* option allows ARB to stitch together several sector goals through a seamless application. An example of this can be found in the aforementioned European example. In appendix C ARB correctly points out that local governments can control land use through the blueprint planning process. In the proposal ARB proffers in page C-43 of appendix C, "ARB proposes that regions use a blueprint planning process to map out their preferred land use and transportation scenarios that meet the regional targets and other regional needs."

The need to integrate GHG emission levels throughout several sectors is clearly recognized by ARB. The guidelines on implementation and the financing is an important point that frankly the Scoping Plan and the appendices do not address. However, we would proffer that the *Jatropha* option coupled with a

³ Integrated Pest Management for Home Gardeners and Landscape Professionals by T.P Salmon and W.P. Gorenzel-University of California

⁴ Fighting Desertification by Integrated Utilization of the *Jatropha* Plant by Richard K Henning

⁵ Reuters article Allegro Biodiesel Receives First Test Shipment of Crude *Jatropha* Oil, February 12, 2008

⁶ Wartsila Corporation Press Release, April 23 2008

liberal market platform could provide urban designers and Land Planners with the ammunition they need to use the Blueprint process to accomplish to emission reduction goals. By way of example, if a Land Use Planning professional would be able to design a project in the Inland Empire, the development would contain an integrated trigeneration plant. The CHCP process provides the cooling component needed in California in the most efficient and sustainable manner. The trigeneration plant would be run on Jatropha oil similar to the Belgium example. The homes would contain the LEED NC model to maximize the green building component. The roof of each structure would be part of the million solar roof goal. The development would use a third party expert to verify the carbon credits the project would generate. The carbon credits would be used by the development to create investment vehicles. An example would be a future contract at a hedge price which would provide global finance options. The price of the credits would be enhanced by the transportation feature of the development. Since the transformation of the Californian transport model from a vehicle-freeway mode to a public light rail mode will take time to mature, there is a need to find a method to implement EO S-01-07. In the hypothetical Inland Empire development model, each unit would be sold with a diesel engine car. The resident would be contractually bound to use the vehicle for driving. A flexible diesel engine would be needed to accommodate the JCL biodiesel. As the JCL fuel stock rises, the distribution pumps will also rise. Until such a build out occurs, the initial developments will provide contractual obligations for fixed mile rates to prevent a trapped option. A resident who provides more Low Carbon Fuel miles beyond their contractual rate will earn carbon credits which can be used to trade to the Jatropha distributor for free fuel. A JCL provider will be allowed by ARB regulations to aggregate carbon credits from said drivers to sell in the Cap & Trade markets.

The utility can earn credits through either a transactional relationship with the development or through export sales from the development of excess capacity. The local government can earn carbon fees or taxes by pointing each transaction.

As such, one development provides LCFS for transportation emission, onsite renewable CHCP and solar energy which frees the grid and produces GHG emissions reductions. The local government earns carbon taxes on these successful transactions. The large utilities reduce their emissions and are provided various methods of reduces their compliance cost.

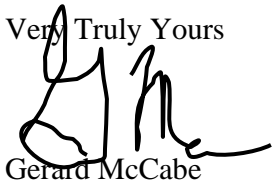
The attractive aspect of this model is that it can be retrofitted into existing communities. However the success of these projected emissions depend on capital raised through open market platforms. The open markets create even a more efficient dynamic in the area of commercial facility management. The ability of building owners to implement onsite renewable energy and energy efficient projects will depend on a solid and real ROI. In European markets energy efficiency projects generate a derivative called “white tags”. These are traded in open markets. If ARB were to pass energy efficiency portfolios for commercial buildings, the facility management would be able to raise funds to purchase the energy efficiency equipment such as smart meters by floating the white tags. An open and diverse market would allow facility management to bundle the carbon credits and the white tags for upfront cost procurement and a tighter ROI. The State can earn the carbon fees by placing transactional fee on the market transactions. The State can also earn carbon fees on the sale of the Jatropha oil.

As the State earns more fees on the aforementioned transactions, money is accrued for light rail construction. A viable light rail system will reduce VMT, which will lower the GHG emissions to be reduced by a greater ratio.

It is our hope that our experience and expertise has provide ARB with comments that are helpful

Thank you for your consideration. We would welcome the opportunity to answer any questions you may have.

Very Truly Yours

A handwritten signature in black ink, appearing to read 'Gerard McCabe'. The signature is stylized with a large initial 'G' and a long horizontal flourish at the end.

Gerard McCabe