

## ***Concept Paper***

# ***California Low Carbon and Renewable Fuel “Green Bank”***

### **Overview**

Establish a Green Bank that would initially be funded by a portion of the revenues derived from the sale of GHG emission allowances pursuant to the California GHG Cap and Trade Program (AB 1532, Perez). The revenues would be used as seed money to support a Low Carbon and Renewable Fuel Bank (LCRF Bank or Green Bank) to help finance the development of low carbon and renewable fuels in California.

### **Problem**

It is difficult for companies investing in low carbon and renewable fuels to secure financing based on anticipated revenues from California Low Carbon Fuel Standard (LCFS) and from the Federal Renewable Fuel Standard (RFS). Banks and lending institutions are very reticent to finance these project using anticipated revenues from these programs. Generally, financing is available based on the projected fuel value of a Low Carbon/Renewable Fuel (LCRF) – but does not include the value of LCFS and RFS credits (combined: LCRF Credits). Currently, gasoline and diesel fuel prices are stable and fuels derived from natural gas are at virtually an all time low.

Uncertainty over the future prices the LCFS and RFS credits (Renewable Identification Numbers or RINs) limits their value in securing capital. This paper uses the term LCRF Credits to cover both LCFS and RIN Credits. Currently, RIN credits can be owned by any intermediary party – including a financing bank. California’s LCFS program would have to be modified to allow the similar holding of LCFS Credits by an intermediary party such as the proposed LCRF Bank.

Uncertainty pertaining to the value of LCRF Credits is a product of both political and market factors. It is not certain, in face of pending legal and political challenges, that the current structure of these programs will be maintained for a period sufficient to secure a return on investment (ROI). Further, the import of LCRFs from outside of the US that could dilute the value of domestically produced LCRFs for use in California. .

For the most part, a LCRF developer must first make the capital investment to build a production facility -- only then, as the fuel is produced and used, are LCFS and RIN credits generated and sold to obligated parties (petroleum fuel providers). The ultimate value of the LCFS and RIN credits cannot be known when the capital investment is made. A mechanism must be found to provide stability and predictability for the value

of LCFS Credits and RINs for the financing of Low Carbon and Renewable Fuels used in California.

## **Concept**

Legislation would be enacted to establish a LCRF financing mechanism using a portion of the revenues from the sale of California GHG Cap and Trade emission allowances. The legislation would also authorize the operation of a LCRF Bank, which could be administered by a state entity such as the California Infrastructure and Economic Development Bank (iBank -- <http://www.ibank.ca.gov/>) or some other newly created entity. This LCRF Bank would contract with prospective LCRF project developers for the long-term value of the LCRF Credits associated with the fuels they plan to produce. The LCRF Bank would then purchase LCRF Credits at the agreed upon price when they become available (when the fuel is actually produced and used). The contract for the purchase of LCRF credits between the Bank and the producer would need to be sufficient to cover the capital payback period for a LCRF facility developed to serve California's LCRF needs – say, 5-10 years.

The LCRF Bank would then sell the LCRF Credits to obligated parties required to ultimately hold and retire LCFS credits and RINs. The LCRF Bank would only be obligated to pay the up-front contracted value of LCFS and RIN credits for fuels that are actually produced and used.

The certainty of an extended contract to purchase LCFS and RFS credits over an future period, backed by the full faith and credit of the State, would enable California LCRF developers to secure financing much more readily.

## **Managing the Fund**

The program would be established with, say, an initial budget of \$100 million/year that would be deposited into the California LCRF Bank. This amount could be raised or lowered depending on the level of commitments the legislature is willing to authorize based on ongoing review of the program. The LCRF Bank could not commit more funds than is projected to be contained in the Bank from both auction revenues and expected LCFS and RIN credit sales. However, the LCRF Bank would be backed by the full faith and credit of the State.

A solicitation would be held every year (or more often if necessary) by the LCFS Bank. The LCRF Bank would offer to LCRF developers, say, 5 to 10 year contracts for the value of LCFS and RIN credits on future LCRF production to be used in California. The solicitation would start with an initially low price for LCRF Bank's future acquisition LCFS and RIN credits. The value would be then be raised until sufficient commitments are

made for a specified quantity of future LCRF Credits and continue until the LCRF Bank has allocated the funds available at that solicitation.

A seller of future LCRF credit to the LCRF Bank would not have to sell the full amount of credits that are anticipated to be produced by the LCRF production facility. A production facility could hold onto any amount of credits they may wish to sell privately. They are only obligated to sell the amounts committed to by contract through the auction. The LCRF Bank is only obligated to purchase future LCRFs Credits that are actually produced -- at the previously agreed upon price. If a LCRF project never produces the LCRF, the LCRF Bank would not be obligated to pay for the LCRF Credits. However, if the LCRF does produce fuel as contracted, the LCRF Bank would be obligated to purchase the credits for the fuels produced at the agreed upon price.

While the Federal RFS2 program allows intermediary and third parties to purchase and acquire RIN Credits, the California LCFS currently does not. A change in CARB rules would be required to allow the LCRF Bank to transact and acquire LCFS Credits.

Once the LCRF Credits are produced by the backed projects and held by the LCRF Bank, the bank could offer them for sale. This sale could occur at any time favorable to the bank, consistent with the objectives of the program, to a willing purchaser (with a compliance obligation) under the LCFS or RFS. The sale of credits held by the LCRF Bank could be made by means of a “reverse Dutch auction” by which the LCRF Bank would set an initially high price and reduce the offered price until sufficient sales are made. Revenues from the sale of LCFS and RIN credits would be deposited into the LCRF Bank. In this

### *Example*

A Potential Future Developer of a LCRF would secure a commitment from the LCRF Bank at a solicitation to purchase future LCRF Credits at an agreed upon price for a specified period of years – sufficient to secure financing for the project. The Future Fuel Developer would then secure separate financing for the construction and start-up of the LCRF fuel production facility based on the contract with the LCRF Bank.

Once the LCRF Credits are generated by the production and use of the LCRF fuel, the LCRF bank would take ownership of the Credits as contracted. These Credits held by the LCRF Bank could then be sold by reverse Dutch auction at any time. Purchasers of the LCRF Credits held by the Bank, ultimately the obligated parties, would be able to use them to meet their compliance obligations under the LCFS and RFS.

If the reverse Dutch auction selling price of the LCRF Credit by the bank to the obligated party is higher than the original solicitation price agreed to with the fuel developer, the LCRF Bank will make money. If the selling price of the LCRF Credit by the LCRF bank is lower than the Credit price previously agreed to with the fuel developer, the LCRF Bank would lose money. The LCRF Bank could set minimum/maximum transaction values as part of the auctions.

fashion, the funds held by the LCRF Bank would be renewed on an ongoing basis. Funding from the GHG Cap and Trade allocation revenues could be adjusted downward as the program matures. Funding should be limited to domestic LCRF projects that produce LCRF for use in California.

It is expected that the LCRF Bank would be self-sustaining after a period and provide a stable basis for financing LCRF projects in California. In fact, if the LCFS and RIN credits are ultimately sold to the obligated parties for a higher price than the original futures price backed by the LCRF Bank, the State would actually have a positive cash flow and funding by the GHG C&T auction could be substantially reduced or eliminated.

The major downside would be if the California LCFS and/or the Federal RFS programs are eliminated or substantially changed in such a way as to devalue the price of LCFS or RFS credits. The concept presented here assumes that the amount the LCRF Bank would pay out would be largely, if not completely, reimbursed by the ultimate purchasers of the LCFS and RFS credits. If the LCFS and RFS credits are devalued in any way, California would still be obligated to pay the value they agreed to for LCRF Credits contracted with the LCRF developers. Similarly, if revenues from the GHG Cap and Trade Auction Allowances are not forthcoming as expected, the state would still be obligated as contracted. On the other hand, these concerns are largely offset by the self-sustaining structure of the program. Further, if problems with Cap and Trade revenues or with LCFS and RFS values develop, CARB could restrict the amount of future obligations. Hence, California's exposure, while not zero, could be substantially controlled and limited.

The upside of the LCRF Bank concept is that it would provide greater certainty in the value of LCFS and RFS credits for the development of LCRF production facilities in California. Due to its self-sustaining structure, the program should have minimal impact on California funds provided the GHG C&T Allowance Auctions proceed as currently structured. It is expected that revenues generated by the sale of LCRF Credits to the obligated parties will eventually displace the need for GHG C&T Auction Revenues as a source of LCRF Bank funding. Further, investment in this LCRF program would provide continuing financial incentive for California to support the ongoing continuation of both the LCFS and RFS.