ENVIRONMENTAL FINANCIAL ADVISORY BOARD

June 15, 2009

Honorable Lisa P Jackson
Administrator
United States Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, D.C. 20460

Dear Administrator Jackson:

The Environmental Financial Advisory Board (EFAB) is pleased to transmit to you two reports dealing with an innovative environmental finance concept which, with certain additions, could produce significant environmental improvements across the nation.

This concept, the Voluntary Environmental Improvement Bond (VEIB) Program, produces long-term, low-cost incentives for installing improvements to reduce green house gas emissions, improve air quality and reduce non-point source water pollution. VEIBs can be used to finance a host of improvements including, but not limited to: (1) solar panels; (2) insulation: (3) insulating doors and windows; (4) new energy efficient tankless water heaters; (5) new EPA-certified wood stoves and hydronic heaters; (6) geothermal loops; (7) green roofs; (8) rain gardens; (9) permeable pavement; (10) septic tank replacements; (11) new clean agricultural diesel engines; (12) livestock feeding stations; (13) animal waste management facilities; (14) stream crossings; (15) stream buffers (trees and fences); and probably more.

The first report deals with the VEIB concept itself, and makes specific recommendations for the Agency to encourage states and local governments to adopt VEIB programs that embrace the types of environmental improvements mentioned above. To date, such programs have been limited only to energy efficiency devices. The Board believes that the country is missing an opportunity to do more environmental good by extending the VEIB concept to a wider array of environmental improvements.

The second report deals with the implementation of VEIB programs. As you will see, the VEIB concept breaks new ground in the field of municipal finance. As such there is a multiplicity of good underwriting, risk mitigation and consumer protection measures that should be observed in implementing any VEIB program. The report outlines them in detail.

We commend the VEIB concept to you and the Agency. We hope that this concept will indeed – in a far broader form – sweep the country and bring with it major improvements to the environment.

We would be pleased to answer any questions or brief you and any of your staff should you desire additional information about these reports. The Board looks forward to continuing to assist EPA in the mission of protecting human health and the environment.

Sincerely,

A. James Barnes
EFAB Chair

A. Stanley Meiburg
Designated Federal Official

Enclosures

cc: Scott Fulton, Acting Deputy Administrator
Michael Shapiro, Acting Assistant Administrator
Office of Water
Gina McCarthy, Assistant Administrator
Office of Air and Radiation
Maryann Froehlich, Acting Chief Financial Officer

Environmental Financial Advisory Board

EFAB

Voluntary Environmental Improvement Bonds: An Innovative, Local, Environmental Finance Concept for Mitigation of Climate Change Risk; Air Pollution Reduction; and the Reduction of Non-Point Source Water Pollution

June 2009

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United States Environmental Protection Agency
Environmental Financial Advisory Board

Report on Voluntary Environmental Improvement Bonds: An Innovative Local Environmental Finance Concept for Mitigation of Climate Change Risk; Air Pollution Reduction; and the Reduction of Non-Point Source Water Pollution

In 2008, the Environmental Financial Advisory Board (the "Board") submitted a report to the Administrator, entitled "Innovative Finance Programs for Air Pollution Reduction" (the "2008 Report"). In that report, the Board recommended that the Environmental Protection Agency (the "Agency") encourage States to create Air Quality Finance Authorities (AQFAs) to finance air pollution reduction equipment and explained how such Authorities could be constituted, and would work.

This Report goes far beyond our 2008 Report. It identifies specific state and local initiatives that could, with modest changes, including specific risk management, underwriting and consumer protection actions, result in programs that would provide a dramatic breakthrough in financing programs to mitigate risks of climate change through the reduction of greenhouse gas emissions, to reduce air pollution, and to reduce non-point source water pollution. We call these financial innovations "Voluntary Environmental Improvement Bonds" (VEIBs)[1].

The genesis of the VEIB concept began in Berkeley, California, in 2008. The City formed a special taxing district – the "Sustainable Energy Financing District" – to finance the purchase and installation of solar panels on the homes of individual citizens if they consented to pay for this improvement through an annual tax assessment on their home to be paid along with their real property taxes. To test the financing method and administration of the program, the City authorized a pilot program on September 23, 2008 and partnered with Renewable Funding, LLC to fund and administer a $1.5 million pilot program.

Enabling legislation has now been passed in California and Colorado where approximately a dozen municipalities are now implementing such programs.

[1] Voluntary Environmental Improvement Bonds (VEIBs) are a specialized form of "Property Secured Obligation", a concept well understood in the municipal bond trade. The report advocates the use of VEIBs, as the centerpiece of local government finance programs to mitigate risks of climate change and improve air and water quality. VEIBs can be used to finance **property-owner owned and maintained environmental and energy efficiency devices and improvements** to reduce greenhouse gas emissions, reduce air pollution, and to reduce non-point source water pollution. Theoretically, VEIBs could be applied to any type of property, whether used by an individual homeowner or commercial entity or other ownership type.

Although the Board applauds these initiatives, we are concerned that States and communities across the country are missing an opportunity to do even more good for the environment. Specifically, although to date these programs have been limited to energy savings devices, VEIBs can, in fact, be used to fund a host of environmental and energy efficiency programs including but not limited to:

- Solar panels
- Insulation
- New insulating windows and doors
- Tankless water heaters
- Geothermal loops
- Replacement of old wood stoves and hydronic heaters with EPA-approved devices
- Permeable pavement
- Rain gardens
- Green roofs
- Replacement of failing septic systems
- Animal Feeding Operations
- Animal Waste Management Systems
- Structures for stream crossings
- Stream buffers (trees & fences)
- Replacement of agricultural diesel equipment

The Board's concern is that States are enacting legislation and communities are mounting only narrowly focused programs that could be expanded to become much broader and do much more environmental good.

Among the more attractive features of properly designed VEIBs are:

- They can provide long-term financing –longer than conventional financing[2]. This drastically reduces monthly payments.

- They offer lower interest rates than conventional financing, in part because the rate is based upon the improved property securing the debt[3].

- Property owners can request to finance improvements and consent to the imposition of an improvements based tax or assessment. No one is compelled to participate and only those property owners who requested the improvements pay.

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[2] It is critical that the finance term not exceed the useful life of the improvement to avoid creating an imbalance between the value of the asset and the amount of the liability.

[3] As used throughout this report, "improved property" means a property whose owner requested to finance environmental and energy efficient improvements and consented to the imposition of a tax or an assessment to pay for the improvements. However, the intent of VEIBs is to finance improvements which provide a wider public benefit. As such, the Board recommends that the sponsoring local government assure there is sufficient public benefit to be derived from using PSOs to finance improvements on individual properties.

- The sponsoring government finances the improvements by issuing Property Secured Obligations, or PSOs, or, in some circumstances, by finding other sources of long-term property secured debt.

- Those property owners pay for their improvements through semi-annual or annual special taxes or assessments that are paid in conjunction with their general property tax bills.

- The PSOs and the associated periodic payments are secured by a lien against the owner's real property.

- The real property liens can constitute a secure financing structure which results in favorable interest rates. Depending upon the state, these liens can be superior in priority to all home mortgages, home equity loans, deeds of trust or other commercial liens[4].

- Depending upon the ownership and maintenance of the improvements, PSOs in the form of publicly offered VEIBs are likely to be taxable debt pursuant to current Federal tax law.

- Since PSOs can be structured as an obligation of the improved properties, authorization of the VEIBs can be limited to the owners of the properties to be improved, i.e. no referendum should be necessary.

- Historically, PSOs programs may, or may not, require the creation of special taxing districts. Whether a district is required or not, it is essential to authorize the sponsoring local governments to distinguish between improved and non-improved properties when imposing the special tax assessment. Ideally, because property owners can consent to participate, authorization to form a special taxing district and / or issue VEIBs should be limited to the owners of the improved properties.

The VEIB program could be implemented with modest changes to existing state and local PSO authority, including specific risk management, underwriting and consumer protection actions.

The local initiatives upon which the VEIB concept is based are beginning to sweep across the country. The Board believes strongly that the EPA should educate and advocate the creation of VEIB programs with proper controls.

There are two specific areas where the EPA could help. The first is to set forth the conditions and requirements of a properly structured VEIB program. In an accompanying report, the Board describes just such a set of underwriting guidance. The importance of such considerations cannot be underestimated. Municipal bonds are generally issued to pay for the actions of government. In this case, they are being issued to pay for the actions of individual citizens. There are a host of underwriting criteria and other vital considerations that need to be observed

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[4] As is common with PSOs, sponsoring governments must ensure that the value to lien ratio is sufficient to finance improvements through VEIBs. Obviously, if insufficient real property value existed, not only would the current lenders and lienholders be adversely affected, but subsequent marketability of the property might be affected, taking what should have been an environmental success story into an economic sinkhole.

for a successful program. And, ultimately, if VEIB programs are unsuccessful, a great opportunity will have been missed.

The second area where the EPA could help is to set forth the principles upon which state enabling legislation can be based. There are seven critical elements in amending or enacting appropriate statutes to adapt PSO authority for VEIB programs:

1) The statute must define public improvements – such as energy efficiency and environmental improvements – to include those owned and maintained by individual property owners.

2) The statute should authorize as many types of energy efficiency and environmental improvement devices as feasible.

3) The statute must enable sponsoring local governments or special taxing districts to distinguish between improved and non-improved properties.

4) The statute must authorize sponsoring local governments or special taxing districts to impose a discretionary special tax or assessment based upon the property improvements rather than a tax based on the assessed value of the property.

5) The statute must authorize sponsoring local governments or special taxing districts to impose the discretionary special tax or assessment on those improved properties whose owners have consented to the imposition of the special tax or assessment.

6) The statute must authorize the issuance of property secured debt by the sponsoring local government or a special taxing district and authorize the execution of property secured debt with other sources.

7) If a special taxing district is required, the sponsoring local government should be authorized to accelerate district formation by petition of property owners requesting the improvements and consenting to the imposition of a special tax or assessment.

In this regard, the Board specifically recommends:

1) The Administrator request that the President of the United States create an inter-agency task force to define the characteristics of a PSO based VEIB program and encourage the adoption of such VEIB programs by state and local governments. The task force could be composed of the Agency, the Department of Agriculture, the Department of Housing and Urban Development, the Department of Energy, the Department of Treasury and other agencies.

2) The Administrator encourage this inter-agency task force to study and recommend changes to the Federal Tax Code and other initiatives to enable the issuance of tax-exempt bonds to finance energy efficiency and environmental improvements owned and operated by property owners with appropriate linkages to the wider public good.

3) The Administrator create an intra-agency task force, with appropriate representatives of the Office of Water and the Office of Air and Radiation, as well as the Regional Offices to educate and advocate the adaptation of PSOs as the essential underlying security for VEIB programs throughout the country.

4) The EPA review its discretionary grant and other authority in any programs where properly designed VEIBs can be used with a view to creating further financial incentives for communities to adopt their own VEIB programs.

In summary, the Board believes that adapting existing PSO authority to create properly designed, implemented and managed VEIBs can offer an unprecedented opportunity to involve the people of the United States, individually and directly, in efforts to improve energy efficiency and to improve the quality of our environment. With authorization by the owners of improved properties, VEIBs can be voluntary and provide incentives for ordinary citizens to make valuable contributions to their own quality of life. If efforts to promote them are successful, and they are widely adopted, they will improve energy efficiency and significantly reduce both air and non-point source water pollution across the country.

It will be easier to change people's behavior on climate change and for the betterment of the environment if such efforts are as easy and affordable as possible. VEIBs make such measures both easy and highly affordable. VEIBs offer the most favorable financing terms possible; they carry the lowest available interest rates for the longest possible term.

Americans generally realize that we must all do our part to reduce the risks of climate change and improve the environment. We need to recycle more. We need to use fewer plastic shopping bags and buy more fuel efficient or less carbon intense cars. But the VEIB concept opens up whole new vistas of individual environmental initiatives. Under a VEIB program, individual families will have many low cost opportunities to do their part to reduce climate change and to improve environmental quality. The lower the cost, the more families will seize these opportunities.

We believe that the VEIB concept will recruit thousands of citizens to the cause of climate change and environmental quality and, in the course of doing so, produce significant benefits for the country in terms of energy efficiency, clean air, and clean water. Therefore, the Board highly commends the concept of Voluntary Environmental Improvement Bonds to the Administrator and to the Agency.

Environmental Financial Advisory Board

EFAB

Financial, Underwriting, Risk Mitigation and Consumer Protection Considerations for the Adoption of Voluntary Environmental Improvement Bond Programs

This report has not been reviewed for approval by the U.S. Environmental Protection Agency; and hence, the views and opinions expressed in the report do not necessarily represent those of the Agency or any other agencies in the Federal Government.

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United States Environmental Protection Agency
Environmental Financial Advisory Board

Report on the Financial, Underwriting, Risk Mitigation and Consumer Protection Considerations for the Adoption of Voluntary Environmental Improvement Bond (VEIB) Programs

In an accompanying report, entitled, *Voluntary Environmental Improvement Bonds: An Innovative Local Environmental Finance Concept for Mitigation of Climate Change Risk; Air Pollution Reduction; and the Reduction of Non-Point Source Water Pollution*, this Board encouraged the Agency to assist States and communities across the country in implementing VEIB programs[1] to achieve a large number of climate change and other important environmental goals. This report deals with specific underwriting and risk management considerations involved in the implementation of properly designed VEIB programs which should be followed to assure that the maximum public and private environmental and economic benefits can be derived on a sustainable basis.

These VEIBs, if properly designed and deployed, can achieve both private asset improvement and environmental public benefit. This public benefit, mitigation of climate change risk, reduction of air pollution, etc., would be achieved through property-owner owned and maintained environmental and energy efficiency improvements. If appropriate quality underwriting controls are put in place as part of the VEIB programs, the likelihood that these private improvements will, in fact, perform in the long term and achieve the desired public benefit (reduction of climate change risk, reduction of air pollution, etc.) is high. Without appropriate underwriting controls, it is possible that these instruments could inadvertently leave the private asset holder with a non-performing asset and the public with an enforcement obligation against an effectively unsecured and /or unrecoverable tax debt.

This report details the design structure and uses of VEIBs and makes specific recommendations about underwriting their deployment, set forth with the goal of achieving actual environmental benefits.

Background

We preface our remarks by noting that government programs in the main, especially those funded by municipal bonds, most commonly involve the actions of the government itself in relatively large endeavors, and that they involve the creation of benefits for the population of the community-at-large. VEIBs certainly benefit the entire community (and country) in terms of

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cleaner air and water; but the beneficiaries of the individual energy efficiency, emissions reductions and / or pollution abatement devices themselves are individual property owners. In our 2008 report, entitled *Innovative Finance Programs for Air Pollution Reduction*, we discussed the difficulties of aggregating a multiplicity of small environmental projects and aggregating the security of individual properties.

VEIBs do both. The local government is the aggregator of the individual projects. And, the credit problem is addressed by having the individual project payments secured by a tax lien on the property – a financing technique that largely obviates the thorny problem of dealing with property owner credit.

Risk Management Essentials

That said, the implementation of VEIB programs presents many new challenges to local governments undertaking them. There are risk mitigation and consumer protection considerations to be observed, where hapless property owners might find themselves having to pay for improvements that are faulty or otherwise do not work if certain underwriting and other technology / service provider pre-qualification requirements are not put in place. There is also the serious risk of placing additional liens on properties already overburdened with mortgages or home equity loans if proper underwriting techniques are not prescribed. Communities must take these considerations into account when implementing VEIB programs. Furthermore, although VEIBs are officially classed as "special revenue bonds" and are technically not the official debt of the issuing community; they nonetheless carry a heavy burden of municipal fiduciary responsibility for tax lien enforcement in the event of non-payment to bondholders. Communities must be fully prepared to undertake the unpleasant task of enforcing these tax liens and, if necessary, foreclosing on the property in order to assure an orderly stream of payments to bondholders.

This report deals with these considerations in depth.

This report is organized into three relevant sections. The first deals with the genesis of VEIB programs in Berkeley, California in 2008. The second deals with how other jurisdictions, including the rest of California, Colorado, Massachusetts and Annapolis, Maryland, are organizing their efforts. The third deals with the several specific underwriting considerations necessary to assure that such programs achieve their desired goals.

<u>The Berkeley FIRST Program: Basic Characteristics and Legislative / Charter Requirements</u>

The genesis of the VEIB concept began in Berkeley, California, in 2008. The City formed a special taxing district – the "Sustainable Energy Financing District" – to finance the purchase and installation of solar panels on the homes of individual citizens if they consented to pay for this improvement through an annual tax assessment on their home to be paid along with their real property taxes. Under the Berkeley program which was officially launched on November 5, 2008, a homeowner can finance up to $37,500 per home for new solar panels through property secured debt. The homeowners can select solar panels from a list of approved[2] products and select an installer from a certified list of installers[3]. Given that solar panels have a long useful life, the City's special taxing district can issue bonds with a term of 20 years or use PSO authority to secure other sources of long-term debt. The City supports this program as a means to address climate change risk.

When other cities like San Francisco, Santa Cruz, Palm Desert, San Diego and San Jose learned about the Berkeley initiative, they decided to implement similar financing mechanisms. Initially, these cities learned they could not legally do so because Berkeley is a "charter city" with special tax and assessment authority that enabled it to include solar panels in the definition of public improvements eligible for financing through a Berkeley sponsored special taxing district.

Subsequently, two bills were introduced to amend California's special taxing district statutes to: (1) include solar panels and other energy efficiency improvements as a public improvement eligible to be financed by a special taxing district, (2) enable local governments more discretion in defining improved properties, and (3) accelerate the formation of a special taxing district based on consent from property owners requesting the improvements.

Both bills passed both houses of the California legislature and one was signed into law by the Governor. In the rush of business in the closing days of the legislative session, however, the second bill was inadvertently vetoed. It has been reintroduced with strong indications that it will become law in 2009.

Federal and California tax law provide that the interest component of special tax/assessment payments are deductible from both federal and state income taxes – as are the interest payments on home mortgages and home equity loans. There is no other loss of income to government.

Possible Coordination of Benefits Under ARRA

When investigating facts for this report, we also became aware of a community seeking a determination of whether PSOs financing privately owned and maintained improvements can be used in conjunction with the energy efficiency tax credits offered in the American Recovery and Reinvestment Act of 2009. The combination of favorable financing, lower energy costs, and federal tax credits, will be a powerful inducement for property owners, particularly homeowners, to finance these investments in our nation's environmental future.

<u>The Colorado Program</u>

As Berkeley was organizing its program, the State of Colorado amended its PSO statutes to enact a similar financing program. The Colorado statutes are slightly broader than the California statutes. They not only finance solar panels but also insulation, new doors, windows and certain

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[2] For a product to be listed as approved a mere listing in a voluntary service was required. No assurance or warranty was provided by such product manufacturers as a condition of approval.

[3] For an installer to become certified, the installer must be a licensed solar installer and registered with the California Solar Initiative (CSI). These criteria did not provide assurance that if the installation was not up to standard, that appropriate repairs could be made or compensatory damages could be paid.

other energy saving improvements. However, in contrast to California, Colorado's statutes do not enable sponsoring local governments to accelerate formation of a special taxing district based on consent of property owners requesting the improvements; rather Colorado requires a referendum to organize the district. As such, the program is more difficult for Colorado local governments to implement than the Berkeley program. Boulder County was the first county to take advantage of this new amended statutory authority with a proposition on its ballot on November 4, 2008. The proposition passed with 64% of the vote. The cities within Boulder County that want to participate must pass their own ordinances to opt into the county program. Some already have.

Annapolis' Program: Public/Private Partnership Approach

The City of Annapolis, Maryland, has adapted its existing PSO authority to create its own variation of a VEIB. As described by Mayor Ellen Moyer, Annapolis allows property owners to finance any project that will "reduce the carbon footprint of a home". The Annapolis program has assembled a public/private partnership where a pool of funds will be provided by local banks to the Chamber of Commerce Foundation from which homeowners will borrow. The trade off, however, for this simplicity of funding is a shorter term. The banks' maximum loan term is 10 years, irrespective of the useful life of the improvement. Thus a $20,000 solar panel array will cost Annapolis residents about $2,600 a year, as opposed to about $1,600 a year in Berkeley. As in the other programs, the loan will be secured by an assessment against individual homes and the payments will be collected as part of their real property taxes. Annapolis is implementing their program without a district, based on their existing PSO authority to impose discretionary taxes or assessments upon participants requesting the improvements.

The Massachusetts Program

Similar to other states, the Commonwealth of Massachusetts relies on PSO authority to finance new septic tanks without the necessity of districts. In Massachusetts the homeowner makes an agreement for the city or town board of health to replace or repair a septic tank at the owner's expense. The city pays for this, what in Massachusetts is called a "betterment", by borrowing the money from the Commonwealth's Clean Water State Revolving Fund (CWSRF). Cities in Massachusetts have the power to issue PSOs to fund this program, but have apparently found it more convenient to borrow from their CWSRF which offers very low rates and 20-year terms. Failing septics are a non-point source of water pollution; so they qualify for CWSRF assistance. As in California and Colorado, annual principal and semi-annual interest payments are secured by a tax assessment against the homeowner's property. Massachusetts has financed over 3,000 new septic systems since 1995, substantially reducing non-point source pollution from these sources. No districts and no referenda were required.

Discussion of Broader Applications for More Environmental Benefit

All of these adaptations of existing PSO authority are highly innovative and are highly commendable programs, in and of themselves; but they have far broader applications.

The Board believes that all of these various applications – in California, Colorado, Maryland and Massachusetts – can be combined into a single concept that can be used to finance a multiplicity of improvements for the environment. We call this environmental finance concept: Voluntary Environmental Improvement Bonds (VEIBs).

Among the many things that can be financed with VEIBs are: solar panels, insulation, insulating doors and windows, new energy efficient tankless water heaters, new EPA-certified wood stoves and hydronic heaters (outdoor, wood fired water heaters), geothermal loops, green roofs, rain gardens, permeable pavement, septic tank replacements, new clean agricultural diesel engines, livestock feeding stations, animal waste management facilities, stream crossings, stream buffers (trees and fences), and probably more. Any type of improvement that can be linked to real property by a tax lien and that can be reasonably expected to remain with the property when ownership changes, can be financed using a PSO. Furthermore, and even more importantly, is the fact that with VEIBs individual property improvements can be pooled and financed together, at the same time. One district (if necessary) could be created where all of the above environmental improvements could be financed together.

Adapting existing PSO authority for VEIBs could be relatively simple. First, sponsoring governments could create a special taxing district or could directly finance these environmental improvements or energy efficiency improvements on behalf of property owners who consent to the imposition of property secured tax or assessment. Second, the property owners would finance the improvements over an extended period of years at comparatively favorable rates.

Underwriting & Risk Management Conditions & Warranties Essential to Sustainability

Risk management conditions are recommended as an integral component of any PSO program designed as a VEIB because once owners agree to the assessment and the device is duly purchased and installed, the obligation of the owner to make payments, which secure the bond, are unconditional and irrevocable, irrespective of whether the device performs as advertised or expected. The sponsoring local government must ensure that an improvement is likely to last for the term of the assessment. As such, certain adaptations of existing PSO authority are recommended to increase the likelihood that the public benefit will be realized in the long term. The structure must not only ensure a public benefit, but must also ensure a level of consumer protection by mitigating the risk of non-performance of the improvements through required risk management terms and conditions.

Although government agencies – as in California and Maryland – may publish list of "approved" products and/or installers, these government lists in and of themselves do not constitute warranties of the devices themselves or the workmanship of the installation. Therefore, any subsequent failure of, or defect in, the device or installation must be dealt with by the homeowner and the vendor/installer directly either through warranties, insurance or other legal remedies. If the property owner refuses to pay - for any reason - the sponsoring local government must have the authority to initiate foreclosure proceedings to cure the delinquency and retire the PSO.

To reduce the likelihood of such failures, appropriate underwriting should be integrated into the program design. Prior to issuing the PSO, the sponsoring local government must review the value to lien ratio for all properties to be improved on an individual basis to ensure adequate security. A full assessment of current liens against the citizen applicant's current real property should be made to assure that the proposed tax lien would not place the property or owner in compromised position, where the debt exceeded the real property value. The value of this property assessment is that it should be one defense against the inadvertent individual property delinquencies and consequential enforcement obligation for the local government as a result of the program.

Underwriting activities should include development of a screening process designed to confirm that before inclusion on an approved list, businesses offering products / installation carried appropriate levels of insurance and bonding for the precise work to be performed or product to be provided, have good standing with the Better Business Bureau or equivalent, have not been debarred from government contracts, and have a history of good product performance – at least for the period equivalent to the PSO terms (e.g. tax lien payoff period). Additionally, the sponsoring local government should require warranties, insurance, and performance bonds from the manufacturers and installers of the improvements sufficient to repair potential damages incurred during installation and as necessary to restore the improvement or product to good working order.

In summary, underwriting criteria should include: (1) verification of sufficient real property value (which the Board understands is generally required by law before a PSO can be issued); (2) for the product manufacturer - minimum general liability coverage, including a product liability extension with limits of liability of no less than $1 million per occurrence and $3 million in the aggregate; (3) for the installer, a valid license to operate in the jurisdiction plus general liability insurance, with a completed operations extension of $1million for each event and $3 million in the aggregate with a minimum claims' period of five years.

<u>VEIBs : Positive Cash Flow Impact with an Environmental Benefit</u>

A roof full of solar panels can cost a family $20,000 – $40,000. A houseful of new energy efficient windows and doors can run $7,500. Replacing a failing septic tank can cost $15,000. A new wood stove is $3,500. Even new tankless water heaters can cost $1,000. Most American families cannot just walk into an appliance store and put down a credit card - at 18.9% interest - and take one of these devices home. Nor are American families particularly attracted by the enticement of a second mortgage to take on such projects because the mortgage payments may be higher than the concurrent expense reductions resultant from the installation of the improvement and because a mortgage may impair credit, whereas a tax lien may not. Thus, because these devices are not economic for the homeowner, most people just don't buy them.

With VEIBs, provided that the useful life of the appliance or other real property improvement is sufficient to make annual payments feasible, the $20,000 upfront cost of a solar panel can be reduced to less than the equivalent of $120 a month payment. The $15,000 septic system becomes $82 a month. The $7,500 of new insulating windows and doors becomes less than $41 a month. The $3,500 wood stove becomes less than $19 a month. And even the new tankless water heaters go from $1,000 to less than $11 a month. These are significant financial incentives that avoid the burden of additional consumer or mortgage debt obligations for homeowners and replace same with a tax debt that travels with the land, as will the real property improvement. In addition, energy saving devices also result in lower power costs that further offset the monthly payment expense and may be further subsidized by federal tax credits.

The third and final step requires the sponsoring government to issue district PSOs or limited PSOs (the VEIB) to raise the cash to pay for the individual environmental improvements. *Only those homeowners who request the improvements are responsible for the debt service.* With authority to distinguish between improved and non-improved properties, a sponsoring local government can impose a discretionary tax or assessment on the improved properties. Not all taxpayers pay for these bonds, only those who request the improvements do. It is truly a *Voluntary* Environmental Improvement Bond. That is the key to broad acceptance of this revolutionary concept. The local government issues a bond, but only those who benefit pay it off. No other taxpayers pay a penny.

There are three critical elements in the VEIB concept. The first, of course, is its voluntary nature and the fact that those who do not participate do not pay. The second is that the VEIB is a PSO and is thus secured by a lien against the owners' property. If the owner sells the property, then the subsequent owner – who then enjoys the improvement - continues to pay for it: the lien goes with the property. When citizens agree to participate in the program, they agree to accept this special assessment against their property. Thus, an assessment and lien against the property is created by contract. In the commercial world, craftsmen have long secured for their services to property owners by filing what are known as Mechanics' Liens. These liens arise out of the contract between the homeowner and the craftsman; they secure the homeowners' promises to pay for the craftsman's services. This is a similar type of lien; although since it is a PSO lien, it can be superior in priority to all commercial liens and mortgages[4].

Local governments should also consider the impact of VEIB assessments on prior secured lenders. Depending on state law, such lenders may be able to accelerate assessment payments on sale, which would vitiate a major benefit of the program.

The importance of this lien and assessment cannot be underestimated. The lien enables the sponsoring local government to issue or oversee the issuance of PSOs and obtain comparatively better rates than conventional financing. Generally, bonds secured by an unlimited general obligation of the local government receive lower rates. However, with sufficient value to lien, PSOs can still attract comparatively favorable rates. Bondholders know that if the individual property owners do not make their payments, that the local government can initiate foreclosure proceedings, cure the delinquencies, and retire the related debt. By adapting existing PSO authority, VEIBs can achieve similar rate results.

The third critical element is that the term of payment can be extended far beyond conventional financing from banks or finance companies. *The longer the term, the lower the annual payment.*

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[4] As noted above, the underwriting of the bond (VEIB) must assure that applicants with properties that do not have sufficient real property value and/or cash flow are not permitted to participate in the program in order to mitigate the risk of bad debt and adverse impact to existing lenders and lienholders.

This is what makes this program so attractive. The long term matches the useful of the asset and enables the property owner to make affordable, lower payments over the term of the PSO. However, as noted above, the term should not exceed the life of the useful life of the real property improvement – as that would be economically unjustified. As such, the importance of design controls cannot be over-emphasized.

Commercial banks prefer not to make unsecured loans for more than five to seven years. But with VEIBs either the sponsoring local government or a special taxing district can issue the debt, rather than a personal loan. That can change credit considerations dramatically. In the field of municipal finance, the rule is that the term of debt should be commensurate with the service life of the assets being financed by the debt. “Service life” essentially refers to how long something will last before it has to be replaced. This means that if a water pump lasts 10 years, it can be financed for ten years. If a school bus last 15 years, it can be financed for fifteen years. Rural water and sewer systems projects are traditionally financed by the U.S. Department of Agriculture’s Water & Environment Program for forty years.

Solar panels can last up to 25 years. Insulating windows and doors can last for 30 years. So can the new EPA-certified wood stoves. New tankless water heaters can probably last 10 years. Therefore, with a VEIB, all of these different property improvements can be financed for their full service lives – not just according to a conventional lender's internal credit policy.

In addition, most homes change hands every 7-9 years. Homeowners may be loathe to make large investments for improvements such as these with home equity loans, because they will have to pay these second mortgages off when they sell the house and leave the improvements behind. Depending on the state, the property buyer’s lender may or may not be able to require prepayment of PSO assessments. Generally, the property buyer’s lender cannot require prepayment of special taxes that resemble traditional property taxes. Accordingly, it is possible that the assessment will stay with the property and the new owners continue the payments just as they continue to enjoy the improvements.

Finally, one of the attractive features of VEIB programs is that the owner does not have to pay off the debt upon sale of the property. The theory, of course, is that the improvement stays with the property and so should the financial obligation. The other side of this argument is that the new property owner is saddled with an unwanted financial burden, notwithstanding the benefit received. These issues need to be carefully aired by local governments contemplating VEIB programs.

How can existing PSO authority be adapted to create VEIB programs in other jurisdictions? The answer will be, in most cases, by the amending or enactment of legislation at the state level.

Certain cities – like Annapolis and Berkeley – may have inherent PSO authorities in their charters to conduct such programs. But most often local governments act under broad authorities that the states grant to classes of jurisdictions, not individual ones. It is most likely that statutes similar to those in California, Colorado and Massachusetts will be necessary.

As such, there are seven critical elements in amending or enacting appropriate statutes to adapt PSO authority for VEIB programs:

1) The statute must define public improvements – such as energy efficiency and environmental improvements – to include those owned and maintained by individual property owners.

2) The statute should authorize as many types of energy efficiency and environmental improvement devices as feasible.

3) The statute must enable sponsoring local governments or special taxing districts to distinguish between improved and non-improved properties.

4) The statute must authorize sponsoring local governments or special taxing districts to impose a discretionary special tax or assessment based upon improvements to the property rather than a tax based on assessed value of the property.

5) The statute must authorize sponsoring local governments or special taxing districts to impose the discretionary special tax or assessment on those improved properties whose owners have consented to the imposition of the special tax or assessment.

6) The statute must authorize the issuance of property secured debt by the sponsoring local government or a special taxing district and authorize the execution of property secured debt with other sources.

7) If a special taxing district is required, the sponsoring local government should be authorized to accelerate district formation by petition of property owners requesting the improvements and consenting to the imposition of a special tax or assessment. .

If properly understood, we believe there would be widespread support for amending or enacting this type of legislation. If the last twelve months of activity are a precursor of what is to come, the VEIB concept might well sweep the country.