UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF THE
CHIEF FINANCIAL OFFICER

APR 19 2005

MEMORANDUM

SUBJECT: EFAB Report on Innovative Finance Techniques

FROM: Charles E. Johnson
Chief Financial Officer

TO: Stephen L. Johnson
Acting Administrator

I am pleased to transmit the attached Environmental Financial Advisory Board (EFAB) report, *The Application of Innovative Finance Techniques in the Transportation Infrastructure & Financial Innovation Act of 1998 (TIFIA) to Environmental Finance Issues.*

This report presents the Board's thoughts and recommendations on a TIFIA provision known as "backloading" in which debt repayment is scheduled towards the back-end of a project. The Board believes that backloading could successfully be used to support brownfields redevelopment and to address affordability needs in rural infrastructure development. EFAB urges EPA to seek TIFIA-like backloading authority as a complement to its infrastructure assistance programs. The Board offers to provide EPA with additional assistance as needed with this innovative financing tool.

If you have questions or comments regarding this EFAB paper, please call me or have your staff contact Joseph Dillon of my staff at 564-9673.

Attachment

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
ENVIRONMENTAL FINANCIAL ADVISORY BOARD

MAR 16 2005

Honorable Stephen L. Johnson
Acting Administrator
United States Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Dear Mr. Johnson:

The Environmental Financial Advisory Board (EFAB) is pleased to submit the enclosed report, "Application of Innovative Finance Techniques in the Transportation Infrastructure & Financial Innovation Act of 1998 to Environmental Finance Issues," for the Agency's consideration and use.

EFAB has an established history of providing advice to EPA on innovative ways to pay for environmental protection. The Board has recently examined the Transportation Infrastructure & Financial Innovation Act of 1998 (TIFIA) and determined that innovative financing techniques authorized therein could be of great value to a number of areas of vital interest to EPA, including: brownfields redevelopment and affordable water and wastewater infrastructure development in rural areas.

TIFIA contains a provision commonly referred to as "backloading" in which debt repayment is scheduled towards the back-end of a project. This approach is very useful for projects which require substantial up-front capital, yet the revenues to service the debt do not materialize for some time. TIFIA has been used successfully in toll road development where the roadway is built, but traffic and toll revenues grow slowly over time. With the Federal government providing security as a "patient investor", debt repayment is scheduled on the back-end of the project as revenues are realized.

EFAB believes that backloading techniques could be successfully used to support brownfields redevelopment and to address affordability needs in rural infrastructure development. In both cases, financing is often stymied by the fact that revenues are not immediately forthcoming. Given a reasonable assurance that revenues will grow over time to properly service the project debt, a backloaded repayment schedule could help projects in these areas to proceed. Of course, there may be substantial risk in this approach; but with the security provided by a "patient investor," and/or a credit worthy guaranty, the risk could be mitigated to enable the project to proceed.

In the case of brownfields redevelopment, the remediation/rehabilitation of a site must often occur prior to attracting a substantial user, and/or where the annual income from the substantial user is insufficient to sustain the cost of the project. Backloading could be used in conjunction with other financial techniques (such as Tax Increment Financing) to fund projects where the capital improvements must take place prior to the attraction of a major user or users, the revenues from which would, over time, sustain the financing.

In rural areas, water and wastewater projects are often deemed unaffordable because the required capital investment in new facilities can not be immediately serviced by user charges. Moreover, the hook-ups/connections to water and wastewater facilities often proceed slowly. As connections are made and the service area rate base increases, user charge revenues grow to support the debt repayment needs. Backloading could be instrumental in enabling a project to proceed; thus solving an immediate environmental need, while deferring financial issues of "affordability" of debt repayment to a later time.

We recommend that the Agency seek to obtain TIFIA-like authority as a complement to its infrastructure assistance programs. EPA should consider developing the means to deploy backload repayment schedules and to implement various guaranty mechanisms. These mechanisms could enable EPA to address immediate environmental needs while structuring the solutions to financial issues to a later stage of the project. EFAB would be happy to provide additional assistance with this innovative financing tool.

Sincerely,

Lyons Gray
Chair

A. Stanley Meiburg
Executive Director

Enclosure

cc: Charles E. Johnson, Chief Financial Officer
Benjamin H. Grumbles, Assistant Administrator for Water
Thomas P. Dunne, Acting Assistant Administrator for
Solid Waste and Emergency Response

Environmental Financial Advisory Board

The Application of Innovative Finance Techniques in the Transportation Infrastructure & Financial Innovation Act of 1998 to Environmental Finance Issues

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.

March 2005

The Application of Innovative Finance Techniques in the Transportation Infrastructure & Financial Innovation Act of 1998 to Environmental Finance Issues

Transportation Innovations

The Environmental Financial Advisory Board (EFAB) has examined the provisions of the Transportation Infrastructure & Financial Innovation Act of 1998 (TIFIA) to determine if any of the innovative financial techniques authorized therein could be adapted to other statutes to help finance environmental infrastructure. The TIFIA program provides for a strong federal role to encourage private investment in transportation facilities. Among the tools used by the program are direct federal loans and loan guarantees. In effect, the Federal government under TIFIA becomes a "patient investor" that provides projects with a credit-worthy capital markets platform.

Backloading

The Board has identified an exciting TIFIA innovative financing technique commonly referred to as "backloading" which could prove very useful in several important environmental financing areas. "Back loaded" financing, in the TIFIA context, recognizes the ramping-up of revenues associated with the introduction of a new service to be supported by user fees. This ramp-up often occurs with parking garages, toll roads, and transit services.

For example, an airport authority might decide to build a parking garage in circumstances where inexpensive, ample, ancillary parking already exists. The airport is projecting that, over time, the conveniences of the new garage will lure travelers away from the less costly alternatives. Thus, the garage revenues will be zero until the garage is built, and then build slowly to levels where they can carry the full debt service. When a new toll road is built, the community must become accustomed to the tolls and the new traffic patterns; thus, it may take years for the volume of traffic to build to the point where revenues are sufficient to repay monies borrowed for construction.

In each of the cases described above, project revenues ramp up over time from zero to, hopefully, levels able to support operations and service debt. However, these demand (or revenue) risks are often difficult to forecast, and private investors are often unwilling to assume the risks associated with the ramp-up or with the potential that actual revenues may be lower than projected.

Patient Investor

TIFIA addresses these factors by recognizing an appropriate role for the federal government as a "patient investor." In particular, the TIFIA program allows the federal

government to be repaid after the private investors. Thus, the debt service schedule can be skewed over time, and the TIFIA program funds can be used for those segments of the financing where the projected revenue flows are more problematic.

Environmental Opportunities

In evaluating the potential applicability and utility of these transportation financing innovations to the environmental arena, the Board believes that they could serve well in several important areas: smart growth, brownfields redevelopment, and the development of water and wastewater infrastructure in rural communities.

Smart Growth

In the smart growth area, backloading could be used where the rehabilitation of an older site must be accomplished prior to attracting a substantial user, or where the annual income from the substantial user alone, without ancillary users, is insufficient to sustain the cost of the project.

Brownfields Redevelopment and Land Revitalization

So, too, in the case of the redevelopment of brownfields, back-end loading could be used in conjunction with other creative financial techniques such as Tax Increment Financing (TIF) to fund projects where the capital improvements must take place prior to the attraction of a major user or users, the revenues from which would over time sustain the financing.

In both the land revitalization and brownfields areas, backloading is warranted since the increase in property values (and revenues from new site uses) that may be expected to arise from site mitigation and redevelopment is not likely to occur immediately, so the capacity of a private owner or a public agency to service a debt in the early years of such a conversion would be far lower than its capacity in later years.

Large Projects

Large scale land revitalization (of factories, mines, railroad yards, shopping malls and the like) either requires a public agency to remediate the site prior to attracting a substantial user or master developer or requires that such an investor be prepared to take on remediation activity prior to redevelopment work.

If such projects were financed or subsidized by a local government through the ever-more-frequently used TIF tool, the use of backloading would make it possible for the public sector participant to raise more capital, since debt servicing capacity would be higher after the tax increment from the revitalization was realized from the higher property values. (TIFs, by design, involve no higher tax rates, but just a capture of the higher value of property.) Those rising property values that could help service a back

loaded bond are likely to occur off-site, around the major redevelopment project, and not just from the development itself.

Small Projects

In the small scale (under one-half acre) brownfields redevelopment area, backloading and the use of TIFs could help make possible the revitalization of whole neighborhoods beset with environmental and economic problems. Since such small sites may account for more total contaminated land area than the large sites in private hands, any advance in attracting investment in this setting would be extremely valuable.

In an area with depressed property values and multiple abandoned, underutilized and/or contaminated sites, no one reclamation project is likely to significantly raise area property values. Thus, the possible use of a TIF is limited by the absence of substantial off-site impacts. Such impacts may be attainable only from a series of revitalizations of problem sites. The cash flow to finance the first site, therefore, may never be available unless all sites are done simultaneously, which is extremely unlikely. Back loaded debt financing through a TIF, however, could attract a developer to begin the series of private sector investments needed to turn around a neighborhood and provide the area-wide tax increments needed to service the debts when higher payments come due.

Affordable Rural Water and Wastewater Infrastructure

In rural and developing areas, back-end loading could be used in financing water and wastewater projects where hook-up fees and user charges only begin to flow after a project is completed. Infrastructure projects in such areas are often judged unaffordable because the debt associated with the capital investment needed for new facilities cannot be immediately serviced by user charges. In fact, new hook-ups/connections to water and wastewater facilities often occur slowly. As connections are made and the service area rate base increases, user charge revenues grow to support debt repayment. Backloading could enable projects to proceed because it solves immediate environmental needs by deferring financial issues of "affordability" of debt repayment to a later time.

This approach might be especially valuable along the US-Mexican border, where the North American Development Bank (NADBank) could guaranty a bond issue with a highly skewed amortization schedule that allows for the build-out of the system and the build-up of operating revenues to sustain long-term debt service. In this case, the new water/wastewater system would enjoy the very low interest rates provided by the NADBank guaranty until such time as the system revenues could provide substantial debt service coverage.

In each of the examples above, it should be noted that, without a NADBank, or other credit-worthy guaranty, the financings could only be accomplished at speculative rates which would further compound the problem being addressed. Thus, back-end loading, coupled with such a guaranty, could prove very valuable indeed.

Recommendation

We, therefore, recommend that, as the Agency reviews its core legislation and its action programs in the water, wastewater, brownfields and smart growth areas, it gives consideration to the use of financial mechanisms such as guaranties and direct loans that will accommodate back-loaded financing. We further recommend that the Agency seek to obtain TIFIA-like authority as a complement to its infrastructure assistance programs. EPA should consider developing the means to deploy backload repayment schedules and to implement various guaranty mechanisms. These mechanisms could enable EPA to address immediate environmental needs while structuring the solutions to financial issues to a later stage of the project. EFAB would be happy to provide additional assistance with this innovative financing tool.