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November 5, 2009

**VIA ECFS**

Marlene H. Dortch
Secretary
Federal Communications Commission
The Portals
445 - 12th Street, SW
Washington, DC 20554

Re: Notice of *Ex Parte* Presentation, GN Docket 09-51

Dear Ms. Dortch:

On November 4, 2009, Gary Evans, Dan Pecarina, and Bob Bartz of Hiawatha Broadband Communications, Inc. ("HBC"), David Russell of Calix, and Ralph McGinley of Oppenheimer & Co, Inc. met with Blair Levin of the National Broadband Plan staff. The purpose of the meeting was to discuss the attached presentation by HBC – *Barriers to Broadband Rural Development* -- which details barriers to the deployment of fiber-to-the-home ("FTTH") networks in rural areas. More specifically, HBC discussed three major barriers to FTTH deployments in these areas: insufficient access to capital and return on investment, excessive transport (middle-mile) costs, and inadequate training for the workforce deploying and operating FTTH networks. HBC believes that as part of the National Broadband Plan the federal government can deal with each of these barriers by adopting mechanisms set forth in its presentation.

In addition to the HBC presentation, Ralph McGinley discussed the attached document, *Debt Service Reserve Fund Replenishment Bond Enhancement Program*, which provides a mechanism to create additional debt financing for FTTH deployments in rural areas.

Should you wish to discuss the presentation further, please contact me.

Sincerely,

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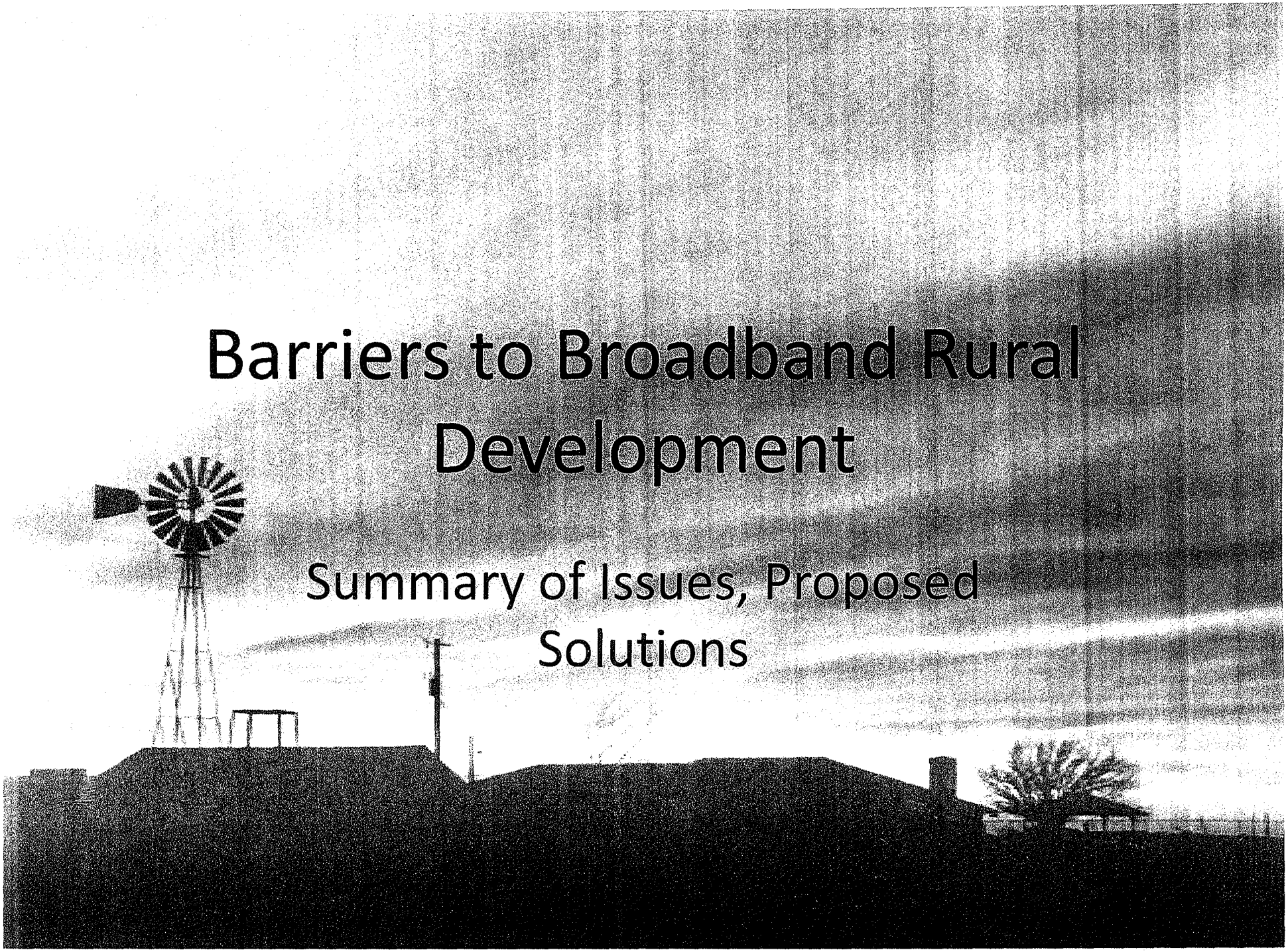
*Counsel for Hiawatha Broadband Communications, Inc.*

Attachments: *Barriers to Broadband Rural Development*
*Debt Service Reserve Fund Replenishment Bond Enhancement Program*

cc: Blair Levin

# Barriers to Broadband Rural Development

## Summary of Issues, Proposed Solutions



# Barrier: Access to Capital, Low ROI – But There Are Options

- Credit Enhancements to Drive Municipal Projects ★★★★★
- Omnibus backing (grants, loans) ★
- Fast Track Partial Loan Guarantees ☆☆☆☆
- National Capital Pool ★★
- Debt Service Reserve Fund ★★★★★
- Universal Service Fund ☆☆☆☆

# Barrier: Transport Costs!
# Options: Incentives Could Help

- Locate Huts in Strategic Places, Amid Clusters of Cities ★★★★
- Share New Transport links to Huts ★★★
- Low Interest RUS Loans ★★
- Utilize Per-Service Pricing Formula ★★★★★

# Barrier: Access to Training!
# Option: Public Private Partnership

- Fiber-Optics Standards Must be Developed
- Government Support for Training Initiatives Key
- Develop Best Practices Inventory
- Change Pricing Model

# Municipal Projects

- Investors Will Not Assume All Risk
- Credit Support Will be Necessary
- Revenue Bonds Only Legitimate Remaining Option
- Credit Enhancements Would Spur Investment
- Broadband Must be Embraced as Public Utility

# Private Projects

- Unless Community Advancement is Goal, Private Investment Won't Happen
- Lack of Tax-Exempt Financing Pushes Up Cost
- Other Options Pay Better Returns than Broadband
- Market Expects Utility-Like Returns
- Penetration Uncertainties Make That Unlikely

# Federal Government Could Help

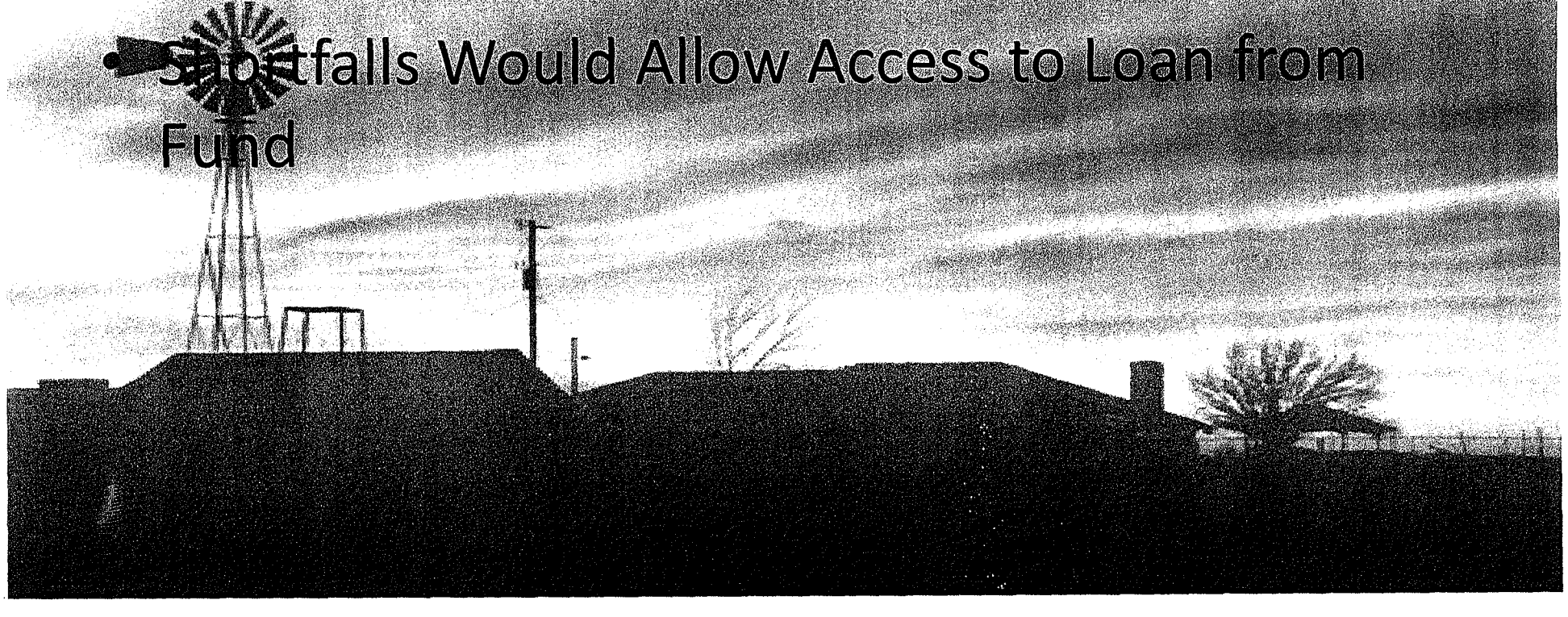
- ROI Subsidies Would Be Necessary
- Credit Enhancements Take Many Forms
  - Grants/Loans: Too Costly
  - Loan Guarantees: Solid Option; Changes Needed
  - Capitol Pool: Guarantor for First Dollar Losses
  - Debt Service Fund: An Attractive, Affordable Option
  - Universal Service Fund: Must Include Broadband

# Partial Loan Guarantees

- RUS Program in Place, But Changes Needed
- Remove 80/20 Split on First-Dollar Losses
- Cover 100 % of Losses Up to 40 – 60 % of Loan
- Approval Process Must Be Shortened: Private Vetting
- Consider Tax-Code Changes to Allow Municipal Bonds to Qualify

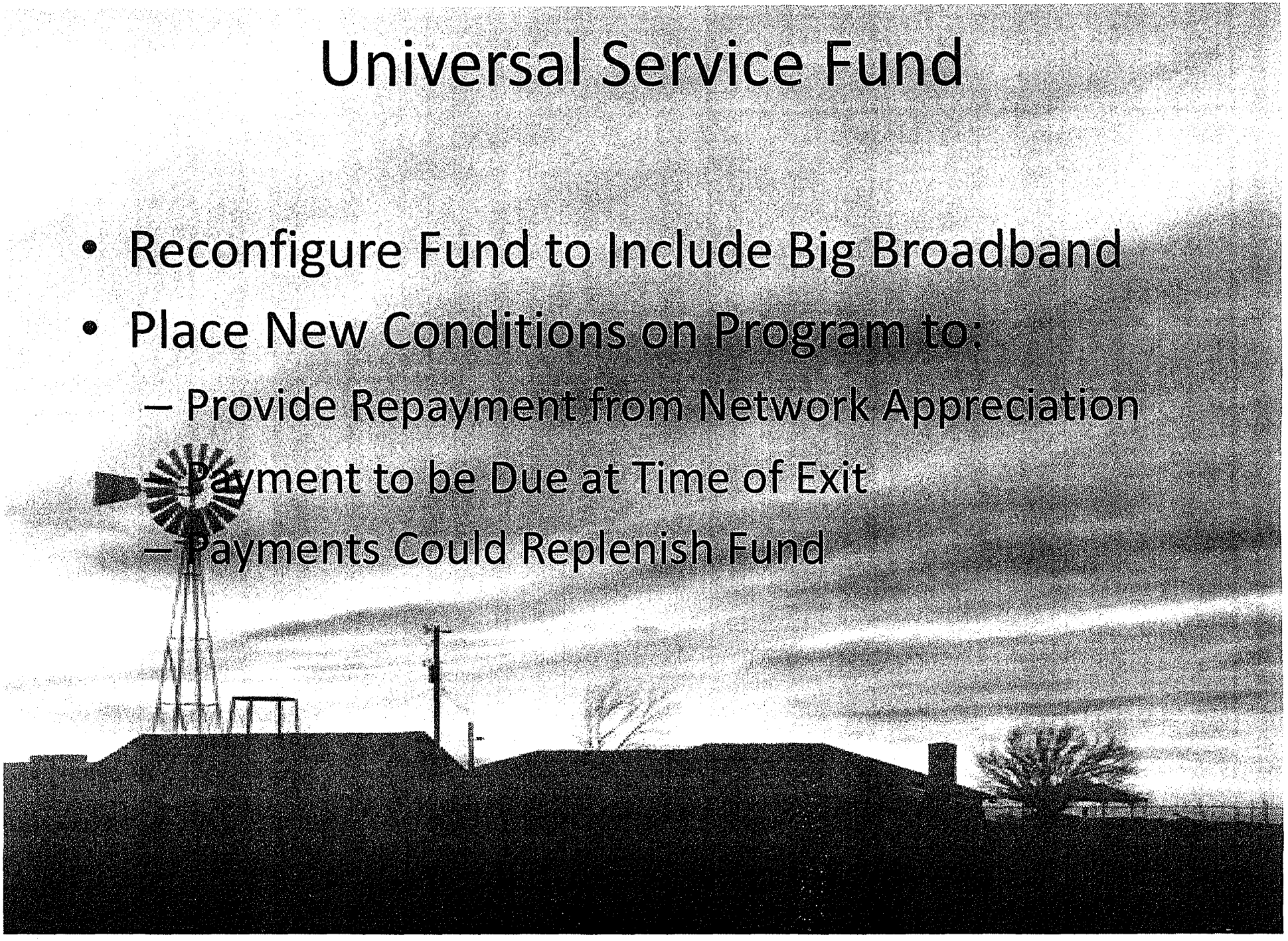
# Debt Service Reserve Fund

- Similar to Private Financings
- Fund to Guarantee Portion of Project
- Program Should Have Ceilings
- Shortfalls Would Allow Access to Loan from Fund



# Universal Service Fund

- Reconfigure Fund to Include Big Broadband
- Place New Conditions on Program to:
  - Provide Repayment from Network Appreciation
  - Payment to be Due at Time of Exit
  - Payments Could Replenish Fund



# Benefits of Rural Deployments

- Population Growth Where it Can Best be Accommodated
- New Enterprises
- Influx of Telecommuters
- Fertile Territory for New Applications Development and Testing

# Barriers to Broadband Rural Deployment

## Challenges and Solutions

### Introduction

*Broadband deployment in rural America has been slowed by several factors, chief among them the lack of capital for connectivity projects in areas where population density sags below metropolitan America proportions that range from 6,750 people per linear mile in New York City to 917 in Houston, Texas. Rural America markets more closely approximate 100 to 300 persons per linear mile, and that number drops still farther as you reach into the more agricultural states of the Midwest and West. Unfortunately, business people, including farmers and ranchers, in rural states are just as dependent upon connectivity for the information that drives their livelihood as residents of metropolitan communities. But broadband deployers today have predictably chosen to build where the projected return on investment will provide access to capital to complete projects – and that is not in rural America.*

*There are other barriers, too:*

- *Linked closely to the lack of capital is return on investment (rural broadband projects fail to generate returns that are as attractive as other investment opportunities);*
- *Transport costs, which are significantly higher in rural areas; and,*
- *Access to technical training in the fiber to the home area.*

*But while rural America investments may be less attractive than other market alternatives, Hiawatha Broadband Communications (HBC) in Southeastern Minnesota has proved that success can be achieved in rural America. If it weren't for the community betterment role HBC's predecessor was designed to play, however, it is unlikely the company would have been created.*

*Today HBC arguably is the most successful of the big broadband companies operating in rural areas, but its rates of return on capital are far lower than the levels that would be minimally required by financiers and venture capitalists. But HBC was begun as a community betterment project for Winona, Minnesota, not as a business venture.*

*The founders of Fastenal Company, who took half their gains from the firm's initial public offering to create a foundation devoted to education, utilized foundation earnings to develop a not-for-profit education project, Luminet, that connected Winona educational institutions, public and health care buildings with fiber-optics. The initiative launched in 1994 was designed*

*to extend the reach of teaching and learning and to provide a cost-effective way for valuable resources to be shared.*

*The project was an instant success, and three years after Luminet became operational, the Fastenal and foundation founders took the next step, investing in a state-of-the-art hybrid fiber-coax network that extended across the Winona area. The first eight million shares of stock were donated to Winona's not-for-profit community. That ownership stake has now grown to 40 percent, and the company has broadened its early mission of Winona betterment to include helping rural America with its connectivity problems.*

*HBC is profitable and has paid a dividend for three consecutive years. The company has also used its profits to fuel steady expansion. It now operates in nine small Southeastern Minnesota markets. Company founders and employees point with pride to the benefits its networks have created for the communities, but the company's returns are not sufficient to attract outside investment to broaden the scope of its networks. HBC was built with $24.6 million in private capital and $5.5 million in debt financing and now has negative retained earnings of $11.8 million.*

*Nonetheless, HBC has proved there is a huge appetite for broadband connectivity in rural markets, and the existence of a value proposition that is based in service rather than price.*

*After connecting its first customer in early 1999, HBC steadily gained penetration in the Winona area. Although it is not the low-price provider in any of its markets, it is the dominant provider in each, the result of a customer-first approach and the production and broadcast of extensive local video programming of exceptional quality.*

*The company reached profitability in 2007, equaling the market norm for telecommunications companies but in a* ***competitive*** *environment. The market norm was generated in monopoly situations. Three-year earnings, however, total $1.1 million and have provided shareholders a cumulative return of 0.765 percent on equity. That does not compare favorably to the investment return expectations of* ***8 to 12 percent*** *in the electric utility industry in Minnesota, nor does it come close to approximating the stock markets' average annual returns of* ***9.3 percent*** *from 1900 to 2008 (4.6 percent price appreciation, plus 4.7 percent in dividends).*

*Measured differently, however, the value of broadband is unmistakable:*

- *Population growth in each of its markets since the networks were built, the gains in several of the seven markets reversing six decades or more of declines;*
- *New businesses in each community, every one of them dependent upon big broadband and in four cases the first new enterprises in the communities in 50 years;*
- *Inward migration of telecommuters in each of the seven markets; and,*

- *Education and health care initiatives based on broadband networks that are being studied to prove suspected measurable improvements in the quality of life and the overall health condition of the populations.*

*The value of the benefits: priceless.*

*That means overcoming the barriers that prevent broadband deployments is essential to improving the health, prosperity, security, and quality of life of Americans.*

**Barrier No. 1: Access to Capital and Return on Investment —** If broadband services are to be deployed throughout rural America, the access to capital and return on investment disparities must be overcome.

It is important that big broadband be the goal throughout the country, because wireless initiatives are not – nor are they likely to be – sufficient to drive emerging applications in the areas of communications, health care and commerce.

By way of example, Winona, because of its broadband network, was selected in 2000 by Cerner Corp. of Kansas City as the alpha site for the firm's *I.Q. Health* rollout, a customer-generated personal health record. That initiative turned two years later into a full electronic medical record and Winona Health, the city's health care system, has for nine consecutive years been named to America's "most wired" health care institutions list. Cerner now is studying improvements in the overall health condition of the community, seeking to measure the gains. Because of the emergence of new applications, particularly those in the health care area and the selection of Winona for another alpha health care project, this one designed to keep seniors and handicapped residents in their private homes longer, HBC has now begun overbuilding its network with fiber to the home.

"Handling these emerging applications makes big broadband networks essential," said Gary Evans, HBC president and CEO, "and achieving declines in the health care cost spiral will be dependent upon initiatives like those we are trialing in Winona. Fiber is the only technology that will effectively do the job...and it is the only technology with the capacity to expand bandwidth as application needs increase."

In examining what might be done to stimulate investment in rural America deployment, personnel of companies that finance both public and private ventures were consulted, principally Managing Director Ralph McGinley of Oppenheimer & Co., which has provided investment banking services to rural broadband projects – municipal, public-private partnerships, and private applications – across the country.

**Municipal Projects**

McGinley and others noted that while the municipal tax-exempt market has a deep appetite for this type of debt, which has and will provide the development capital for broadband projects, these investments will not be made if bond investors must assume all the risk without credit enhancements. In other words, there is a market for municipal bond capital for broadband, but it cannot be accessed without credit support.

Utilizing tax-exempt revenue bonds, Oppenheimer financed the fiber-to-the-home project now under construction in Monticello, Minnesota. Revenue bonds are the only vehicle available for the financing of such projects because few if any municipalities will be willing to place the entire debt of their taxpayers.

All investment officials agree that there is a substantial municipal revenue bond market that could be attracted to sound projects with some level of credit enhancements where the financing tool used is tax-exempt bonds.

McGinley believes that to achieve rapid expansion of big broadband across the country, policymakers must embrace broadband as the next level of public utility. In addition, he says, the national provision of some form of credit enhancements which will support municipal debt offerings will open the door for that to happen. He suggests about fifteen projects in Minnesota alone would move forward with the proper program in place.

**Private Projects**

McGinley also discussed the question of access to capital from the point of view of a small private start-up such as HBC and whether any of these approaches for credit enhancements are valid for this situation. In his opinion HBC, built by private funds, is an exception. If the private market providers were going to do more of these builds, he says they would have already been done.

First, the lack of tax-exempt financing pushes up the cost of capital, assuming investors could be found.

Second, private investors will compare the return on their investment by comparing it to other market options.

There is a gap between what is achievable by a small start-up fiber-based service provider and current market expectations on ROI. McGinley believes comparing returns from a small private fiber provider start-up and a public utility is invalid. A public utility generally provides service to 100 percent of a market and it is that factor that leads investors to believe in the assured and safe investment claim. A telecom/broadband provider start-up has to project much less than

100 percent penetration. Moreover, what penetration will be achieved cannot accurately be predicted. Furthermore, McGinley believes the expected return would need to be in the neighborhood of **16 to 18 percent**, rather than 8 percent of a public utility because of the risk associated with a start-up and the cost of debt capital – if such debt capital is even available.

Given the gap that currently exists between private investor returns and market expectations, McGinley believes that credit enhancements and a large ROI subsidy (that could approach almost full subsidy) would be necessary to encourage the private sector to invest in private initiatives as opposed to public utility approaches.

**Potential Government Backed Credit Enhancements**

a. **Omnibus backing: grants or low interest loans.** There is value in the government providing grants to build out big broadband projects. Low-interest loans are much less valuable, however, andy benefits must be viewed in relation to drawbacks. McGinley thought this the least attractive of the alternatives, saying there are process and allocation problems (similar to the stimulus situation), and it ties up upfront government money.

b. **Fast-Track Partial Loan Guarantees.** The federal government already has one of the best credit enhancements at its disposal: partial loan guarantees. But the Rural Utilities Service (RUS) program has never been used because: 1) the 80/20 split on first dollar losses has not been sufficient to attract private investors; 2) the approval process takes too long; and, 3) direct loans from the government have lower interest rates than a federally guaranteed private loan. The program should be tweaked in two ways:

> First, the guarantees should cover 100 percent of losses up to 40 to 60 percent of the loan.
>
> Second, because private investors take on half the risk but write a check for the full amount, the government can rely on them to do a thorough vetting of projects, allowing the government to implement a fast-track approval process. The new process permits the government to use its limited taxpayer dollars to encourage private investment for rural projects.

Finally, changes in the tax code, allowing projects financed by tax-free municipal bonds to qualify, should be seriously considered. This loan guarantees option is favored by many investors.

c. **National capital pool.** The pool would act as a first guarantor for a portion of the loss should there be a shortfall on a project. Projects would have to meet specific criteria to be covered.

d. **Debt service reserve fund replenishment program.** This would be similar to what is now done by credit worthy entities in private financings. An example would be that on a $26 million

project, the associated debt service reserve fund to be guaranteed would be $2 million. There would be ceilings so that payout would be no higher than 10 percent of the par amount of the bonds in a given year. Example: In year four, the $26 million project has a shortfall of $750,000 that is filled from the reserve fund. The draw would be as a loan from the federal debt service fund repayable under manageable terms. There is also a question of how long this debt service reserve fund guarantee would remain in place, how many times it could be tapped, etc. A parameter formula would identify threshold conditions for burning off the covenant as the business got established and secure. McGinley considered the debt service reserve fund replenishment program the most attractive option. He has prepared a short analysis of the fund. The analysis has been circulated to the state governments of Indiana, Vermont, and Minnesota. It is available, if desired.

e. **Universal Service Fund.** The federal government, given the application convergence going on around fiber in the communications field, should be encouraged to reconfigure the Universal Service Fund (USF) that assists rural telephone companies to include big broadband projects. There is a potential advantage to the latter strategy in that fiber networks, unlike copper and coaxial plants, now are rapidly appreciating in value, providing reward to investors at the time of exit. The USF reconfiguration should include provisions that allow the federal government to share in the financial benefits that are realized at the time of exit, allowing the fund to enhance its assets for distribution, fueling more rural-area deployment.

**Barrier No. 2: Transport Costs —** Service providers in rural America are at a severe disadvantage when it comes to the cost of broadband transport. While fiber transport companies have available fiber that could be used to reduce costs to rural communities, few network points of presence (POPs) have been created in rural areas. This fiber typically runs alongside interstate highways, state highways and railroad tracks. Most of the POPs, however, have been created in larger towns or in locations where multiple fiber providers converge. There are thousands of small towns that are 50 miles or more from a network POP. Connecting these small towns to a network POP is possible usually only through the telephone local exchange carrier (LEC), and in many cases two or more telephone companies may be required to make the necessary connections to complete a transport link to a POP. This is known as the loop cost. The loop cost of a simple DS3 in a rural area could easily run more than $5,000 per month compared to a more typical $550 in an area nearer a POP.

Reducing transport costs would encourage more rural last-mile services at affordable costs, but transport companies have not responded to the need because linking into a fiber route typically costs $100,000 to provide a hut with appropriate electronic equipment and power. Recovering this expenditure drives up cost to service providers and makes last-mile service expensive.

Incentives are needed to encourage fiber transport companies to locate huts at strategic points amid clusters of communities. These huts could be used by neighboring communities and

eliminate the need for multiple-loop providers. If a community or local provider built fiber to the rural POP, it would also eliminate the high costs charged by some rural LECs.

The federal government logically is the source of last resort for incentives or subsidies to the transport companies to assist with the significant start-up costs.

Low-interest loans from Rural Utilities Service (RUS) could be used to put facilities in place. Then, if both RUS and the transport companies used a model developed by HBC), a three-way benefit would result, with the last-mile users, service providers, and transport companies all becoming beneficiaries of the program.

To eliminate huge start-up costs that prevent rural providers from expanding services, including broadband, HBC charges its rural provider wholesale customers on a per-subscriber basis for use of fiber and other facilities needed to provide last-mile services.

Per-subscriber charges allow the provider to build revenues in new territories without the burden of financing all of the start-up costs. Payments accelerate as customer numbers surpass plateaus negotiated in advance. When customer numbers reach the top plateau, the balance of the start-up costs and financing fees become due.

This model allows service providers to build business cases that support last-mile extensions to more rural areas.

**Barrier No. 3: Access to Training, Operator Understanding —** While standards and training programs exist for providers who deliver content by copper, coax and hybrid fiber-coax, no such programs exist for those who deliver content via fiber-to-the-home networks. While the federal government should develop the standards, training programs would likely be most successful if developed and operated by private sector organizations such as the Fiber To The Home Council.

The primary challenges are knowledge of the optical domain, the use of multiple wavelength, and physical and technical skills needed for fiber splicing and management. The old model of contractor fiber splicing doesn't work well in the FTTH environment, at least outside main plant construction. Every new drop line must be spliced, tested, and provisioned, these operations often occurring during conditions that are unfavorable. Even with new connectors, special skills are required.

Government support for training for implementations, operations, and management of fiber-optics networks would help accelerate the spread of successful fiber-optics network facilities throughout the country. A training initiative should embrace two steps.

The first step would be to support a program to accelerate identification of best-practices training for fiber implementation, operations, and management. Such a program might take

some lessons from both telecommunications institutes and from industry groups also committed to quality training. For example, the National Regulatory Research Institute (NRRI) focuses on creating the knowledge to meet regulatory challenges (among other goals). There is a similar need to rapidly identify best practices for training to meet the fiber implementation challenge. In this step a small but focused challenge program set up in cooperation with the industry associations and university centers would aim to provide rapid results identifying best practices for training and management.

The second step would be to support a program of training for implementation, operation, and management of fiber-optics networks. Support for training would be particularly beneficial to smaller operators.

A pool of funding for participation and attendance at relevant industry and research conferences would be relatively simple to administer and would take advantage of available resources.

A second more ambitious approach would be to create something like a Fiber Training Institute (FTI)). A rough analogy might be made to the work of the United States Telecommunications Training Institute (USTTI), which is a non-profit public-private partnership between senior federal officials and leaders of the U.S. information and communication technology (ICT) and broadcast industries focusing on development and training for the developing world. The purpose of a Fiber Training Institute would be very different with a focus on cutting-edge development and training for U.S. fiber implementations and operations committed to big broadband to the home. The actual training sites might emulate the practice of the USTTI which takes place in corporate and federal training facilities, laboratories and universities. A lean, decentralized highly effective concrete training program developed by the FTTH Council is envisioned.

October 30, 2009

# DEBT SERVICE RESERVE FUND REPLENISHMENT BOND ENHANCEMENT PROGRAM

## National Broadband Initiative
## The Next Generation of Public Utility

The following is a summary description of a credit enhancement technique premised on the public policy initiative of the deployment of fiber optic broadband connectivity to users in the more rural parts of America. The lack of capital access is a major inhibitor to the success of this initiative in the public sector. Many municipal communities have embraced the concept of "fiber-to-the-user" as the next logical stage of public utilities. The "future proofing" of communities across America is inhibited not by a lack of interest, but by access to capital.

As is the case with other revenue producing utilities, municipal policymakers are not likely to pledge their precious ad valorem credit to these projects. Consequently, the tax-exempt bond market has an appetite for this type of financing, but not without some financial support during the start-up period from an entity other than the project.

The following describes a credit enhancement technique which will provide unlimited access to capital without any initial outlay of cash. It is a financing technique which has been used very successfully on a project-by-project basis for many years in the municipal finance sector. This discussion is intended to bring this technique to a national level.

**Debt Service Reserve Fund – Project Specific**

A Debt Service Reserve Fund ("DSRF") is typically funded from bond proceeds, cash or an acceptable letter of credit. The DSRF is in an amount approximately equal to one year's principal and interest payment or annual debt service of a bond issue. The sizing of the DSRF is restricted in size by federal tax law, in that it cannot exceed the lesser of the maximum annual principal and interest, 125% of the average annual principal and interest, or 10% of the total amount of the original par value of the bonds issued.

The DSRF is held by the Trustee on behalf of the bondholders, and if funded by cash or bond proceeds, is invested to the benefit of the Borrower in predetermined eligible investments. Typically, these investments are US Treasury Securities, Agencies or collateralized guaranteed investor contracts. Proceeds from the interest return on the DSRF are typically paid by the Trustee to the Bond Fund which offsets the next bond principal and/or interest payment, consequently producing a net debt service amount then due.

The documents for a bond issue will call for the DSRF to be funded at a required level throughout the term of the bond issue. Language in the documents typically will provide for a period of "cure" in the event that the DSRF is ever drawn in order to make prompt and timely payment to the bondholders. This "cure" or replenishment typically comes from the cash flow produced by the enterprise being financed or is allowed from alternative and outside sources in order to meet the minimum requirement of the deposit to the DSRF.

The use of the proceeds from the DSRF are restricted to: a draw from the Trustee to make up any shortfall in the debt service when due, to partially fund a complete redemption of the bonds at either a mandatory or optional redemption event, or to make a portion of the final payment on the bond issue at the term of the bond issue.

Typical term sheet language for a DSRF is as follows:

**Debt Service Reserve Fund**: A DSRF will be created and funded from the Borrower's cash, bond proceeds, and/or a letter of credit arranged by the Borrower and acceptable to the Managing Underwriter in an amount equal to the maximum one year principal and interest debt service on the Bonds. The DSRF will be held by the Trustee for the Term of the Bonds for the benefit of the bondholders. The DSRF will be invested by the Trustee at the direction of and for the benefit of the Borrower.

**Debt Service Reserve Fund Replenishment – National Broadband Replenishment Pool – Project Specific**

A DSRF replenishment provision can be incorporated into the structure of a bond issue, and consequently, can provide a very significant enhancement of the credit of the bonds as they are offered to the marketplace. This replenishment provision will be the subject of an agreement between National Broadband Replenishment Pool and the Bond Trustee (the "DSRF Replenishment Agreement"). This DSRF Replenishment Agreement will provide for the make up of any shortfall from the maximum requirement for the DSRF created by a draw by the Trustee.

**Replenishment Loan Repayment – National Broadband Replenishment Pool**

The National Pool, as a result of the DSRF Replenishment Agreement, will be in a position of receiving a subordinate note from the Project, and as a result, be reimbursed for draws which have been required to be made from the DSRF. For example, the National Pool, having negotiated terms to the DSRF Replenishment Agreement, can be secured on a subordinate basis (subordinate to the bondholders) with a tax-exempt or taxable return, depending on the circumstances for the underlying bond issue.

During the term of the DSRF Replenishment Agreement, these Bonds will carry a provision whereby the bondholders will agree not to accelerate the Bonds. Consequently, the obligation of the National Pool for the replenishment will be limited to the amount of the DSRF for any given year. This maximum amount assumes, of course, that there are no revenues to pay debt service for that period.

**CAP-Limitation – Project Specific**

The DSRF Replenishment Agreement will be capped and thus limited to a dollar amount in the aggregate for a particular project. For the purpose of this hypothetical example, this limit is to be $10,000,000 per project. This cap/limitation would be sized, on a project-to-project basis, to approximately represent 2 full years of principal and interest on the Bonds ("Debt Service"). In order for the exposure of the National Pool to reach this level, the Project would have had to fail to generate any revenue available for Debt Service for a sustained 24 months past construction build-out and capitalized interest.

Term sheet language in regards to a DSRF Replenishment Agreement as described herein would read as follows:

**Debt Service Reserve Fund Replenishment Agreement**: The National Broadband Replenishment Pool will provide a DSRF Replenishment Agreement, whereby the Trustee will be instructed to draw on the DSRF in the event of a shortfall in revenue from the Project. A draw from the DSRF will be replenished up to an aggregate maximum of $10,000,000 until such time that the requirement for the Release of the Replenishment Agreement has been satisfied (see Release Provisions below). An individual draw on the DSRF will cause a draw from the Replenishment Agreement to be deposited into the DSRF within 60 days from the initial shortfall and draw. For as long as the DSRF Replenishment Agreement is in place, the Bond Indenture will provide that the Bonds will not be subject to acceleration for any reason other than a complete mandatory or optional redemption as provided for by the Bond Indenture.

**Release Provisions – Project Specific**

The National Pool would be afforded release provisions in the DSRF Replenishment Agreement. Under such provisions, the National Pool would be released from its requirement to provide the replenishment payments. Release provisions will be determined by a debt service coverage test over a period of time, typically through Project stabilization.

Term Sheet language, relative to the Replenishment Agreement Release Provisions, would read as follows:

**Replenishment Agreement Release Provisions**: The National Pool's obligation under the aforeferenced DSRF Replenishment Agreement shall be released upon the Project's debt service coverage performance at 1.50x for a consecutive 18 months as determined by the annual audit of the Project.

The use of a DSRF Replenishment Agreement would provide a very powerful credit enhancement device in today's marketplace. For further discussion on this topic, please contact:

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