REFORM SCENARIOS

AND POTENTIAL FINANCIAL IMPACTS

A White Paper To The

State Members

Of The

Federal-State Joint Board

On

Universal Service

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THIS WHITE PAPER HAS BEEN PREPARED BY MEMBERS OF THE STATE STAFF OF THE FEDERAL-STATE JOINT BOARD ON UNIVERSAL SERVICE AND ITS CONSULTANTS IN ORDER TO ASSIST THE RELEVANT DELIBERATIONS OF THE STATE MEMBERS OF THE JOINT BOARD. THE ANALYSIS AND VIEWS EXPRESSED IN THIS WHITE PAPER ARE THOSE OF THE AUTHORS AND DO NOT REFLECT THE FORMAL POSITIONS OR OPINIONS OF THE REMAINING STATE STAFF, STATE MEMBERS, OR GOVERNMENTAL/NON-GOVERNMENTAL ENTITIES THAT CURRENTLY EMPLOY THESE AUTHORS.

Reform Scenarios and Potential Financial Impacts

National broadband policy has been evolving. The President and the FCC are both calling for major broadband expansion. In the last two years, the Rural Utilities Service (RUS) and the National Telecommunications and Information Administration have both administered large broadband grant programs; the RUS has also provided a significant number of broadband loans. The FCC has issued a "National Broadband Plan" (NBP) that generally describes a path to "close the broadband availability gap" and to help move the nation's communications infrastructure away from the current mixture of circuit-switched and packet switched networks toward an all-packet-switched/all-internet Protocol (IP) architecture.

The new enthusiasm for broadband is matched by increased uncertainty. A basic question about future federal funding is which carriers and technologies will benefit. Wireless providers claim their new technologies can provide acceptable broadband at a lower cost than wireline services. The FCC appears to have accepted the general argument that wireless providers can do a better job than wireline providers – in many instances (based on geography), regardless of cost. Indeed, even if the FCC's models underlying the NBP show that wireline providers may have lower costs east of the Mississippi River, the FCC's models, in many cases, show that investment in wireless technologies will have a higher net present value (NPV) than investment in wireline DSL technologies, when certain incremental revenues are also taken into account. Wireline broadband providers, who historically have benefitted from the majority of federal funding, dispute these claims, both as to data capacity and low cost. A related question is whether support will be directed primarily to providers that assume "provider of last resort" (POLR) duties, and if so, how rigorous those duties will be. Incumbent local exchange companies (ILECs) tend to argue that POLR duties should be rigorous and should match all the elements of existing "carrier of last resort" duties that states today impose on ILECs. Wireless carriers emphasize that their services can often reach every location in an area and that supplemental equipment can be used to solve localized problems.

A second basic question is whether future universal service fund (USF) support will be based, as it currently is for incumbent telephone companies, on a cost of capital model. The present model encourages providers to raise capital from equity shareholders and from banks and RUS (or Co-Bank or other lenders or funders) and – importantly – from debt offerings. It provides federal support to pay, when necessary, the cost of capital and operating costs. The alternative model is to make advance grants for capital construction and minimize or eliminate capital cost support and operating expense support. This question is particularly pertinent in light of the NBP proposal to require rate-of-return carriers to move to some form of incentive regulation.

A third basic question is whether the assumptions underlying the NBP model lead to accurate estimates of the costs and the net present value of new broadband deployment – particularly the assumptions to deliberately exclude the network costs of serving the existing customers who already have broadband and the value of existing universal service support. The FCC very briefly acknowledged these gaps in the NBP model but then issued its NBP recommendations in spite of these gaps. Indeed, one of the FCC staff technical documents supporting the NBP states that when USF support for existing networks is ignored, the total funding gap for providing broadband service in unserved areas could be "significantly higher than the incremental calculation [of $23.5 Billion] indicates."

A fourth basic question is whether the FCC's assumptions about the amount of incremental revenues that companies can earn from providing broadband in previously unserved areas are realistic – particularly in areas that are also unserved by video providers. A robust dialogue is needed about whether, in the absence of the "killer app" of video (and the resulting triple play or quadruple play), broadband adoption – and the resulting incremental revenue stream - will be slowed, and perhaps significantly so. Additional conversation is also needed about the impact that programming costs may have on the ability and willingness of small and mid-size companies to even offer video services in the first place.

The National Broadband Plan, published by the FCC in 2010, did not resolve these issues. It recommended a comprehensive reform of existing programs, with elimination of all current mechanisms by 2020. To replace them, the plan proposed a "Connect America Fund" (CAF) that would target areas that are currently unserved, while also taking care to ensure that consumers continue to enjoy broadband and voice services that are available today. The plan also proposed a Mobility Fund that would provide a limited amount of one-time funding to improve the availability of 3G wireless networks, as the foundation for possible future support for 4G networks.

Since USF is a finite resource, the FCC said that it would focus first on those areas that require lower amounts of subsidy to achieve that goal, and over time address those areas that are the hardest and most costly to serve, recognizing that the subsidy required may decline in the future as technology advances and costs decline. The plan also says that ongoing support should be provided "where necessary" with the clear inference that it is de minimis. The FCC recognized that sudden changes in universal service support could have unintended consequences that slow progress. The plan concluded that success will come from a clear road map for reform, including guidance about the timing and pace of changes to existing regulations, so that the private sector can react and plan appropriately. However the Plan does not do so.

The FCC has expressed a great deal of concern that some ILECs may have been using existing USF support (e.g., high-cost loop support) to pay for at least a portion of their broadband buildouts. The FCC's proposed solution, at least for wireline companies, is to repurpose federal USF mechanisms and USF support *away from* existing circuit-

switched networks that were designed to provide voice services but have more recently been adapted to provide DSL Internet access services, and toward IP-based networks on which "voice" would simply be one of many Internet applications.

This repurposing could have significant implications for the country if it results in existing ILEC USF recipients being unable to provide either newer broadband services or traditional voice services, being unable to repay existing loans or retire other existing debt, and/or being unable to obtain additional loans or other external financing (because the lenders may perceive some ILECs as too risky, due to the loss of the repurposed USF revenue stream). Even when lenders are willing to lend to rural ILECs or mid-size companies that no longer receive federal universal service support, some of those companies may elect not to incur the debt because they, themselves, are worried about the impact on their cash flow of losing USF support and, thus, their ability to repay the loans.

Discussion Questions:

1. How large is the aggregate debt of all ILECs? What portion of that total has been incurred to build facilities that support broadband?

2. What is the typical ILEC debt repayment period for capital expenditure projects that involved broadband?

3. What portion of broadband borrowing is to provide broadband other than through ILECs? Are wireless carriers borrowing to provide broadband? Cable providers?

4. What is the range of costs per location or per subscriber for ILEC projects that have recently been financed to provide broadband?

5. What are typical depreciation recovery periods for capital expenditure projects that involve: (a) voice and (b) broadband?

6. How does the financial community factor in debt coverage in evaluating the financial risk of broadband deployment?

7. What are the typical operating characteristics, if any, of ILECs which have incurred significant debt to support deployment of broadband over existing networks? What are the typical debt characteristics, if any, of ILECs that provide broadband?

8. Among RBOC/mid-size ILEC/RLEC borrowers who have incurred debt to construct broadband, how dependent are these borrowers on current USF support mechanisms?

9. What effect did the NBP have in 2010 on spending for broadband? Did it enhance or retard spending on broadband capital expenditures?

10. If current USF support mechanisms are fundamentally restructured, what characteristics of the new programs are likely to make capital most available for broadband projects? How important is certainty? How important is the total amount of support?

11. Is it reasonable to expect that "the subsidy required may decline in the future as technology advances and costs decline?" What evidence exists to support this presumption?

12. What other kinds of guidance about changes to existing regulations would help the private sector react and plan appropriately?

13. What is the best way to quantify "the total [funding] gap for providing service in unserved areas" if the cost of supporting existing networks or replacement networks to serve existing voice and broadband customers is also taken into account, given that the FCC has acknowledged that its own estimates are likely to be significantly understated?

14. If the FCC does repurpose existing USF support mechanisms toward broadband and/or wireless services, providers, or networks, what impact is that likely to have on small and mid-size USF recipients in the following respects:
    - Their eligibility to receive future federal USF support for telephone service?
    - Their eligibility to receive future federal USF support for broadband services?
    - The impact on future cash flow and, hence, their ability to repay existing loans?
    - Lenders' perceptions of the riskiness of these companies in the future and the lenders' willingness to provide additional loans in the future in light of that perception of risk?

15. The NBP could have a chilling effect on willingness to borrow and thus on broadband build out if prospective borrowers (providers) perceive that proposed support changes would harm cash flow or increase risk. Even if loans are available, are borrowers confident that they will be able to take out and repay those loans, in light of the FCC's proposed policy changes?

16. Are there any lessons to be learned from the recent RUS loans provided pursuant to ARRA or other federal legislation? In particular, the NBP suggested that future FCC funding would be repurposed away from funding operating expense and debt amortization and toward funding capex directly.

For companies that were offered RUS loan funding (either a 100% loan commitment or a loan offered in combination with RUS grants), did the possible FCC policy changes affect those companies' confidence in their ability to repay the loans? Did any potential borrowers go so far as to turn down RUS loans because of concerns that FCC changes would make them unable to repay those loans?

17. Assuming the FCC does begin a program of repurposing federal USF support, how likely is it that in the future, small and mid-size companies will be able to rely upon other (non-USF and non-access charge) revenues for both general operating expenses and repaying existing debt?

18. How critical is the ability to offer video and wireless services to a company's ability to repay existing debt – particularly in the absence of USF support? What impact could factors like high video content costs have in this regard?

19. The FCC transition period for repurposing USF support is ten years. What is the typical amortization period for telephone company loans from different lenders such as RUS, Co-Bank, and RTFC?