

Public Interest Comment on the
*Connect America Fund*¹

July 9, 2010

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The Regulatory Studies Program (RSP) of the Mercatus Center at George Mason University is dedicated to advancing knowledge of the impact of regulation on society. As part of its mission, RSP conducts careful and independent analyses employing contemporary economic scholarship to assess rulemaking proposals from the perspective of the public interest. Thus, this comment in response to the Federal Communications Commission's (FCC) Notice of Inquiry and Notice of Proposed Rulemaking² does not represent the views of any particular affected party or special interest group, but is designed to assist the FCC as it seeks to develop the most effective and economical way to bring broadband service to unserved areas.

I. Introduction

The FCC levies universal service assessments on interstate telecommunications services. The assessment rate now exceeds 15 percent. A little more than half of this money, or \$4.6 billion, is spent to subsidize telephone service in high-cost areas.³ The National Broadband Plan the FCC issued on March 16 recommended that the commission should repurpose these subsidies to support deployment of broadband infrastructure capable of delivering both data and voice service.⁴

¹ Prepared by Jerry Ellig, senior research fellow, Mercatus Center at George Mason University. This comment is one in a series of Public Interest Comments from the Mercatus Center's Regulatory Studies Program and does not represent an official position of George Mason University. I would like to thank Yash Thakkar for research assistance and helpful conversations.

² Federal Communications Commission, *In the Matter of Connect America Fund*, WC Docket No. 10-90, Notice of Inquiry and Notice of Proposed Rulemaking (Adopted April 21, 2010). (Hereinafter "NOI.")

³ Federal Communications Commission, *Connecting America: The National Broadband Plan* (March 16, 2010), at 140. (Hereinafter "National Broadband Plan.")

⁴ *Id.* at 147.

The plan estimated that seven million American households lack access to broadband infrastructure capable of supporting speeds of at least 4 megabytes per second (mbps) download and 1 mbps upload.⁵ On April 21, the FCC approved a Notice of Inquiry and Notice of Proposed Rulemaking seeking comment on design of the Connect America Fund to subsidize broadband deployment in unserved areas.⁶

Because the Connect America Fund does not yet exist, and because it would subsidize broadband that has not yet been deployed, the FCC has a unique opportunity to design an effective, economical, and accountable program from the ground up. The National Broadband Plan implicitly recognized this opportunity:

Given that the USF is a finite resource, the FCC should work to maximize the number of households that can be served quickly, focusing first on those areas that require lower amounts of subsidy to achieve that goal, and over time addressing those areas that are hardest to serve, recognizing that the subsidy required may decline in the future as technology advances and costs decline.⁷

Rather than establishing a centrally-designed, once-and-for-all structure that covers all unserved areas, the FCC can create an iterative approach that uses competitive bidding to allocate subsidy dollars where they will make broadband available to the most unserved households at the lowest cost. The FCC can then consider alternative, supplementary approaches for locations that attract little or no bidding interest.

The proposal for competitive procurement auctions from 71 concerned economists, reproduced as appendix B to the FCC's Notice of Inquiry, provides a useful starting point. The economists proposed that the federal government should award subsidies through a competitive process. Proposals to build out broadband in different locations would compete against each other according to a transparent and well-defined criterion, such as the cost of the subsidy per home passed or per subscriber. Proposals that accomplished the goal at the lowest cost would receive the funding. This process would ensure that the government spends its limited funds to bring broadband to as many homes as possible.

For telephone service, the FCC currently awards subsidies based either on a firm's historical costs or a forward-looking cost model. In either case, the incumbent firm already offering telephone service is guaranteed some type of subsidy payment. Competitive procurement auctions for new broadband service offer numerous benefits over the way the FCC has traditionally awarded universal service subsidies in high-cost areas:

⁵ Id. at 137.

⁶ NOI, *supra* note 2.

⁷ National Broadband Plan, *supra* note 3, at 141.

- *Effectiveness:* A competitive procurement auction would allow the FCC to maximize the amount of new broadband deployment accomplished with subsidy dollars. It would be the most effective way to advance the availability goal articulated in the National Broadband Plan.
- *Ease of administration:* The FCC would not have to design or hold contentious proceedings to develop a cost model to determine the amount of subsidy. The practice of having private firms compete for contracts is universally accepted throughout the federal government. There are already numerous useful rules in place for competitive contracting that could be applied to this project. The FCC does not need to reinvent the wheel to implement effective procurement auctions.
- *Accuracy:* The auction format would dramatically reduce the complexity of the FCC's job and improve the quality of subsidy decisions by mobilizing private parties' knowledge about particular cost and demand circumstances in specific unserved areas.
- *Efficiency:* An auction that forces prospective providers in different locations to compete against each other for funding would help constrain the total cost of subsidies by ensuring that subsidies will be no greater than necessary. The FCC would also avoid the contentious proceedings and well-known perverse incentives that occur when subsidies are based on embedded costs. Firms could not increase their profits by increasing their costs; on the contrary, they could earn greater profits by finding less-expensive ways to provide affordable broadband.
- *Accountability:* The need to develop transparent, up-front criteria for awarding subsidies means that the FCC would have transparent performance measures that show how much each subsidy has improved broadband availability in unserved areas. Thus, the FCC could build in accountability for outcomes from the beginning, avoiding a significant problem that has plagued the high-cost subsidy program for telephone service.

The FCC could bring broadband to unserved areas most effectively, economically, and rapidly by establishing one or more competitive procurement auctions that would force proposals for service in different areas to compete against each other. To design effective procurement auctions, the FCC needs to address three critical issues: the definition of broadband, the definition of "unserved" areas, and the price constraints that would accompany universal service subsidies.

Broadband: The National Broadband Plan's proposed 4 mbps download/1 mbps upload definition of broadband would not satisfy the Telecommunications Act's criteria for identifying additional services eligible for universal service subsidies. Section 254 requires, among other things, that services eligible for subsidies must be subscribed to by a substantial majority of residential customers. But a minority of residential customers currently subscribe to broadband with download speeds as fast as 4 mbps. The fastest

broadband speed arguably subscribed to by a substantial majority of residential customers is 768 kbps, and so this is the fastest minimum speed the FCC could seek to subsidize.

Unserviced areas: The definition of an “unserved” area depends in large part on the speed the FCC selects to define broadband. The analysis underlying the National Broadband Plan provides a useful starting point for identifying unserved areas, but it may need substantial modification since the FCC will likely have to adopt something other than the 4 mbps/1 mbps definition. The FCC can best mobilize individual providers’ particular knowledge about the economics of serving diverse unserved areas by allowing carriers themselves to propose the areas they would serve when making subsidy bids.

Price: It is difficult to see how the FCC could subsidize broadband under Section 254 of the Telecommunications Act without having the provider make some type of commitment on the price it will charge. Either the providers would have to bid both on the subsidy and the price, or the FCC would need to specify in advance what price the providers would be allowed to charge for the subsidized service. The standard the FCC recently justified in response to the *Qwest II* decision—a price within two standard deviations of average urban rates—may be a workable standard. If providers bid on both the price and the subsidy, the FCC could give greater weight to bids that include prices within two standard deviations of urban rates. The subsidy bids need not specify the prices of all broadband offerings from a subsidized provider. Rather, the subsidy agreement need only specify the price for the particular service offering the FCC seeks to subsidize.

II. Major Issues in Competitive Procurement Auctions

In response to a Notice of Inquiry on broadband grants authorized by the American Recovery and Reinvestment Act, 71 economists signed a memo advocating the use of competitive procurement auctions. The signatories presented their proposal to the National Telecommunications and Information Administration and Rural Utilities Service as a suggested means of allocating one-time subsidies for broadband buildouts in unserved areas. The FCC Notice of Inquiry reproduced this proposal in appendix B and asked “whether some form of competitive procurement auction could be an efficient mechanism to determine subsidies for the extension of new broadband-capable infrastructure in unserved areas.”⁸

The FCC could adopt a similar approach to award either one-time grants or a stream of universal service subsidy payments for a designated number of years. Like the Rural Utilities Service, the FCC faces the challenge of allocating limited funds to expand broadband availability to the greatest extent possible. The FCC can expand broadband availability in the most efficient, effective, and cost-effective manner by awarding universal service subsidies to broadband providers who initiate service in unserved areas at the lowest possible subsidy per subscriber or per home passed. Bids for subsidies covering multiple years could be converted to net present values to make them

⁸ NOI, *supra* note 2, at para. 47.

comparable, or the FCC might give preference to bids that request subsidies for only one or a few years.

One major advantage of a competitive procurement auction is that the FCC would need to develop transparent criteria for awarding subsidies at the outset. The need to develop transparent criteria for awarding subsidies would give the FCC a head start on developing transparent performance measures that show how much each subsidy has improved broadband availability in unserved areas. The FCC's high-cost subsidies for telephone service have received significant criticism due to the absence of effective measures that promote accountability for outcomes. Ten years after the FCC created the high-cost program, the Government Accountability Office could justifiably claim that "While there is a clearly established purpose for the high-cost program, FCC has not established performance goals or measures ... 12 years after the passage of the 1996 Act and after distributing over \$30 billion in high-cost program support, FCC has yet to develop specific performance goals and measures for the program."⁹

As the National Broadband Plan recognizes, it is imperative that the FCC improve performance and accountability in the universal service fund.¹⁰ Accountability, however, does not just mean the funds are spent for the intended purpose and there is a clear audit trail. Accountability for results requires the FCC to articulate quantifiable performance measures based on the Connect America Fund's goals, gather data that will allow it to measure progress toward those goals, and arrange for independent retrospective analysis to identify whether, and to what extent, the measured progress was actually caused by the subsidies.¹¹

To implement a competitive procurement auction, the FCC must carefully define exactly what it is that bidders are bidding to provide.¹² Four key issues are: (1) Is the goal availability or subscribership? (2) What counts as "broadband?" (3) What counts as an "unserved" area? and (4) What price must the provider commit to offering consumers in order to qualify for the subsidy?

1. Is the goal availability, or subscribership?

The FCC would first have to decide whether the goal is just availability of service, or also subscribership. If the goal is availability, then the appropriate performance measure is the

⁹ Government Accountability Office, *Telecommunications: FCC Needs to Improve Performance Management and Strengthen Oversight of the High-Cost Program*, Report No. GAO-08-633 (June 2008), at 5.

¹⁰ National Broadband Plan, *supra* note 3, at 143-44.

¹¹ Mercatus Center scholars have filed extensive comments in prior FCC proceedings recommending how the high cost universal service program could be made more accountable for results. See, e.g., Maurice McTigue and Jerry Ellig, *Public Interest Comment on Performance Measures for Universal Service Programs*, FCC Docket 05-195 (Oct. 17, 2005), available at http://fjallfoss.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6518169986; Maurice McTigue and Jerry Ellig, *Notice of Ex Parte Communication*, FCC Docket 05-195 (January 26, 2006), available at http://fjallfoss.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6518313841.

¹² NOI, *supra* note 2, para 47.

number of new households for which broadband becomes available as a result of the subsidies. If the goal is subscribership, then the appropriate performance measure is the number of new households in unserved areas who actually subscribe to broadband as a result of the subsidies.

The performance goals and measures, in turn, should determine the criterion for selection of winning bidders. If the goal is availability, then competitors should be expected to bid on the subsidy per home passed in unserved areas. If the goal is subscribership, then competitors should be expected to bid on the subsidy per subscriber in unserved areas. In either case, selecting the winning bidders based on the lowest bids would enable the FCC to maximize the amount of broadband availability or subscribership achieved with limited subsidy dollars.

2. What counts as broadband?

The National Broadband Plan articulates a goal of making broadband with a download speed of 4 mbps and download speed of 1 mbps available to all Americans. The plan justifies this goal largely because the average actual broadband speed purchased by U.S. households is 4 mbps.¹³ The Omnibus Broadband Initiative technical paper reproduced as Appendix C to the Notice of Inquiry offers two different justifications: the median speed is approximately 3.1 mbps and will likely soon be 4 mbps, and 4 mbps is necessary to view streaming video, such as classroom lectures.¹⁴ The technical paper uses the 4 mbps/1mbps definition to estimate which areas count as unserved, and it estimates the subsidies that would be required to deploy broadband with these speeds in all areas where these speeds are not currently available.

The definition of broadband matters a great deal because the required speed has a big effect on the size of the required subsidies. The technical paper estimates that making 4 mbps/1 mbps broadband universally available would require subsidies with a net present value of \$23.5 billion over the next 20 years.¹⁵ If the goal is reduced to 1.5 mbps download, however, the size of the subsidy falls to \$15.3 billion.¹⁶

This figure likely understates the subsidy savings, however, for several reasons that are outside the scope of the technical paper's model. A goal below 3 mbps would allow already-deployed, third-generation wireless broadband to count when measuring availability. Third-generation wireless is available to approximately 98 percent of US households,¹⁷ but the technical paper estimates that 4 mbps/1 mbps broadband is available to 95 percent of U.S. households, leaving about 7 million households

¹³ National Broadband Plan, *supra* note 3, at 21.

¹⁴ FCC Omnibus Broadband Initiative, "The Broadband Availability Gap," OBI Technical Paper No. 1 (April 2010), at 43-44. (Hereinafter "Broadband Availability Gap.")

¹⁵ *Id.* at 1.

¹⁶ *Id.* at 45.

¹⁷ National Broadband Plan, *supra* note 3, at 40.

unserved.¹⁸ Including third-generation wireless cuts the number of unserved or underserved households by more than half.

In addition, the technical paper does not include satellite when measuring availability, because it estimates that satellite will only be able to serve only about two million households at 4 mbps/1 mbps by 2012, falling to one million in 2015 as individual households' usage increases.¹⁹ It does, however, calculate that satellite could be a very cost-effective means of serving households in the highest-cost locations. Serving the highest-cost 250,000 households with satellite broadband would reduce subsidies by \$13.4 billion, or 57 percent of the estimated funding gap.²⁰

The 4 mbps/1 mbps goal, however, significantly constrains satellite's potential contribution. Reducing the goal to 2 mbps download, for example, would roughly double broadband satellite capacity, allowing satellite to serve 2 million homes in 2015. Reducing the goal to 1 mbps would probably allow satellite to serve about 4 million homes in 2015. Thus, a lower goal could allow satellite to make a much more pervasive contribution, reducing subsidies by even more than the \$13.4 billion estimated in the technical paper.

The 4 mbps/1 mbps definition is thus a significant driver of subsidy costs. But it is arbitrary and not extensively justified in the National Broadband Plan or the technical paper. Mandating a minimum download speed of 4 mbps goes far beyond equalizing broadband opportunities for all Americans. Even if we presume that 4 mbps will soon become the national median, that means almost half of American broadband subscribers will have decided that a slower speed is perfectly adequate for their needs. Mandating the median goes far beyond ensuring that all households have access to "basic" broadband service. The 4 mbps/1 mbps goal appears to be driven by the Omnibus Broadband Initiative team's value judgment that access to streaming video is something that all Americans ought to have, regardless of what a substantial majority of households have actually chosen.

The 4 mbps/1 mbps definition is thus problematic on public policy grounds. But it is also questionable legally. Before the FCC can use the 4 mbps/1 mbps or any other definition to award universal service subsidies, it must demonstrate that this definition reflects the appropriate balancing of factors the commission must consider under Section 254 when it decides whether a new service should qualify for universal service subsidies.

The 4 mbps/1 mbps definition of broadband does not satisfy Section 254 of the Telecommunications Act simply because it appears in the National Broadband Plan. The plan was an FCC staff study, not the result of a rulemaking. The FCC commissioners did not vote on the plan, nor did they even vote to authorize the staff to release the plan. As Commissioner McDowell noted on March 16:

¹⁸ Author's calculation from figures presented in *Broadband Availability Gap*, *supra* note 14, Exhibit 2-A.

¹⁹ *Id.* at 91.

²⁰ *Id.* at 92.

In all seriousness, it is important for everyone to understand that the Plan offered up today for Congress’s review represents a tremendous amount of hard work and thoughtfulness. However, it does not carry with it the force and effect of law. In other words, the Plan itself contains no rules. Not having a vote has given the Broadband Plan team the flexibility to make their recommendations to Congress and the Commission freely.²¹

The day the FCC released the broadband plan, the commissioners adopted a Joint Statement on Broadband. This statement articulated a number of the commissioners’ “shared beliefs,” including a belief that every American should have the opportunity to benefit from broadband, continuous private sector investment is crucial, and the universal service fund should be reformed to encourage investment in broadband.²² The statement did not, however, include the 4 mbps/1 mbps definition of broadband, or any other definition. The commission vote on the statement, therefore, was not a vote to approve the 4 mbps/1 mbps definition.

It is doubtful that the 4 mbps/1 mbps definition would satisfy all of the Telecommunications Act’s criteria for identifying additional services eligible for subsidies. The second criterion the FCC is supposed to consider when defining new services eligible for universal service subsidies is whether the service has, “through the operation of market choices by customers, been subscribed to by a substantial majority of residential customers...”²³ Sixty-five percent of Americans have broadband at home.²⁴ But a *minority* of residential customers subscribe to broadband that meets the FCC’s 4 mbps/1 mbps definition. According to the technical report, 48 million subscribers have download speeds of 4 mbps or higher. More subscribers—53 million—have broadband download speeds of 3 mbps or lower.²⁵ And 35 percent of Americans have no broadband at all.²⁶ These figures imply that a *substantial majority* of Americans have *not subscribed* to broadband that meets the National Broadband Plan’s proposed definition. Approximately 59 percent of Americans subscribe to broadband with a download speed of 768 kbps or higher.²⁷ Perhaps this figure qualifies as a “substantial majority,” but surely the 4 mbps/1 mbps definition does not.

²¹ Statement of Commissioner Robert M. McDowell (March 16, 2010), http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-296912A1.pdf.

²² FCC, Joint Statement on Broadband (March 16, 2010).

²³ 47 USC §254(c)(1)(B).

²⁴ National Broadband Plan, *supra* note 3, at 167.

²⁵ Calculated from figures in Broadband Availability Gap, *supra* note 14, at 43.

²⁶ National Broadband Plan, *supra* note 3, at 167.

²⁷ Calculation of this figure is complicated by the fact that the number of “users” in the technical paper’s Exhibit 3-J appears to be the number of subscribers or households, rather than the total number of actual users. There may be more than one user per subscription or household. Assuming that the 101 million “users” depicted in this graph represent the 65 percent of the US population that has broadband at home, then the total number of potential subscriptions is approximately 155 million, and the number of non-subscribers is 54 million. Ninety-two million subscribers have download speeds of 768 kbps or higher, and 92 million/155 million = 59 percent.

A reasonable person might also question whether even 59 percent counts as a “substantial majority” for the purpose of declaring broadband a service eligible for subsidy. Surely Section 254 requires a “substantial majority” in part to ensure that consumers who have chosen not to subscribe to a service do not bear the injustice of having to subsidize the provision of that service to others. It is clear from the FCC’s figures that most of the 35 percent of American households without broadband have it available but choose not to subscribe. Therefore, subsidizing even 768 kbps broadband would force many consumers to pay universal service assessments to provide others with a subsidized service that they themselves have decided is not worth the cost.

3. What counts as an “unserved” area?

The definition of an “unserved” area determines which areas would be eligible for subsidies. Table 1 shows that the number of unserved households varies greatly, depending on the definition of broadband the commission adopts. The National Broadband Plan’s 4 mbps download definition yields an estimate of 7 million unserved households. If areas with broadband slower than 3 mbps are defined as unserved, then there are 6.9 million unserved households. The final figure, 4.2 million, is the number of households the FCC’s broadband team estimated have no broadband capability at all.

Table 1: How many “unserved” households are there?²⁸

Broadband definition	Number of unserved households
4 mbps download (Broadband Plan definition)	7 million
3 mbps download	6.9 million
1.5 mbps download	6.3 million
768 kbps download	6 million
384 kbps download	4.2 million

Once the FCC selects and justifies a definition of broadband, it could use the technical analysis already conducted by the Omnibus Broadband Initiative to identify the areas eligible for subsidies—that is, the areas where service would not be profitable in the absence of subsidies. Depending on the definition, the FCC’s analysis may need to be revised or extended to provide an accurate picture of actual availability. If the FCC adopts a slower definition of broadband that would include third-generation wireless, for example, then the analysis needs to account for the availability of third-generation wireless to 98 percent of households. Fewer areas would be eligible for subsidies. A slower definition would also require reconsideration of satellite’s potential contribution. Defining broadband as 1 mbps download, for example, would expand satellite’s capacity roughly fourfold, to about 4 million households. Since this definition would also count third generation wireless as broadband, the number of households unserved by terrestrial broadband would likely fall to 3.5 million or fewer—well within satellite’s capacity to serve at 1 mbps.

²⁸ Figures calculated from data in Broadband Availability Gap, *supra* note 14, Exhibit 2-A.

Once the FCC identifies the unserved areas, it would need to identify how areas would be selected for the procurement auctions. Different broadband providers use different technologies with different economics. In some cases, it may be easier for a provider to offer broadband in an unserved area by extending existing infrastructure in adjacent areas that already have broadband. In other cases, a “greenfield” approach may be more economical. The FCC could best mobilize individual carriers’ particular knowledge about these opportunities by allowing carriers themselves to propose the areas they would serve when making subsidy bids. The FCC’s analysis would identify all of the areas eligible for subsidies, and the individual bidders would then nominate the specific subsets of those areas they seek to serve.

4. What price must the provider commit to offering consumers to quality for the subsidy?

In a competitive procurement auction, prospective providers would bid on the amount of subsidy they require to provide the service. They would not bid on the price consumers would pay for the service. The price, however, obviously affects the revenues providers could expect to receive from consumers. Before providers could calculate the subsidy required, they would need to know in advance what price they would be allowed to charge.

It is difficult to see how the FCC could legally subsidize broadband without having the provider make some type of commitment on the price it will charge as a quid pro quo for universal service subsidies. If the FCC uses universal service funds to subsidize broadband in rural areas, Section 254 of the Telecommunications Act requires the commission to demonstrate that the resulting broadband prices in rural areas would be “reasonably comparable” to the broadband prices charged in urban areas.²⁹ In *Qwest Comm. Int’l, Inc. v. FCC (Qwest II)*, the Tenth Circuit court held that the FCC had failed to define the term “reasonably comparable” in a manner that comported with its concurrent duties to preserve and advance universal service.³⁰ The FCC had considered a “reasonably comparable” price to be one that falls within two standard deviations of the national average urban rate contained in the Wireline Competition Bureau’s annual rate survey. The commission recently provided empirical justification for this benchmark in response to the *Qwest II* ruling.³¹

Likewise, in the present case with broadband subsidization, the subsidy agreements must include price provisions that that give consumers in high-cost areas access to broadband at rates that are reasonably comparable to rates charged in urban areas. Additionally, as per the ruling in *Qwest II*, the “FCC must define the term ‘reasonably comparable’ in a manner that comports with its concurrent duties to preserve and advance universal

²⁹47 U.S.C. § 254(b)(3).

³⁰ 398 F. 3d 1222, 1237 (2005).

³¹ FCC, *High-Cost Universal Service Support, Federal-State Joint Board on Universal Service, Final Rule*, WC Docket No. 05-337, 75 Fed. Reg. 26137 (May 11, 2010).

service.”³² Below, we suggest three alternative ways of ensuring that prices of subsidized broadband in high cost areas are reasonably comparable to prices in urban areas.

a. Urban rates as a benchmark

One form of price standard likely to be most consistent with the goals of the National Broadband Plan and Section 254 of the Telecommunications Act would be a requirement that the subsidized provider’s prices could not exceed some type of benchmark rate paid by urban consumers. Rural households would have reasonably comparable rates if they could buy broadband at prices similar to those paid by a substantial number of suburban and urban households. The FCC’s “two standard deviations” benchmark might be most useful here, since there is evidence that keeping rural telephone rates within two standard deviations of urban rates has led to increased telephone subscribership.³³

Such a benchmark implies that rural rates could be somewhat higher than those contemplated in the analysis underlying the National Broadband Plan. The analysis underlying the National Broadband Plan appears to assume that consumers in high-cost areas would pay prices for broadband equal to the national average.³⁴ If the goal of broadband price regulation in rural areas is to produce rates reasonably comparable to those in urban areas, this benchmark is problematic. A price ceiling equal to the national average rate (or urban average rate) would likely provide many rural households with access to broadband at prices lower than those paid by many suburban and urban households. In addition, suburban and urban households would pay for most of the universal service subsidies through assessments on their interstate telecommunications services. Making subsidized broadband available to rural households at prices lower than those paid by many suburban and urban households, while at the same time requiring suburban and urban households to fund most of the subsidies, hardly produces “reasonable comparable” rates.

If prices in high-cost areas were higher than the National Broadband Plan assumes, the total cost of achieving universal broadband access could be lower than the plan assumes. The sensitivity analysis in the technical paper, for example, estimates that increasing the average revenue per unit by 30 percent would reduce the size of the required subsidies by about 11 percent, from \$23.5 billion to \$21.0 billion.³⁵ Lower subsidies per subscriber or home passed means that the FCC could accomplish more broadband deployment in unserved areas with its limited subsidy resources. Alternatively, lower subsidies per subscriber or home passed would allow the FCC to reduce universal service assessments on wireline and wireless telecommunications. This would increase economic efficiency, because universal service assessments generate substantial deadweight losses.³⁶

³² 398 F. 3d 1222, 1237 (2005).

³³ FCC, *High-Cost Universal Service Support*, *supra* note 31.

³⁴ Broadband Availability Gap, *supra* note 14, at 50-51.

³⁵ *Id.* at 51.

³⁶ Jerry Ellig, *Costs and Consequences of Federal Telecommunications and Broadband Regulations*, 58 Federal Communications Law Journal 17 (Feb. 2005); Jerry Ellig and James Taylor, *The Irony of Transparency: Unintended Consequences of Wireless Truth-in-Billing*. Loyola Consumer Law Review 19:1

b. Contractual commitment by bidders

A more flexible alternative that could still meet the requirements of Section 254 would be to require that bidders name the price at which they commit to offering subsidized broadband. The FCC would then select winning bids on the basis of two criteria: the subsidy per new subscriber or home passed, and the price of the subsidized service. This approach would make the auction design and bidding process somewhat more complicated. To ensure fairness and transparency, the FCC would need to indicate in advance how it plans to make tradeoffs between the amount of subsidy and the price. Bids could receive explicit, higher weights if the provider proposes a price within two standard deviations of the urban average. For proposed prices outside this range, the commission could perhaps adopt a sliding scale of weightings that imposes larger penalties on bids that propose prices further away from two standard deviations of the urban average.

c. Provider's unsubsidized rates as a benchmark

Some bidders willing to provide subsidized service would likely be companies that already offer unsubsidized broadband in more heavily populated areas. For these providers, an administratively simple pricing option is available. If these providers offer service in subsidized locations at the same price they charge in unsubsidized locations, then they quite obviously would be providing customers in the subsidized locations with prices reasonably comparable to the prices their customers receive in the unsubsidized locations. In other words, the FCC can use the provider's unsubsidized price as a benchmark for the subsidized price. Therefore, if a provider commits to selling the subsidized service at the same price it charges for that service in locations where it does not receive subsidies, there is no need for any other price stipulation in the subsidy agreement.

Regardless of which option the FCC chooses, the bidding process need not include the prices of all broadband offerings from a subsidized provider. Only the prices for the particular service offering the FCC seeks to subsidize need to be "reasonably comparable" to the prices in urban areas. Some customers may be willing to pay premium prices for faster speeds in high-cost areas. Providers can be expected to take this demand for higher speeds into account when they develop their business plans and subsidy bids. If providers expect to profit from ancillary investments needed to provide speeds faster than the FCC-mandated minimum, these profits would help reduce the amount of subsidy the providers would require. Unregulated prices for speeds that differ from the FCC's goal would thus help make basic broadband more widely available at a lower subsidy cost.

(2006); Jerry Ellig and Andrew Perraut, "Public Interest Comment on Universal Service Fund Contribution Methodology." WC Docket No. 06-122 (Nov. 2, 2007).

III. Conclusion

Creation of the Connect America Fund offers the FCC the opportunity to make a clean break with past subsidy disbursement practices that were often ineffective, inefficient, and unaccountable for achieving the outcomes articulated in the 1996 Telecommunications Act. Competitive procurement auctions would allow the FCC to achieve the greatest possible improvement in broadband availability or subscribership with limited subsidy dollars. In designing the auctions, the commission will need to address four issues:

1. Decide whether the goal is availability or subscribership, and craft selection criteria and performance measures accordingly.
2. Articulate a definition of broadband that is consistent with all of the factors the FCC is supposed to consider according to Section 254 of the Telecommunications Act. The fastest minimum broadband speed subscribed to by a substantial majority of residential consumers is likely only 748 kbps, not the 4 mbps proposed in the National Broadband Plan.
3. Identify which areas are considered “unserved” and hence eligible for subsidies. A minimum speed of 1 mbps or lower would substantially reduce the amount of subsidy required to accomplish the goal of bringing basic broadband to all Americans.
4. Identify in advance the pricing provisions providers would have to accept in exchange for subsidies. A price within two standard deviations of the urban average may be a workable standard. The most flexible way to implement this standard would be to require providers to bid on both subsidies and price, and give greater weight to bids that offer a price within two standard deviations of the urban average. As an alternative, providers who already offer unsubsidized service elsewhere could be presumed to offer “reasonably comparable” rates if they offer to charge a price in subsidized areas no higher than the price they charge for the same service in unsubsidized areas.

Competitive procurement auctions designed according to these guidelines would give the FCC the best possible opportunity to use universal service funding to bring broadband to as many Americans as possible.