This document is scheduled to be published in the
Federal Register on 12/16/2011 and available online at
http://federalregister.gov/a/2011-31924, and on FDsys.gov

6712-01

FEDERAL COMMUNICATIONS COMMISSION

47 CFR Part 54

[WC Docket Nos. 10-90, 07-135, 05-337, 03-109; GN Docket No. 09-51; CC Docket Nos. 01-92, 96-45; WT Docket No. 10-208; FCC 11-161]

Connect America Fund; A National Broadband Plan for Our Future; Establishing Just and Reasonable Rates for Local Exchange Carriers; High-Cost Universal Service Support

AGENCY: Federal Communications Commission.

ACTION: Proposed rule.

SUMMARY: In this document, the Federal Communications Commission (Commission) seeks comment on several issues related to Eligible Telecommunications Carriers obligations, the funding mechanisms for rate-of-return, price cap and mobile carriers, and a Remote Areas Fund. The Commission also seeks comment on several issues related to bill-and-keep, end user charges, IP-to-IP interconnection, and call signaling rules. This is information will help the Commission to comprehensively reform and modernize the universal service and intercarrier compensation systems to ensure that robust, affordable voice and broadband service, both fixed and mobile, are available to Americans throughout the nation.

DATES: Comments on the matters synopsized in paragraphs 1 - 303 of the Supplementary Information and proposed 47 CFR part 54, subparts L, M, and N are due on or before January 18, 2012 and reply comments on the matters synopsized in paragraphs 1 - 303 of the Supplementary Information and proposed 47 CFR part 54, subparts L, M, and N are due on or before February 17, 2012. Comments on the matters synopsized in paragraphs 304 - 406 of the Supplementary Information are due on or before February 24, 2012 and reply comments on the matters synopsized in paragraphs 304 - 406 of the Supplementary Information are due on or before March 30, 2012. If you anticipate that you will be submitting comments, but find it difficult to do so within the period of time allowed by this FNPRM, you should advise the contact listed below as soon as possible.

ADDRESSES: You may submit comments, identified by WC Docket Nos. 10-90, 07-135, 05-337, 03-109; GN Docket No. 09-51; CC Docket Nos. 01-92, 96-45; WT Docket No. 10-208; FCC 11-161, by any of the following methods:

- Federal eRulemaking Portal: http://www.regulations.gov. Follow the instructions for submitting comments.
- Federal Communications Commission's Web Site: http://fjallfoss.fcc.gov/ecfs2/. Follow the instructions for submitting comments.
- People with Disabilities: Contact the FCC to request reasonable accommodations (accessible format documents, sign language interpreters, CART, etc.) by e-mail: FCC504@fcc.gov or phone: (202) 418-0530 or TTY: (202) 418-0432.

For detailed instructions for submitting comments and additional information on the rulemaking process, see the SUPPLEMENTARY INFORMATION section of this document.

FOR FURTHER INFORMATION CONTACT: Amy Bender, Wireline Competition Bureau, (202) 418-1469, Victoria Goldberg, Wireline Competition Bureau, (202) 418-

7353, and Margaret Wiener, Wireless Telecommunications Bureau, (202) 418-2176 or TTY: (202) 418-0484.

SUPPLEMENTARY INFORMATION: This is a synopsis of the Commission's Further Notice of Proposed Rulemaking (FNPRM) in WC Docket No. 10-90, GN Docket No. 09-51, WC Docket No. 07-135, WC Docket No. 05-337, CC Docket No. 01-92, CC Docket No. 96-45, WC Docket No. 03-109, and WT Docket No. 10-208; FCC 11-161, released November 18, 2011. The complete text of this document is available for inspection and copying during normal business hours in the FCC Reference Information Center, Portals II, 445 12th Street, SW., Room CY-A257, Washington, DC 20554. The document may also be purchased from the Commission's duplicating contractor, Best Copy and Printing, Inc., 445 12th Street, SW., Room CY-B402, Washington, DC 20554, telephone (800) 378-3160 or (202) 863-2893, facsimile (202) 863-2898, or via the Internet at http://www.bcpiweb.com. It is also available on the Commission's web site at http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-11-161A1.pdf.

Pursuant to §§ 1.415 and 1.419 of the Commission's rules, 47 CFR 1.415, 1.419, interested parties may file comments and reply comments on or before the dates indicated on the first page of this document. Comments may be filed using the Commission's Electronic Comment Filing System (ECFS). See Electronic Filing of Documents in Rulemaking Proceedings, 63 FR 24121, May 1, 1998.

- Electronic Filers: Comments may be filed electronically using the Internet by accessing the ECFS: http://fjallfoss.fcc.gov/ecfs2/.
- Paper Filers: Parties who choose to file by paper must file an original and one copy of each filing. If more than one docket or rulemaking number appears in the

caption of this proceeding, filers must submit two additional copies for each additional docket or rulemaking number.

Filings can be sent by hand or messenger delivery, by commercial overnight courier, or by first-class or overnight U.S. Postal Service mail. All filings must be addressed to the Commission's Secretary, Office of the Secretary, Federal Communications Commission.

- All hand-delivered or messenger-delivered paper filings for the Commission's Secretary must be delivered to FCC Headquarters at 445 12th St., SW, Room TW-A325, Washington, DC 20554. The filing hours are 8:00 a.m. to 7:00 p.m. All hand deliveries must be held together with rubber bands or fasteners. Any envelopes and boxes must be disposed of before entering the building.
- Commercial overnight mail (other than U.S. Postal Service Express Mail and Priority Mail) must be sent to 9300 East Hampton Drive, Capitol Heights, MD 20743.
- U.S. Postal Service first-class, Express, and Priority mail must be addressed to 445 12th Street, SW, Washington DC 20554.

People with Disabilities: To request materials in accessible formats for people with disabilities (braille, large print, electronic files, audio format), send an e-mail to fcc504@fcc.gov or call the Consumer & Governmental Affairs Bureau at 202-418-0530 (voice), 202-418-0432 (tty).

I. FURTHER NOTICE OF PROPOSED RULEMAKING

A. Broadband Public Interest Obligations

i. Measuring Broadband Service

1. In the USF/ICC Transformation Order, adopted concurrently with the FNPRM, the Commission adopts a rule requiring that actual speed and latency be measured on the access network of each eligible telecommunications carriers (ETC) from the end-user interface to the nearest Internet access point, and requires that ETCs certify to and report the results to the Universal Service Administrative Company (USAC) on an annual basis. The Commission seeks comment on whether it should adopt a specific measurement methodology beyond what is described in the USF/ICC Transformation Order and the format in which ETCs should report their results.

2. The Measuring Broadband America Report concludes that a standardized set of broadband measurements can be implemented across a range of ISPs and scaled to support detailed regional assessments of broadband deployment and performance. The Commission notes that commercial hardware and software as well as some free, non-commercial options are available. Should the Commission adopt a uniform methodology for measuring broadband performance? If so, should it be uniform across different technologies? The Commission notes that it has requested more information on measurement approaches for mobile broadband in Comment Sought on Measurement of Mobile Broadband Network Performance and Coverage, 75 FR 33303, June 11, 2010, and seeks to incorporate that proceeding's record. How should wireless providers measure speed? Should the Commission require fixed funding recipients to install

SamKnows-type white boxes at consumer locations to monitor actual performance in a standardized way?

3. Should the Commission specify a uniform reporting format? Should test results be recorded in a format that can be produced to USAC and auditable such that USAC or the state commissions may confirm that a provider is, in fact, providing broadband at the required minimum speeds?

4. Should providers be required to provide the underlying raw measurement data to USAC? Are there legitimate concerns with confidentiality if such data are made public? Is it sufficient to have a provider certify to USAC that its network is satisfying the minimum broadband metrics and retain the results of its own performance measurement to be produced on request in the course of possible future audits?

5. Should the Commission consider easing the performance measuring obligations on smaller broadband providers? If so, what would be the appropriate threshold for size of provider before granting relief for measuring broadband? If so, how can it ensure that their customers are receiving reasonably comparable service?

ii. Reasonably Comparable Voice and Broadband Services

6. In the USF/ICC Transformation Order, the Commission directs the Wireline Competition Bureau (WCB) and Wireless Telecommunications Bureau (WTB) (together, the Bureaus) to develop and conduct a survey of voice and broadband rates to compare urban and rural voice and broadband rates. The Commission seeks comment on the components of the survey.

7. With respect to determining reasonable comparability of voice service rates for universal service purposes, should the Commission separately collect data on

fixed and mobile voice telephony rates? Should fixed and mobile voice services have different benchmarks for purposes of reasonable comparability?

8. In the landline context, the Commission has previously surveyed the basic R-1 voice rate. What would the equivalent basic offering be in the mobile context? How should the Commission take into account packages that offer varying numbers of minutes of usage and/or additional features such as texting?

9. With respect to determining reasonable comparability of broadband services, should the Commission separately collect data on fixed and mobile broadband pricing and capacity requirements (if any)? For purposes of that analysis, how should the Commission consider, if at all, data cards provided by mobile providers?

10. For fixed broadband offerings subject to the Commission's initial Connect America Fund (CAF) requirements of 4 Mbps downstream/1 Mbps upstream, should the Commission survey advertised rates for such service, or the closest available offering in urban areas? How should the Commission take into account promotional pricing that may require a specific contractual commitment for a period of time?

11. Should fixed and mobile broadband services have different or the same benchmarks for purposes of reasonable comparability?

12. The Commission also seeks comment on how to compare mobile broadband to fixed broadband as product offerings evolve over time.

13. In the USF/ICC Transformation Order, the Commission also determines that rural rates for broadband service would be reasonably comparable to urban rates under 47 U.S.C. 254(b)(3) if rural rates fall within a reasonable range of the national

average urban rate for broadband service. The Commission seeks comment on how specifically to define that reasonable range for broadband.

14. The Commission notes that in the voice context, today it requires states to certify that basic R-1 voice rates for non-rural carriers are no more than two standard deviations above the national average R-1 rate. Would using two standard deviations be the appropriate measure for reasonable comparability in the broadband context, or should the Commission adopt a different methodology for establishing such a reasonable range? Do unregulated broadband prices show relatively small variations, making another methodology more appropriate? For example, would prices normalized to disposable income be appropriate?

15. Should the Commission adopt a presumption that if a given provider is offering the same rates, terms and conditions (including capacity limits, in any) to both urban and rural customers, that is sufficient to meet the statutory requirement that services be reasonably comparable?

iii. Additional Requirements

16. Some commenters propose to require CAF recipients to comply with certain interconnection requirements. The Commission seeks comment on whether the Commission should require CAF recipients to offer IP-to-IP interconnection for voice service, beyond whatever framework it adopts more broadly. If so, what would the scope and nature of any such requirement be? Should any obligations be based on the requirements of 47 CFR 251(a)(1), since, as ETCs, the providers subject to these requirements will be telecommunications carriers? How would any such obligations be enforced?

17. The Commission also seeks additional comment on the proposal of Public Knowledge and the Benton Foundation that CAF recipients be required to make interconnection points and backhaul capacity available so that unserved high-cost communities could deploy their own broadband networks. How would such a requirement operate? Is it sufficient to require CAF recipients to negotiate in good faith with community broadband networks to determine a point of interconnection? If there are disputes, who should resolve them? Should there be reporting requirements associated with such an obligation (i.e., should CAF recipients be required to report annually on unfulfilled requests for interconnection from community broadband networks)? What benefits might such a requirement bring that the Commission's other universal service policies are not meeting? What would the costs of such a requirement be, on funding recipients and on administration of the requirement?

18. The Commission also seeks comment on the proposal of Public Knowledge and the Benton Foundation that the Commission should create a fund for a Technology Opportunities Program to assist communities with deploying their own broadband networks. How much money should the Commission set aside for such a program? Are there any legal impediments to the Commission running such a pilot program out of the universal service fund? The Commission acknowledges the important role that WISPs, non-profits, and other small and non-traditional communications providers play in extending broadband in rural America, including in areas where traditional commercial providers have not deployed. Are there other things the Commission should be doing to enable such entities to further extend broadband coverage, particularly in currently unserved areas?

B. Connect America Fund for Rate-of-Return Carriers

19. In response to the USF/ICC Transformation NPRM, 75 FR 26906, May 13, 2010, the Rural Associations (NECA, NTCA, OPASTCO, ERTA, and WTA) proposed the creation of a new broadband-focused CAF mechanism that ultimately would entirely replace existing support mechanisms for rate-of-return carriers. Subsequently, the Rural Associations provided draft rules that provide additional context regarding the operation of their proposed CAF. The Commission now seeks focused comment on this proposal and asks whether and how it could be modified consistent with the framework adopted in the USF/ICC Transformation Order to provide a path forward for rate-of-return or carriers to invest in extending broadband to unserved areas. The Commission sets forth in Appendix G of the USF/ICC Transformation Order the draft rules, modified to take into account the rule changes adopted in the USF/ICC Transformation Order, and seeks comment on those draft rules. These rules, as modified, are not reproduced here, but are available in their entirety at http://transition.fcc.gov/Daily_Releases/Daily_Business/2011/db1122/FCC-11-161A1.pdf.

20. Under the Rural Association Plan, loop costs would be allocated to the interstate jurisdiction based on the current 25 percent allocator or the individual carrier's broadband adoption rate, whichever is greater. This would have the practical effect of reducing over time the size of legacy support mechanisms, like HCLS, that offset some intrastate costs. The new interstate revenue requirement would also include certain key broadband-related costs (i.e., middle mile facilities and Internet backbone access). In conjunction with this proposal, the Rural Associations also propose that their authorized

rate-of-return be reduced from 11.25 percent to 10 percent. CAF support would be provided under this new mechanism for any provider's broadband costs that exceeded a specified benchmark representing wholesale broadband costs in urban areas. In particular, under this proposal, CAF funding would be computed by subtracting the product of an urban broadband transmission cost benchmark times the number of broadband lines in service, from the actual company broadband network costs (which would be the sum of last mile, second mile, middle mile, and Internet connection costs). The broadband transmission benchmark would have a fixed component that would increase from $19.25 in the first year to $24.75 in the eighth year, and a variable component that is tied to an individual company's broadband take rate. In addition, there would be certain provisions to mitigate the impact on companies that would receive reduced support under the modified mechanism. The purpose of the transitional stability mechanism would be to ensure that no study area would experience a reduction in total support of more than five percent, on an annual basis, which would be funded by carriers that receive a net increase in support.

21. The Rural Associations explain that their plan is calibrated to aim for a budget target of $2.05 billion in combined funding for USF and their suggested access restructure mechanism in the first year of implementation, and may grow to $2.3 billion by the sixth year. In the USF/ICC Transformation Order, the Commission adopts an overall budget target for rate-of-return companies of $2 billion over the next six years. Given that, how could the Commission best accommodate the Rural Association Plan within the Commission's budgetary framework? If savings are realized in other components of the CAF—for example, if competitive bidding leads to less support being

disbursed through the CAF for price cap areas than has been budgeted for—should those savings be used to increase funding for rate-of-return carriers under the Rural Association Plan? Could the Commission more quickly transition existing support mechanisms to the framework proposed by the Rural Associations to stay within the overall budget? The Commission seeks year-by-year financial projections of any new mechanisms and the related impact on legacy support mechanisms, as well as the associated data and assumptions supporting those projections.

22. With respect to plan specifics, the Commission seeks comment on the benefits and the costs of providing support for middle mile facilities and access to the Internet backbone under the Rural Associations' proposal. On average for smaller carriers, approximately what proportion of the costs to deploy broadband networks and provide broadband services are attributable to middle mile and Internet backbone costs today? Commenters are encouraged to provide factual information to support any projections they submit into the record. Consistent with the overall framework adopted in the USF/ICC Transformation Order to impose reasonable limits on recovery of loop expenses, how could the Commission impose a constraint on the recovery of middle mile costs under this proposal?

23. The Rural Associations propose that costs be shifted to the interstate jurisdiction based on an individual carrier's Broadband Take Rate, which equals its total broadband lines divided by its total working access lines. Should this calculation be limited to residential lines? The Rural Associations define Broadband Line to include any line that supports voice and broadband, or only broadband, at a minimum speed of 256 Kbps downstream. The Commission seeks comment on that proposal, and asks

whether broadband lines should be defined consistent with the broadband characteristics required in its public interest obligations. What would be the impact of a more stringent definition of a broadband line in this context? If the Commission were to adopt this proposal but shift costs to the interstate jurisdiction only for loops that provide speeds of at least 4 Mbps downstream and 1 Mbps upstream, how would that affect the financial projections regarding this proposal? Are there any legal, policy or practical implications to providing CAF support for lines where the end user customer does not subscribe to voice service from the ETC? The Rural Associations' Plan contemplates that rate-of-return carriers may offer standalone broadband; to the extent they do so, absent any other rule changes, what would be the impact on USF support for rate-of-return carriers? What rule changes would help provide appropriate incentives for investment in broadband-capable networks, while limiting unrestrained growth in support provided to rate-of-return companies?

24. How does the Rural Associations' proposal to alter the current 25 percent allocation of loop costs fit within, or inform, the Federal-State Joint Board on Jurisdictional Separations' ongoing work to reform the separations process? Are there components of the Rural Association plan that should be referred to the Separations Joint Board and examined directly in that ongoing process?

25. In the USF/ICC Transformation Order, the Commission adopts a requirement that rate-of-return carriers offer speeds of 4 Mbps downstream and 1 Mbps upstream upon reasonable request. Should the Commission adopt a rule that rate-of-return carriers are not required to serve any location within their study area that is served by an unsubsidized competitor and will not receive support for those lines to the extent

they choose to extend service to areas of competitive overlap? How would the Commission implement the Rural Associations' proposal in conjunction with such a rule? In particular, what would be the methodology for removing the broadband costs associated with areas of competitive overlap from the calculation of the proposed CAF support?

26. Is a broadband urban wholesale benchmark the right approach to determine support under a new rate-of-return mechanism, or would another approach be more in keeping with the statute and prior precedent? How does comparing wholesale urban costs relate to the Commission's obligation to ensure that rural retail rates are reasonable? Should such a benchmark be based on the wholesale cost of providing broadband, or another metric? Can wholesale broadband costs be calculated reliably, particularly where wholesale broadband services are not typically offered in urban areas? As an alternative, should the relevant benchmark be set based on the price of comparable retail services in a sample of urban areas?

27. The Rural Associations' benchmark proposal contemplates a fixed and variable component of the rural benchmark. How should the Commission establish the levels for those components, and should there be a company-specific component of the benchmark? If the benchmark is tied in any manner to the National Exchange Carrier Association (NECA) tariff rates or another industry metric, does that proposal bear any risks of gamesmanship by carriers to raise or lower individual rates to maximize universal service receipts?

28. What information would the Commission need to require from carriers to evaluate and implement that Rural Association proposal? Prior to implementation,

should the Commission, for instance, require carriers to submit analyses showing their broadband adoption trends for service at varying speeds for the last five years for us to develop reasonable projections regarding broadband penetration in the future? What information should the Commission obtain regarding their middle mile costs to better understand the implications of the proposal to include middle mile costs in support calculations?

29. How would the proposed transitional stability plan mechanism operate? What would be the distributional impact of this proposal in terms of the number of companies that would see increases in support, compared to the number of companies that would see decreases in support?

30. The Rural Associations propose that incremental broadband build-out commitments would be tied to an individual company's ability to receive incremental CAF support for new investment, subject to prospective capital investment constraints and the budget target adopted by the Commission. If the Commission were to adopt such an approach, what specific metrics or build-out milestones should be established, and what reporting and certifications should be imposed to improve the Commission's ability to enforce such commitments? How should CAF associated with intercarrier compensation reform be incorporated into any rate-of-return CAF mechanism? Would the public interest obligations for CAF associated with intercarrier compensation reform be updated to reflect any new obligations? The Commission seeks comment more broadly on how its universal service policies can best accelerate broadband deployment to consumers served by rate-of-return carriers, many of whom reside in rural America. In the long term, should universal service support for rate-of-return carriers be distributed

through separate mechanisms from the mechanisms used to distribute support for other types of carriers, or is a uniform national approach preferable to achieve its universal service objectives? The Commission seeks comment on any other proposals to transition areas served by rate-of-return carriers to CAF, or any other analysis or recommendations that could facilitate this process.

C. Interstate Rate of Return Represcription

31. As explained in the Order, rate-of-return carriers will continue to receive for some time a modified version of their legacy universal service support. The level of support they receive depends, in part, on the interstate rate of return allowed for plant in service. As a result, the Commission concluded it was necessary to evaluate the authorized interstate rate of return for rate-of-return carriers, which has not been updated in over 20 years. Three major associations representing rate-of-return carriers, as well as the State Members of the Federal-State Joint Board on Universal Service, have proposed a reduction in the current rate of return, which is currently set at 11.25 percent, in the context of overall reform. The Commission agrees that it is appropriate at this time to reexamine the rate of return as part of comprehensive reform of the universal service fund. The Commission seeks comment more generally on how this prescription fits within the broader reform framework for rate-of-return carriers, and specifically in what manner this prescription process should be linked to other proposals in this FNPRM, including the separate CAF support mechanism for rate-of-return carriers.

32. With respect to the prescription process itself, the Commission's statutory authority under 47 U.S.C. 205 provides the power to determine and prescribe those elements that make up the charge, including the interstate rate of return. The rate of

return must be high enough to provide confidence in the financial integrity of the carrier, so that it can maintain its credit and attract capital. The return should also be commensurate with returns on investments in other enterprises having corresponding risks. On the other hand, the return should not be higher than necessary for this purpose.

33. The Commission last prescribed the authorized interstate rate of return in 1990, reducing it from 12 percent to 11.25 percent. The Commission believes fundamental changes in the cost of debt and equity since 1990 no longer allow it to conclude that a rate of return of 11.25 percent is necessarily just and reasonable as required by 47 U.S.C. 201(b). The rate-of-return carrier associations proposed a reduction in the interstate rate of return from the current 11.25 percent to 10 percent. The State Members of the Federal-State Joint Board proposed that the rate be reduced further to 8.5 percent. The State Members highlight that the interest rate on a three month Treasury Bill has fallen from 7.83 percent in 1990 to 0.15 percent in January 2011. Further, the Commission observes that the average 10-year treasury constant maturity rate has declined from approximately 8.1 percent in January 1991 to approximately 2 percent in September 2011.

34. The Commission finds compelling evidence that its presently applied interstate rate-of-return, 11.25 percent, is no longer reflective of the cost of capital. The Commission believes updating the rate of return is necessary for rate-of-return carriers to both attract capital on reasonable terms in today's markets and encourage economically sound network investments. The Commission welcomes input from state regulators that may have insights from conducting intrastate rate of return represcriptions in recent years. The Commission also invites comment on how the Commission can ensure that

the rate of return over time remains consistent with changes in the financial markets and cost of capital. The Commission seeks comment on means by which the rate of return can be adjusted automatically based on some set of financial triggers, and how any such triggers would operate.

35. When it last initiated an interstate rate of return prescription proceeding in 1998, the Commission sought comment on the methods by which it could calculate incumbent LECs' costs of capital. The Commission seeks comment on the issues raised in the 1998 Prescription Notice generally and asks parties to provide the data responsive to the previous requests. In particular, the Commission seeks comment on the following:

36. WACC. Weighted average cost of capital (WACC) identifies the rate of return required to maintain the current value of a firm; alternatively, it is the minimum rate of return the firm needs to offer to investors to maintain access to its current supply of capital. WACC is the key component for prescribing the rate of return. The Commission seeks comment on how to calculate the WACC for the relevant companies. The Commission asks whether the formula to determine the WACC in 47 CFR 65.301-305 is the proper framework for this represcription, and whether any modification or update to the formula or inputs is warranted or necessary. Specifically, the Commission's rules provide that WACC is the sum of the cost of debt, the cost of preferred stock, and the cost of equity, each weighted by its proportion in the capital structure. Does this remain the correct approach? Should the Commission augment, or replace, its WACC calculation with any other analysis or approaches? Looking to the WACC calculated for an entire company, rather than for a specific line of business, is appropriate, for example, when thinking about setting an allowed rate-of-return for an

entire company. In contrast, this overall WACC would not in general inform a business as to whether to undertake a specific project. Typically, specific projects that have greater risk and therefore a greater cost of capital than the entire company are only undertaken when much higher rates of return are expected. Given that many rate-of-return companies have diversified beyond regulated voice services, for example to offer broadband, video, or wireless services, should the WACC be computed for only the regulated portion of the company's business, or at the level of the entire company? The Commission seeks comment on this analysis, and how, if at all, it should impact its rate-of-return calculation, and use of WACC for these purposes.

37. Data. The Commission seeks comment on the appropriate data and methodologies the Commission should use to calculate the WACC. The Commission notes that some of the formulas in the rules rely on ARMIS data, which are no longer collected. In the absence of ARMIS data, what additional data should the Commission require and rely upon, and who should be required to file the data? Are there other publicly available data that could provide the necessary information? Does the absence of any particular data necessitate a different approach to any of the necessary calculations?

38. Capital Structure. Under the Commission's WACC calculation, the estimated cost of debt, preferred stock, and equity of a company are all weighted relative to their proportion in the firm's capital structure. A firm's capital structure can be measured on a book basis or market basis. The Commission seeks comment on whether the formula in 47 CFR 65.304 based on book values remains the correct approach, and whether any modification to the formula or inputs is warranted or necessary. Are there

other components of the cost of capital that should be included in the capital structure, and should any of the elements listed in the rules be excluded?

39. Surrogates. Because the vast majority of rate-of-return carriers are not publicly traded, the Commission must select an appropriate set of surrogate firms, for which financial data is available publicly, to use as a basis for the cost of capital analysis. To do so, the Commission must select a group of companies for which there is available financial data and that face similar risks to rate-of-return carriers. The Commission's rules provide that the proper group of surrogates is all local exchange carriers with annual revenues equal to or above the indexed revenue threshold, which is $146 million this year. In the 1998 Prescription Notice the Commission sought comment on what group of companies should be selected as surrogates and tentatively concluded at that time that the Regional Bell Operating Companies' (RBOCs) risk most closely resembled the risk encountered by the rate-of-return carriers. The Commission seeks comment on whether that group should be used as surrogates here, or whether another group of providers, for example smaller publicly traded carriers, not including the RBOCs, would better serve this purpose. Should the surrogate group include publicly traded rate-of-return companies only, or a mixture of publicly traded rate-of-return companies and smaller price-cap companies? Commenters proposing a particular surrogate group should clearly define that group, identify the publicly available financial data for that group, and explain how that group best reflects the business risks and cost of capital of rate-of-return carriers.

40. Cost of Debt. A firm's cost of debt can be estimated by dividing its total annual interest expense by its average outstanding debt measured on a historic book

basis, or alternatively, on a market basis using the current yield to maturity. The Commission seeks comment on the cost of debt formula in 47 CFR 65.302 of the Commission's rules based on book values. The Commission had previously noted that the book basis is more objectively ascertainable, but may not fully reflect current investor expectations. The Commission seeks comment on that assessment, and the relative weight either the book or market approach should be given in its calculations. The Commission's rules provide that this measurement should occur for the most recent two years. Is this the correct time period, or is a longer or shorter period warranted?

41. Cost of Preferred Stock. A firm's cost of preferred stock can be calculated by dividing the total annual preferred dividends by the total proceeds from the issuance of preferred stock. The Commission asks whether the formula in 47 CFR 65.303 remains the correct one, and whether any modification to the formula or inputs is warranted or necessary. The Commission's rules provide that this measurement should occur for the most recent two years. Is this the correct time period, or is a longer or shorter period warranted? Can the WACC calculation be simplified by ignoring the cost of preferred stock (and the amount of preferred stock in the capital structure) without significantly affecting the accuracy of the WACC?

42. Cost of Equity. A firm's cost of equity can be estimated using a number of different approaches. The Commission's rules do not provide a specific formula for determining the cost of equity. In 1990, the Commission relied heavily on the discounted cash flow (DCF) methodology, which assesses a firm's stock price and dividend rate and forecasted growth rates to determine the cost of equity. There are a number of different variations of DCF, including historic and classic calculations. Alternatively, a firm's cost

of equity can be calculated using the capital asset pricing model (CAPM). To use the CAPM, estimates of the risk free rate, the market risk premium, and the correlation of surrogate companies' common stock returns with the returns of the entire market of securities (or betas) must be made. The Commission seeks comment on these approaches, and asks whether any other methodologies should be incorporated into its analysis. For instance, should the Commission rely upon any cost of equity calculations made in state proceedings addressing intrastate rate of return, or other benchmarks based on the stock market as a whole, or a subset of companies or industries? Proponents of any particular methodology should detail their preferred approach and the relevant data required to perform the necessary calculations. Commenters should also justify the relative weight any particular methodology or comparison should have in the Commission's ultimate calculation. The Commission also seeks comment on the need, if any, to make adjustments with respect to flotation costs (i.e., costs of selling new securities in the market) or dividends.

43. Zone of Reasonableness. The cost of equity, based on different methodologies and sets of reasonable assumptions and input values, as well as the WACC calculation can be used to develop a range from which the Commission can prescribe the new authorized interstate rate of return. This zone of reasonableness allows the Commission to take into account additional policy considerations before finalizing the new rate of return. The Commission seeks comment on the factors the Commission should consider in determining the rate of return from within that zone of reasonableness. The Commission asks how infrastructure deployment, particularly broadband deployment, and today's reforms should be accounted for in its analysis. Is the

deployment of broadband significantly more risky than the voice telephony business, and does it have a significantly greater cost of capital? The Commission notes, for instance, that voice telephony has nearly universal penetration, while broadband adoption is more than 65 percent nationally. If some or all of the surrogates on which the WACC estimates are based are large companies such as Verizon and AT&T, should unique competitive and market conditions for rate-of-return carriers be reflected, and should any differences in diversification in rate-of-return carrier offerings compared to large carrier offerings, which now may include voice, video, wireless, and data services, be reflected, if at all? Should any allowances made in 1990, or proposed in 1998, apply here? The Commission also seeks comment on the need to make any adjustments to capture changes in the telecommunications market generally, and ask commenters proposing any such adjustments to explain why they are necessary to prescribe the allowable rate of return for multi-use plant that can provide voice, data, video and other services, in particular, and how any such adjustments should be structured. Lastly, the Commission asks whether any of these policy considerations should also be reflected in any other components of the WACC calculation, and, if so, in what manner.

44. Preliminary Analysis. The Commission estimate, using recent public data, the WACC for AT&T and Verizon and find it in the range of 6 to 8 percent. This range is consistent with other analysts' estimates. The Commission finds a similar range when considering other mid-size and competitive carriers. Even if the interest rate were to increase by 1.5 percent, which seems unlikely in today's economy, the WACC would remain in the range of approximately 7 to 8 percent. This preliminary analysis would conservatively suggest that the authorized interstate rate of return should be no more than

9 percent. The Commission seeks comment on this analysis and note that this preliminary analysis does not prejudge the Commission's ability to select a higher or lower rate of return in this proceeding.

45. Impact on Universal Service Funding. The Commission proposes that any reduction in the rate of return be reflected in its universal service rules by reducing the HCLS cap by a corresponding amount, and repurposing that funding amount consistent with the CAF framework and budget. The Commission also proposes that ICLS support be reduced by a corresponding amount as well. The Commission seeks comment on these proposals and how to calculate any such reductions. The Commission seeks comment on whether any savings realized from reducing the rate of return should be used to establish a new CAF mechanism for rate of return companies that would support new broadband investment. How would a change in the rate of return impact the Rural Association's CAF proposal discussed in this FNPRM, and does this prescription process impact the timing or operation of that proposal or any other transition of rate-of-return carriers to CAF-based support? In the alternative, The Commission seeks comment on the potential benefits of retaining the HCLS cap at the same amount even if the rate of return is reduced, which would have the effect of allowing funding to be redistributed to lower cost rate-of-return carriers that are ineligible for HCLS support today. Are there any other changes to other universal service distribution mechanisms that should be made to reflect a change to the rate of return?

46. Tribally-Owned and Operated Carriers. The Commission seeks comment on how to account for Tribally-owned and operated carriers in this prescription, and whether a different rate of return is warranted for these carriers. Tribal governments, and

by extension, Tribally-owned and operated carriers, play a vital role in serving the needs and interests of their local communities, often in remote, low-income, and underserved regions of the country. Tribally-owned and operated carriers serve cyclically impoverished communities with a historical lack of critical infrastructure. Reservation-based economies lack fundamental similarities to non-reservation economies and are among the most impoverished economies in the country. Tribal Nations also cannot collateralize trust land assets, and as a result, have more limited abilities to access credit and capital. The Commission seeks comment on how such considerations should be reflected in its analysis.

47. Other Considerations. Finally, the Commission asks commenters to address any other changes that are needed to: (1) the data used in the prescription process; or (2) the calculations the Commission must perform to prescribe a new interstate rate of return. The Commission also invites commenters to provide any other relevant evidence or studies that could assist in this represcription.

D. Eliminating Support for Areas with an Unsubsidized Competitor

48. In the USF/ICC Transformation Order, the Commission concludes that it will phase out all high-cost support received by incumbent rate-of-return carriers over three years in study areas where an unsubsidized competitor, or combination of unsubsidized competitors, offering voice and broadband service that meets its performance obligations serves 100 percent of the residential and business locations in the incumbent's study area. The Commission seeks comment on a proposed methodology for determining the extent of overlap, a process for preliminary determinations of such overlap, a process for the affected ETC to challenge the accuracy

of the purported overlap, with input from the relevant state commission and the public, and how to adjust support levels in situations with less than 100 percent overlap.

49. To determine what rate-of-return study areas have 100 percent overlap by an unsubsidized competitor, staff performed a preliminary analysis. The analysis relies on two sets of data: TeleAtlas Wire Center Boundaries (6/2010) and data from the State Broadband Initiative (SBI) program administered by NTIA as of December, 2010.

50. First, staff identified which census blocks are in each rate-of-return study area, including a census block in a study area if the centroid of that census block is within the TeleAtlas boundaries for a wire center associated with the study area. Next, staff identified study areas where a wired provider other than the incumbent local exchange carrier offered broadband service at speeds of at least 3 Mbps downstream/768 kbps upstream to all of the census blocks in the study area. Staff excluded all resellers as identified in the SBI data and included only xDSL, cable, and fiber technologies.

51. The Commission seeks comment on whether this is an appropriate methodology for determining areas of overlap, which will result in adjustments to support levels for the rate-of-return ETC.

52. The Commission's staff performed a preliminary analysis examining census blocks smaller than two square miles and identified 18 rate-of-return study areas with 99 percent or greater overlap; and an additional 19 with greater than 95 percent overlap (a total of 37 study areas with greater than 95 percent overlap).

53. This analysis has several potential limitations. TeleAtlas data may not represent the actual incumbent local exchange carrier footprint in all instances. In addition, TeleAtlas data generally assign all geographies to one incumbent provider's

footprint or another; however, in reality, there are large, generally unpopulated areas not served by any incumbent carrier facilities. As such, this analysis may over-estimate the rate-of-return ETC's footprint and under-estimate the extent to which the populated portions of that footprint are completely overbuilt by competitive networks.

54. SBI data have their limitations as well, as the Commission acknowledged in its most recent Broadband Progress Report. In addition, SBI data only measure the availability of broadband capable of delivering at least 768 kbps downstream and 200 kbps upstream. There is no direct measure of the availability of voice service, but the Commission presumed that an unsubsidized xDSL, fiber, or cable competitor that has deployed a broadband network that meets the SBI standard also is offering voice services.

55. The Commission notes that small blocks could be reported as served if as few as one location in that block has service or could have service within a typical service interval. The Commission seeks comment on whether this could lead us to count areas as served by an unsubsidized competitor even if a meaningful number of locations are, in fact, not served.

56. The Commission seeks comment on how best to deal with data relating to large blocks. Since neither NTIA nor the Commission has access to the actual location of businesses or homes, SBI population estimates data relies on estimating home locations by random placement of locations along roads. While this will provide an accurate view of the fraction of large blocks that are served in aggregate, it will likely lead to over- or under-estimates in any small number of some large blocks. How can the Commission use such data to determine whether a large block is served or not?

57. The Commission seeks comment on a process for identifying areas with greater than 75 percent overlap. The Commission proposes that WCB identify areas with greater than 75 percent overlap, utilizing the finalized methodology, and then publish the results of that analysis. The Commission proposes that WCB provide the affected ETC an opportunity to challenge the accuracy of the purported overlap and to take public comment for a period of time, such as 45 days. The Commission seeks comment on this proposal.

58. Several commenters supported state involvement in a process to determine areas of overlap. How could state commissions play a role in determining the extent of overlap? For instance, after WCB performs the overlap analysis, should there be a period of time for the relevant state commission to comment on the analysis? What would be a reasonable time frame to request an evaluation from a state commission regarding such overlap? Alternatively, could the Commission establish a process in which state commissions advise us, by a date certain, which study areas served by rate-of-return carriers have unsubsidized facilities-based competitors, and therefore should be subject to potential adjustments in high-cost support?

59. The Commission also seeks comment on whether support levels would need to be adjusted in areas where there is less than 100 percent overlap by an unsubsidized facilities-based provider of terrestrial fixed voice and broadband service. To the extent support levels do need to be adjusted, the Commission seeks further comment on how to do so.

60. In the August 3 Public Notice, 76 FR 49401, August 10, 2010, the Commission sought comment on how to allocate costs between the overlap areas and the

ILEC-only areas, including whether the Commission should use a cost model to accomplish that allocation.

61. In response to the August 3 Public Notice, NCTA recommended that the Commission should identify study areas served by rate-of-return regulated incumbent LECs where (1) unsubsidized broadband providers serve more than 75 percent of homes; and (2) current high-cost support exceeds projected support under the cost model for the remaining areas by more than 10 percent. During the interim period, in any study area that meets those criteria, the Commission should provide notice to the carrier that support will be reduced to the level suggested by the cost model unless it can demonstrate that a higher amount is necessary. The Commission seeks comment on this proposal.

62. The Commission notes that in the USF/ICC Transformation Order, it directed WCB to develop and finalize a cost model for use in price cap territories. Would it be appropriate to use such a model, after appropriate public input, in the way described by NCTA to create a presumptive reduction in support levels for rate-of-return carriers? For purposes of determining whether model-determined support in the remaining areas (i.e., the areas of no overlap) exceeded current support by more than 10 percent, would the Commission need to allocate the current high-cost support between the areas of overlap and the areas where there is no overlap? To the extent that support would need to be allocated between areas of overlap and no overlap, what criteria or standards would govern any such allocation? Should there be a rebuttable presumption that all costs are divided pro rata among access lines, and allocated to the census block in which that access line is located, so that absent an appropriate showing the recipient would receive the same support amounts per line, but only for those lines that fall outside the area of

overlap? Cablevision suggests that only costs solely attributable to the non-competitive area should be supported, and that most of the costs of overhead (which presumably are largely associated with customers in the areas where there is competitive overlap) should not be recoverable. Would that be a workable approach? How should the Commission allocate costs associated with cable and wire facilities, and central office equipment, between competitive and non-competitive areas?

63. NCTA suggests that there be a process in which a carrier subject to reductions could demonstrate that a higher amount is necessary. Should reductions commence within a specified time period, such as 120 days, absent a showing that additional support is necessary? What process should be established for rate-of-return carriers subject to potential support adjustments to contest any such adjustments? For instance, should they be required to show that the adjusted levels would be inadequate to continue to provide voice service to consumers, for example, using the criteria the Commission set forth in the USF/ICC Transformation Order for petitions for waiver? Should the Commission undertake a total company earnings review in those circumstances? Should the Commission seek input from the relevant state commission on whether support amounts should be adjusted, and how that would impact consumers in the relevant communities?

64. If the Commission were to adopt any of these proposals to adjust support levels, over what time period should support levels be transitioned to new levels in situations where there is less than 100 percent overlap?

E. Limits on Reimbursable Capital and Operating Costs for Rate-of-Return Carriers

65. In the USF/ICC Transformation Order, the Commission adopts a rule to use benchmarks for reasonable costs to impose limits on reimbursable capital and operating costs for high-cost loop support received by rate-of-return companies. A specific methodology for calculating individual company caps for HCLS is set forth in Appendix H of the USF/ICC Transformation Order, which is available in its entirety at http://transition.fcc.gov/Daily_Releases/Daily_Business/2011/db1122/FCC-11-161A1.pdf, and is summarized herein at section I.E.1. The Commission seeks comment on using this methodology to impose limits on reimbursement from HCLS and proposes to implement this methodology for support calculations beginning July 1, 2012.

66. Appendix H of the USF/ICC Transformation Order uses, the methodology of quantile regression analyses to generate a set of limits for each rate-of-return cost company study area. These would limit the values used in eleven of the twenty-six steps in NECA's Cost Company Loop Cost Algorithm, which is used to calculate the study area's total unseparated cost per loop, and ultimately its HCLS. The regression-derived limits are set at the 90th percentile of costs for each individual step in NECA's Cost Company Loop Cost Algorithm, compared to similarly situated companies for each individual step. In other words, a company whose actual costs for a particular step in the algorithm are above the 90th percentile, compared to similarly situated companies, would be limited to recovering amounts that correspond to the 90th percentile of cost, i.e. the amount of cost that ninety percent of similarly situated companies are at or below when they submit costs for that particular step in the algorithm. The Commission seeks

comment on whether the 90th percentile is the appropriate dividing line to disallow recovery of cost, or whether the Commission should establish a lower or higher threshold, such as the 85th percentile or the 95th percentile.

67. For the dependent variable in the regression analysis, Commission staff limited its analysis to cost data filed by rural rate-of-return companies that submit cost data, and excluded cost data filed by price cap carriers. For the independent variables, staff used 2010 block-level Census data that it mapped to each study area. The independent variables included: number of loops, number of housing units (broken out by whether the housing units are in urbanized areas, urbanized clusters, and nonurban areas), as well as several geographic measures such as land area, water area, and the number of census blocks (all broken out by urbanized areas, urbanized clusters, and nonurban areas). The analysis thereby recognizes that many smaller study areas (those with lower populations to serve) and more rural geographies (those with lower population densities) legitimately have higher costs per line (i.e., compared to the national average cost per loop) than larger study areas that contain significant urban populations.

68. As explained more fully in Appendix H of the USF/ICC Transformation Order, quantile regression has several advantages over other statistical techniques for identifying outliers. Although the Commission finds that quantile regression is an appropriate technique to use in setting benchmarks on reimbursable investment and expenses, the Commission invites further comment on alternative statistical techniques.

69. This methodology utilized variables that are currently available to the Commission. The Commission acknowledges that in their analysis using proprietary cost data, the Nebraska Companies also included variables for frost index, wetlands

percentage, soils texture, and road intersections frequency. As noted in the USF/ICC Transformation Order, the soils data from the Natural Resource Conservation Service (NRCS) that the Nebraska study used do not cover all the study areas used in its regressions (such as Puerto Rico, Guam, American Samoa, US Virgin Islands, Northern Mariana Islands, and Alaska). The Commission seeks comment on sources of other soil data that completely cover all the study areas or how to deal with those study areas where the SSURGO data are missing or incomplete. To the extent any commenter advocates use of a methodology that includes additional independent variables, they should identify with specificity the data source and the completeness and cost of the additional data, if not publicly available.

70. In the USF/ICC Transformation Order, the Commission concludes that support will be redistributed to those carriers whose unseparated loop cost is not limited by operation of the benchmark methodology. Based on 2010 NECA data filed with the Commission, and using an estimate of $455 for the national average cost per loop, it estimates this proposed methodology would reduce HCLS payments to about 280 rural rate-of-return cost study areas by an estimated $110 million, with approximately $55 million redistributed to approximately 340 cost company study areas whose unseparated loop cost is not limited by operation of the benchmark methodology. The Commission thus estimates that more study areas could see increases in HCLS than would see decreases.

71. In the USF/ICC Transformation Order, the Commission concludes that it should also limit recovery of excessive capital and operating costs through the interstate

common line support mechanism. The Commission seeks comment on how specifically to implement such a limit for ICLS.

72. Although the Commission currently does not receive detailed cost data for determining ICLS, the Commission believes the best approach for calculating benchmarks to limit reimbursable capital and operating costs for ICLS would be to use a methodology similar to the one developed for HCLS, and seeks comment on this proposal. In the USF/ICC Transformation Order, the Commission modifies its rules to require NECA to provide to the Commission upon request underlying data collected from ETCs to calculate payments under the current support mechanisms, including ICLS. In the USF/ICC Transformation Order, the Commission directs NECA to file the detailed revenue requirement data it receives from carriers no later than thirty days after release of the USF/ICC Transformation Order so that WCB could evaluate whether it should adopt a methodology using these data.

73. The Commission seeks comment on two other alternatives that would not use the detailed revenue data from NECA or require carriers to file additional data. First, the Commission could run a single regression using the total interstate revenue requirement for each carrier, but this approach does not distinguish between capital and operating costs. Second, the Commission could use the decrease in cost per loop resulting from the regressions used to limit HCLS to limit a carrier's interstate revenue requirement. While the Commission recognizes that there are some differences between the costs used to calculate unseparated loop costs and the common line revenue requirement, and between loops and access lines, the Commission seeks comment on

whether they are equivalent enough for purposes of establishing benchmarks for reasonable costs.

74. The Commission seeks comment generally on whether network operation and investment by Tribally-owned and operated carriers is significantly different from non-Tribal conditions to warrant special treatment for purposes of establishing benchmarks for permissible capital and operating costs. The Commission seeks comment on whether the 90^{th} percentile is the appropriate dividing line to disallow recovery of costs, or whether it should establish a lower or higher threshold, such as the 85^{th} percentile or the 95^{th} percentile. The Commission seeks comment here on whether a different percentile is appropriate for Tribally-owned and operated carriers, or whether it should otherwise alter the methodology to take into account the unique circumstances of Tribally-owned and operated carriers that are just beginning to serve their communities.

1. Modeling Limits on Reimbursable Operating and Capital Costs

75. Overview. This section summarizes the methodology set forth in Appendix H of the USF/ICC Transformation Order, which is available in its entirety at http://transition.fcc.gov/Daily_Releases/Daily_Business/2011/db1122/FCC-11-161A1.pdf, for determining carrier-specific limits on High Cost Loop Support (HCLS) payments to rate-of-return cost carriers with very high capital expenses (capex) and operating expenses (opex) relative to their similarly situated peers. The methodology operates within the current HCLS calculation algorithm, using information that is readily available to the Commission and to the public. This section describes both the

econometric process used to establish carrier-specific limits to HCLS payments and the implementation process.

76. This work significantly extends the analyses submitted by the Nebraska Rural Independent Companies, which use ordinary least squares regression analysis to develop a framework to predict capital and operating expenditures. The Nebraska study examines data for a subset of rural rate-of-return carriers, and uses proprietary data not available to the Commission or to the public. In contrast, the proposed methodology described herein uses data currently available to the Commission and sets forth a detailed and implementable mechanism for examining all rural rate-of-return cost study areas and limiting HCLS payments in those study areas that have costs higher than the vast majority of their similarly-situated peers. The Commission uses quantile regression for parameter estimation rather than ordinary least squares for reasons set forth below. In addition, because directly implementing caps for capex and opex cannot be accomplished without fundamentally altering the way HCLS support payments are calculated today, the methodology described can be implemented quickly within the current HCLS framework.

77. Methodology for Imposing Limits. This methodology creates caps for 11 of the algorithm steps in NECA's 26-step Cost Company Loop Cost Algorithm. These algorithm steps are all functions of cost categories that are defined in NECA's Appendix B. The methodology calculates the maximum amount for each of the 11 algorithm steps as the 90^{th} percentile cost for a similarly situated company. A company whose actual costs for a particular step in the algorithm are above the 90^{th} percentile, compared to similarly situated companies, would be limited to recovering amounts that correspond to

the 90th percentile of cost, i.e. the amount of cost that ninety percent of similarly situated companies are at or below when they submit costs for that particular step in the algorithm

78. The methodology involves a quantile regression analysis using data from nearly all the rural rate-of-return cost carriers for each algorithm step. The quantile regression parameter estimates are used to calculate a cap equal to the 90th percentile prediction for each carrier for that algorithm step. This is repeated for each of the rest of the examined algorithm steps. Once all the 90th percentile caps are calculated, the lesser of the company's capped algorithm step value and the original value is inserted into the appropriate algorithm step, which then flows into the later algorithm steps as before. The 11 algorithm steps in the analysis are identified below.

79. The Commission considered using an ordinary least squares-based analysis to set the caps, but decided that quantile regression was preferable for two reasons. First, error terms in bivariate OLS models of each algorithm step on the loops variable exhibit heteroscedasticity. While ordinary least squares-based analyses such as weighted least squares can certainly deal with heteroscedasticity, it complicates efforts to deal with other problems such as outliers and non-Gaussian error terms.

80. Further, ordinary least squares can produce biased parameter estimates in the presence of outliers. Ordinary least squares has methods available for dealing with outliers, such as excluding them from the analysis or using dummy variables to deal with them, but that requires exercise of judgment as to which observations are truly outliers. Also, given the data currently available to the Commission, distinguishing between study areas with high idiosyncratic costs (i.e., those that truly are the most expensive-to-serve areas) and others with excessively high cost (e.g., due to imprudent or unnecessarily large

past investments) is challenging. Further complicating matters, some carriers may enjoy especially low costs compared to their peers for idiosyncratic reasons. While these observations would be outliers, they would be masked by the virtue that they are somewhat "too low" and therefore it would be difficult to properly identify and deal with those outliers. Thus, simply looking only for observations that are too high may be insufficient. When using ordinary least squares, failing to account for all outliers (including the difficult-to-find outliers that are "too low") could bias the regression coefficients which would then bias payments to carriers. Quantile regression solves this problem.

81. Use of Quantile Regression. Quantile regression, developed by Roger Koenker and Gilbert Basset in 1978, is a good solution to address these problems. It is similar to ordinary least squares regression, but where ordinary least squares minimizes the sum of squared residuals from the regression line, the median quantile regression minimizes the sum of absolute residuals from the regression line; for quantiles other than the median, quantile regression minimizes the sum of asymmetrically-weighted absolute residuals.

82. While ordinary least squares requires the error terms be homoscedastic, quantile regression makes fewer assumptions about the error term than ordinary least squares, and so there is no need to correct for heteroscedasticity. Thus the quantile regression methodology is robust to error structures that are non-Gaussian or violate the assumption of the normal distribution of errors required for unbiased estimation using ordinary least squares.

83. Quantile regression is also resistant to outliers, so the parameter estimates would be little changed by accounting for (or not) particular observations as outliers. That is, if one were to modify the analysis to account for any known outliers, then the Commission would not expect the list of study areas affected by the caps or the levels of those caps to change very much. Given the complexities of identifying outliers mentioned above, this is an attractive property.

84. Another significant advantage of quantile regression is that it allows the independent variables to have different effects on the study areas in the different quantiles. Thus, for illustrative purposes, if the number of housing units in a rural area increased while holding everything else constant, the size of the study area's cost increase could differ based on which quantile it is in. Hypothetically, the marginal effect of a change could even be positive for a carrier in one quantile (such as the 90th percentile) and negative for a carrier in another (such as the 10th percentile). This is not allowed in ordinary least squares, which assumes that the marginal effect is the same on all carriers. Given that the Commission is examining carriers with high costs relative to other carriers, this is an especially helpful property.

85. Setting the Quantile Threshold. This methodology uses the 90th percentile because carriers with costs exceeding 90 percent of their similarly-situated peers may raise questions about the prudence of such expenditures. In the Further Notice, the Commission seeks comment on whether to set the exact quantile to a lower or higher level such as the 85th percentile or the 95th percentile.

86. All of the regressions were log-log: all dependent and most independent variables were logged using the natural log. For those variables that were logged, the

Commission added one before taking the log so that observations with values equaling zero could be included in the analysis.

87. While many of the measures of density are collinear, this is not problematic for this methodology because our goal is prediction, not statistical inference. Multicollinearity does not harm predictions.

88. Dependent Variables. Consistent with the idea of limiting reimbursements for capex, the Commission creates caps for algorithm steps 1, 2, 17 and 18. Algorithm steps 1 and 2 represent the two categories of gross plant. Algorithm steps 17 and 18 represent the depreciation and amortization associated with the plant represented in algorithm steps 1 and 2.

89. Consistent with the idea of limiting reimbursements for opex, the Commission creates caps for algorithm steps 7, 8, 13, 14, 15, 16, and 21. Algorithm steps 7 and 8 represent materials and supplies. Algorithm steps 13 and 14 represent maintenance. Algorithm steps 15 and 16 represent network support and general support expenses. Algorithm step 21 represents benefits other than corporate operations expenses. By creating caps for these 11 algorithm steps, the Commission limits the reimbursements for capex and opex expenditures that exceed those of the vast majority of similarly-situated carriers.

90. The Commissions excludes algorithm step 19 (corporate operations expense) from the regression analysis because limitations for that cost category have been separately adopted in the USF-ICC Transformation Order, and also excludes algorithm step 20 because it represents taxes. Additionally, the Commissions excludes algorithm step 22 (rents) because the regression fit is so poor. Because the regressions are run

independently, the exclusion of algorithm step 22 from the methodology does not affect the other regressions.

91. As mentioned above, some of the early algorithm steps calculate factors (based on the reported cost categories) that flow into later algorithm steps. While the Commission does not directly modify algorithm steps 3, 4, 5, 6, 9, 10, 19, 20, and 22, the Commission allows changes in algorithm steps 1 and 2 to flow through to these algorithm steps. For example, algorithm steps 1 and 2 flow into algorithm step 20, which accounts for operating taxes to be assigned to loop costs. Thus, a reduction to algorithm step 1 and/or 2 could lead to a reduction in algorithm step 20, which would be in accordance with the approach of limiting HCLS payments to study areas with very high capital expenses.

92. As with the independent variables, the values of the algorithm steps in our analysis were logged to linearize the model. In two instances, a study area had a negative algorithm step value, which prevented us from taking the natural log for those two values. These two observations were omitted. The data from these two study areas were still included in all the other regressions. Where the algorithm step value was negative, the study area's original algorithm step value was retained.

93. Independent Variables. The independent variables in this study are those that the Commission believes correlate with each carrier's costs, are currently available to the Commission, and exist for all study areas in the regression analysis. The independent variables in the methodology are proxies for scale, density, and terrain. Other than the number of loops the study area serves, all the independent variables are from the 2010

United States census. As with the algorithm step variables, the Commission took the natural logs of all the independent variables to linearize the model.

94. Census block data were rolled up to study area boundaries using Tele Atlas data. There were 28 study areas without census block information that were excluded from this analysis. There are two significant advantages to using block-level census data. First, census blocks are most granular areas at which the Census Bureau publishes data, so using census blocks allows for the most accurate mapping of demographic data such as housing units to study areas. Second, census blocks are designated as being part of (in decreasing urbanness order) an urbanized area, urbanized cluster or nonurban. In this fashion, the Commission allowed the nonurban (rural) independent variables to have different effects from the urban variables. For instance, the additional cost of serving an additional urban housing unit (holding all else constant) is likely to be different than the cost of serving an additional rural housing unit. Therefore, for each of the census-based independent variable in our analysis, the Commission rolled the data up based on whether they are in an urbanized area, urbanized cluster or rural area within the study area.

95. Not all the variables are significant in each regression, and there are some variables (such as the log of land area in urbanized clusters) that are not significant in any of the regressions. The Commission chose to use all the variables in all the regressions so long as the parent variable (such as land area) had at least one child variable (such as land area in a non-urbanized area) that was significant for at least one of the regressions in the analysis. While this meant that some regressions had many insignificant variables, this was not a problem because the goal of the regression was not to determine

statistically significant correlations, but instead to generate 90th percentile predictions, which are unaffected by the addition of insignificant variables.

96. The Commission used two measures of scale, loops and housing units. The more loops the carrier is serving, the higher its expenses will be. The Commission uses the number of loops in NECA's October 2011 filing. The NECA data do not disaggregate loop data by urbanized clusters, urbanized areas or non-urban areas, so the Commission includes an additional scale variable with the urbanness breakout: housing units.

97. The Commission included two measures of density in our analysis, the weighted housing unit density and the number of census blocks in the study area. Because it is easier to wire businesses and homes when they are close to each other than when they are far apart, the Commission expects that costs will decrease with density. There are several ways one can measure density, however.

98. The simple method, which merely divides the study area's number of housing units by total area (or just land area) does not take into account the possibility that large swaths of land in a study area may have absolutely no homes or businesses. So the Commission calculated the weighted average density for each study area using census block data.

99. For each census block in each study area, the Commission calculated the block's density by dividing the number of housing units in the block by the area of the block. The Commission then set the weight for each block equal to the number of housing units in the block divided by the total number of housing units in the study area. Thus, blocks without any homes had no weight. Again, census data do not include the

number of businesses in the block, so they could not be included in the density calculation.

100. The Commission included land and percent water in each study area as a rough indicator of terrain-driven costs. The Commission expects that holding everything else constant, the more land area that a carrier has in its territory, the more expensive it is to serve. Similarly, the more water area in the study area, the more expensive it should be to serve, because roads are typically routed around such water, so the natural pathways for the carrier's cabling are longer than they otherwise would be.

101. Results. The regression analysis was run for the four most recent years of data that NECA reported to the Commission: 2007 – 2010. The results for each year of data were very consistent with each other. The regression results from 2010 are available at http://transition.fcc.gov/Daily_Releases/Daily_Business/2011/db1122/FCC-11-161A1.pdf.

102. Two versions of the quantile regression analysis are presented there: Table 1 includes the weighted density variable, and Table 2 excludes it. Perhaps surprisingly, weighted density was significant in only one of the regressions in Table 1. One may think weighted density is insignificant in this model because of the inclusion of the other density measures (the three blocks variables), but weighted density is still insignificant when the blocks variables are omitted. (Further, the pseudo R^2 drops when the Commission omits the blocks variables, so it keeps the blocks variables in the analysis and drops the weighted density variable.) The Commission therefore uses the model that excludes weighted density.

103. As expected, the loops variable was the most influential independent variable in predicting the values for the algorithm steps. The remaining variables are significant in many of the regressions (both when including and excluding the weighted density variable), and so they remain in the regressions.

104. As mentioned above, the study area's capped algorithm step values (or the original algorithm step values where they are lower than the capped algorithm step values) are inserted into the algorithm. These step values then flow into later algorithm steps that ultimately determine the Study Area Cost Per Loop value.

105. In addition, WCB has released additional relevant data at: at http://fcc.gov/encyclopedia/rate-return-resources under the heading "Connect America Fund FNPRM Appendix H Data [zip file]."

106. Implementation. This proposed methodology would be updated annually to establish limits on the Study Area Cost Per Loop values, which are used to determine eligibility for HCLS payments.

F. ETC Service Obligations

107. The Commission seeks comment on what action may be appropriate to adjust ETCs' existing service obligations as funding shifts to new, more targeted mechanisms. The Commission's aim is to ensure that obligations and funding are appropriately matched, while avoiding consumer disruption in access to communications services.

108. Under the new funding mechanisms established in the USF/ICC Transformation Order and proposed in the FNPRM, ETCs may receive reduced support in their existing service areas, and ultimately may no longer receive any federal high-cost

support. The Commission seeks comment on whether such reductions should be accompanied by relaxation of those carriers' voice service obligations under 47 U.S.C. 214(e)(1) in some cases. For example, under the CAF Phase II process, an incumbent LEC that declines to undertake a state-level service commitment may lose some or all of its ongoing support in that state. Similarly, the Commission will gradually phase out all high-cost support received by incumbent rate-of-return carriers in study areas where an unsubsidized competitor – or a combination of unsubsidized competitors – offers voice and broadband service that meets the performance requirements for 100 percent of the residential and business locations in the incumbent's study area. Likewise, competitive ETCs that today receive support under the identical support rule will see funding in their existing service areas phased down over time as set forth in the USF/ICC Transformation Order, although those ETCs will be eligible for targeted funding to extend advanced mobile services through the Mobility Fund Phase I and Phase II. Some commenters have proposed that as these reductions occur, the Commission should relax or eliminate ETCs' voice service obligations. The Commission seeks comment on this suggestion.

109. In addition, even in service areas where ETCs retain existing support levels or receive greater funding under the Connect America Fund, that funding will increasingly be targeted at the census block level, or to other precisely defined geographic areas. For example, in the USF/ICC Transformation Order, the Commission directed WCB to develop a cost model to estimate on a granular level, such as the census block, the amount of support necessary for deployment of a broadband-capable wireline network in high-cost areas above a specified threshold, and to use the output of that model to calculate the support that incumbent price cap companies would receive if they

undertake state-level broadband service commitments. These price cap ETCs will still be subject to voice service obligations under 47 U.S.C. 214(e)(1), however, and the model-derived support amount will not include a separate estimate of support for the cost of providing voice service to locations below the specified threshold or those locations that will receive funding from the Remote Areas Fund that the Commission establishes in the USF/ICC Transformation Order,. Likewise, competitive ETCs that bid for Phase I Mobility Fund support will be required to offer advanced mobile service in specific unserved census areas, but their state or federally-defined service territory may be substantially larger than their bid areas. The Commission seeks comment on whether, in situations such as these, some adjustment in affected ETCs' 47 U.S.C. 214(e)(1)obligation to offer service throughout their service area may be appropriate. Alternatively, the Commission seeks comment on whether it should adopt a federal framework for the process to be used in redefining service areas, by the states or the Commission, as appropriate. What specific modifications to 47 CFR 54.207 would be appropriate? Should there be uniform procedures for service area redefinition for ETCs that are incumbent carriers, regardless of whether the incumbent is classified as a rural carrier or a non-rural carrier in a particular study area?

110. The Commission proposes that existing ETC relinquishment and service area redefinition procedures, backstopped by the availability of forbearance from federal requirements, provide an appropriate case-by-case framework in which to address these issues in the near term, but the Commission also seeks comment on other approaches. To the extent that carriers find that the ETC relinquishment and service area redefinition procedures prove insufficient, the Commission proposes that case-by-case federal

forbearance would provide an appropriate remedy in the near term, as the Commission gains experience under the new universal service mechanisms established in the USF/ICC Transformation Order. Under section 10 of the Act, 47 U.S.C. 160, the Commission must forbear from applying any regulation or any provision of the Act to a telecommunications carrier. The Commission has forborne from the 47 U.S.C. 214(e)(1) requirement that ETCs offer service using at least some of their own facilities and the 47 U.S.C. 214(e)(5) requirement that the service area of a competitive ETC conform to the service area of any rural telephone company service. The Commission sees no reason why it could not likewise forbear from the 47 U.S.C. 214(e)(1) requirement that carriers offer service throughout their service area if the statutory criteria for forbearance are met. In particular, the Commission notes that 47 U.S.C. 160 expressly grants it authority to tailor forbearance relief to any or some of telecommunications carriers' geographic markets, which the Commission believes would allow it forbear from enforcing a carrier's 47 U.S.C. 214(e)(1) obligations in some parts of its service area, while maintaining those obligations elsewhere. The Commission seeks comment on its interpretation of 47 U.S.C. 160, and on its proposal to use case-by-case forbearance to adjust carriers' 47 U.S.C. 214(e)(1) service obligations under its new funding mechanisms as necessary and in the public interest.

111. The Commission notes that some commenters have sought broader modifications to the 47 U.S.C. 214(e)(1) framework, and the Commission also seeks comment on these suggestions as alternatives or supplements to the case-by-case approach it proposed. In particular, some commenters suggest that the Commission adopt a rule under section 47 U.S.C. 201 or 47 U.S.C. 254(f) providing that an ETC's 47

U.S.C. 214(e)(1) service area should be limited to those specific geographies (e.g., wire centers) where the ETC is receiving universal service support.

112. These commenters also suggest that the Commission grant blanket 47 U.S.C. 160 forbearance to the extent 47 U.S.C. 214(e)(1) requires ETCs to offer service in areas where they receive no universal service support. In the alternative, commenters suggest that the Commission reinterpret 47 U.S.C. 214(e)(1) to require the provision of service only in areas where those services actually are supported, contending that the requirement in 47 U.S.C. 214(e)(1) that ETCs offer the services that are supported suggests that the service obligation only attaches where support actually flows.

113. The Commission seeks comment on each of these proposals. In particular: Do these approaches appropriately balance federal and state roles in the designation and oversight of ETCs? Are they in tension with the requirement in 47 U.S.C.214(e)(4) that ETCs may only be allowed to relinquish their designations in areas served by more than one eligible telecommunications carrier, i.e., areas where service will continue even if relinquishment is permitted? Are they in tension with the statutory language in 47 U.S.C. 214(e)(5) that the service area of a rural telephone company is its study area, unless the Commission and the states, establish a different definition? Are there ways to address this tension and ensure continued voice service to consumers in all areas of the country, while still taking steps to better align targeted funding with service obligations, as some commenters advocate? Is the proposed interpretation of 47 U.S.C. 214(e)(1) consistent with that section's requirement that carriers offer the services that are supported throughout the service area for which their ETC designation is received?

114. If the Commission were to establish a general rule that service obligations should only attach in the specific geographies (e.g., wire centers) where the ETC is receiving universal service support, the Commission also seeks comment on what would be the appropriate geography to use. Should the Commission use geographies based on the actual network architectures of fund recipients, like wire centers? Or should the Commission pick technology-neutral geographies, such as census blocks, census tracts, or counties? How granular should the Commission's definition of the service requirement be? What would be the practical implications of an ETC having service obligations in certain census blocks and not others within a community (for instance having obligations outside of town, but not within the footprint of an unsubsidized provider that services only the town), and would that variation in obligation result in consumer confusion?

115. Finally, the Commission also seeks comment on how to ensure that low-income consumers across America continue to have access to Lifeline service, both in urbanized areas that will not, going forward, receive support from the new CAF, and in rural areas that will, over time, receive support from the CAF. As a practical matter, how can the Commission ensure that low-income consumers that only wish to subscribe to voice service continue to have the ability to receive Lifeline benefits? The Commission emphasizes its ongoing commitment to ensuring that low-income consumers in all regions of the county have access to telecommunications and information services. Some commenters have suggested that the Commission create Lifeline-only ETCs. As a matter of federal policy, would it thwart achievement of the objectives established by Congress

to relieve an existing ETC of the obligation to provide Lifeline if there was no other ETC in that particular area willing to offer Lifeline services?

G. Ensuring Accountability

116. The Commission proposes various alternative remedies available to it in the event an ETC fails to comply with its rules regarding receipt of high-cost universal service support.

117. Financial Guarantees. The first alternative remedy the Commission proposes for non-compliance with its rules is a financial guarantee. The Commission proposes that a recipient of high-cost and CAF support should be required to post financial security as a condition to receiving that support to ensure that it has committed sufficient financial resources to complying with the public interest obligations required under its rules and that it does in fact comply with the public interest obligations set forth in Section VI of the USF/ICC Transformation Order. In particular, the Commission seeks comment on whether all ETCs should be required to obtain an irrevocable standby letter of credit (LOC) no later than January 1, 2013. The Commission's goal in proposing this requirement is to protect the integrity of the USF funds disbursed to the recipient and to secure return of those funds in the event of a default, even in the event of bankruptcy.

118. The Commission seeks comment on applying post-auction procedures, including performance guarantees, to ETCs that apply for funding after a competitive bidding process. The Commission seeks comment on adopting financial performance guarantee requirements for ETCs that receive funding through processes other than competitive bidding.

119. Should ETCs that will receive less than a specified amount of support be exempted from any requirement to provide an LOC? On what basis should the Commission adopt such a blanket exemption? For instance, should it be based on the aggregate amount of support provided on a study area basis, and at what dollar level should the Commission grant such an exemption?

120. The Commission seeks comment on how to determine the amount of the LOC necessary to ensure compliance with the public interest obligations imposed in the USF/ICC Transformation Order, as well as the length of time that the LOC should remain in place. For example, the amount of the LOC could be determined on the basis of the ETC's estimated annual funding amount. Should the amount of an initial LOC, or a subsequent LOC, also ensure the continuing maintenance and operation of the network? The Commission also recognizes that a recipient's failure to fulfill its obligations may impose significant costs on the Commission and, potentially, on the USF itself if there is a need to provide additional support to another ETC to serve the area. Should the amount of an initial LOC or a subsequent LOC include an additional amount that would serve as a default payment? Under what circumstances should the ETC be required to replenish the LOC? For how long should an ETC be required to keep the LOC in place? Is there a finite time after which the LOC will no longer be necessary to safeguard the Fund?

121. The Commission proposes that under the terms of the LOC, failure to satisfy essential terms and conditions upon which USF support was granted, including failure to timely renew the LOC, will be deemed a failure to properly use USF support and will entitle the Commission to draw the entire amount of the LOC to recover that support and any default payment. The Commission, for example, would draw upon the

LOC when the recipient fails to meet its required deployment milestone(s) or other public interest obligations. Are there any situations in which the Commission should deem non-compliance to be non-material, and therefore not warrant a draw on the letter of credit? Should recipients be provided a period of time to cure non-performance before drawing on the letter of credit? The Commission proposes that failure to comply will be evidenced by a letter issued by the Chief of either WTB or WCB or their designee, which letter, attached to an LOC draw certificate shall be sufficient for a draw on the LOC.

122. Penalties. The Commission seeks comment on alternatives to the financial guarantees including whether revocation of ETC designation, denial of certification resulting in prospective loss of support, or recovery of past support amounts is an appropriate remedy for failure to meet their public interest obligations. The Commission also seeks comment on the specific circumstances in which these alternatives might apply, if they are different than the specific circumstances in which financial guarantees would apply.

123. The Commission also seeks comment on what specific triggers might lead to support reductions, how much support should be reduced, how best to implement support reductions, and how the review and appeal process should be revised. If the Commission adopts a framework for partial withholding of support, should it establish levels of non-performance that would result in the loss of specific percentages of support? For example, should the Commission establish levels one through four of non-compliance, with corresponding loss of support of 25, 50, 75, and 100 percent? If so, what criteria would the Commission use to determine a carrier's level of non-performance?

124. USAC recovers support when recipients have received support to which they are not entitled, typically accomplishing the recovery through adjustments in future disbursements. Should the Commission adopt rules identifying what constitutes a material failure to perform, warranting recovery of past funding? For instance, should price cap companies be subject to a loss of prospective support for failure to meet intermediate build-out requirements? Should they be subject to recovery of past support amounts if they fail to meet the performance requirements at the end of the five-year term? Should there be a sliding scale for recovery of past amounts depending on the degree to which the carrier fails to meet a specified milestone? Should the Commission continue the current practice of offsetting any support adjustments against future disbursements?

125. Should the Commission adopt rules that create self-executing reductions in support that would be administered by USAC? The Commission notes that under its current rules, any party that disputes action by USAC may seeks review by the Commission. What additional processes, if any, should the Commission put in place for ETCs to dispute any support adjustments for non-performance?

126. The Commission recognizes that, under 47 U.S.C. 214, ETC designation is a responsibility shared between the states and the Commission. The Commission welcomes input from its state colleagues on the circumstances in which ETC designations have been revoked by states in the past, and what circumstances might warrant revocation under its reformed Connect America Fund. Should the Commission adopt a national framework for when ETC revocation is appropriate?

127. The State Members of the Universal Service Joint Board suggest that denial of certification – which today results in loss of support for the coming year – is a draconian remedy that should be available if necessary, but avoidable if possible. The Commission seeks comment on what circumstances would justify such a result. The State Members also proposed in their comments that carriers should be disqualified from receiving support during periods in which they fail to provide adequate information to verify continuing eligibility to receive support and adequate to perform support calculations. The Commission seeks comment on this proposal and welcomes input from its state partners on how it can ensure there are significant consequences for material non-compliance.

128. An alternative approach might be to separately count compliance with each public interest obligation established in Section VI of the USF/ICC Transformation Order, with non-compliance with each individual obligation resulting in the ETC losing a set percentage of support for each obligation it fails to meet. Must non-compliance with an obligation be material? If so, how will the Commission define material for these purposes?

H. Annual Reporting Requirements for Mobile Service Providers

129. In the USF/ICC Transformation Order, the Commission seeks to take several steps to harmonize and update its annual reporting requirements for recipients of USF support, including extending the current annual reporting requirements to all ETCs. All ETCs that receive high-cost support, except ETCs that receive support solely pursuant to Mobility Fund Phase I, which has separate annual reporting obligations, will be required to annually file the information required by new 47 CFR 54.313 with the

Commission, USAC, and the relevant state commission, authority in a U.S. Territory, or Tribal government or authority, as appropriate. In the USF/ICC Transformation Order, the Commission also establishes new reporting requirements for the annual reports that will ensure that recipients are complying with the new broadband public interest obligations it adopts. Because Mobility Fund support will differ in some respects from support received under other USF high-cost support mechanisms, in the section of the USF/ICC Transformation Order adopting the first phase of the Mobility Fund, the Commission requires recipients of Mobility Fund support to file annual reports specific to that program. Mobility Fund recipients that receive support under other high-cost programs may file a separate Mobility Fund annual report or they may include the required information with respect to their Mobility fund support in a separate section of their annual reports filed pursuant to new 47 CFR 54.313.

130. The Commission seeks comment here on whether there are certain requirements in its new annual reporting rule for ETCs, new 47 CFR 54.313, that do not reflect basic differences in the nature and purpose of the support provided for mobile services. Specifically, the Commission seeks comment on whether it should revise 47 CFR 54.313 reporting requirements or adopt new reporting requirements that would apply to support an ETC receives to provide mobile services. For example, new 47 CFR 54.313 requires ETCs to include in their annual reports, beginning with their April 1, 2014 report, information regarding their progress on their five-year broadband build-out plan. What type of similar information would be appropriate to require of mobile service providers who receive support from Phase I or Phase II of the Mobility Fund? ETCs are currently required to report annually on the number of requests for service from potential

customers within the ETC's service areas that were unfulfilled during the past year. Should the Commission continue to require this information from mobile service providers in view of the fact that the measure of performance for ETCs receiving Mobility Fund support is coverage of the supported areas, and not the number of subscribers to the supported service?

131. ETCs must also include in their annual reports detailed information on outages that meet certain minimum criteria described in the rule, including the geographic areas affected and the number of customers affected. For mobile service providers, how should the number of affected customers be counted? Should the number of affected customers be the number of customer billing addresses within the affected areas, the average number of customers served by the towers that are out-of-service during the outage, or some other measure?

132. The Commission seeks comment on the annual reporting issues and on any other aspects of its annual reporting requirements that commenters believe do not reflect the nature of mobile services being offered and the objectives of the USF support they receive and that require a new annual reporting rule specifically directed to mobile service providers.

I. Mobility Fund Phase II

133. The USF/ICC Transformation Order establishes an annual budget for Mobility Fund Phase II of $500 million, up to $100 million of which will be reserved to support Tribal lands, including Alaska. The Commission proposes rules to use the Mobility Fund Phase II to ensure 4G mobile wireless services in areas where such service would not otherwise be available, and seeks comment on certain alternative approaches.

i. Overall Design

134. The Commission proposes to use a reverse auction mechanism to distribute support to providers of mobile broadband services in areas where such services cannot be sustained or extended without ongoing support. The Commission proposes that the reverse auction be designed to support the greatest number of unserved road miles or other units within the overall Mobility Fund budget. Assigning support in this way would be consistent with its general decision to use market-driven policies to maximize the value of limited USF resources, and should enable us to identify those providers that will make most effective use of the budgeted funds, thereby benefiting consumers as widely as possible. The Commission discusses the proposed framework for the program and the auction mechanism and seeks comment on alternatives, including the use of a model to determine both the areas that would receive support and the level of support.

ii. Framework for Support Under Competitive Bidding Proposal

a. Identifying Geographic Areas Eligible for Support

135. The Commission seeks to provide funding only in geographic areas where there is no private sector business case to provide mobile broadband and high quality voice-grade service. The Commission proposes to identify such areas by excluding all areas where unsubsidized 3G or better services are available. The Commission proposes to use census blocks as the minimum size geographic unit for identifying eligible areas.

136. <u>Identifying Areas Eligible for Support</u>. The Commission proposes to identify areas eligible for support on a census block basis, which would permit us to

target Phase II support more precisely than if the Commission were to use a larger area. As a proxy for identifying areas where private investment is likely to undertake to provide mobile broadband services, and thus, areas not eligible for support, the Commission proposes to use areas where an unsubsidized provider offers 3G or better service based upon the most recent available data prior to auction. Under this proposal, any census block where 3G or better service is available from at least one unsubsidized provider would not be eligible for support. Census blocks with 2G service available from an unsubsidized provider as well as census blocks where 3G service is provided only by subsidized provider(s) would be eligible. Specifically, the Commission would use American Roamer data to identify areas where there are mobile networks that offer service using EV-DO, EV-DO Rev A, UMTS/HSPA and HSPA+, LTE, and any other technologies offering equivalent speeds or better. The Commission may wish to prioritize support to areas that also lack 2G coverage, and American Roamer data could also be used for this purpose. As with Phase I, the Commission proposes to use the centroid method to establish whether service using particular technologies is available to a particular census block. Census blocks that do not have such service would be eligible for Phase II support. The Commission seeks comment on these proposals. In particular, the Commission seeks comment on whether there are other proxies for determining where private investment will deploy mobile broadband, other data sources, other technologies, or methods other than the centroid method that the Commission should consider in determining whether particular census blocks should be excluded from eligibility for support to promote its objectives.

137. The Commission also seeks comment on how a cost model could be

used to identify areas for which providers would be able to seek support in a Phase II auction. The Commission notes that US Cellular and MTPCS have filed analyses based on cost models for the deployment of wireless services. Elsewhere, the Commission seeks comment on their submissions. In particular, the Commission discusses at greater length how a cost model could be used both to identify areas where support should be offered and, as an alternative to competitive bidding, to determine the amount of support to be offered. The Commission invites comment on the possibility of using a mobile wireless cost model only to identify the areas that would be eligible for Phase II support, with the actual award of support through a reverse auction. The Commission also seeks comment on using other criteria – such as the availability of unsubsidized services to refine a model-based definition of areas for which providers will be eligible to seek support in the auction. For example, the Commission could make ineligible for Phase II support areas with unsubsidized providers, or areas where any provider has made a public or regulatory commitment to provide unsubsidized service, even if a cost model indicates that costs are high.

138. Minimum Size Unit for Bidding and Support. The Commission proposes to identify eligible areas at the census block level and that the census block should be the minimum geographic building block for defining areas for which support is provided. Because census blocks are numerous and can be quite small, the Commission believes that the Phase II auction should provide for the aggregation of census blocks for purposes for bidding. The Commission could set out by rule a minimum area for bidding comprised of an aggregation of eligible census blocks. In addition, the auction procedures could provide for bidders to be able to make all-or-nothing package bids on

combinations of bidding areas. Package bidding procedures could specify certain predefined packages, or could provide bidders greater flexibility in defining their own areas, here comprised of census blocks. The Commission seeks comment on possible approaches to aggregating census blocks.

139. Under the Census Tract Approach, the Commission would define a minimum aggregation of blocks by rule, for example by aggregating eligible census blocks based on the census tract in which they lie, so that bidders would bid for support for all eligible census blocks within that tract. Under the Bidder-Defined Approach, the Commission would not require a minimum aggregation of census blocks, but would establish package bidding procedures that would allow bidders to group the specific census blocks on which they wanted to bid.

140. Census Tract Approach. Under this approach the Commission would create a minimum unit for bidding that is larger than an individual block. For example, the Commission could use a census tract, so bidders would bid for support to serve all the eligible blocks within the census tract. The Commission asks for comment on whether tracts would be an appropriate unit here or whether there is some other minimum grouping of census blocks that would be preferable, such as block groups. Should the Commission use a different minimum geographic unit in areas where census blocks and/or census tracts are especially large? For example, if the Commission group blocks into tracts for bidding, should it consider making an exception if the particular tract is especially large, and use individual blocks or block groups for bidding in those cases, as the Commission has done in Alaska for Mobility Fund Phase I? Regardless of the minimum unit, there are a number of different auction designs that could be used. For

example, one possibility would be to use a clock auction format with bidding on tracts. Without package bidding, bidders could manage aggregations of tracts through multiple rounds of bidding. For package bidding, the Commission could allow bidders to flexibly aggregate census tracts (or other units) of their choosing or it could allow bidders to place package bids on pre-defined packages of tracts. The Commission seeks comment on bidders' interest in and need for package bidding as it relates to its choice of a minimum unit for bidding and support. Under the Census Tract Approach bidders would be required to serve a specified percentage (e.g., 75 percent) of the units (or road miles, as proposed) in the unserved census blocks.

141. Bidder-Defined Approach. Under this approach, the Commission would not specify a minimum aggregation of census blocks but would provide bidders with considerable flexibility to aggregate the specific census blocks they proposed to serve. Bidders would be able to make bids that specify a set of census blocks to be covered, and a total amount of support needed. The Commission seeks comment on whether there should be a boundary on bids under such procedures – for example, would it be useful to have a rule that all the census blocks in a given bid must be within a cellular market area (CMA)? Under this approach, a bidder could be permitted to submit several bids, up to a limit that would be specified in the auctions procedures. Bids by that bidder that contained some geographic overlap would be treated as mutually exclusive, i.e., only one could be awarded. Bids that do not overlap could win simultaneously. The Commission would use a computer optimization to identify the set of bids that maximizes the number of eligible road miles (or other supported units) covered subject to the budget constraint. Under this general approach, there may be some limited scenarios where

eligible road miles may be covered by multiple winners – i.e., whenever the optimization determines that the set of winning bids that would maximize the total road miles or other units covered within the budget requires limited duplicative coverage, the Commission would permit that coverage. The Commission seeks comment on whether such an approach could be sufficiently contained to ensure that it is truly making the most efficient use of the fund given limited resources. The Commission also notes that allowing overlap among providers could reduce the revenues a bidder expects from customers, and therefore could increase the support a bidder would seek. The Commission seeks comment on whether this is a significant concern, and whether it could be addressed by allowing bidders to make bids contingent on the overlap being less than some percentage. In addition providers would be required to serve all the units in the census block.

142. In order to bid effectively, presumably bidders would need to match eligible census blocks to their business plans, and know the number of road miles (or other supported units) within each census block. Prior to an auction, WTB and WCB would provide information on the specific eligible census blocks and the units associated with each. The Commission could provide information through one or more bidder tools on its website. Those tools, for instance, could allow bidders to readily match up their own information on the geographic areas in which they are interested with the blocks available in the auction. Bidder tools could also make readily accessible to potential bidders various online data, including maps, regarding the unserved blocks in which they are interested -- such as associated road mile or population (or other units) data so that bidders could consider potential per-unit bids for coverage of various possible geographic

areas. Providing these tools could facilitate participation by small as well as large providers. The Commission seeks comment on whether there is additional information or help that the Commission should provide to bidders would need from the Commission or whether the tools needed for this matching and calculation can be developed by bidders.

143. The Commission invites comment on any other advantages and disadvantages of the Census Tract and Bidder-Defined approaches from a provider's perspective. Commenters should address the minimum scale at which providers may want to incorporate Phase II support into their existing networks; the simplicity of the auction mechanism; the ability of providers to capture efficiencies, and to formulate and implement bidding strategies; and ease of administration.

144. Prioritizing Areas. The Commission seeks comment on whether it should target areas currently without any mobile service for priority treatment under Phase II. For instance, should it provide a form of bidding credit that would promote the support of areas with no mobile service at all or only mobile service at lower than current generation or 3G levels?

145. The Commission also seeks comment on whether it should prioritize coverage to any areas in which previously provided support is being phased down. To the extent that parties believe there is a risk of meaningful loss of coverage, the Commission welcomes comments on how to define the areas at risk, and how to address the risk. Once the areas are defined, they could be prioritized, for example, by making available bidding credits for these areas.

b. Establishing Bidding and Coverage Units

146. The Commission proposes to base the number of bidding units and the

corresponding coverage requirement on the number of road miles in each eligible geographic area. Requiring coverage of road miles directly reflects the Mobility Fund's goals of supporting mobile services, and indirectly reflects many other important factors – such as business locations, recreation areas, and work sites – since roads are used to access those areas. And while traffic data might be superior to simple road miles as a measure of actual consumer need for mobile coverage, the Commission has not found comprehensive and consistent traffic data across multiple states and jurisdictions nationwide. Because bidders are likely to take potential roaming and subscriber revenues into account when deciding where to bid for support under Phase II, the Commission expects that support will tend to be disbursed to areas where there is greater traffic. The Commission seeks comment, however, on the use of other units for bidding and coverage – such as population and workplaces – instead of or in combination with road miles.

147. The Commission proposes to use the TIGER data collected by the Census Bureau to determine the number of road miles associated with each eligible geographic area. TIGER data is available nationwide on a standardized basis and can be disaggregated to the census block level. The Commission anticipates that the Bureaus would exercise their delegated authority to establish the units associated with each eligible census block and identify the specific road categories within TIGER considered – primary, secondary, local, etc. – to calculate the units associated with a given area. The Commission seeks comment on this proposal.

c. Maximizing Consumer Benefits

148. The Commission's goal is to maximize the coverage of mobile broadband services supported with its annual Mobility Fund Phase II budget. In contrast

to the former rules, under which multiple providers are entitled to an award of portable, per-subscriber support for the same area, the Commission expects that to maximize coverage within its budget it will generally be supporting a single provider for a given geographic area. The Commission would support more than one provider in an area only if doing so would maximize coverage. The Commission seeks comment on whether allowing overlap among providers would unduly compromise its objective to maximize consumer benefits. The Commission plans to take into account its experience implementing Mobility Fund Phase I to ascertain whether there are ways to further minimize overlap during the implementation of Mobility Fund Phase II. The Commission is mindful that its statutory obligation runs to consumers, rather than carriers, and that it must target limited public funds in a way that expands and sustains the availability of mobile broadband services to maximize consumer benefits. To further protect consumer interests, the Commission also proposes to adopt certain terms and conditions to promote leveraging of publicly funded investment by other providers operating in the same areas as a recipient of support under Phase II of the Mobility Fund. The Commission invites comment on this approach, which is consistent with one the Commission has taken elsewhere with respect to universal service support.

149. The Commission also seeks comment on whether and to what extent recipients of Mobility Fund Phase II support should be permitted to partner with other providers to fulfill the public interest obligations associated with Phase II. For example, should the Commission permit eligible providers to seek support together, provided that they disclose any such arrangements when applying for a Mobility Fund auction? The Commission invites comment on whether it should establish any limit on the number of

geographic areas for which any one provider may be awarded Phase II support. If the Commission were to do so, what effect would this have on those mobile providers that focus on serving rural areas? Is there another basis on which it should limit the amount of Phase II support that goes to any one provider?

d. Term of Support

150. The Commission proposes a fixed term of support of 10 years and, in the alternative, seeks comment on a shorter term. In considering the optimal term for ongoing support, the Commission seeks to balance providing adequate certainty to carriers to attract private investment and deploy services while taking into account changing circumstances. How should the timeframes for deployment and private investment be synchronized with the pace of new technology? What is the minimum period for making deployment practicable? In light of possible improvements in technology, would it be more practicable to provide for a longer term and require an increase in performance during the term? Or, would it be more appropriate to provide for a shorter term that reflects the likely life cycle of existing technologies? The Commission seeks comment on this proposal and on the option for a shorter term.

151. The Commission also seeks comment on whether it is appropriate to establish any sort of renewal opportunity for support, and on what terms. For instance, should the Commission follow its licensing regime which allows for a renewal expectancy if buildout and service obligations have been met? Alternatively, should the Commission take into account the extent to which a recipient utilizes new technologies to exceed the minimum performance requirements established at the outset of the term of support? To what extent should the unforeseen development of new products and

services in unsupported areas be taken into account when assessing a support recipient's performance and qualification for renewal?

e. Provider Eligibility Requirements

152. With a narrow exception, discussed infra, the Commission proposes to require that parties seeking Mobility Fund Phase II support satisfy the same eligibility requirements that it has adopted with respect to Phase I. The Commission seeks comment on this proposal. Is there any reason to alter the requirements previously adopted in light of the differences between Phase I's one-time support and Phase II's ongoing support? Parties providing suggestions should be specific and explain how the eligibility requirements would serve the ultimate goals of Phase II. The Commission also seeks comment on ways the Commission can encourage participation by the widest possible range of qualified parties.

f. Public Interest Obligations

153. Voice. The USF/ICC Transformation Order sets out general requirements applicable to all recipients of support from the CAF, including recipients of Mobility Fund support. Consistent with those requirements, recipients of Mobility Fund support will have to offer voice service that satisfies the public interest obligations shared by all recipients of CAF support. Likewise, all recipients of Mobility Fund support must offer a standalone voice service to the public.

154. Mobile Broadband Performance Requirements and Measurement. Unlike requirement for voice service, recipients' public interest obligations with respect to broadband vary depending upon the particular public interest goal being met by the support provided. The Commission proposes that, as for Mobility Fund Phase I

recipients that elect to offer 4G service, recipients of Mobility Fund Phase II support will be required to provide mobile voice and data services that meet or exceed a minimum bandwidth or data rate of 768 kbps downstream and 200 kbps upstream, consistent with the capabilities offered by representative 4G technologies. The Commission further proposes that these data rates should be achievable in both fixed and mobile conditions, at vehicle speeds consistent with typical vehicle speeds on the roads covered. As the Commission notes in its USF/ICC Transformation Order regarding Phase I, the proposed measurement conditions may enable users to receive much better service when accessing the network from a fixed location or close to a base station. These minimum standards must be achieved throughout the cell area, include at the cell edge, at a high probability, and with substantial sector loading. The Commission seeks comment on these initial performance metrics. The Commission also seeks comment from providers of services used by people with disabilities, such as Internet-based telecommunications relay services, including video relay services (VRS), and point-to-point video communications or videoconferencing services, as to whether these performance metrics will be sufficient to support such services and communications.

155. In order to assure that recipients offer service that enables the use of real-time applications, the Commission also proposes that round trip latencies for communications over the network be low enough for this purpose.

156. The Commission further seeks comment on whether, and if so, in what ways these metrics should be modified during the term of support to reflect anticipated advances in technology. The Commission also seeks comment from providers of services used by people with disabilities as to whether or not and how these performance

metrics should be modified over time to support such services and communications. In the USF/ICC Transformation Order the Commission notes the obligations applicable to certain CAF recipients will evolve over time. The Commission proposes that the performance characteristics required of Mobility Fund Phase II recipients likewise be required to evolve over time, to keep pace with mobile broadband service in urban areas. How exactly should those obligations evolve? Should the term of support provided be synchronized with anticipated changes in obligations?

157. The Commission further proposes that recipients be required to meet certain deployment milestones in order to remain qualified for the ongoing support awarded in Phase II. Specifically, consistent with the approach the Commission is taking for Phase I support used to deploy 4G, the Commission proposes that providers be required to construct a network offering the required service in the required area within three years. Commenters are invited to address the feasibility of the proposed three year deployment deadline, given the projected availability of 4G equipment and any other issues that may affect deployment, such as compliance with local, state, or federal laws and requirements, and weather. To the extent the Commission modifies recipients' public interest obligations over time, the Commission seeks comment on when such metrics must be achieved. Should the Commission also adopt interim deadlines for upgrading service to comply with revised requirements with respect to 50 percent of the covered area?

158. If the Commission adopts the Census Tract Approach, it proposes to require Phase II recipients to provide coverage meeting their public service obligations to at least 75 percent of the road miles in all of the unserved census blocks for which they

receive support. To the extent that a recipient covers additional road miles or other units beyond the minimum requirement, the Commission proposes to provide support based on its bid unit up to 100 percent of the units associated with the specific unserved census blocks covered by a bid. If the Commission adopts the Bidder-Defined Area approach, it proposes that Phase II recipients should be required to provide coverage meeting their public service obligations to a higher percentage, perhaps to all of the unserved units within the census blocks.

159. The Commission proposes that recipients demonstrate that they have met relevant performance and coverage obligations by submitting drive test data, consistent with the industry norm and the provisions the Commission adopts for Phase I. The Commission seeks comment on how frequently such data should be submitted during the term of support.

160. Collocation and Voice and Data Roaming Obligations. The Commission requires that Phase I recipients allow the collocation of additional equipment under certain circumstances and condition their receipt of support on compliance with voice and data roaming requirements. The Commission seeks comment on adopting similar requirements for Phase II recipients. Are there additional requirements the Commission might consider in order to ensure that publicly funded investment can be leveraged by other providers to the extent they may operate in areas that need universal service support?

161. Reasonably Comparable Rates. The Commission seeks comment on how to implement, in the context of the Mobility Fund Phase II, the statutory principle that supported services should be made available to consumers in rural, insular, and high-

cost areas at rates that are reasonably comparable to rates charged for similar services in urban areas. The Commission proposes that recipients be subject to the same requirements regarding comparable rates that apply to all recipients of CAF support.

162. The Commission will consider rural rates for service supported by the Mobility Fund to be reasonably comparable to urban rates under 47 U.S.C. 254(b)(3) if rural rates fall within a reasonable range of urban rates for reasonably comparable service. The Commission seeks additional comment here with respect to the evaluation of reasonably comparable voice and broadband services for purposes of Mobility Fund Phase II specifically.

163. For purposes of the Mobility Fund, the Commission proposes to focus on mobile broadband service that meets the universal service performance characteristics. For instance, the Commission invites further comment as to whether there are additional sources of information or aspects of service to consider in light of the fact that Mobility Fund support is for mobile service over a geographic area. The Commission also seeks comment on whether the mobile nature of the service supported by Mobility Fund Phase II, or the pricing of mobile voice and broadband services, present any unique features for purposes of adopting a methodology for evaluating rates under its reasonable comparability standard. The Commission proposes to require recipients of funding under Mobility Fund Phase II to provide information regarding their pricing for mobile broadband service offerings.

iii. Auction Process Framework

164. The Commission proposes general auction rules governing the auction process itself, including options regarding basic auction design, application process,

information and competition, and auction cancellation.

165. As the Commission did for Mobility Fund Phase I, it proposes to delegate to the Bureaus authority to establish detailed auction procedures consistent with the auction rules the Commission establishes here, take all other actions necessary to conduct a Phase II auction, and conduct program administration and oversight. Under this proposal, a public notice would be released announcing an auction date, identifying areas eligible for support through the auction and the road miles associated with each area, and seeking comment on specific detailed auction procedures to be used.

a. Auction Design

166. The Commission proposes rules outlining various auction design options and parameters, while at the same time proposing that final determination of specific auction procedures to implement a specific design be delegated to the Bureaus as part of the subsequent pre-auction notice and comment proceeding.

167. The Commission proposes a rule providing that a Phase II auction may be conducted in a single round of bidding or in a multiple round format, or in multiple stages where an additional stage could follow depending upon the results of the previous stage. The Commission also proposes that maximum bid amounts, reserve prices, bid withdrawal provisions, bidding activity rules and other terms or conditions of bidding would be established by the Bureaus. Should reserve prices be set using the results of a wireless model for each state, similar to the CAF Phase II auction where price cap carriers decline the state-level commitment? The Commission also proposes that the Bureaus may consider various procedures for grouping geographic areas within a bid – package bidding – that could be tailored to the needs of prospective bidders as indicated

during the pre-auction notice and comment period.

168. It appears that some form of package bidding will likely enhance the auction by helping bidders incorporate network-wide efficiencies into their bids. The Commission invites preliminary comment on whether package bidding may be appropriate for this auction and if so, why. The Commission asks for input on package bidding as it relates to its choice of the Census Tract or Bidder-Defined approaches. The Commission asks for any additional comments on the potential advantages and disadvantages of possible package bidding procedures and formats. The Commission asks for input on the reasons why certain package bidding procedures would be helpful or harmful to providers bidding in an auction, and what procedures might best meet its goal of maximizing the benefits of Phase II support for consumers. For example, regardless of whether the Commission adopt the Census Tract or Bidder-Defined approach, should it impose some limits on the size or composition of package bids, such as allowing flexible packages of blocks or larger geographic units as long as the geographic units are within the boundaries of a larger unit such as a county or a license area (e.g., a CMA)? Or, if the Commission adopts the Census Tract approach, should it establish package bidding procedures that allow bidders to place package bids on predetermined groupings of areas that follow a particular hierarchy – such as blocks, tracts, and/or counties, which nest within the census geographic scheme?

b. Potential Bidding Preference for Small Businesses

169. The Commission seeks comment on whether small businesses should be eligible for a bidding preference in a Phase II auction. If adopted, the preference would act as a reverse bidding credit that would effectively reduce the bid amount of a

qualifying small business for the purpose of comparing it to other bids. The preference would be available with respect to all census blocks on which a qualified small business bids. Would a bidding credit be an effective way to help address concerns regarding smaller carriers' ability to effectively compete at auction for support? Would such a bidding credit be consistent with the objective of the Phase II fund to support the greatest number of unserved road miles within the overall Mobility Fund budget? Should the Commission adopt a preference to assist small businesses even if the bidding credit results in less coverage achieved than would occur without the bidding credit?

170. The Commission also seeks comment on the appropriate size of any potential small business bidding credit. The Commission notes that, in the spectrum auction context, the Commission typically awards small business bidding credits ranging from 15 to 35 percent, depending on varying small business size standards. The Commission seeks comment on what bidding credit percentage, if any, would be appropriate to increase the likelihood that the small business would have an opportunity to win support in the auction.

171. The Commission also seeks comment on how it should define small businesses. In the context of the Commission's spectrum auctions, the Commission has defined eligibility requirements for small businesses seeking to provide wireless services on a service-specific basis, taking into account the capital requirements and other characteristics of each particular service in establishing the appropriate threshold.

172. The Commission seeks comment on the use of a small business definition in the Mobility Fund Phase II context based on an applicant's gross revenues, as it has done in the spectrum auction context. Specifically, should a small business be

defined as an entity with average gross revenues not exceeding $40 million for the preceding three years? Alternatively, should the Commission consider average gross revenues not exceeding $125 million for the preceding three years? In determining an applicant's gross revenues under what circumstances should the Commission attribute the gross revenues of the applicant's affiliates? The Commission also invites input on whether alternative bases for size standards should be established in light of the particular circumstances or requirements that may apply to entities biding for Mobility Fund Phase II support. Commenters should explain the basis for their proposed alternatives, including whether anything about the characteristics or capital requirements of providing mobile broadband service in unserved areas or other considerations require a different approach.

c. Application Process

173. The Commission proposes a two-stage application process, similar to that used in spectrum license auctions, and as described more completely in the USF/ICC Transformation Order. Under this proposal, the Commission would require a pre-auction short-form application from potential auction participants. Commission staff would review the short-form applications to determine whether applicants had provided the necessary information to participate in an auction. Commission staff would then release a public notice indicating which short-form applications were deemed acceptable and which were deemed incomplete. Applicants whose short-form applications were deemed incomplete would be given a limited opportunity to cure defects and to resubmit correct applications. Only minor modifications to an applicant's short-form application would be permitted. The Commission would release a second public notice designating the applicants that qualified to participate in the Phase II auction. The Commission seeks

comment on its proposal, and on any alternative approaches.

d. Information and Communications

174. The Commission does not see circumstances specific to Phase II that warrant departure from its usual auction policies regarding permissible communications during the auction or the public release of certain auction-related information. Hence, the Commission proposes, in the interests of fairness and maximizing competition, to prohibit applicants from communicating with one another regarding the substance of their bids or bidding strategies. The Commission further proposes a rule to provide for auction procedures to limit public disclosure of auction-related information. Specific details regarding the information to be withheld would be identified during the pre-auction procedures process, upon delegated authority to the Bureaus.

e. Auction Cancellation

175. The Commission proposes that it have discretion to delay, suspend, or cancel bidding before or after a reverse auction begins under a variety of circumstances, including natural disasters, technical failures, administrative necessity, or any other reason that affects the fair and efficient conduct of the bidding. The Commission seeks comment on this proposal, which is consistent with its approach in spectrum auctions, as well as Phase I of the Mobility Fund.

f. Post-Auction Long-Form Application Process for Mobility Fund Phase II

176. The Commission proposes to apply the same post-auction long-form application process adopted with respect to Phase I for Phase II support. Accordingly, applicants for Phase II support would be required to provide the same showing that they

are legally, technically and financially qualified to receive Phase II support as required of applicants for Phase I support. In addition, the Commission proposes that a winning bidder for Phase II support will be subject to the same auction default payment adopted for winning bidders of Phase I support, if it defaults on its bid, including if it withdraws a bid after the close of the auction, fails to timely file a long form application, is found ineligible or unqualified to be a recipient of Phase II support, or its long-form application is dismissed for any reason after the close of the auction. In addition, the Commission proposes that a recipient of Phase II support be subject to the same performance default payment as recipients of Phase I support.

iv. Tribal Issues

177. In view of the relatively low level of telecommunications deployment, and distinct connectivity challenges on Tribal lands, the Commission reaffirms its commitment to address Tribal needs and establishes a separate budget to provide ongoing USF support for mobility in such areas. In the USF/ICC Transformation Order the Commission establishes an annual budget of up to $100 million to provide ongoing support for mobile broadband services to qualifying Tribal lands. In addition, the Commission notes that the CAF will separately support broadband for homes, businesses, and community anchor institutions, including on Tribal lands.

178. The Commission proposes to apply the same Tribal engagement obligation and a 25 percent bidding credit preference for Tribally-owned or controlled providers in Phase II as it does for Phase I. To the extent the Commission adopts a cost model, discussed infra, are there particular measures the Commission should take to help ensure that the needs of Tribes are met? What modifications might be needed to the

proposed Tribal engagement obligations? Are there other alternatives the Commission should consider?

179. In addition, to afford Tribes an increased opportunity to participate at auction, in recognition of their interest in self-government and self-provisioning on their own lands, the Commission proposes to permit a Tribally-owned or controlled entity to participate at auction even if it has not yet been designated as an ETC. Consistent with the approach adopted in Phase I, the Commission proposes that a Tribally-owned or controlled entity that has an application for ETC designation pending at the relevant short form application deadline may participate in an auction to seek support for eligible census blocks located within the geographic area defined by the boundaries of the Tribal land associated with the Tribe that owns or controls the entity that has not yet been designated as an ETC.

180. To the extent practicable, the Commission proposes to award ongoing support for mobile broadband services on Tribal lands on the same terms and conditions as it proposes for the ongoing support mechanism for Phase II in non-Tribal lands. The Commission recognizes that there are several aspects for which a more tailored approach may be appropriate, as evidenced in the record. The Commission proposes to apply in Phase II the specific provisions adopted in the context of the Tribal Mobility Fund Phase I. Are there any differences in its proposals to award ongoing support that would justify an alternative approach here? To the extent that providers in Alaska may be dependent on satellite backhaul for middle mile, should the Commission modify its Phase II performance obligations for some limited period of time, similar to what the Commission adopts more generally as a performance obligation for ETCs? Should a similar

accommodation be made for areas in which there is no affordable fiber-based terrestrial backhaul capability? If so, how should the Commission define affordability for these purposes? Further, in areas with only satellite backhaul, should the Commission require funded deployments to be able to support continued local connectivity in case of failure in the satellite backhaul? How would such a requirement be structured to ensure continued public safety access?

181. The Commission seeks comment on GCI's proposal that new mobile deployments be given some priority in Phase II. Commenters supporting such an approach should explain how such a priority mechanism could work, which deployments would be eligible for prioritization, and any other implementation issues. Similarly, the Commission seeks comment on GCI's proposal that priority be given to areas that do not have access to the National Highway System to account for the lack of roads and highways in many remote parts of Alaska. Are there alternative means in Phase II to account for remote areas, including those in Alaska, where roads and other infrastructure may be lacking?

182. In addition, to afford Tribes an opportunity to identify their own priorities, the Commission seeks further comment on a possible mechanism that would allocate a specified number of priority units to Tribal governments. The priority units for each Tribe would be based upon a percentage of the total population in unserved blocks located within Tribal boundaries. Tribes would have the flexibility to allocate these units in whatever manner they choose. Tribes could elect to allocate all of their priority units to one geographic area that is particularly important to them, or to divide the total number of priority units among multiple geographic units according to their relative priority. By

giving Tribes the opportunity to allocate a substantial number of additional units to particular unserved geographic areas within the boundaries of their Tribal lands, the Commission would allow Tribes to reduce the per-unit amount of bids covering those unserved areas, so as to increase the likelihood that these areas would receive funding through the proposed competitive bidding process.

183. The Commission is mindful that the record developed to date suggests that the effectiveness of this approach depends, in part, on providing a significant number of priority units for Tribes to allocate. The Commission proposes that an allocation in the range of 20 to 30 percent of the population in unserved areas on the Tribal land would provide Tribes a meaningful opportunity to provide input on where support could be effectively targeted. Commenters should address whether this approach should apply to both the general and Tribal Mobility Fund Phase II. The Commission also seeks comment on how such priority units should be awarded in Alaska, given the unique Alaska Native government structure and the large number of Alaska Native Villages likely to be clustered in any given geographic area. Should the Commission allocate priority units proportionately, according to the relative size and/or number of unserved units of all Alaska Native Villages in any given geographic area? Would a similar approach be warranted for Hawaiian Home Lands, or are there alternative approaches that best reflect conditions in Hawaii? Alternatively, the Commission seeks comment on whether the Tribal engagement obligations adopted for Phase I are sufficient to ensure that Tribal priorities are met with respect to ongoing support under Phase II. To the extent the Commission adopts its proposal for Tribal priority units, the Commission seeks comment on whether a Tribally-owned and controlled provider should also be eligible to

receive a bidding credit within its Tribal land or if the Tribe must choose between one or the other. If the Commission offers a bidding credit to Tribally-owned and controlled providers seeking Phase II support, would a 25 percent bidding credit, like the one the Commission has adopted for Phase I be sufficient, or does it need to be set at a different level to achieve its objectives?

184. The Commission also seeks comment on whether a different approach is warranted for Tribal lands in Alaska given the unique operating conditions in Alaska. The Commission proposes that carriers serving Alaska would be eligible for the same funding opportunities as carriers serving Tribal lands in the rest of that nation. Is this the right approach? In the alternative, should an amount of any Tribal funding be set aside only for carriers serving Alaska to ensure some minimal level of funding representative of the need in that state? The Commission seeks comment on the size of any Alaska-specific set aside, and the need to adjust the total Tribal component of Mobility Fund II to account for any Alaska-specific figure. The Commission also seeks comment on whether any Alaska-specific funding should be focused on middle mile connectivity, which is one of the core impediments to 3G and 4G service in Alaska. How could such a mechanism be structured to facilitate the construction of microwave and fiber-based middle mile facilities, which are lacking in portions of remote areas of Alaska.

v. Accountability and Oversight

185. The Commission proposes to apply to Mobility Fund Phase II the same rules for accountability and oversight that will apply to all recipients of CAF support, including reporting, audit, and record retention requirements. Because Mobility Fund support will differ in some respects from support received under other USF high-cost

support mechanisms, the Commission also proposes that recipients of Phase II support be required to include in their annual reports the same types of additional information that is required of recipients of Phase I support. Should any of these requirements be modified or omitted for recipients of Mobility Fund Phase II support? Are there additional types of information that should be required?

vi. Economic Model-Based Process

186. Instead of determining support for mobile wireless providers through competitive bidding, the Commission could determine support using a model that estimates the costs associated with meeting public interest obligations, as well as a provider's likely revenues from doing so. Regardless of which method is used, the objectives of the Mobility Fund's Phase II remain the same. That is, the Commission seeks to maximize the reach of mobile broadband services supported with its established budget in areas where there is no private sector business case for providing such services. Accordingly, commenters advocating for a model should address why a model-based approach would better serve this purpose than its proposal. The Commission seeks more detailed comment on the design of such a model and a framework for support in which a model might be used, as compared with its proposed market-based mechanism for determining the level and distribution of necessary support.

a. Model Design

187. In considering this alternative to a market-based mechanism, the Commission seeks to develop a more detailed record than it has received to date regarding the possible design of a forward looking economic model of costs and revenues of mobile wireless services. Generally, the Commission observes that cost structures,

revenue sources, and available data all may vary in the mobile service context from other services, such as fixed wireline voice or broadband. What components of a model for mobile wireless services are critical in accurately forecasting costs and revenues? Is the model more or less sensitive to certain potential errors than others? How does the pace of change in the mobile service industry affect the reliability of a model for projections of greater than five years, or seven years, or ten years?

188. Two parties already have offered the results of a model-based analysis in selected states to argue for the benefits of a model-based approach for the Mobility Fund. Both US Cellular and MTPCS have pointed to a CostQuest Associates model for estimating costs and revenues related to mobile service. The Commission seeks comment generally on the model that US Cellular and MTPCS describe in their submissions.

189. In their model-based analyses, both US Cellular and MTPCS estimated the costs of expanding their existing networks in order to provide service in unserved areas. Taking existing networks into account when modeling costs is sometimes referred to as a brownfield approach. A brownfield approach assumes that providers will make use of existing assets. The results of such an analysis may be unreliable if the provider controlling the relevant assets chooses not to receive support and uses those assets for other purposes. Moreover, the costs for one provider may be very different from the costs for another provider, due to differences in their access to existing assets. The Commission seeks comment on how best to construct a brownfield model when the goal is not to model the costs of individual mobile wireless provider, but of a generic provider in an area.

190. The parties claim that CostQuest's model also enables users to determine the cost of offering wireless service without using existing assets. Modeling costs of providing service without pre-existing assets is sometimes referred to as a greenfield approach. A greenfield approach runs the risk of overestimating the necessary costs of providing service by failing to make efficient use of existing assets. The Commission seeks comment on the relative advantages of a brownfield or greenfield approach in the context of mobile services when determining which areas require support and when determining how much support is required.

191. Modeling also raises concerns regarding the accuracy of data (inputs) used in the model. How critical is it that the model accurately forecast base station locations? In an efficient network providing mobile service, base station locations are interdependent – the signal from one should overlap with another sufficiently to assure effective coverage but not so much as to create interference. Assumptions regarding any base station location in a network may be significant with respect to the final number and location of all base stations, and therefore the cost of the entire network. This is especially true with respect to pure greenfield models, which make assumptions about the possible locations of cell sites without being able to take account of actual constraints in locating such sites. The Commission seeks comment on the ways, if any, to assess the sensitivity of model-based results to potential errors regarding site location when estimating costs for providing mobile service. Would the use of a brownfield approach substantially reduce such sensitivity?

192. The CostQuest model employed by US Cellular and MTPCS also assesses incremental revenues from expanded mobile coverage when determining an

area's need for support. If a provider can count on generating revenue from the network expansion that meets or exceeds related costs, even the highest cost area may not require support. How could the Commission take into account revenues in a model used for mobile support? Could the Commission develop non-party-specific estimates of incremental revenues? Should the Commission consider potential revenues from non-supported services that could be offered over the network infrastructure that provides supported voice service, including the mobile broadband service required as a condition of Mobility Fund support, or other services, like subscription video services? What estimates could the Commission use with respect to the potential costs and revenues associated with the provision of such services?

193. Notwithstanding their significance in determining the need for support, estimating revenues may be difficult, particularly over longer periods of time. Given difficulties in estimating consumer interest in particular service offerings at particular prices, errors in estimating revenues may be more likely to occur and, when they occur, more likely to result in larger errors in determining the appropriate level of support. The Commission seeks comment on the extent to which it might be able to achieve the appropriate balance between the inclusion of revenue estimates and the likely accuracy of the model's outcomes, and, if so, how the Commission would do so.

194. A model might be used simply to determine what areas require support for the public interest obligations to be met, rather than determine that as well as the amount of support to be provided. The Commission seeks further comment on whether a mobile wireless model may be sufficiently reliable for more limited purposes. Could a model offer guidance on the appropriate level of support, such as determining a

maximum that might be offered in a competitive bidding process in a particular area, without being sufficiently accurate to rely on for determining the actual level of support in that area?

b. Framework for Economic Model-Based Process

195. If the Commission were to use an economic model to determine support levels, the goals and objectives of the Phase II Mobility Fund would continue to be to support next generation mobile service where support is needed in as many areas as possible, given the limited funds available. The public interest obligations attaching to the receipt of support would remain the same. The Commission seeks comment on which, if any, elements of its proposes framework would need to change if it decides to use a model-based process for determining support.

196. The Commission also seeks comment specifically on whether the granularity with which an economic model produces reliable cost and/or revenue estimates would have any impact on the geographic areas being made available for mobile services support. If a model is more likely to determine support amounts accurately only over an area larger than a census block, does it mean that the Commission should increase the minimum area for which support is offered? The Commission seeks comment on the minimum area for offering model-based support. Would a model be more accurate in estimating support for areas based on resident population instead of road miles? If so, would the Commission have to use resident population as a metric for offering support and measuring compliance with public interest obligations if the Commission adopts a model-based approach?

197. In order to extend its limited budget to reach the widest possible

coverage, the Commission generally expects to offer support to only one mobile services provider in an area. The Commission seeks comment on how to implement that principle under a model-based approach. In contrast to competitive bidding, the Commission notes the model-based approach does not include a mechanism for selecting among multiple parties. Should the Commission determine the party that receives support through a qualitative review of would-be providers? If so, what factors should that review take into account? Should the Commission reserve support for a particular area to the provider currently receiving universal service support that has the most extensive network within a defined area? What other method could the Commission use to select among providers? In addition, the Commission could use the results of a wireless model to set reserve prices in the context of competitive bidding. The Commission seeks comment here on how to use the results of a wireless model to distribute Mobility Fund Phase II, support consistent with its use of a wireline cost model in CAF-Phase II to target support to high-cost areas subject to its budget.

198. The Commission notes that US Cellular and MTPCS proposed permitting multiple providers to receive support for service in the same area. Given the economics of the underlying terrestrial wireless technology, permitting multiple providers to receive support could increase the amount of support required per subscriber, as the number of subscribers per provider will decline. The Commission seeks comment on this concern.

199. The Commission also seeks comment on whether using mobile model-based support would change the appropriate length of the term of support. Are there aspects of the model that link its estimates to particular time periods? Is that reason to

offer the support for any particular length of time? Is it possible to estimate the cost of meeting the proposed increases in public interest obligations several years in advance? Particularly with respect to a mobile wireless model used to determine ongoing support for a term of years, how should the Commission address potential changes in circumstances or technology over time that would change modeled costs and/or revenues?

200. Finally, commenters addressing the possible use of a model-based approach should discuss whether the Commission would need to make any changes to the management and oversight of the program, as well as any other changes they believe it should make to the framework the Commission proposed for a competitive bidding mechanism.

J. Competitive Process in Price Cap Territories Where the Incumbent Declines to Make a State-Level Commitment

201. The Commission adopts a framework for USF reform in areas served by price cap carriers where support will be determined using a combination of a forward-looking broadband cost model and competitive bidding to efficiently support deployment of networks providing both voice and broadband service over the next several years. In each state, each incumbent price cap carrier will be asked to undertake a state-level commitment to provide affordable broadband to all high-cost locations in its service territory in that state, excluding locations served by an unsubsidized competitor, for a model-determined efficient amount of support. In areas where the incumbent declines to make that commitment, the Commission will use a competitive bidding mechanism to distribute support in a way that maximizes the extent of robust, scalable broadband

service and minimizes total cost. The FNPRM addresses proposals for this competitive bidding process, which the Commission refers to here as the CAF auction for price cap areas.

i. Overall Design of the Competitive Bidding Process

202. Consistent with the Commission's decision to use incentive-driven policies to maximize the value of scarce USF resources, the Commission proposes to use a reverse auction mechanism to distribute support to providers of voice and broadband services in price cap areas where the incumbent ETC declines to accept model-determined support. Assigning support in this way should enable the Commission to identify those providers that will make most effective use of the budgeted funds, thereby extending services to as many consumers, businesses, and community anchor institutions as possible. The Commission proposes to use a competitive bidding mechanism to identify those eligible areas – and associated providers – where supported services can be offered at the lowest cost per unit.

ii. Framework for Awarding Support Under Competitive Bidding

a. Identifying Geographic Areas Eligible for Competitive Bidding

203. Identifying Eligible Areas. In any areas where the price cap ETC declines to make a state-level commitment, the Commission proposes to conduct competitive bidding to award support using the same areas identified by the CAF Phase II model as eligible for support. The Commission also seeks comment on other approaches to defining the areas to be used in this auction. The Commission could exclude areas that, based on the most recent data available, are served – at any speed, at 4 Mbps downstream

/ 1 Mbps upstream, or at 6 Mbps downstream / 1.5 Mbps upstream. In addition, the Commission could use different cost thresholds for defining service, for example, including all unserved areas regardless of cost in the auction. As it did for the Mobility Fund, the Commission proposes to use census blocks as the minimum size geographic unit eligible for competitive bidding. Using census blocks will allow the Commission to target support based on the smallest census geography available. The Commission seeks comment on this proposal, as well as alternatives.

204. Minimum Size Unit for Bidding and Support. The Commission proposes that the census block should be the minimum geographic building block for defining areas for which support will be provided. Because census blocks are numerous and can be quite small, the Commission believes that it will need to provide at the auction for the aggregation of census blocks for purposes for bidding. There are a number of ways to permit such aggregation, including the possibility of adopting a rule regarding a minimum area for bidding comprised of an aggregation of eligible census blocks, such as tracts, and/or the use of auction procedures that provide for bidders to be able to make all-or-nothing package bids on combinations of bidding areas. As discussed elsewhere, two possible approaches for census block aggregation include a Census Tract-type approach and a Bidder-Defined approach. The Commission seeks comment here on whether a Census Tract-type approach, Bidder-Defined approach, or another approach would best meet the needs of bidders in the CAF auction for support in price cap areas.

205. Prioritizing Areas. In addition, the Commission seeks comment on whether it should target areas currently without any broadband service for priority treatment in whatever competitive bidding mechanism it adopts. Should the Commission

provide a form of bidding credit that would promote the support of such areas?

b. Establishing Bidding and Coverage Units

206. In order to compare bids, the Commission proposes to assign a number of bidding units to each eligible census block. Consistent with the terms of the public interest obligations undertaken by bidders, the Commission proposes to base the number of units in each block on the number of residential and business locations it contains, using the 2010 decennial census data. The Commission seeks comment on this proposal, and on any alternatives.

c. Maximizing Consumer Benefits

207. The Commission's objective is to distribute the funds it has available to bring advanced services to as many consumers as possible in areas where there is no economic business case for the private sector to do so. Where the incumbent declines to make a state-level commitment to provide affordable broadband to all high-cost locations in its service territory in return for model-determined support in each state, the Commission proposes to use the competitive bidding mechanism described here, which will be open to any provider able to satisfy the public interest obligations associated with support. Thus, the Commission envisions that there may be more than one ETC that seeks such support for any given area. In contrast to the former rules, under which multiple providers are entitled to an award of portable, per-subscriber support for the same area, the Commission expects that to maximize coverage within its budget it will generally be supporting a single provider for a given geographic area through this auction. As with Mobility Fund Phase II, the Commission would support more than one provider in an area only if doing so would maximize coverage. The Commission is

mindful that its statutory obligation runs to consumers, rather than carriers, and that it must target its limited funds in a way that expands and sustains the availability of broadband services to maximize consumer benefits. The Commission also proposes that a competitive ETC would become ineligible to receive support for any area under its phase down of frozen legacy support formerly distributed pursuant to the identical support rule as soon as it began receiving CAF support for that same area.

208. The Commission also seeks comment on whether and to what extent ETCs that receive such support through a competitive bidding process should be permitted to partner with other providers to fulfill their public interest obligations. The Commission invites comment on whether it should establish any limit on the geographic extent to which any one provider may be awarded such support. Is there another basis on which it should limit the amount of support that goes to any one provider?

d. Term of Support

209. The Commission proposes a term of support for providers that receive support through this auction that is equal to that adopted for providers that accept state-level model-determined support. Accordingly, the Commission proposes a term of support of five years, subject to recipients complying with the obligations of the program. The Commission seeks comment on this proposal, and whether a longer time-period, e.g., ten years, would better serve its goals. The Commission also seeks comment on whether it is appropriate to establish any sort of renewal opportunity, and on what terms, including whether there should be any difference here from universal service support awarded under a state-level-commitment.

e. Provider Eligibility Requirements

210. ETC Designation. For the same reasons that apply with respect to other CAF programs, the Commission generally proposes to require that applicants for support be designated as ETCs covering the relevant geographic area prior to participating in an auction. As a practical matter, this means that parties that seek to participate in the auction must be ETCs in the areas for which they will seek support at the deadline for applying to participate in the competitive bidding process. The Commission seeks comment on this proposal.

211. Certification of Financial and Technical Capability. The Commission also proposes that each party seeking to receive support determined in this auction be required to certify that it is financially and technically capable of providing the required service within the specified timeframe in the geographic areas for which it seeks support. The Commission seeks comment on how best to determine if an entity has sufficient resources to satisfy its obligations. Should the Commission require that any entity finance a fixed percentage of any build-out with non-CAF or private funds? The Commission seeks comment on certification regarding an entity's technical capacity. Does the Commission need to be specific as to the minimum showing required to make the certification? Or can the Commission rely on its post-auction review and performance requirements?

212. Eligibility of Carriers Declining a State-Level Commitment Covering the Area. The Commission is not inclined to restrict the eligibility of carriers that could have accepted model-determined support for the area that will be auctioned, but seeks comment on this approach. What effect does the opportunity to seek support in a

subsequent auction have on incentives to accept or decline a state-level commitment in exchange for model-determined support? How should the differences in potential service areas be taken into account, given that potential bidders in the auction will not be required to bid on the entire territory of the price cap carrier in that state?

213. Other Qualifications. The Commission seeks comment on other eligibility requirements for entities seeking to receive support in an auction after the price cap incumbent declines to make a state-level commitment. Parties providing suggestions should be specific and explain how the eligibility requirements would serve its objectives. At the same time that the Commission establish minimum qualifications consistent with these goals, are there ways the Commission can encourage participation by the widest possible range of qualified parties? Are there any steps the Commission should take to encourage smaller eligible parties to participate in the bidding for support?

f. Public Interest Obligations

214. Service Performance Requirements and Measurement. The Commission proposes that recipients of support awarded through this competitive bidding process be obligated to provide service meeting specified performance requirements. The Commission proposes that these performance requirements be the same as those required of providers that accept model-determined support. Under this proposal, the Commission seeks to maximize via competitive bidding (both within and across regions) the amount of broadband service being offered at the same full performance levels required for incumbent providers willing to undertake a state-level broadband commitment. The Commission seeks comment on this proposal.

215. Alternatively, the Commission seeks comment on relaxing the minimum

performance requirements sufficiently to expand the pool of technologies potentially eligible to compete for support. Under this approach, providers could offer different performance characteristics, such as download and/or upload speeds, latency, and limits on monthly data usage, and the Commission would score such quality differences in evaluating bids. That is, individual providers could propose different prices at which they would be willing to offer services at different performance levels, and the Commission would select the winning bids based on both the prices and the performance scores. To simplify the bidding process, the Commission could limit the set of performance levels that providers could bid to offer – for instance, to a standard broadband offering and a higher quality broadband offering. This general approach would give the Commission the option of making tradeoffs between supporting a higher quality service to fewer locations versus supporting a standard service for more locations. Such an approach should result in more competitive bidding by allowing more technologies to compete for funding (both within a region and across regions), thereby enabling the CAF budget to yield greater coverage at acceptable broadband performance standards than under the proposal. The Commission seeks comment on how it could best implement this alternative -- including how to score different performance dimensions, and, whether providers should specify as part of their bids the retail prices they would charge consumers and, if so, how to include such prices in scoring the bids. Parties should further address how the Commission should assess the public interest tradeoffs between offering a higher quality to fewer customers and accepting a lower quality for some customers but serving more customers. The Commission also seeks comment on whether and how the possibility of obtaining support for a lower quality service would affect the incentives of incumbent providers to accept or decline a state-level broadband commitment. The Commission seeks comment from providers of services used by people with disabilities, such as Internet-based telecommunications relay services, including VRS, and point-to-point video communications or video conferencing services, as to the minimum performance requirements needed to support such services and communications.

216. Requesting Locations. The Commission proposes that support recipients be required to provide subsidized service to as many locations as request service in their areas during the term of support. Alternatively, the Commission seeks comment on whether it should limit the number of locations that must be served in any area based on the number of locations identified at the time of the auction. Such a limit would be consistent with limiting the total amount of support available. However, it would not take into account changes in the number of eligible locations during the term for which support will be provided. In order to take growth into account while maintaining a limit on the total amount of support, should it provide for a presumed growth rate in the number of locations during the term of support? Or should the Commission simply require providers to serve whatever number of future locations there may be, effectively requiring providers to take into account their own estimates of such growth when bidding for support?

217. Reasonably Comparable Rates. The Commission proposes that recipients of support through CAF auctions for price cap areas will be subject to the same requirements regarding comparable rates that apply to all recipients of CAF support.

218. Deployment Deadlines. The Commission proposes that recipients be

required to meet certain deployment milestones in order to remain qualified for the full amount of any award. The Commission proposes that deployment milestones that apply to ETCs through a competitive process be the same as those that apply to price cap ETCs that accept a state-level commitment. The Commission seeks comment on whether recipients of CAF auction support should instead be subject to different deployment deadlines.

iii. Auction Process Framework

219. Consistent with its approach for the Mobility Fund, the Commission proposes to delegate to the Bureaus authority to establish detailed auction procedures, take all other actions to conduct this competitive bidding process, and conduct program administration and oversight consistent with any rules and policies the Commission establish in light of the record it receives based on the proposals made for this CAF auction process for support. The Commission seeks comment on this proposal.

a. Auction Design

220. Consistent with its approach for the Mobility Fund, the Commission proposes certain general rules outlining various auction design options and parameters, while at the same time proposing that final determination of specific auction procedures to implement a specific design based on these rules be delegated to the Bureaus as part of the subsequent pre-auction notice and comment proceeding. Among other issues, the Commission proposes to give the Bureaus discretion to consider various procedures for grouping eligible areas to be covered with one bid – package bidding – that could be tailored to the needs of prospective bidders as indicated during the pre-auction notice and comment period.

221. The Commission is inclined to believe that some form of package bidding may enhance the auction by helping bidders to incorporate efficiencies into their bids. While the Bureaus will establish specific procedures to address this issue later, the Commission invites preliminary comment on whether package bidding may be appropriate for this auction, and if so, why. The Commission asks for input on package bidding as it relates to its choice of a Census Tract-type or Bidder-Defined approach for the Mobility Fund Phase II. The Commission seeks comment on the potential advantages and disadvantages of possible package bidding procedures and formats in the context of awarding support to ensure the universal availability of modern networks capable of delivering broadband and voice service to homes, businesses, and community anchor institutions. The Commission asks for input on the reasons why certain package bidding procedures would be helpful or harmful to providers bidding in an auction, and what procedures might best meet its goal of maximizing such universal availability. Should the Commission impose some limits on the size or composition of package bids, such as allowing flexible packages of blocks or larger geographic units as long as the geographic units are within the boundaries of a larger unit such as a county or a state? If the Commission adopts the Census Tract-type approach, it could establish package bidding procedures that allow bidders to place package bids on predetermined groupings of eligible areas that follow a particular hierarchy – such as blocks, tracts, counties, and/or states, which nest within the census geographic scheme.

222. The Commission seeks preliminary comment on determining reserve prices for the auction based on the support amounts estimated by a forward looking broadband cost model.

b. Potential Bidding Preference for Small Businesses

223. The Commission seeks comment on whether small businesses should be eligible for a bidding preference in a CAF auction for support in price cap areas and whether such a bidding preference would be consistent with the objective of providing such support. Consistent with the approach discussed for Mobility Fund Phase II, the preference would act as a reverse bidding credit that would effectively reduce the bid amount of a qualifying small business for the purpose of comparing it to other bids. The Commission also seeks comment on the size of any small business bidding credit that would be appropriate to increase the likelihood that the small business would have an opportunity to win support in the auction. The Commission also seeks comment on how it should define small businesses if it adopts a bidding credit for auctions to award support in price cap areas. For the reasons provided in its discussion of Mobility Fund Phase II, the Commission seeks comment on whether a small business should be defined as an entity with average gross revenues not exceeding $40 million for the preceding three years. Alternatively, should the Commission consider a larger size definition for this purpose, such as average gross revenues not exceeding $125 million for the preceding three years? In determining an applicant's gross revenues under what circumstances should it attribute the gross revenues of the applicant's affiliates? The Commission seeks comment on these definitions and invites input on alternatives.

c. Auction and Post-Auction Process

224. Short-Form Application Process. The Commission proposes to use the same two-stage application process described in the USF/ICC Transformation Order for Phase I of the Mobility Fund. The Commission seeks comment on this proposal and on

whether there are any reasons to deviate from the process already adopted for the Mobility Fund.

225. Information and Communications. The Commission does not expect there to be circumstances specific to this auction that would indicate that it should deviate from the usual auction policies with respect to permissible communications during the auction or the public release of certain auction-related information. The Commission proposes to use the same rules and procedures regarding permissible communications and public disclosure of auction-related information as it does for the Mobility Fund. The Commission seeks comment on this proposal.

226. Auction Cancellation. Consistent with its approach regarding the Mobility Fund, the Commission proposes to provide the Bureaus with discretion to delay, suspend, or cancel bidding before or after a reverse auction begins under a variety of circumstances. The Commission seeks comment on this proposal.

227. Post-Auction Long-Form Application Process. The Commission proposes to apply the post-auction long-form application process for Mobility Fund Phase I to participants in auctions for price cap CAF. Accordingly, applicants that win competitive bidding in such auctions would be required to demonstrate in their long-form applications that they are legally, technically and financially qualified to receive the support. The Commission seeks comment on this approach.

228. In addition, the Commission proposes that a winning bidder will be subject to an auction default payment, if it defaults on its bid, including if it withdraws a bid after the close of the auction, fails to timely file a long form application, is found ineligible or unqualified to be a recipient of support, or its long-form application is

dismissed for any reason after the close of the auction. In addition, the Commission proposes that recipients of support will be subject to a performance default payment. The Commission proposes the same rules for both of these default payments as it has have adopted for Mobility Fund Phase I. The Commission seeks comment on these proposals.

iv. Tribal Issues

229. The Commission seeks comment on whether to establish special provisions to help ensure service to Tribal lands. To the extent practicable, the Commission anticipates that support is best awarded using the same framework, and on the same terms and conditions, as it proposes for other areas where the price cap carrier declines to make a state-level commitment to provide services. The Commission recognizes, however, that there are several aspects for which a more tailored approach may be appropriate on Tribal lands, as evidenced in the record developed to date. The Commission seeks comment on whether to adopt revisions to identify eligible geographic areas and appropriate coverage units, consistent with the approach it took in the Tribal Mobility Fund Phase I. The Commission also proposes Tribal engagement requirements, preferences that reflect its unique relationship with Tribes, including a bidding credit of 25 percent for Tribally-owned and controlled recipients, and ETC designation provisions to allow a Tribally-owned or controlled entity to participate at auction provided that it has an application for ETC designation pending at the short-form application stage. The Commission seeks comment on these issues. The Commission seeks comment on establishing a Tribal priority along the lines the Commission proposes for the Tribal Mobility Fund Phase II. The Commission believes that these measures would help to ensure service in a way that acknowledges the unique characteristics of Tribal lands and

reflects and respects Tribal sovereignty. To the extent the Commission adopt its proposal for Tribal priority units, the Commission seeks comment on whether a Tribally-owned and controlled provider should also be eligible to receive a bidding credit within its Tribal land or if the Tribe must choose between one or the other. Would a 25 percent bidding credit, like the one it has adopted for Phase I and proposed for Phase II of the Mobility Fund be sufficient, or does it need to be set at a different level? The Commission seeks comment on whether to adopt an alternative backstop support mechanism for any Tribal land in which the auction fails to attract a bidder.

v. Accountability and Oversight

230. The Commission proposes that all recipients of CAF support awarded through a competitive process would be subject generally to the same reporting, audit, and record retention requirements adopted in the USF-ICC Transformation Order. The Commission seeks comment on this proposal.

231. In structuring support, the Commission is mindful that it must comply with the Anti-Deficiency Act (31 U.S.C. 1341(a)(1)(B)). Commenters are invited to address how to structure an award of support for a period of years to provide recipients with the requisite level of funding and certainty, while ensuring that the Commission's Anti-Deficiency Act obligations are met.

vi. Areas that Do Not Receive Support

232. Any areas that do not receive support either via a price cap carrier accepting a state-level commitment or via the subsequent auction would be eligible for support from the Remote Areas Fund budget.

K. Remote Areas Fund

233. The USF-ICC Transformation Order adopts a number of reforms aimed at ensuring universal availability of robust and affordable voice and broadband services to all Americans. A key element of these reforms is the Commission's dedication of an annual budget of at least $100 million to ensure that the less than one percent of Americans living in remote areas where the cost of deploying traditional terrestrial broadband networks is extremely high can obtain affordable broadband. The Commission seeks comment on how best to implement the CAF for remote areas (Remote Areas Fund).

234. The obstacles to ensuring that affordable voice and broadband service are available in extremely high-cost areas differ somewhat from the obstacles to ensuring that such services are available in other areas supported by the CAF. With respect to those latter areas the Commission focus has been on how best to facilitate the deployment of robust fixed and mobile broadband technologies where its universal service fund budget can support such deployment. In contrast, in extremely high-cost areas, available universal service support is unlikely to be sufficient for the deployment of traditional terrestrial networks supporting robust voice and broadband services. The CAF can help fulfill its universal service goals in these areas by taking advantage of services such as next-generation broadband satellite service or wireless internet service provider (WISP) service, which may already be deployed (or may be deployable with modest upfront investments) but may be priced in a way that makes service unaffordable for many consumers. In addition, the Commission recognizes that some of the most likely providers of service to these remote areas have cost structures, price structures, and

networks that differ significantly from those of other broadband providers. For instance, the cost of terminal equipment and installation for satellite broadband often is greater than for other broadband offerings. The Commission asks commenters to focus in particular on these characteristics and explain what, if any, impact they should have on the structure of the Remote Areas Fund.

i. Program Structure

235. The Commission seeks comment on how to structure the Remote Areas Fund. The Commission proposes that support for remote areas be structured as a portable consumer subsidy. Specifically, the Commission seeks comment on CAF support being used to make available discounted voice and broadband service to qualifying residences/households in remote areas, in a manner similar to its Lifeline and Link Up programs (together, Lifeline). As with Lifeline and Link Up, ETCs providing service in remote areas would receive subsidies only when they actually provide supported service to an eligible customer. Such a program structure would have the effect of making voice and broadband more affordable for qualifying consumers, thus promoting consumer choice and competition in remote areas. The Commission seeks further comment on how to implement such a proposal below.

236. The Commission also seeks comment on an alternative structure for the Remote Areas Fund, which would use a competitive bidding process. Such a process could be conducted in one of three ways: (a) a per-subscribed-location auction, (b) a coverage auction, or (c) an auction of support that would include not only remote areas but also areas where the incumbent LEC declines to undertake a state-level commitment. The Commission seeks further comment on how it could implement such a proposal.

237. Another alternative would be to structure CAF support for remote areas as a competitive proposal evaluation process, or Request for Proposal (RFP) process.

238. The Commission also seeks comment generally on whether there are other ways to structure CAF support for remote areas. Are there other alternatives that the Commission should consider? Commenters should address considerations of timeliness, ease of administration, and cost effectiveness relative to the proposed portable consumer subsidy and auction approaches. For any proposed alternative, the Commission also seeks comment on whether its approach to management and oversight of this program.

ii. General Implementation Issues

a. Definition of Remote Areas

239. The Commission intends to use a forward-looking cost model – once finalized – to identify a small number of extremely high-cost areas in both rate-of-return and price cap areas that should receive support from the Remote Areas Fund. However, given its goal of implementing the program by the end of 2012, the Commission will not be able to use the model to identify, at least in the first instance, remote areas eligible for CAF support.

240. The Commission therefore seeks comment on how to identify the areas eligible for the Remote Areas Fund while the model is unavailable. The Commission proposes to provide support to those census blocks in price cap territories that are identified by National Broadband Map data as having no wireline or terrestrial wireless broadband service available, subsidized or unsubsidized. The Commission seeks comment on this proposal. Could this test be used as a proxy for identifying extremely

high-cost areas? Is the National Broadband Map data sufficiently granular? Given that it is reported voluntarily by broadband providers, may the data be considered reliable enough for this purpose? Is there a risk that use of that metric would result in overlap with areas that likely would be supported by Mobility Fund monies or by funding made available post-state-level commitment? Could any overlap be addressed by making areas ineligible to the extent they are supported by other CAF funds? Given the goal of increasing broadband availability quickly, might the benefits of permitting overlaps for some time period outweigh the costs? Are there other data sources that could be used in conjunction with National Broadband Map data to improve its identification of remote areas? Are there alternative methods to using National Broadband Map data that the Commission could use to identify those remote areas in which CAF support should be available? What would be the advantages and disadvantages of such methods?

241. Should the Commission switch from its initial method of identifying remote areas eligible for support (e.g., by using National Broadband Map data) to the forward-looking cost model once the model is available? How frequently should the Commission reexamine whether an area is appropriately classified as remote for the purposes of Remote Area Fund support? The National Broadband Map is updated approximately every six months – would that be an appropriate interval? Is a periodic reexamination of the classification of remote areas sufficient to ensure that Remote Areas Fund support is not provided in areas where other carriers are providing broadband supported by other CAF elements? Likewise, is it sufficient to ensure eligibility for the Remote Areas Fund for consumers in areas where a carrier that currently receives USF

support ceases to provide broadband service because that support is no longer available in whole or in part?

242. The Commission notes that whether the Remote Area Fund is distributed as one-time awards or as ongoing support may affect the impact of any reexamination of the classification of remote areas. If one-time awards were distributed, up to $100 million for a given year, additional money would be available in subsequent years. If ongoing support were awarded, and $100 million were committed for a term of years, it would foreclose the possibility of support for additional areas later identified as remote by the model. Therefore, regardless of the distribution mechanism (portable consumer subsidy, auction, or RFP), the Commission proposes to use one-time support until the model is complete. Thereafter, the Commission may decide to use one-time support, ongoing support, or a combination of the two.

b. Provider Qualifications

243. ETC Designation. For the same reasons that apply with respect to other components of CAF, the Commission proposes to require that applicants for CAF support for remote areas be designated as ETCs covering the relevant geographic area as a condition of their eligibility for such support. The Commission seeks comment on this proposal.

244. The Commission also seeks comment on the Commission's authority to designate satellite or other providers as ETCs pursuant to section 214(e)(6). Section 214(e)(6) authorizes the Commission to designate ETCs in the limited cases where a common carrier is not subject to the jurisdiction of a state commission. Under current procedures, when a carrier seeks ETC designation by the Commission, it must obtain

from the relevant state an affirmative statement that the state lacks authority to designate that provider as an ETC. In order to streamline the implementation of CAF support for remote areas, should the Commission change its determination that carriers seeking non-Tribal land ETC designation must first seek it from the state commissions? Likewise, to the extent that providers may seek to serve remote areas in multiple states, can and should the Commission establish a streamlined process whereby the Commission could grant providers a multi-state or nationwide ETC designation? What modifications, if any, should be made to its ETC regulations in light of the particular characteristics of CAF support for remote areas? Would forbearance from any of the existing obligations be appropriate and necessary?

245. Certification of Financial and Technical Capability. The Commission also proposes that each party seeking to receive CAF support for remote areas be required to certify that it is financially and technically capable of providing the required service within the specified timeframe in the geographic areas for which it seeks support. The Commission seeks comment on what specific showings should accompany any such certification.

246. Other Qualifications. The Commission seeks comment on other eligibility requirements for entities seeking to receive support for remote areas and how such requirements would advance its objectives. At the same time that the Commission establish minimum qualifications consistent with these goals, are there ways the Commission can encourage participation by the widest possible range of qualified parties, including smaller entities?

c. Term of Support

247. The Commission seeks comment on whether to establish a term of support in conjunction with the Remote Areas Fund. To the extent the Commission adopts a structure that requires a term of support, the Commission proposes a five-year term, and seeks comment on alternative terms. The Commission also seeks comment on whether it is appropriate to establish any sort of renewal opportunity, and on what terms.

d. Public Interest Obligations

(i) Service Performance Criteria

(a) Voice

248. The Commission requires all recipients of federal high-cost universal service support (whether designated as ETCs by a state commission or the Commission), as a condition of receiving federal high-cost universal service support, to offer voice telephony service on a standalone basis throughout their supported area. ETCs may use any technology in the provision of voice telephony service. Additionally, consistent with the section 254(b) principle that consumers in all regions of the Nation . . . should have access to telecommunications and information services . . . that are available at rates that are reasonably comparable to rates charged for similar services in urban areas, ETCs must offer voice telephony service, including voice telephony service offered on a standalone basis, at rates that are reasonably comparable to urban rates. The Commission finds that these requirements are appropriate to help ensure that consumers have access to voice telephony service that best fits their particular needs.

(b) Broadband

249. Because different technologies, which may provide lower speeds and/or

higher latencies, are likely to be used to serve locations in extremely high-cost areas than in other areas, and because it is not reasonably feasible to overcome this difference with the limited resources available through the CAF, the Commission proposes to tailor broadband performance requirements to the economic and technical characteristics of networks likely to exist in those remote areas. The Commission therefore proposes to modestly relax the broadband performance obligations for fixed voice and broadband providers to facilitate participation in the Remote Areas Fund by providers of technologies like next-generation satellite broadband and unlicensed localized fixed wireless networks, which may be significantly less costly to deploy in these remote areas. The Commission seeks comment on the appropriate performance requirements for broadband service to remote areas.

250. Speed Requirement. The Commission notes that satellite broadband providers and WISPs are capable of offering service at speeds of at least 4 Mbps downstream and 1 Mbps upstream or intend to do so in the near future. The Commission proposes that broadband services eligible for CAF support for remote areas must, consistent with other CAF requirements, offer actual speeds of at least 4 Mbps downstream and 1 Mbps upstream. The Commission seeks comment on this proposal. Are adjustments to those speeds appropriate given the nature of satellite service, WISP service, or other services? Is the availability of sufficient backhaul capacity a limiting factor that must be taken into account in some circumstances?

251. Latency. Consistent with other CAF requirements, the Commission proposes to require ETCs to offer service of sufficiently low latency to enable use of real-time applications, including VoIP. The Commission recognizes that providers that

operate satellites in geosynchronous orbits will, as a matter of physics, have higher latency than most terrestrial networks, and seeks comment on how to operationalize that requirement. Would it be appropriate to set a latency standard, measured in milliseconds, for satellite services delivered in remote areas? If so, what should that standard be?

252. Capacity. The Commission seeks comment on whether services supported by CAF for remote areas should have a minimum capacity requirement, and if so what that requirement should be. The Commission notes that both WildBlue and HughesNet currently limit daily or monthly usage by their residential subscribers. Upon launch of their new satellites, both providers may be able to adjust their usage limits.

253. Other elements of CAF require that usage limits for broadband services must be reasonably comparable to usage limits for comparable residential broadband offerings in urban areas. Is this standard appropriate for satellite, WISP, and other broadband services in remote areas? Could the Commission establish a different capacity standard for services supported by CAF in remote areas that still enable consumers to utilize distance learning, remote medical diagnostics, video conferencing, and other critical applications, while allowing network operators the flexibility necessary to manage their networks? How would such a standard be operationalized?

(ii) Pricing

254. Reasonably Comparable Rates. The fourth performance goal adopted in the USF-ICC Transformation Order is to ensure that rates are reasonably comparable for voice as well as broadband service, between urban and rural, insular, and high-cost areas. Rates must be reasonably comparable so that consumers in rural, insular, and high-cost areas have meaningful access to these services. The Commission proposes to utilize the

standards discussed in the USF-ICC Transformation Order to determine whether rates for voice and broadband service in remote areas are reasonably comparable to those in urban areas. The Commission seeks comment on this proposal.

255. Specifically, the Commission proposes to consider rates for voice service in remote areas to be reasonably comparable to urban voice rates under section 254(b)(3) if rates in remote areas fall within a reasonable range of urban rates for reasonably comparable voice service. Consistent with precedent, the Commission proposes to presume that a voice rate is within a reasonable range if it falls within two standard deviations above the national average.

256. As with voice services, for broadband services, the Commission proposes to consider rates in remote areas to be reasonably comparable to urban rates under section 254(b)(3) if rates in remote areas fall within a reasonable range of urban rates for reasonably comparable broadband service. The Commission expects that the specific methodology to define that reasonable range that the Bureaus elsewhere have been directed to develop will be of equal use here.

257. The Commission is committed to achieving its goal of ensuring that voice and broadband are available at reasonably comparable rates for all Americans. It is unlikely, however, that the Commission will be able to ensure that every residence/household in extremely high-cost, remote areas has access to subsidized voice and broadband service given the overall budget for the CAF. The Remote Areas Fund is, therefore, focused primarily on making voice and broadband affordable for consumers who would not otherwise have the resources to obtain it. The Commission seeks comment in the following sections on whether to implement a means test to ensure that

those residences/households in remote areas that are most in need of support to make voice and broadband affordable are able to obtain it.

258. The Commission recognizes that this approach would be different from the current Commission approach for advancing universal service in high-cost areas, which does not look at the income levels of individual consumers that are served by carriers that receive funding from the high-cost program. These past decisions, however, were made in the context of a high-cost fund that lacked a strict budget. The Commission has now established an annual budget of no more than $4.5 billion for the high-cost fund. In the context of this budget, the Commission has considered how best to achieve its goals with respect to the relatively small number of extremely costly to serve locations. Supporting robust fixed terrestrial networks in these remote areas would be so expensive that it would impose an excessive burden on contributors to the fund, even recognizing the section 254(b)(3) comparability principle, which the courts and the Commission have held must be balanced against the other principles. Imposing such a burden on consumers that contribute to the universal service fund would undermine its universal service goals by raising the cost of communications services.

259. The Commission seeks to ensure that consumers in extremely high-cost areas have a meaningful opportunity to obtain both voice and broadband connectivity, and has concluded that it should support the provision of some service to those who might otherwise have no service at all. The Commission believes this is a reasonable balancing of the section 254(b) principles in the context of remote areas that would be unreasonably expensive to serve by the means contemplated in the other CAF programs. In the USF-ICC Transformation Order, the Commission believes it can achieve this goal

for these remote customers for approximately $100 million per year. It is appropriate to revisit, in this narrow context, the question of whether it should direct the limited available funds to support residences/households with limited means, rather than offering discounted rates to residences/households for which a somewhat higher price is unlikely to be a barrier to adoption.

260. Subsidy Pass Through. To the extent the Remote Areas Fund is structured in a way that support is provided to ETCs on a per-subscriber basis (e.g., as a portable consumer subsidy or as a per-subscribed-location auction), the Commission proposes that ETCs be required to pass the subsidy it receives for a subscriber on to that subscriber – in its entirety – in the form of a discount. This requirement is consistent with Lifeline, and will help to ensure that consumers in remote areas have access to services at reasonably comparable rates. The Commission seeks comment on this proposal.

261. Price Guarantees. The Commission seeks comment on how to ensure that providers do not raise their prices in response to the availability of the Remote Areas Fund subsidy. One proposal would be to require each ETC to establish an anchor price for its basic service offering – including installation and equipment charges – as a condition of eligibility to receive Remote Areas Fund support. Such an approach would provide ETCs with pricing flexibility for all but their basic service offerings, while ensuring that low-income consumers have access to at least one product that is affordable. The Commission seeks comment on how to establish appropriate anchor prices. Would it be enough to require that the lowest discounted rate be reasonably comparable to rates in urban areas?

262. Consumer Flexibility. The Commission proposes that consumers that receive discounts by virtue of Remote Areas Fund support should be permitted to apply that discount to any service package that includes voice telephony service offered by their ETC – not just to a basic package that is available at an anchor price or to other limited service offerings. Consumers in urban areas generally have the ability to purchase multiple service packages with varying levels of service quality at varying prices. It seems reasonable to afford a consumer in a remote area the same opportunity. The Commission seeks comment on this proposal.

iii. Portable Consumer Subsidy Issues

a. Subscriber Qualifications

263. The Commission proposes that CAF support for remote areas be used to make available discounted voice and broadband service to qualifying residences/households in remote areas, in a manner similar to its Lifeline program. The Commission proposes to limit CAF support for remote areas to one subsidy per residence/household. The Commission further proposes that in order for an ETC to receive a subsidy for a residence/household (which subsidy will be used to provide that service to that residence/household at a discounted rate), the residence/household be located in a remote area. Finally, the Commission seeks comment on whether to require that residences/households meet a means test.

264. Eligibility Limited to One Per Residence/Household. The Commission proposes to limit support to a single subsidy per residence/household in order to facilitate its statutory universal service obligations while preventing unnecessary expenditures for duplicative connections. A single fixed broadband connection should be sufficient for a

single residence/household. The Commission seeks comment on this proposal.

265. The Commission also seeks comment on how to implement this proposal in the context of CAF support for remote areas. First, the Commission proposes to adopt the use and definition of residence or household ultimately adopted by the Commission in connection with the Lifeline and Link Up Reform and Modernization NPRM, 76 FR 16482, March 23, 2011. The Commission seeks comment on this proposal. The Commission also seeks comment on how best to interpret the one per residence/household restriction in light of current service offerings and in the context of situations that may pose unique circumstances. How should the Commission or Administrator determine that CAF support for remote areas is being provided in a manner consistent with any definitions of household or residence ultimately adopted? Should providers be able to rely on the representation of the person signing up for the discounted service?

266. The Commission seeks comment on the relationship between CAF support for remote areas and the Lifeline program. Should a consumer's decision to obtain services supported by the Remote Areas Fund affect or preclude their eligibility for Lifeline, or vice versa? What other issues must the Commission address in order to ensure that these programs are structured in a complementary fashion?

267. Remote Area. The Commission proposes that CAF support for remote areas should be available only for service provided to residences/households located in extremely high-cost areas, consistent with the discussion above. The Commission seeks comment on this proposal.

268. Limiting Support to New Subscribers. It is likely that there are

residences/households located in remote areas that are capable of and willing to pay for satellite voice and broadband services at current prices. These residences/households do not, by definition, require assistance in overcoming the barrier to affordability in remote areas. The Commission therefore seeks comment on whether it is appropriate to limit Remote Areas Fund support to new subscribers only. If so, how would such a restriction be implemented? Can an ETC determine whether a potential new subscriber is a current or past subscriber to itself or to another ETC? Should residences/households be considered new customers some period of time after cancelling service with an ETC? If so, how long a period is appropriate?

269. Means Test. The Commission seeks comment on whether to use a means test to identify qualifying locations for which support can be collected in each eligible remote area. It would appear that using a means test for determining qualifying residences/households is particularly appropriate in supporting services in extremely high-cost, remote areas that may be most cost-effectively served by satellite technology. This is because such service is readily available over broad areas, but often at higher prices to the end user than common terrestrial broadband services. In addition, by limiting its support to locations that meet a means test the Commission assure that it stretch the available funds as far as possible to support service to those that would not otherwise be able to afford it. The Commission seeks comment on whether an approach that provides a portable subsidy to only a subset of consumers in remote areas is consistent with the statutory principle that consumers in all regions of the Nation, including low-income consumers . . . should have access to . . . . advanced telecommunications and information services . . . at rates that are reasonably comparable

to rates charged for similar services in urban areas. The Commission seeks comment on these proposals, and on any alternatives .

270. The Commission seeks comment on what standard it would use for such a means test. For instance, would it be appropriate to set a threshold means test for residences/households of 200 percent of the poverty level as established annually, based on residence/household size? That would, for example, provide support for a family of four that has income of $44,700 or lower. What would be the relative advantages and disadvantages of setting a higher or lower level? Would it be appropriate to also specify other governmental programs that could serve as models or as proxies for a means test, as is done with the Commission's low-income program?

271. Community Anchor Institutions and Small Businesses. The Commission seeks comment on whether small businesses and/or community anchor institutions also should be eligible for the Remote Areas Fund. How would the proposals set forth in this FNPRM need to be modified to administer a Remote Areas Fund that includes small businesses? How should small businesses be defined? Would small businesses receive the same subsidy as residences/households, or a different subsidy? As the Commission observed in the USF-ICC Transformation Order, community anchor institutions in rural America often are located near the more densely populated area in a given county – the small town, the county seat, and so forth – which are less likely to be extremely high-cost areas and therefore may not require support. If the Commission is to provide support to community anchor institutions, how should that term be defined?

b. Setting the Amount of the Subsidy

272. The Commission seeks comment on how to set the CAF support amount

for remote areas for ETCs for voice and broadband services.

(i) Stand-alone Voice Service

273. The Commission seeks comment on how to set the CAF support amount for remote areas for stand-alone voice service. One proposal would be to adopt rules consistent with those that establish the tiered Lifeline support amounts for voice telephony service. Would these support amounts be sufficient to overcome the barrier to affordability for voice service faced by individuals in remote areas? Would a greater or lesser amount be more appropriate? If so, how would such an amount be calculated?

(ii) Voice and Broadband Service

274. The Commission seeks comment on how to set the CAF support amount for remote areas for a bundle of voice and broadband (voice-broadband) service. The Commission notes that current satellite services tend to have significantly higher monthly prices to end-users than many terrestrial fixed broadband services, and frequently include substantial up-front equipment and installation costs.

275. Monthly Payments. The Commission seeks comment on the appropriate support amount for monthly satellite voice-broadband service charges. One proposal would be to provide a monthly amount equal to the difference between the retail price of a basic satellite voice-broadband service and an appropriate reference price for reasonably comparable service in urban areas. How would the appropriate reference price for satellite voice-broadband be calculated? How would the appropriate reference price for a reasonably comparable voice-broadband service in urban areas be calculated? What performance criteria should be applied when selecting a service or services from which to derive the price? Should a discount be applied to the price of services which are

of lower quality (e.g., have higher latency or stricter capacity limits)? Could the survey of urban broadband rates the Bureaus have been authorized to conduct provide the necessary data? How should the presence or absence of mandatory contract terms or other terms and conditions that may differ be taken into account? Are there other data sources available that could be relied upon to determine one or both reference prices?

276. What other methods could be used to establish the appropriate support amount? Proposals should be detailed and specific, and commenters should be mindful of the need to balance the goal of ensuring access to affordable broadband in remote areas with the need to operate within the budget and minimize opportunities for waste, fraud and abuse.

277. Installation and Equipment. The cost of purchasing or leasing terminal equipment and installation necessary for satellite service to be initiated often are greater than for other services. The Commission seeks comment on how and whether Remote Areas Fund support should be allocated to defray these startup costs.

278. The Commission proposes that subscribers be required to pay, or provide a deposit of, a meaningful amount to help ensure that subscribers have the means to pay for the services to which they subscribe and to provide an incentive to comply with any terms of their service agreements regarding use and return of equipment. What would be an appropriate payment or deposit amount?

279. By extension, the Commission proposes that the subsidy for installation services and equipment sale or lease be the difference between the payment or deposit amount described in the preceding paragraph and the ETC's routine charges for initiating service. The Commission seeks comment on whether this would result in an appropriate

subsidy level. Should the Commission instead establish a fixed subsidy amount? If so, how should that subsidy amount be calculated? Should the subsidy be paid at the time service is initiated, or should smaller payments be made during the duration of the subscription? What other factors must be taken into account so as to ensure that the costs of installation and equipment do not serve as a barrier to affordable broadband service in remote areas while minimizing incentives for customer churn and opportunities for waste, fraud and abuse?

280. Satellite Service Availability. The Commission recognizes that some of the most likely providers of service to remote areas are satellite providers. Are there issues relating to the nature of satellite service that could prevent potential subscribers from obtaining service? For example, WildBlue and HughesNet both require that subscribers have a clear view of the southern sky in order to obtain a signal. How many potential subscribers in remote areas may not be able to obtain a signal due to the nature of their dwelling unit (e.g., a multi-unit dwelling), terrain surrounding their dwelling unit (e.g., proximity to mountains), heavy foliage, or other obstructions? To what extent can such issues be resolved by antenna masts or other solutions? Should the cost of resolving such issues be subsidized by CAF support for remote areas? If so, how would the amount of such subsidy be calculated?

c. Terms and Conditions of Service

281. The Commission notes that both WildBlue and HughesNet require subscribers to enter into a 24-month contract as a condition of service, and impose an early termination fee if service is terminated prior to the end of the contract term. Should ETCs be permitted to impose such contract terms when consumers subscribe to services

supported by CAF for remote areas? Are there other terms or conditions that should be prohibited or restricted in connection with the provision of supported services? For example, should an ETC be permitted to require subscribers to pay by credit card, or to pass a credit check before service is initiated?

d. Budget

282. The Commission seeks comment on how to ensure that it stay within the annual Remote Areas Fund budget under a portable consumer subsidy structure. Should support be available on a first come, first served basis, or should some other method be used to identify which applicants receive support? If, in a given funding year, support expenditures begin to approach the budgeted amount, should the Commission tighten the eligibility criteria to reduce demand (*e.g.*, by lowering the threshold established for a means test, if adopted)? If so, how? What other tools or techniques can the Commission use to ensure that demand for CAF for remote areas support does not outstrip the budgeted supply?

283. The Commission also seeks comment on what the Commission should do if requests for reimbursement from the Remote Areas Fund are lower than the budget. If, in a given funding year, support expenditures do not reach the budgeted amount, should the Commission modify its eligibility criteria to allow additional residences/households in remote areas to obtain service supported by the Remote Areas Fund? If so, how?

iv. Auction Approaches

284. As alternatives to its proposals the Commission could use one of several competitive bidding approaches to target the provision of CAF funding in extremely

high-cost areas. Using an auction in which providers compete across areas for support from the Remote Areas Fund could enable us to identify those providers that would offer the services at least cost to the fund, so as to maximize the number of locations that could be served within the budget. More specifically, the Commission seeks comment on three auction-related alternatives. If the Commission uses an auction framework, it would have to consider some additional questions regarding how to address aspects of the program that would be different under an auction approach than for its voucher proposal. Commenters advocating for auction options should discuss to what extent the choice of a particular auction approach should affect decisions about the general implementation issues discussed above including definition of remote areas, provider qualifications, and public interest obligations.

285. Per-Subscribed Location Auction. This competitive bidding alternative would have much in common with the portable consumer subsidy proposal in that it would offer a subsidy based on service provided to qualifying locations. In contrast, however, under an auction approach, the subsidies would not necessarily be available in all the areas identified as extremely high-cost, but only in those areas for which winning bids were accepted. Further, in an auction for per-location support, only the providers submitting the winning bids would be eligible to collect the subsidy payments to serve qualifying locations in the area. And under an auction approach, the subsidy amount would be determined based on bids in the auction, and would not be set by the Commission.

286. In a per-subscriber location auction, the Commission would establish a benchmark price level for services meeting the performance criteria defined for voice and

broadband in extremely high-cost areas. Bidders would then indicate in the auction a subsidy amount at which they would be willing to offer services meeting its specifications while charging consumers no more than the benchmark price, which would represent a discount off the otherwise available price. The Commission seeks comment on how it should establish this price, and how to adjust it over time. Many of the same considerations discussed above with respect to the portable consumer subsidy would apply to the per-subscriber-location auction, and the Commission asks commenters to address these issues.

287. With respect to the choice of areas for competitive bidding under this option, the Commission seeks comment on whether it should use a geographic area other than census blocks as a minimum geographic unit for bidding, and how that choice relates to whether and how it might provide for bidding on packages of areas. In order to evaluate the effect of bids with respect to available funds, the Commission would determine the number of qualifying locations in each eligible census block based on 2010 decennial census data (e.g., those locations meeting a required means test).

288. The Commission could design the auction to select one or possibly more than one provider that would be eligible to receive a subsidy amount to provide services in a given area, and the Commission seeks comment on these possible approaches. Enabling more than one provider to receive support could provide qualifying customers with the benefits of a choice of service providers. Selecting a single provider per area, however, could give the providers more certainty regarding potential customers, which may permit lower bids. The Commission also asks commenters to consider whether picking one provider or two or more would have an effect on auction

competition and the auction's ability to drive subsidy prices to efficient levels. In this regard, the Commission asks commenters to indicate the likely impact on subsidy levels of picking one provider or two or more through an auction, as well as the concomitant effect on the number of locations that could be served within the budget.

289. Coverage Auction. This competitive bidding option could be appropriate if the Commission finds that it needs to spur significant new deployment (e.g., launching a new satellite or directing a dedicated spot beam to a particular area) to make voice and broadband services available in extremely high-cost areas. Thus, a coverage auction would have much in common with its proposals for competitive bidding for Mobility Fund Phase II and price cap areas in which a state-level commitment was not made in that it would offer support to service providers in exchange for making service available at reasonably comparable rates to any requesting location within a particular geographic area. Similar to the other proposed CAF auctions, requesting locations would not be subject to a means test, and support would not be tied to the number of subscribers a provider serves. As a threshold matter, the Commission seeks comment on whether a coverage auction would displace private investment, given existing and planned capacity and coverage that may be achieved without support. If adequate capacity and coverage is unlikely to be achieved absent support, the Commission seeks input on how to structure a competitive auction, given the nature of competition among satellite broadband providers and the possibility of competition from providers using other technological platforms, such as WISPs.

290. The Commission seeks comment on the appropriate geographic area to use as a minimum geographic unit for bidding, and how that choice relates to whether

and how the Commission might provide for bidding on packages of areas. In order to evaluate the impact on available funds of bids made for different geographic areas the Commission would determine the number of potential locations in each eligible census block based on 2010 decennial census data. The Commission would anticipate that, in order to maximize the consumer benefits, it would generally be supporting a single provider for a given geographic area. The Commission would support more than one provider in an area only if doing so would maximize coverage.

291. Combined Auction. This auction option would combine the budgets available for the post-state-level commitment competitive bidding process and for remote areas, relaxing the performance requirements applicable to providers of fixed services receiving CAF support in order to increase the number of technologies service providers could use. In such an auction, providers could offer different performance characteristics, such as download and/or upload speeds, latency, and limits on monthly data use, and the Commission would score such quality differences in evaluating bids. This would give the Commission the ability to make trade-offs between subsidizing a higher quality service to fewer customers versus subsidizing a lower quality for more customers. Additionally, such an approach should result in more competitive bidding and lower prices, by allowing more technologies to compete for funding (both for an area and across areas), thereby permitting the CAF budget to yield greater quality for a given coverage, expanded coverage, or some combination thereof. This could allow the auction to determine a more cost effective distribution of budgets for services that meet potentially different performance obligations, rather than having the Commission decide in advance how to distribute the budgets across different auctions.

292. The Commission seeks comment on the appropriate geographic area to use as a minimum geographic unit for bidding, and how that choice relates to whether and how it might provide for bidding on packages of areas. The Commission also seeks comment on how to establish the number of units in eligible geographic areas. For instance, should the Commission apply a means test to determine the number of qualifying locations that must be served? Further, the Commission seeks comment on whether and how to score different performance dimensions, and, whether providers should specify as part of their bids the retail prices they would charge consumers and, if so, how to include such prices in evaluating the bids. The Commission also asks whether it should prioritize areas currently lacking availability of any terrestrial broadband service at any speed by, for example, providing a form of bidding credit.

293. Competitive Bidding Procedures. Should the Commission use any of its competitive bidding alternatives, the Commission would generally structure the procedures as it has done for Mobility Fund Phase I and proposed for Phase II and for the CAF auction for price cap areas. The Commission proposes to use the same general auction rules as adopted or proposed for other contexts, including rules on potential auction designs, and rules on governing an auction application phase, a bidding phase, and a post-auction process whereby selected providers would show they are legally, technically and financially qualified to receive the support. As with other adopted and proposed auctions for CAF components, the Commission proposes to delegate to the Bureaus authority to establish detailed auction procedures and take all other actions to implement a competitive bidding process and other program aspects of the subsidies for remote areas to be determined through competitive bidding.

294. Auction Design. The Commission proposes to use the same general rules established for the Mobility Fund Phase I and proposed for the Mobility Fund Phase II, regarding various auction design options and parameters, which would form the basis for auction procedures to implement a specific design as part of the pre-auction notice and comment proceeding. The Commission contemplates that the specific procedures to be adopted for this auction would be identified in a public notice. Among other issues, the Commission proposes to give the Bureaus discretion to consider various procedures for grouping eligible areas to be covered with one bid – package bidding – that could be tailored to the needs of prospective bidders as indicated during the pre-auction notice and comment period. The Commission seeks comment on these proposals and invites commenters to identify any alternatives.

295. Potential Bidding Preference for Small Businesses. The Commission also seeks comment on whether small businesses should be eligible for a bidding preference if it uses any of its competitive bidding alternatives to provide support from the Remote Areas Fund, and whether such a bidding preference would be consistent with the objective of providing such support. The preference would be similar to the small business preference on which the Commission seeks comment for auctions of Mobility Fund Phase II support, and would act as a reverse bidding credit that would effectively reduce the bid amount for the purpose of comparing it to other bids. The Commission also seeks comment on the appropriate size of any small business bidding credit. The Commission also seeks comment on how it should define small businesses. Specifically, for the reasons provided in its discussion of Mobility Fund Phase II, the Commission seeks comment on whether a small business should be defined as an entity with average

gross revenues not exceeding $40 million for the preceding three years. Alternatively, should the Commission consider a larger size definition for this purpose, such as average gross revenues not exceeding $125 million for the preceding three years? In determining an applicant's gross revenues under what circumstances should the Commission attribute the gross revenues of the applicant's affiliates? The Commission seeks comment on these definitions and invites input on whether an alternative basis for a size standard should be established.

296. Application, Auction and Post-Auction Process. The Commission proposes to use the same two-stage application process described more completely elsewhere. Similarly the Commission proposes to use the same rules and procedures regarding permissible communications and public disclosure of auction-related information, and regarding delay, suspension, or cancellation of bidding. The Commission also proposes to use the same rules regarding the post-auction long-form application process and the same rules regarding auction defaults and performance defaults.

297. The Commission seeks comment on all of these proposals. Specifically, the Commission asks whether there are reasons related to the specific circumstances it seeks to address in remote areas that should cause us to deviate from the process established for the Mobility Fund.

v. Competitive Evaluation Approach

298. The Commission seeks comment on structuring CAF for remote areas as a competitive proposal evaluation process, or RFP process. With this option the Commission would solicit proposals to provide broadband service in eligible areas,

consistent with its technical requirements, and award support for a fixed term to those proposals that offered the best value in terms of meeting its stated criteria. Using such an RFP process, perhaps modeled after the Rural Utilities Service Broadband Initiatives Program, might permit the Commission more flexibility than an auction in balancing evaluation criteria – for example, with respect to quality standards such as capacity and latency, or quality and price.

vi. Other Issues

a. Certification and Verification of Eligibility

299. The Commission's obligation to minimize waste, fraud and abuse in Commission programs suggests that it should require individuals who are eligible for CAF support for remote areas be required to certify as to their eligibility and periodically verify their continued eligibility. Given the Commission's experience in administering the Lifeline program, the Commission proposes to adopt the Lifeline certification and verification procedures proposed by the Commission in connection with the Lifeline and Link Up Reform and Modernization NPRM. The Commission seeks comment on this proposal and on whether any modifications would be necessary to reflect the differences between the Lifeline and Link Up programs and the Remote Areas Fund. Would other rules be more appropriate? To the extent that the proposals for Lifeline contemplate that states be permitted to implement additional verification procedures, should it consider permitting similar state-specific procedures here? Should it consider the same uniform sampling methodology proposed for Lifeline? What other modifications to the Lifeline and Link Up rules might be necessary?

b. Accountability and Oversight

300. Except for disbursing support, the Commission proposes to apply to its program of support for remote areas the same rules for accountability and oversight as it does for CAF. Thus, recipients of this support would be subject generally to the same reporting, audit, and record retention requirements that apply to recipients of CAF support. The Commission proposes to disburse support for the remote areas budget on a quarterly, per-location served basis, beginning upon notification that a qualifying location has contracted with the designated support recipient for service consistent with the program technical requirements.

301. The Commission proposes that providers notify the Commission quarterly of newly served locations by submitting a certification specifying the number of signed contracts for qualifying locations, along with a certification that each location meets the qualifying criteria (e.g., a means test) established in this proceeding. Signed contracts would be covered by the record retention requirements applicable to all recipients of CAF support.

302. The Commission proposes that payments for newly acquired customers be submitted and paid quarterly. The Commission seeks comment on how often support for continuing qualifying customers should be paid out, e.g., in quarterly installments.

303. In structuring an appropriate payment plan, the Commission is mindful that it must comply with the Anti-Deficiency Act. Commenters are invited to address how to structure an award of support that provides recipients with the requisite level of funding and certainty, while ensuring that the Commission's Anti-Deficiency Act obligations are met.

L. Introduction to Intercarrier Compensation

304. In this portion of the FNPRM, the Commission seeks comment on additional topics that will guide the next steps to comprehensive reform of the intercarrier compensation system initiated in the USF-ICC Transformation Order.

M. Transitioning All Rate Elements to Bill-and-Keep

305. The Commission adopts a bill-and-keep pricing methodology as the default methodology that will apply to all telecommunications traffic at the end of the complete transition period. In the USF/ICC Transformation Order, the Commission finds that a bill-and-keep methodology has numerous consumer benefits, best addresses access charge arbitrage, and will promote the transition from TDM to all-IP networks. Although the Commission specifies the implementation of the transition for certain terminating access rates in the USF/ICC Transformation Order, the Commission did not do the same for other rate elements, including originating switched access, dedicated transport, tandem switching and tandem transport in some circumstances, and other charges including dedicated transport signaling, and signaling for tandem switching. The Commission seeks further comment to complete its reform effort, and establish the proper transition and recovery mechanism for the remaining elements. Commenters warn that failure to take action promptly on these elements could perpetuate inefficiencies, delay the deployment of IP networks and IP-to-IP interconnection, and maintain opportunities for arbitrage. The Commission agrees, and seeks to reach the end state for all rate elements as soon as practicable, but with a sensible transition path that ensures that the industry has sufficient time to adapt to changed circumstances. As a result, the Commission seeks comment on transitioning the remaining rate elements consistent with

its bill-and-keep framework, and adopting a new recovery mechanism to provide for a gradual transition away from the current system.

306. Origination. Other than capping interstate originating access rates and bringing dedicated switched access transport to interstate levels, the USF/ICC Transformation Order does not fully address the complete transition for originating access charges. Instead, it provides on an interim basis that interstate originating switched access rates for all carriers are to be capped at current levels as of the effective date of the rules adopted pursuant to the USF/ICC Transformation Order. As the Commission acknowledges in the USF/ICC Transformation Order, 47 U.S.C. 251(b)(5) does not explicitly address originating charges. The Commission determines, therefore, that such charges should be eliminated at the conclusion of the ultimate transition to the new intercarrier compensation regime. The Commission seeks comment on that final transition for all originating access charges.

307. Beyond the interim steps set forth in the USF/ICC Transformation Order, the Commission seeks comment on the need for an additional multi-year transition for originating access as part of the final transition to bill-and-keep. Commenters warn that establishing separate transitions for different intercarrier charges invites opportunities for arbitrage. Should any final transition of originating access be made to coincide with the final transition for terminating access adopted? Should a separate transition schedule be established for originating access only after the transition the Commission adopts for terminating access is complete? If a separate transition schedule is established after the transition is complete, would a two-year transition beginning in year 2018 for price cap carriers and 2020 for rate of return carriers be an appropriate time

period? If not, what other time period should be considered and when should it commence? Should rate of return carriers be given additional time to transition such rates? If so, how much? How should reductions of originating access rates be structured? Should rates be reduced in equal increments over a period of years? Should the timing of rate reductions vary by type of carrier? The Commission seeks comment on an appropriate schedule, and the timing of any necessary interim steps.

308. The Commission seeks further comment as to what, if any, recovery would be appropriate for originating access charges and how such recovery should be implemented. For instance, should any recovery be limited to those incumbent LECs that do not provide retail long distance through affiliates? In addition, the Commission asks for comment on the legal basis for the Commission to provide or deny recovery for originating access. The Commission seeks comment on how to minimize any additional consumer burden associated with the transition of originated access traffic, and how best to promote IP-to-IP interconnection in this transition.

309. The Commission also seeks the input of the states on how to transition to bill-and-keep for originating access charges. Although the Commission can exercise its authority to implement a transition, as it does in the USF/ICC Transformation Order the Commission could also defer to the states to create a transition to bill-and-keep for originating access. Since originating intrastate access rates are not capped for rate of return carriers, the Commission asks whether it should initially defer the transition to bill-and-keep for originating access to the states to implement. If so, how much guidance should the Commission provide states? Should the Commission provide the date that the

transition must be complete? Should states also be responsible for determining any appropriate recovery mechanism?

310. Relatedly, the Commission also seeks comment on the appropriate treatment of 8YY originated minutes. In the case of 8YY traffic, the role of the originating LEC is more akin to the traditional role of the terminating LEC in that the IXC carrying the 8YY traffic must use the access service of the LEC subscribed to by the calling party. Stated differently, in the case of 8YY traffic, because the calling party chooses the access provider but does not pay for the toll call, it has no incentive to select a provider with lower originating access rates. For this reason, the Commission asks parties to address whether it should distinguish between originating access reform for 8YY traffic and originating access reform more generally.

311. The Bureaus has previously sought data and comment on the relative proportion of 8YY originated minutes to traditional originated minutes. In its response, the Nebraska Companies estimated that approximately 20-30 percent of originating traffic is to an 8YY number, while Texas Statewide Telephone Cooperative suggested that this figure could be as much as 50 percent. Are these figures commensurate with the average number of minutes that customers originate to 8YY numbers on other networks? The Commission again invites carriers to provide us with this data to help evaluate originating access reform, and the need for a distinct 8YY resolution. The Nebraska Companies further contend that a 251(b)(5) regime in which originating compensation does not exist, is unworkable in an environment of originating 8YY traffic and equal access obligations. The Commission seeks comment on this conclusion and any alternatives.

312. Finally, the Commission seeks comment on other possible approaches to originating access reform, including implementation issues and its legal authority to adopt any such reforms.

313. Transport and Termination. The initial transition described above does not fully address tandem switching and transport charges. For rate-of-return carriers, these charges are capped at interstate levels. For price cap carriers, where the terminating carrier owns the tandem in the serving area, these charges are subject to the transition established in the USF/ICC Transformation Order but the Commission does not address the transition for tandem switching and transport charges if the price cap carrier does not own the tandem in the serving area. Because the Commission's USF/ICC Transformation Order does not address the transition for all transport charges and the relationship between these charges and interconnection obligations more generally, the Commission seeks further comment on the proper transition for these charges. The Commission seeks comment on the proper scope of its reform and on the transition for these elements.

314. Several commenters express concern about the treatment of transport and tandem services under the ABC Plan and Joint Letter. T-Mobile asserts that as rates are reduced, ILECs will have powerful incentives to shift costs from end office functions to transport and tandem switching functions, requiring the Commission to devote additional time and effort to its scrutiny of ILEC tariff filings. Sprint raises concern that transport rate elements bear no relationship to the miniscule incremental cost of performing the traffic termination functions and that these rates serve as a disincentive for efficient interconnection and may have potential to extend arbitrage behavior.

Competitive LECs argue that, even at interstate levels between the years 2013 to 2017, transport rates create significant opportunities for price cap ILECs to raise rivals' costs and, at the end state, price-cap ILECs would have the incentive to charge as high a price for that transport as possible. Commenters further argue that there are definitional ambiguities about the scope of transport that deserve clarification. The Commission agrees that such elements must be transitioned to bill-and-keep at the end state, as required by the USF/ICC Transformation Order, and seeks comment on the final transition to bill-and-keep for these charges.

315. The Commission invites comment regarding the appropriate transition for tandem switching and transport charges, and the need for any additional recovery mechanisms. At what point in time should tandem switching and transport charges be transitioned? Some commenters suggest that transport rates be reduced at a pace that coincides with its current transition for end office switching. Alternatively, tandem switching and transport rates could be reduced after the conclusion of the transition for end office switching. The Commission seeks comment on these proposals as well as other possible transition timeframes. Should the transition for these rate elements differ based upon the type of carrier? The Commission asks parties to comment on what, if any, unintended consequences may arise in connection with a longer transition for these charges, and whether any delay would impede the transition to IP-to-IP interconnection.

316. The Commission also seeks comment on possible recovery for tandem switching and transport as part of its recovery mechanism. Should recovery be made available for these charges? If a tandem switching and transport provider renegotiates an agreement for these services in anticipation of reform, should any increased revenue it

receives be offset against eligible recovery? Should any recovery for these rate elements differ based upon the type of carrier?

317. The Commission notes that some of these issues are closely related to the network edge for purposes of delivering traffic. In the traditional access charge system, tandem switching and transport charges were typically assessed against interexchange carriers. Meanwhile, in the traditional reciprocal compensation system, the originating carrier was typically responsible for transport to the point of interconnection, which may be located at the end office of the called party's carrier. As the Commission moves to a new intercarrier compensation system governed by a 47 U.S.C. 251(b)(5) bill-and-keep methodology, the Commission invites parties to comment on the existing and future payment and market structures for dedicated transport, tandem switching, and tandem switched transport. EarthLink has suggested that charges such as tandem switching and transport charges could become obsolete in an all-IP world. Is this correct? If so, how should it impact possible reform?

318. Transit. Currently, transiting occurs when two carriers that are not directly interconnected exchange non-access traffic by routing the traffic through an intermediary carrier's network. Thus, although transit is the functional equivalent of tandem switching and transport, transit refers to non-access traffic, whereas tandem switching and transport apply to access traffic. As all traffic is unified under 47 C.F.R. 251(b)(5), the tandem switching and transport components of switched access charges will come to resemble transit services in the reciprocal compensation context where the terminating carrier does not own the tandem switch. In the USF/ICC Transformation Order, the Commission adopts a bill-and-keep methodology for tandem switched

transport in the access context and for transport in the reciprocal compensation context. The Commission has not addressed whether transit services must be provided pursuant to 47 U.S.C. 251 of the Act; however, some state commissions and courts have addressed this issue.

319. Commenters also express concern that, as a result of the reforms adopted in the USF/ICC Transformation Order, transit providers will have the ability and incentive to raise transit service rates both during the transition and at the end state of reform. Specifically, one commenter alleges that without regulation of transit, ILECs would have opportunities to exploit their termination dominance. Commenters also express concern with the end state for tandem switching and transport for price cap carriers when the tandem owner does not own the end office, which, under 47 U.S.C. 251 framework is typically considered a transit service. As part of the transition for price cap carriers, the USF/ICC Transformation Order provides that bill-and-keep will be the pricing methodology for all traffic and includes the transition for transport and termination within the tandem serving area where the terminating carrier owns the serving tandem switch. However, the USF/ICC Transformation Order does not address the transition in situations where the tandem owner does not own the end office. NCTA states that in this regard the ABC Plan is unclear and may attempt to significantly undermine competition by suggesting that such services would fall outside of the regulatory regime. As a result, commenters suggest that these services are transit services and should be provided pursuant to 47 U.S.C. 251 at cost-based and reasonable rates.

320. The Commission seeks comment on the need for regulatory involvement and the appropriate end state for transit service. Given that transit service includes the same functionality as the tandem switching and transport services subject to a default bill-and-keep methodology, should the Commission adopt any different approach for transit traffic given that providers pay for transit for IP services and transit may apply to get traffic to a network edge in a bill-and-keep framework? The Commission invites parties to comment on the current market for these services. Does the transit market demonstrate the hallmarks of a competitive market? If transit services are not being offered competitively, how prevalent is this? How might the market evolve in light of the reforms adopted in the USF/ICC Transformation Order? If the Commission were to regulate these charges, what legal framework is appropriate and what pricing methodology would apply during the transition?

321. Other Charges. The Commission's transition to a bill-and-keep framework may implicate other charges. For example, commenters have highlighted that the ABC Plan and Joint Letter fail to specify what transition applies to dedicated transport or to other flat-rated charges. The Commission invites parties to comment on any rate elements or charges that require additional reform. What transition should apply to these charges?

N. Bill-and-Keep Implementation

322. In the USF/ICC Transformation NPRM the Commission also sought comment on issues related to the implementation of a bill-and-keep pricing methodology. Now that the end point to comprehensive intercarrier compensation reform has been determined, the Commission seeks comment on any interconnection and related issues

that must be addressed to implement bill-and-keep in an efficient and equitable manner. The Commission expects that the reforms adopted will not upset existing interconnection arrangements or obligations during the transition.

323. Points of Interconnection. Currently, under 47 U.S.C. 251(c)(2)(B), an incumbent LEC must allow a requesting telecommunications carrier to interconnect at any technically feasible point. The Commission has interpreted this provision to mean that competitive LECs have the option to interconnect at a single point of interconnection (POI) per LATA. As a threshold matter, does the Commission need to provide new or revised POI rules at some later stage of the transition to bill-and-keep or provide one set of rules to be effective at the end of the six-year transition for price cap carriers and nine-year transition for rate-of-return carriers maintain the current regime until that time? For instance, do commenters anticipate potential arbitrage schemes emerging as a result of maintaining the current POI rules until the transition is complete, or will the defined transition path and accompanying rate reductions the Commission adopts in the USF/ICC Transformation Order prevent such practices?

324. Also, 47 U.S.C. 251(c) does not currently apply to all rural LECs or non-incumbent LECs. How do commenters envision POIs functioning for these carriers? The Commission seeks to better understand the nature of interconnection arrangements with rural carriers today. For example, is interconnection typically pursuant to negotiated agreements, rules, or another type of framework? Is indirect interconnection the primary means of interconnection with small, rural carriers? If the Commission needs to mandate the use of POIs for rural LECs and non-incumbent LECs, should this requirement begin during or after the transition to the stated end point?

325. The Commission seeks comment on whether the Commission needs to prescribe POIs under a bill-and-keep methodology. One possible approach could be to permit interconnection at any technically feasible point on the other providers' network with a default POI being used for compensation purposes when there is no negotiated agreement between the parties. What are the pros and cons of such an approach? To what extent does the Commission's regulatory authority over interconnection allow it to prescribe POIs? Alternatively, CenturyLink proposes the use of traffic volumes to dictate the number of POI locations for traffic exchanged with an ILEC (including traffic flowing in both directions). The Commission seeks comment on this proposal and any other alternatives concerning POI obligations under a bill-and-keep regime.

326. The Commission seeks comment on how to promote IP-to-IP interconnection and facilitate the transition to all-IP networks. Some of these questions may affect the POI issues raised here. For instance, if the Commission were to adopt its proposal to require a carrier that desires TDM interconnection to pay the costs of any IP-TDM conversion, how would that affect commenters' opinions or responses to the POI questions herein? How would they be affected if the Commission adopted other IP-to-IP interconnection obligations?

327. The Network Edge. A critical aspect to bill-and-keep is defining the network edge for purposes of delivering traffic. The edge is the point where bill-and-keep applies, a carrier is responsible for carrying, directly or indirectly by paying another provider, its traffic to that edge. Past proposals to treat traffic under a bill-and-keep methodology typically assume the existence of a network edge, beyond which terminating carriers cannot charge other carriers to transport and terminate their traffic.

In the USF/ICC Transformation NPRM the Commission recognized that there are numerous options for defining an appropriate network edge. For example, the edge could be the location of the called party's end office, mobile switching center (MSC), point of presence, media gateway, or trunking media gateway. The Commission has not received significant comment on the network edge issue up to this point.

328. As discussed in the USF/ICC Transformation Order, the Commission believes states should establish the network edge pursuant to Commission guidance. The Commission seeks comment on this and other options for defining the network edge. Assuming that defining the network edge remains a critical aspect of the transition to bill-and-keep, the Commission seeks comment on the appropriate network edge and related issues. For instance, should the Commission adopt a competitively neutral location for the network edge, such as where interconnecting carriers have competitive alternatives—other than services or facilities provided by the terminating carrier—to transport traffic to the terminating carrier's network? In its comments, CTIA describes a Mutually Efficient Traffic Exchange (METE) proposal pursuant to which carriers would bear their own costs to deliver traffic to each other at specified network edges. Is this an appropriate way to define the network edge under a bill-and-keep approach? Do commenters have alternative suggestions on how best to define carrier obligations under a bill-and-keep approach? The Commission seeks comment on these questions and on any alternative proposals regarding the network edge.

329. Role of Tariffs and Interconnection Agreements. The Commission believes that generally continuing to rely on tariffs while also allowing carriers to negotiate alternatives during the transition is in the public interest because it provides the

certainty of a tariffing option, which historically has been used for access charges, while still allowing carriers to better tailor their arrangements to their particular circumstances and the evolving marketplace than would be accommodated by exclusively relying on one size fits all tariffs. The Commission seeks comment on whether the Commission needs to forbear from tariffing requirements in 47 U.S.C. 203 of the Act and 47 CFR Part 61 to enable carriers to negotiate alternative arrangements pursuant to the USF/ICC Transformation Order.

330. As carriers transition from the existing access charge regime to the 47 U.S.C. 251(b)(5) framework and bill-and-keep methodology adopted in the USF/ICC Transformation Order, the Commission believes they will rely primarily on negotiated interconnection agreements rather than tariffs to set the terms on which traffic is exchanged. Specifically, 47 U.S.C. 251(b)(5) imposes on all LECs the duty to enter reciprocal compensation arrangements, and 47 U.S.C. 252 outlines the responsibility of incumbent LECs to negotiate interconnection agreements upon receipt of a request for interconnection pursuant to 47 U.S.C. 251. Although the Commission maintains a role for tariffing as part of the transition, the Commission believes the reliance on interconnection agreements is most consistent with the USF/ICC Transformation Order's application of reciprocal compensation duties to all carriers. The Commission seeks comment on this view. If so, do commenters believe the Commission needs to modify or eliminate any of its interconnection rules?

331. Given the potential primary reliance on interconnection agreements, the Commission seeks comment on the possibility of extending its interconnection rules to all telecommunications carriers to ensure a more competitively neutral set of interconnection

rights and obligations. The T-Mobile Order, Developing a Unified Intercarrier Compensation Regime; T-Mobile et al. Petition for Declaratory Ruling Regarding Incumbent LEC Wireless Termination Tariffs, CC Docket No. 01-92, Declaratory Ruling and Report and Order, 70 FR 49401, March 30, 2005 (T-Mobile Order), extended to CMRS providers the duty to negotiate interconnection agreements with incumbent LECs under the 47 U.S.C. 252 framework to address interconnection and mutual compensation for non-access traffic. The Commission seeks comment on whether it should extend the interconnection agreement process adopted in the T-Mobile Order to all telecommunications carriers, including competitive LECs or other interconnecting service providers such as interexchange carriers. Competitive LECs have requested that the Commission expand the scope of the T-Mobile Order and require CMRS providers to negotiate agreements with competitive LECs under the 47 U.S.C. 251/252 framework. In addition, rural incumbent LECs urged the Commission to extend the T-Mobile Order to give ILECs the right to require all carriers to negotiate interconnection agreements under the 47 U.S.C. 252 framework. These requests stem largely from concerns about payment of intercarrier compensation charges. Thus, the Commission seeks comment on whether, in light of the reforms adopted herein, any further modification to its interconnection rules is still warranted for the end of the transition period, and the legal basis of any such modifications.

332. Possible Arbitrage Under a Bill-and-Keep Methodology. The Commission notes that several commenters to the USF/ICC Transformation NPRM suggest that a bill-and-keep approach may promote arbitrage opportunities in the industry. For example, some commenters suggest that a bill-and-keep framework may

promote traffic dumping on terminating carriers' networks. Based on the current record, the Commission disagrees with these concerns, which it finds speculative. Nonetheless, to the extent the Commission's predictive judgment is incorrect, it takes take this opportunity to establish a record to ensure that it is prepared to act swiftly to address any potential arbitrage situations. The Commission asks parties to provide more detail on traffic dumping and its negative effects. Have there been incidents of traffic dumping in the wireless industry that operates largely under bill-and-keep today? How should the Commission define traffic dumping for purposes of analyzing its effect on the network? Are there concerns of traffic congestion or other harm to the network? If so, the Commission notes in the USF/ICC Transformation Order that carriers may include traffic grooming language in their tariffs to address such concerns. Are there any additional measures the Commission can and should take to prevent such practices? Other commenters suggest that this practice could result in carriers having every incentive to keep traffic from terminating on their networks. Do commenters agree?

O. Reform of End User Charges and CAF ICC Support

333. The Commission seeks comment on a number of questions related both to the recovery mechanism adopted in the USF/ICC Transformation Order as well as the pre-existing rules regarding subscriber line charges (SLCs). In particular, with respect to the recovery adopted in the USF/ICC Transformation Order, the Commission seeks comment on the long-term elimination of that transitional recovery mechanism beyond the provisions for reduction and elimination of elements of that recovery already adopted in the USF/ICC Transformation Order. In addition, some commenters question whether existing SLCs—which the Commission does not modify in the USF/ICC Transformation

Order—are set at appropriate levels under pre-existing Commission rules or whether they should be reduced, particularly for price cap carriers where the Commission has not evaluated the costs of such carriers in nearly ten years. The Commission therefore seeks comment on the appropriate level and, longer-term, the appropriate regulatory approach to such charges, as carriers increasingly transition to broadband networks.

334. ARC Phase-Out. As part of its recovery mechanism, the Commission allows incumbent LECs to impose a limited access replacement charge (ARC). Because the ARC is, among other constraints, limited to the recovery of Eligible Recovery, and because the Commission defines Eligible Recovery to decline over time, the ARC will phase down and approach $0 under the terms of the USF/ICC Transformation Order. This will take some time, however, under the ten percent annual reductions in Price Cap Eligible Recovery, and smaller annual percentage reductions in Rate-of-Return Eligible Recovery. The Commission notes, by contrast, that intercarrier compensation-replacement CAF support for price cap carriers is subject to a defined sunset date. Should the Commission likewise adopt a defined sunset date for ARC charges? Should those charges sunset at the same time price cap carriers' intercarrier compensation-replacement CAF support sunsets, or at some other time? Similarly, as with intercarrier compensation-replacement CAF support for price cap carriers, should the ARC be phased out after the end of intercarrier compensation rate reforms or, given that it already is subject to an independent phase-down, should it simply be eliminated? Would other modifications be appropriate for the ARC charges adopted in the USF/ICC Transformation Order, given carriers' transition to broadband networks and associated business plans relying more heavily on revenues from broadband services?

335. CAF ICC Support Phase-Out. Although the intercarrier compensation-replacement CAF support for price cap carriers is already subject to a defined phase-out under the USF/ICC Transformation Order, should the Commission modify the phase-out period based on a price cap carrier's receipt of state-wide CAF Phase II support? If so, how and why? Should intercarrier compensation-replacement CAF support for rate-of-return carriers be subject to a defined phase-out? If so, should it be modeled after the approach used for price cap carriers, or based on a different approach? Would other modifications be appropriate for the intercarrier compensation-replacement CAF support adopted in the USF/ICC Transformation Order, given carriers' transition to broadband networks and associated business plans relying more heavily on revenues from broadband services?

336. Treatment of Demand in Determining Eligible Recovery for Rate of Return Carriers. In years one through five, Rate-of-Return Eligible Recovery will decrease at five percent annually, with both ARC and ICC-replacement CAF provided based on a true-up process. The Commission did so to enable such carriers time to adjust and transition away from the current system. But, the Commission believes that five years is a sufficient time to adjust and, for years six and beyond, the Commission seeks comment on how to modify the recovery baseline. The Commission seeks comment on decreasing Rate-of-Return Eligible Recovery by an additional percent each year for a maximum of five years, up to a maximum decrease of 10 percent. In addition, the Commission seeks comment on an alternative approach to the use of true-ups for determining recovery after five years. For example, in place of annual true-ups, should the Commission use the average MOU loss based on data reported by rate of return

carriers in years one through five? If the Commission does so, should it be instead of or in addition to changing the baseline, should the Commission use the same 10 percent decline it uses for price cap carriers, or would commenter recommend another mechanism to replace the true-up process?

337. Magnitude and Long-Term Role of SLCs. Some commenters contend that SLCs are not set appropriately today, particularly for price cap carriers whose costs are no longer evaluated. Moreover, given carriers' transition to business plans relying more heavily on broadband services, it is not clear what the appropriate role is for regulated end-user charges for voice service over the longer term. The Commission thus seeks comment on whether SLCs are set at appropriate levels today and whether, longer term, the Commission should retain such regulated charges under existing or modified rules, or if those charges should be eliminated.

338. When the Commission increased the residential and single-line business SLC cap above $5.00 it first sought comment on whether an increase in the SLC cap above $5.00 is warranted and, if not, whether a decrease in common line charges is warranted. In light of the evolution of network technology over time and any other marketplace developments raised by commenters, the Commission seeks comment on whether the magnitude of carriers' revenues currently associated with the common line are appropriate, or too high (or low). In particular, as in the past, the Commission seeks forward-looking cost information associated with the provision of retail voice grade access to the public switched telephone network. In addition to other data or information that commenters wish to provide in this respect. The Commission further seeks comment on how the costs of the local loop have been allocated between its use for regulated voice

telephone service and its use for other services, such as broadband Internet access, video, or other nonregulated services. Are carriers' regulated common line recovery bearing an appropriate share of the cost of the local loop, or too much (or too little)?

339. More broadly, if carriers increasingly are moving to IP networks, to what extent is voice telephone service simply one of many applications on that network, such that regulated charges specific to voice might no longer be appropriate? In particular, should the Commission eliminate SLCs? If so, when should they be eliminated, and through what process? Should the Commission eliminate SLCs as of a date certain absent a showing by a carrier that such revenue is justified? If so, should the Commission require a showing comparable to that required under the Total Cost and Earnings Review, or some other showing? Likewise, to the extent that some carriers continue to receive revenue from a universal service mechanism specifically designed to address common line recovery, such as ICLS, as a supplement to SLC revenues, should that be eliminated or modified, as well? If so, when, and how, should that support be eliminated? If not, how would that continuing support mechanism operate in the absence of SLCs?

340. Even if the overall magnitude of common line revenues are justified and SLCs are retained, the Commission seeks further comment on the operation of the SLCs and the specific levels of the SLC caps, including whether they should be modified in any respect. For example, should the Commission require greater disaggregation or deaveraging of SLCs, either in terms of classes of customers or services or in terms of geographic areas? If so, what is the appropriate scope of customers, services, or geography? Would new cap(s) be appropriate for the new categories of SLCs, and if so,

at what level? Conversely, as part of its intercarrier compensation reform, the Commission allows the ARC to be set at the holding-company level. Would that, or another more aggregated or averaged approach be warranted, and if so, what?

341. Advertising SLCs. As described in the USF/ICC Transformation Order, although the ARC is distinct from the SLC for regulatory purposes, the Commission expects incumbent LECs to include the new ARC charges as part of the SLC charge for billing purposes. However, commenters observe that SLC charges frequently are not included in the advertised price for incumbent LECs' services, making it more difficult for customers to evaluate and compare the price of service among different providers. Thus, the Commission seeks comment on requiring incumbent LECs (and other carriers, if they charge a SLC or its equivalent) to include such charges in their advertised price for services subject to SLC charges. Could the Commission require that carriers include SLC charges (including ARCs) in their advertised price for services, or condition their ability to impose SLCs or ARCs or to receive CAF support on their doing so? Are there alternative approaches the Commission should take to ensure greater disclosure of such charges to customers in a way that advances price comparison and evaluation? Could the Commission adopt such requirements pursuant to its authority under 47 U.S.C. 201(b) of the Act or on another basis?

P. IP-to-IP Interconnection Issues

342. As recommended by the National Broadband Plan, the Commission has set an express goal of facilitating industry progression to all-IP networks, and ensuring the transition to IP-to-IP interconnection is an important part of achieving that goal. As stated in recommendation 4.10 of the National Broadband Plan, [t]he FCC should clarify

interconnection rights and obligations and encourage the shift to IP-to-IP interconnection. Likewise, in the USF/ICC Transformation NPRM the Commission sought comment on steps the Commission can take to promote IP-to-IP interconnection. The Commission received some comment on the issue but hope to develop a more complete record on IP-to-IP interconnection issues, in light of the reforms undertaken in the USF/ICC Transformation Order. As the Commission states in the USF/ICC Transformation Order, the duty to negotiate in good faith has been a longstanding element of interconnection requirements under the Communications Act and does not depend upon the network technology underlying the interconnection, whether TDM, IP, or otherwise. Commission requirements implementing the duty to negotiate IP-to-IP interconnection in good faith could take their primary guidance from one or more of various provisions of the Communications law— 47 U.S.C. 4, 201, 251(a), or 251(c) of the Communications Act, or 706 of the 1996 Act, 47 U.S.C. 1302. The Commission seeks comment on which of the available approaches is most consistent with its statutes as a whole and sound policy. The Commission therefore seeks comment on the implementation of the good faith negotiation requirement, and also seeks comment on any additional actions the Commission should take to encourage transitions to IP-to-IP interconnection where that is the most efficient approach.

343. The comprehensive reforms the Commission adopted in its order on ICC-USF reform takes initial steps to eliminate barriers to IP-to-IP interconnection. In this regard, the Commission notes that the intercarrier compensation transition it adopts in the USF/ICC Transformation Order specifies default rates but leaves carriers free to negotiate alternative arrangements. The Commission concludes that the preexisting

intercarrier compensation regime did not advance technology neutral interconnection policies because it provided LECs a more certain ability to collect intercarrier compensation under TDM-based interconnection, with less certain compensation for IP-to-IP interconnection. Under the Commission's new framework, even if a carrier historically has relied on intercarrier compensation revenue streams, it need not wait until intercarrier compensation reform is complete to enter IP-to-IP interconnection arrangements. Rather, to the extent that certainty regarding intercarrier compensation is important to a particular carrier during the transition, it is free to negotiate appropriate compensation as part of an arrangement for IP-to-IP interconnection under the Commission's transitional framework.

344. Some commenters express concern that additional protections are needed to ensure IP-to-IP interconnection, however. The Commission expects all carriers to negotiate in good faith in response to requests for IP-to-IP interconnection for the exchange of voice traffic, and that such good faith negotiations will result in interconnection arrangements between IP networks, and the Commission seeks comment on which of the various possible statutory provisions as well as standards and enforcement mechanisms it should adopt to implement its expectation that carriers negotiate in good faith. The Commission also seeks comment on actions the Commission could take to, at a minimum, encourage the transition to IP-to-IP interconnection where efficient. In particular, the Commission proposes that if a carrier that has deployed an IP network receives a request to interconnect in IP, but instead requires TDM interconnection, the costs of the IP-to-TDM conversion would be borne by the carrier that elected TDM interconnection. The Commission seeks comment on this proposal. The

Commission also seeks comment on other measures that Commission might adopt to encourage efficient IP-to-IP interconnection.

345. The Commission also seeks comment on proposals to require IP-to-IP interconnection in particular circumstances under different policy frameworks. In this regard, the Commission observes that 47 U.S.C. 251 of the Act is one of the key provisions specifying interconnection requirements, and that its interconnection requirements are technology neutral—they do not vary based on whether one or both of the interconnecting providers is using TDM, IP, or another technology in their underlying networks. The specific application of the interconnection requirements of 47 U.S.C. 251 depend upon factual circumstances and other considerations, and the Commission seeks comment on the resulting implications in the context of IP-to-IP interconnection, along with other legal authority that might bear on the Commission's ability to adopt any particular IP-to-IP interconnection policy framework. Moreover, the Commission seeks comment on how to carefully circumscribe the scope of traffic or services subject to any such framework to leave issues to the marketplace that appropriately can be resolved there.

346. Finally, the Commission seeks comment on proposals that the Commission leave IP-to-IP interconnection to unregulated commercial agreements. Although the Commission has relied on such an approach in some contexts in the past, the Commission seeks comment on the factual basis for whether, and when, to adopt such an approach here.

i. Scope of Traffic Exchange Covered By an IP-to-IP Interconnection Policy Framework

347. It is important that any IP-to-IP interconnection policy framework adopted by the Commission be narrowly tailored to avoid intervention in areas where the marketplace will operate efficiently. The Commission thus seeks comment on the scope of traffic exchange that should be encompassed by any IP-to-IP interconnection policy framework for purposes of this proceeding. The Commission stated in the USF/ICC Transformation Order that it expects carriers to negotiate in good faith in response to requests for IP-to-IP interconnection for the exchange of voice traffic. But, the Commission notes that various types of services can be transmitted in IP format, and commenters recognize that many pairs of providers are exchanging both VoIP traffic and other IP traffic with each other. Further, different commenters appear to envision IP-to-IP interconnection policy frameworks encompassing different categories of services provided using IP transmission. The Commission seeks comment on those issues, along with any other recommendations commenters have for defining the scope of an IP-to-IP interconnection policy framework in this context. For any proposed scope of IP-to-IP interconnection, the Commission also seeks comment on whether it is necessary, or appropriate, to address classification issues associated with particular IP services.

348. Some comments proposed that an IP-to-IP interconnection framework address the exchange of voice traffic. For some commenters, this would broadly encompass all VoIP traffic, whether referred to as packetized voice traffic, IP voice traffic, or simply VoIP. Is it technologically possible to adopt such an approach? Does it make sense as a policy matter to adopt an IP-to-IP interconnection framework focused

specifically on voice service, and how would such an approach be implemented? For example, would this approach have the result of compelling providers to exchange VoIP traffic under a different technological or legal arrangement from what those providers use to exchange other IP traffic? Could the interconnection framework be structured to provide certain interconnection rights with respect to the exchange of VoIP traffic, while giving those providers the freedom to exchange other IP traffic in a consistent manner? What impact, if any, would such an approach have on any preexisting arrangements for the exchange of non-voice IP traffic?

349. Other comments propose IP-to-IP interconnection frameworks that would encompass narrower categories of VoIP services, such as managed or facilities-based VoIP, as distinct from over the top VoIP. Are there advantages or disadvantages to focusing on this narrower universe of voice traffic as a technological, policy, or legal matter? For example, are there different costs or service quality requirements associated with such services such that those services would warrant distinct treatment? How would such traffic or services be defined? Would interconnection for other VoIP services be left unaddressed at this time? Or would they be subject to a different policy framework, and if so, what framework would be appropriate?

350. Alternatively, other comments seem to anticipate that IP interconnection policies could encompass IP traffic other than voice. Would it be appropriate to encompass any non-voice IP traffic or services in such a framework, and how would they be defined? The Commission notes, for example, that it historically has not regulated interconnection among Internet backbone providers. If a different interconnection policy framework were adopted in this context, how would it be distinguishable? To what

extent would an IP-to-IP interconnection policy framework address interconnection rights for both voice and non-voice traffic, or to what extent would providers simply have the freedom to use otherwise-available interconnection arrangements to exchange particular IP traffic or services?

ii. Good Faith Negotiations for IP-to-IP Interconnection

a. Standards and Enforcement for Good Faith Negotiations

351. Building upon its statement in the USF/ICC Transformation Order that the duty to negotiate in good faith under the Act does not depend upon the network technology underlying the interconnection, whether TDM, IP, or otherwise, the Commission seeks comment on the particular statutory authority that provides the strongest basis for the right to good faith negotiations for IP-to-IP interconnection. As a threshold matter, however, the Commission seeks comment on the appropriate scope and nature of requirements for good faith negotiations generally that should apply, as well as the associated implementation and enforcement. For example, should the Commission focus on all carriers generally, or adopt differing standards for particular subsets of carriers such as terminating carriers, incumbent LECs, or carriers that may have market power in the provision of voice services, or should the Commission focus on some other scope of providers? Should the right to good faith negotiations for IP-to-IP interconnection be limited to traffic associated with particular types of services? How would the Commission determine whether or not a particular provider negotiated in good faith under such an approach? For example, should such claims be evaluated in the same manner as claims that a carrier failed to negotiate in good faith as required by 47 U.S.C.

251(c)(1) of the Act, or regulatory frameworks from other contexts? Are there other criteria that commenters believe the Commission should address with respect to the standards and enforcement for good faith negotiations? For example, should enforcement occur at the Commission, state commissions, courts, or other forums?

352. Would the Commission need to address or provide guidance regarding the contours of a range of reasonableness for IP-to-IP interconnection rates, terms, and conditions themselves to assess whether a party's negotiating positions are reasonable and in good faith? For example, would the Commission need to specify whether direct physical interconnection is required, or whether indirect interconnection could be sufficient in order to judge whether particular negotiations are in good faith? Are there other criteria or guidance regarding the substance of the underlying IP-to-IP interconnection that the Commission would need to specify to make enforcement of a good faith negotiation requirement more administrable?

353. The Commission observes that certain statutory provisions may give the Commission either broader or narrower leeway to define the scope of entities covered by the requirement, the standards for evaluating whether negotiations are in good faith, and the associated enforcement mechanisms. Thus, in addition to seeking comment on the particular statutory authority the Commission should adopt for good faith negotiation requirements, commenters should discuss any limitations on the substance and enforcement of the good faith negotiation requirements arising from the particular statutory provision at issue, or what particular approaches to defining and enforcing good faith negotiations are appropriate in the context of the Commission's exercise of particular legal authority. In addition, the Commission seeks comment not only on any

rules the Commission would need to adopt or revise, but also any forbearance from statutory requirements that would be needed to implement a particular framework for good faith negotiations for IP-to-IP interconnection.

b. Statutory Authority To Require Good Faith Negotiations

354. In this section, the Commission notes that there are various sections of the Act upon which the right to good faith negotiations for IP-to-IP interconnection could be grounded, and seeks comment on the policy implications of selecting particular provisions of the Act. In the subsequent section, the Commission seeks comment on the possible legal authority commenters have cited in support of substantive IP-to-IP interconnection obligations, including 47 U.S.C. 251(a)(1), 251(c)(2), and other provisions of the Act; section 706 of the 1996 Act, 47 U.S.C. 1302; as well as the Commission's ancillary authority under Title I. The Commission thus likewise seeks comment on those and other provisions as a basis for the right to good faith negotiations regarding IP-to-IP interconnection, as well as resulting implications for the scope and enforcement of that right.

355. The Commission seeks comment on whether the Commission should utilize 47 U.S.C. 251(a)(1) as the basis for the requirement that all carriers must negotiate in good faith in response to a request for IP-to-IP interconnection. Section 251(a)(1), 47 U.S.C. 251(a)(1), requires all telecommunications carriers to interconnect directly or indirectly. The requirements of this provision thus extend broadly to all telecommunications carriers, and are technology neutral on their face with respect to the transmission protocol used for purposes of interconnection. The Commission thus seeks

comment on whether the Commission should rely upon 47 U.S.C. 251(a)(1) as the primary source of a right to good faith negotiations for IP-to-IP interconnection. Should the Commission create a specific enforcement mechanism and, if so, should the remedy be at the state level or with the Commission? The Commission notes that 47 U.S.C. 251(c)(1) of the Act expressly adopts a requirement for incumbent LECs, and requesting carriers seeking interconnection with them, to negotiate in good faith in accordance with 47 U.S.C. 252 to implement the requirements of 47 U.S.C. 251(b) and (c). Although the requirements of 47 U.S.C. 251(a)(1), standing alone, are not encompassed by that provision, the Commission does not believe that would preclude the Commission from concluding that a separate good faith negotiation requirement is required under 47 U.S.C. 251(a)(1). What is the appropriate mechanism for enforcing a right to good faith negotiations for IP-to-IP interconnection under 251(a)(1)? Similarly, to the extent that the good faith negotiation requirement adopted for 47 U.S.C. 251(a)(1) interconnection must be distinct from that imposed by 47 U.S.C. 251(c)(1), would the Commission need to adopt a different approach to evaluating claimed breaches of good faith from the framework used under 47 U.S.C. 251(c)(1)? If so, what framework for evaluating such claims should the Commission adopt?

356. The Commission also seeks comment on whether the requirement of good faith negotiations for IP-to-IP interconnection should be based on 47 U.S.C. 251(c)(2). Section 251(c)(2), 47 U.S.C. 251(c)(2), requires incumbent LECs to provide direct physical interconnection to requesting carriers when the criteria of 47 U.S.C. 251(c)(2)(A)-(D) are met. When 47 U.S.C. 251(c)(2) applies, it is subject to a statutory requirement of good faith negotiations under 47 U.S.C. 251(c)(1), with enforcement

available through state arbitrations under 47 U.S.C. 252. Further, the Commission already has adopted guidance for evaluating claimed breaches of good faith negotiations under 47 U.S.C. 251(c)(1). Would that guidance remain appropriate for evaluating alleged failure to negotiate IP-to-IP interconnection in good faith under this provision? Under the terms of 47 U.S.C. 251(c), the Commission believes that the obligations of 47 U.S.C. 251(c)(2) apply only to incumbent LECs, and thus under the terms of the statute the associated duty to negotiate interconnection in good faith under 47 U.S.C. 251(c)(1) only would extend to incumbent LECs and requesting carriers seeking interconnection with them. The Commission notes, however, that good faith negotiations under the USF/ICC Transformation Order are expected of all carriers, not just incumbent LECs. As a result, would the Commission need to rely on additional statutory provisions for the basis of good faith negotiation requirements for IP-to-IP interconnection among other types of carriers?

357. Alternatively, the Commission seeks comment on whether the obligation to negotiate in good faith for IP-to-IP interconnection arrangements should be grounded in 47 U.S.C. 201, particularly in conjunction with other provisions of the Act and the Clayton Act. The Commission previously interpreted 47 U.S.C. 2(a), 201 and 202 collectively as requiring common carriers to negotiate the provision of their services in good faith and thus requiring LECs to negotiate interconnection in good faith with CMRS providers. It found it appropriate to extend the requirement of good faith negotiations not only to interconnection for the exchange of interstate services, but for intrastate services as well, reasoning that departures from its good faith requirement [in the context of intrastate services] could severely affect interstate communications by preventing cellular

carriers from obtaining interconnection agreements and consequently excluding them from the nationwide public telephone network. The Commission further concluded that its authority to mandate good faith negotiations is also derived from 47 U.S.C. 309(a) and 314 of the Act and Section 11 of the Clayton Act, 15 U.S.C. 21, which require the Commission to remedy anticompetitive conduct, given that delays in the negotiating process could place a carrier at a competitive disadvantage. The Commission seeks comment on whether the Commission should adopt these provisions as the legal basis for a requirement of good faith negotiations among carriers regarding IP-to-IP interconnection. Would the considerations cited by the Commission in the context of LEC-CMRS interconnection likewise justify a right to good faith negotiations in this context? If so, what standards and processes should apply in evaluating and enforcing good faith negotiations under this provision? The Commission notes that interconnection with LECs for access traffic historically—and as preserved by 251(g)—was addressed through exchange access and related interconnection regulations, including through the purchase of tariffed access services. How should any right to good faith negotiation of IP-to-IP interconnection for the exchange of access traffic be reconciled with those historical regulatory frameworks? Does the Commission's action in the accompanying USF/ICC Transformation Order to supersede the preexisting access charge regime and adopt a transition to a new regulatory framework affect this evaluation?

358. In addition, the Commission seeks comment on the relative merits of section 706 of the 1996 Act, 47 U.S.C. 1302, as the statutory basis for carriers' duty to negotiate IP-to-IP interconnection in good faith. Some commenters suggest that section 706, 47 U.S.C. 1302, would provide the Commission authority to regulate IP-to-IP

interconnection. Would the statutory mandate in section 706, 47 U.S.C. 1302, justify a requirement that carriers negotiate in good faith regarding IP-to-IP interconnection? If so, what standards and enforcement processes would be appropriate? If the Commission were to rely on section 706 of the 1996 Act, 47 U.S.C. 1302, to impose a good faith negotiation requirement, would it also need to adopt associated complaint procedures, or could the existing informal and formal complaint processes, which derive from 47 U.S.C. 208, nonetheless be interpreted to extend more broadly than alleged violations of Title II duties? Could the Commission, relying on section 706, 47 U.S.C. 1302, extend the obligation to negotiate in good faith beyond carriers to include all providers of telecommunications? If so, should the Commission do so?

359. The Commission also seeks comment on whether 47 U.S.C. 256 provides a basis for the good faith negotiation requirement for IP-to-IP interconnection. Although 47 U.S.C. 256(a)(2) says that the purpose of the section is to ensure the ability of users and information providers to seamlessly and transparently transmit and receive information between and across telecommunications networks, 47 U.S.C. 256(c) provides that nothing in this section shall be construed as expanding or limiting any authority that the Commission may have under law in effect before February 8, 1996. Particularly in light of 47 U.S.C. 256(c), is it reasonable to interpret 47 U.S.C. 256 as a basis for the good faith negotiation requirement? If so, what are the appropriate details and enforcement mechanism? Even if it is not a direct source of authority in that regard, should it inform the Commission's interpretation and application of other statutory provisions to require carriers to negotiate IP-to-IP interconnection in good faith?

360. Alternatively, should the Commission rely upon ancillary authority as a

basis for requiring that carriers negotiate in good faith in response to requests for IP-to-IP interconnection? Because it is communications by wire or radio, the Commission clearly has subject matter jurisdiction over IP traffic such as packetized voice traffic. Is the requirement that carriers negotiate in good faith in response to requests for IP-to-IP interconnection reasonably ancillary to the Commission's exercise of its authority under a statutory provision? If so, what standards and enforcement mechanisms should apply? If the Commission were to rely on ancillary authority to impose a good faith negotiation requirement, would it also need to adopt associated complaint procedures, or could the existing informal and formal complaint processes, which derive from 47 U.S.C. 208, nonetheless be interpreted to extend more broadly than alleged violations of Title II duties? Similarly, if the Commission relies on ancillary authority, could it extend the obligation to negotiate in good faith beyond carriers to include all providers of telecommunications? If so, should the Commission do so?

361. Finally, the Commission seeks comment on whether the obligation for carriers to negotiate IP-to-IP interconnection in good faith should be grounded in other statutory provisions identified by commenters. If so, what statutory provisions, and what are the appropriate standards and enforcement mechanisms? Alternatively, should the Commission rely on multiple statutory provisions? If so, which provisions, and how would they operate in conjunction?

iii. IP-to-IP Interconnection Policy Frameworks

a. Alternative Policy Frameworks

362. The Commission seeks comment on the appropriate role for the Commission regarding IP-to-IP interconnection. In particular, the Commission seeks

specific comment on certain proposed policy frameworks. With respect to each such framework, the Commission seeks comment not only on the policy merits of the approach, but also the associated implementation issues. These include not only any rules the Commission would need to adopt or revise, but also any forbearance from statutory requirements that would be needed to implement the particular framework for IP-to-IP interconnection.

(i) Measures To Encourage Efficient IP-to-IP Interconnection

363. At a minimum, the Commission believes that any action the Commission adopts in response to this FNPRM should affirmatively encourage the transition to IP-to-IP interconnection where it increases overall efficiency for providers to interconnect in this manner. The Commission seeks comment on possible elements of such a framework, as well as alternative approaches for encouraging efficient IP-to-IP interconnection.

364. Responsibility for the Costs of IP-to-TDM Conversions. Some commenters have proposed that carriers electing TDM interconnection be responsible for the costs associated with the IP-TDM conversion. In particular, these commenters contend that carriers that require such conversion, sometimes despite the fact that they have deployed IP networks themselves, effectively raise the costs of their competitors that have migrated to IP networks. If a carrier that has deployed an IP network receives a request to interconnect in IP, but, chooses to require TDM interconnection, the Commission proposes to require that the costs of the conversion from IP to TDM be borne by the carrier that elected TDM interconnection (whether direct or indirect). The

Commission seeks comment on how to define the scope of carriers with IP networks that should be subject to such a requirement. The Commission further seeks comment on what specific functions the carrier electing TDM interconnection should be financially responsible for under such a requirement. Should the financial responsibility be limited to the electronics or equipment required to perform the conversion? Or should the financial responsibility extend to other costs, such as any potentially increased costs from interconnecting in many locations with smaller-capacity connections rather than (potentially) less expensive interconnection in a smaller number of locations with higher-capacity connections? If there are disputes regarding payments, should the losing party bear the cost of those disputes?

365. Would the Commission need to take steps to ensure the rates associated with those functionalities remain reasonable, and under what regulatory framework? For example, would ex ante rules or ex post adjudication in the case of disputes be preferable? Would the costs of the relevant functions need to be measured, and if so how? In the case of rates for such functionalities charged by incumbent LECs, should the otherwise-applicable rate regulations apply to such offerings? In the case of carriers other than incumbent LECs, how, if at all, would such rates be regulated? Would the ability of the carrier electing TDM interconnection to self-deploy the IP-to-TDM conversion technology or purchase it from a third party rather than paying the other provider constrain the rate the other provider could charge for such functionality? Would the Commission also need to regulate the terms and conditions of such services? If so, what is the appropriate regulatory approach?

366. Would some pairs of carriers with IP networks that interconnect directly or indirectly in TDM today both choose to continue interconnecting in TDM? If so, how would the commission ensure that any requirements it adopted addressing financial responsibility for IP-to-TDM conversions did not alter the status quo in such circumstances? For example, could the obligation to pay these charges be triggered through a formal process by which one interconnected carrier requests IP-to-IP interconnection and, if the second interconnected carrier refuses (or fails to respond), the second carrier then would be required to bear financial responsibility for the IP-to-TDM conversion? Would the Commission need to specify a timeline for the process, including the time by which a carrier receiving a request for IP-to-IP interconnection either must respond or be deemed to have refused the request (and thus become subject to the financial responsibility for the IP-to-TDM conversion)? If so, what time periods are reasonable?

367. What mechanism would be used to implement any such charges? Should carriers rely solely on agreements? Or should carriers tariff these rates, perhaps as default rates that apply in the absence of an agreement to the contrary? Should the carrier seeking to retain TDM interconnection be permitted to choose to purchase the conversion service from any available third party providers of IP-to-TDM conversions, rather than from the carrier seeking IP-to-IP interconnection? If so, how would that be implemented as part of the implementation framework?

(ii) Specific Mechanisms To Require IP-to-IP Interconnection

368. The Commission seeks comment on certain other approaches for requiring IP-to-IP interconnection raised in the record.

369. Scope of Issues To Address Under Different Policy Frameworks Requiring IP-to-IP Interconnection. The Commission seeks comment on the general scope of the Commission's appropriate role concerning IP-to-IP interconnection, subject to certain baseline requirements. For example, if the baseline only extended to certain terms and conditions, would providers have adequate incentives to negotiate reasonable IP-to-IP interconnection rates? What specific terms and conditions would need to be subject to the policy framework, and which could be left entirely to marketplace negotiations? Should any oversight of terms and conditions take the form of general guidelines, perhaps subject to case-by-case enforcement, rather than more detailed *ex ante* rules? Where in a provider's network would IP need to be deployed for it to be subject to such requirements? To inform its analysis of these issues, the Commission seeks comment on the physical location of IP POIs, with concrete examples of traffic and revenue flows, as well as who bears the underlying costs of any facilities used, whether in the original installation, or in maintenance and network management. What are the implementation costs of the provision of Session Initiation Protocol (SIP) at the point of interconnection, and the extent to which voice quality would be compromised without such provision? How would current policies, if maintained, provide efficient or inefficient incentives for point-of-interconnection consolidation, and/or the provision of efficient interconnection protocols, such as SIP? Would adopting a timetable for all-IP

interconnection be necessary or appropriate, or would carriers have incentives to elect IP-to-IP (rather than TDM) interconnection whenever it is efficient to do so?

370. In addition, would it be necessary or appropriate to address providers' physical POIs in the context of IP-to-IP interconnection? What factors should the Commission consider in evaluating possible policy frameworks for physical POIs, such as the appropriate burden each provider bears regarding the cost of transporting traffic? If the Commission were to address POIs, would the Commission need to mandate the number and/or location of physical POIs, or would general encouragement to transition to one POI per geographic area larger than a LATA be appropriate? If so, what should that larger area be? How, if at all, would any regulations of physical POIs impact the relative financial responsibilities of the interconnected carriers for transporting the traffic?

371. The Commission also seeks comment on providers' incentives under a policy framework that involves some Commission oversight of IP-to-IP interconnection rates, as well as terms and conditions. If an IP-to-IP interconnection policy framework addresses interconnection rates, how should it do so? For example, would it be sufficient to require that all VoIP traffic be treated identically, including in terms of price? Would it be appropriate to require that interconnection for the exchange of VoIP traffic be priced the same as interconnection for the exchange of all other IP traffic? If the price for the interconnection arrangement itself is distinct from the compensation for the exchange of traffic, how should each be regulated? Would a differential between the costs/revenues in the pricing of IP-to-IP interconnection and traffic exchange relative to TDM interconnection and traffic exchange create inefficient incentives to elect one form of interconnection rather than the other? If so, should any charges for both the

interconnection arrangement and traffic exchange under an IP-to-IP interconnection framework mirror those that apply when carriers interconnect in TDM? Or should the Commission adopt an alternative approach? For example, should the Commission provide for different rate levels or rate structures than otherwise apply in the TDM context? What is the appropriate mechanism for implementing any such framework? Should the regulated rates, terms, and conditions be defaults that allow providers to negotiate alternatives?

372. Specific Proposals For IP-to-IP Interconnection. Some commenters contend that the Commission should require incumbent LECs to directly interconnect on an IP-to-IP basis under 47 U.S.C. 251(c)(2) of the Act. In addition to the 47 U.S.C. 251(c)(2) legal analysis upon which it seeks comment , the Commission seeks comment on the policy merits of such an approach. What requirements would the Commission need to specify under such an approach? In addition, by its terms, 47 U.S.C. 251(c)(2) only imposes obligations on incumbent LECs. Is that focus appropriate, or would the Commission need to address the requirements applicable to other carriers, as well? If so, how could that be done under such an approach?

373. Alternatively, should the Commission adopt a case-by-case adjudicatory framework somewhat analogous to the approach of 47 U.S.C. 251(c)(2) and 252, where the Commission require IP-to-IP interconnection as a matter of principle, but leave particular disputes for case-by-case arbitration or adjudication? Under such an approach, would the Commission need to establish some general principles or guidelines regarding how arbitrations or adjudications will be resolved, and if so, with respect to what issues? Which providers should be subject to any such obligations—incumbent LECs, all carriers

that terminate traffic, or a broader scope of providers? Should the states and/or the Commission provide arbitration or dispute resolution when providers fail to reach agreement, and what processes should apply? Does the Commission have legal authority to adopt such an approach?

374. Other commenters propose that the Commission require IP-to-IP interconnection under 47 U.S.C. 251(a)(1). The Commission seeks comment on the possibility of designating one of the carriers as entitled to insist upon direct (rather than indirect) interconnection under 47 U.S.C. 251(a)(1). However, if the Commission required IP-to-IP interconnection under 47 U.S.C. 251(a)(1) but permitted either carrier to insist upon indirect interconnection, could the Commission require the carrier making that election bear certain costs associated with indirect interconnection, such as payment to the third party for the indirect interconnection arrangement, bearing the cost of transporting the traffic back to its own network and customers from the point where the carriers are indirectly interconnected, or other costs?

375. As another alternative, T-Mobile and Sprint proposed that each service provider establish no more than one POI in each state using Session Initiation Protocol (SIP) to receive incoming packetized voice traffic and be required to provide at its own cost any necessary packet-to-TDM conversion for a short-term transition period. Then, in the longer term, the parties suggest that the Commission use the Technical Advisory Committee (TAC) to develop recommendations for the protocol for receiving packet-based traffic and to propose efficient regional packet-based interconnection points. T-Mobile and Sprint suggest acting on the TAC's recommendations after public notice and the opportunity for comment. The Commission seeks comment on T-Mobile and Sprint's

proposal. If the Commission moves forward with an approach like T-Mobile/Sprint's, how much time should the Commission allow for each of the two time periods proposed? Based on the transition periods adopted in the USF/ICC Transformation Order, how would this two-step approach work?

376. The Commission also seeks comment on XO's proposal to facilitate the move to IP-to-IP interconnection. XO recommends that the Commission require every telecommunications carrier to provide IP-based carrier-to-carrier interconnection (directly or indirectly) within [five] years, regardless of the technology the carrier uses to provide services to its end users. During the transition period parties could continue to negotiate an agreement with a third party to fulfill its interconnection obligations. XO suggests that if a carrier chose to continue delivering traffic to the TDM POI, it would continue to pay higher intercarrier compensation rates while the IP termination rate would be set lower to incentivize carriers to deliver traffic in an IP format and therefore deploy IP networks to avoid the costs of converting from TDM to IP. After the proposed five-year transition, XO recommends that terminating carriers would be able to refuse to accept traffic via TDM interconnection where IP interconnection is available. The Commission notes that it has adopted a different approach to intercarrier compensation for VoIP traffic in the USF/ICC Transformation Order than that recommended by XO. What impact would that have on XO's IP-to-IP interconnection proposal? In addition, is a five-year transition period to IP interconnection sufficient? Should the Commission allow providers to refuse TDM traffic as XO proposes? Are there any potential negative consequences for having different pricing for TDM and IP interconnection?

377. The Commission also observes that many providers interconnect indirectly today, and some commenters anticipate that indirect interconnection will remain important in an IP environment, as well. If an IP-to-IP interconnection policy framework granted providers the right to direct IP-to-IP interconnection, would this reduce or eliminate providers' incentives to interconnect indirectly? Alternatively, if the policy framework gave providers flexibility to interconnect either directly or indirectly, would this result in demand for indirect IP-to-IP interconnection that gives some providers incentives to offer services that enable third parties to interconnect on an IP-to-IP basis?

(iii) Commercial Agreements Not Regulated by the Commission

378. The Commission also seeks comment on proposals to adopt a policy framework that would leave IP-to-IP interconnection largely unregulated by the Commission.

379. Incentives Under Unregulated Commercial Agreements. Has the Commission, through its actions in the USF/ICC Transformation Order, sufficiently eliminated disincentives to IP-to-IP interconnection arising from intercarrier compensation rules? Even if there were no disincentive arising from the intercarrier compensation rules, would some competitors seek to deny IP-to-IP interconnection on reasonable rates, terms, and conditions to raise their rivals' costs? Are there circumstances where a refusal to interconnect on an IP-to-IP basis would result in service disruptions?

380. Specific Proposals for Unregulated Commercial Agreements. Verizon contends that [t]he efficient way to allow IP interconnection arrangements to develop would be to follow . . . the tremendously successful example of the Internet, which relies upon voluntarily negotiated commercial agreements developed over time and fueled by providers' strong incentives to interconnect their networks. As AT&T argues, the interdependence of IP networks, along with the multiplicity of indirect paths into any broadband ISP's network—for the transmission of a VoIP call or any other type of IP application—deprive any such ISP of any conceivable terminating access 'monopoly' over traffic bound for its subscribers. Thus, commenters contend that the government should avoid prescribing the terms that will govern complex and evolving relationships among private sector actors. In other contexts, the Commission has recognized that a provider might not always voluntarily grant another provider access to its network on just and reasonable rates, terms, and conditions and that, in certain circumstances, some regulatory protections might be warranted. Is interconnection in this context distinguishable, and if so, how? If not, how could the Commission identify the circumstances where a less regulated (or unregulated) approach might be warranted from those where some regulation is needed?

(iv) Other Proposals and Related Issues

381. In addition to the specific proposals the Commission seeks comment on any alternative approaches that commenters would suggest. In addition to the policy merits of the approach, the Commission seeks comment on its legal authority to adopt the approach, and how that approach would be implemented, including any new rules or rule changes.

382. The Commission also observes that there is a growing problem of calls to rural customers that are being delayed or that fail to connect. The Commission seeks comment on whether any issues related to those concerns are affected by carriers' interconnection on an IP-to-IP basis, or to any interconnection policy framework the Commission might adopt in that context. Are there components of, or modifications to, any such framework that the Commission should consider in light of concerns about calls being delayed or failing to connect?

b. Statutory Interconnection Frameworks

383. The Commission anticipates that the Commission may need to take some steps to enable the efficient transition to IP-to-IP interconnection, and the Commission seeks comment on the contours of its statutory authority in this regard. Just as there are varied positions regarding the appropriate policy framework for IP-to-IP interconnection, so too are there varied positions on the application of various statutory provisions in this regard. The Commission therefore seeks comment on the appropriate interpretation of statutory interconnection requirements and other possible regulatory authority for the Commission to adopt a policy framework governing IP-to-IP interconnection. In addition, insofar as the Commission addresses IP-to-IP interconnection through a statutory framework historically applied to TDM traffic, the Commission seeks comment on whether any resulting changes will be required to the application of those historical TDM interconnection requirements, either through rule changes or forbearance.

384. Section 251. The Commission agrees with commenters that nothing in the language of 47 U.S.C. 251 limits the applicability of a carrier's statutory

interconnection obligations to circuit-switched voice traffic and that the language is in fact technology neutral. In addition, the Commission seeks comment on whether the provisions of 47 U.S.C. 251 interconnection are also service neutral, or do they vary with the particular services (e.g., voice vs. data, telecommunications services vs. information services) being exchanged? If so, on what basis, and in what ways, do they vary? A number of commenters go on to contend that the Commission can regulate IP-to-IP interconnection pursuant to 47 U.S.C. 251 of the Act. If the Commission were to adopt IP-to-IP interconnection regulations under the 47 U.S.C. 251 framework, would those regulations serve as a default in the absence of a negotiated IP-to-IP interconnection agreement between parties? In addition to those overarching considerations regarding the application of 47 U.S.C. 251 generally, the Commission recognize that the scope of the interconnection requirements of 47 U.S.C. 251(a)(1) and 251(c)(2) are tied to factual circumstances or otherwise circumscribed in various ways, and the Commission seeks comment on the resulting implications in the context of IP-to-IP interconnection.

385. Section 251(a)(1). Section 251(a)(1) of the Act, 47 U.S.C. 251(a)(1), requires each telecommunications carrier to interconnect directly or indirectly with the facilities and equipment of other telecommunications carriers. The Commission previously has recognized that this provision gives carriers the right to interconnect for purposes of exchanging VoIP traffic. However, could a carrier satisfy its obligation under 47 U.S.C. 251(a)(1) by agreeing to interconnect directly or indirectly only in TDM, or could the Commission require IP-to-IP interconnection in some circumstances?

386. Section 251(a)(1), 47 U.S.C. 251(a)(1), does not expressly specify how a particular pair of interconnecting carriers will decide whether to interconnect directly or

indirectly. How should the Commission interpret 47 U.S.C. 251(a)(1) in this regard? If the Commission were to require IP-to-IP interconnection under 47 U.S.C. 251(a)(1), would this effectively require direct interconnection in situations where there was no third party that could facilitate indirect IP-to-IP interconnection? Would this be consistent with the Commission's prior interpretation of 47 U.S.C. 251(a)(1) that telecommunications carriers should be permitted to provide interconnection pursuant to 47 U.S.C. 251(a) either directly or indirectly, based upon their most efficient technical and economic choices? Should the Commission interpret 47 U.S.C. 251(a)(1) to allow the carrier requesting interconnection to decide whether interconnection will be direct or indirect or should the Commission otherwise formally designate one of the carriers as entitled to insist upon direct (rather than indirect) interconnection? If so, which carrier should be entitled to make that choice, and how would such a framework be implemented?

387. In general, how would IP-to-IP interconnection be implemented under 47 U.S.C. 251(a)(1)? To what extent should the Commission specify <u>ex ante</u> rules governing the rates, terms, and conditions of IP-to-IP interconnection under 47 U.S.C. 251(a)(1), or could those issues be left to case-by-case evaluation in state arbitrations or disputes brought before the Commission? If the Commission did not address these issues through <u>ex ante</u> rules, what standards or guidelines would apply in resolving disputes?

388. <u>Section 251(c)(2)</u>. Section 251(c)(2), 47 U.S.C. 251(c)(2), requires incumbent LECs to provide, for the facilities and equipment of any requesting telecommunications carrier, interconnection with the local exchange carrier's network, subject to certain conditions and criteria. Such interconnection is for the transmission

and routing of telephone exchange service and exchange access. Interconnection must be direct, and at any technically feasible point within the carrier's network that is at least equal in quality to that provided by the [incumbent LEC] to itself or to any subsidiary, affiliate, or any other party to which the carrier provides interconnection. Finally, incumbent LECs must provide interconnection under 47 U.S.C. 251(c)(2) on rates, terms, and conditions that are just, reasonable, and nondiscriminatory. The Commission seeks comment on whether the Commission should set a policy framework for IP-to-IP interconnection under 47 U.S.C. 251(c)(2), including on the specific issues.

389. The Commission seeks comment on the scope of an incumbent local exchange carrier for purposes of 47 U.S.C. 251(c)(2). The Commission has recognized that an entity that meets the definition of incumbent local exchange carrier in 47 U.S.C. 251(h) is treated as an incumbent LEC for purposes of the obligations imposed by 47 U.S.C. 251 even if it also provides services other than pure telephone exchange service and exchange access. Thus, under the statute, an incumbent LEC retains its status as an incumbent LEC as long as it remains a local exchange carrier.

390. To the extent that, at some point in the future, an entity that historically was classified as an incumbent LEC ceased offering circuit-switched voice telephone service, and instead offered only VoIP service, the Commission seeks comment on whether that entity would remain a local exchange carrier (to the extent that it did not otherwise offer services that were telephone exchange service or exchange access). The Commission notes that the Commission has not broadly determined whether VoIP services are telecommunications services or information services, or whether such VoIP services constitute telephone exchange service or exchange access. To what extent

would the Commission need to classify VoIP services as telecommunications services or information services to resolve whether the provider remained a LEC? Under the reasoning of prior Commission decisions, the Commission does not believe that a retail service must be classified as a telecommunications service for the provider carrying that traffic (whether the provider of the retail service or a third party) to be offering telephone exchange service or exchange access. With specific respect to VoIP, the Commission notes that some providers contend that the classification of their retail VoIP service is irrelevant to determining whether telephone exchange service and/or exchange access is being provided as an input to that service. The Commission seeks comment on these issues.

391. In addition, the record reveals that today, some incumbent LECs are offering IP services through affiliates. Some commenters contend that incumbent LECs are doing so simply in an effort to evade the application of incumbent LEC-specific legal requirements on those facilities and services, and the Commission would be concerned if that were the case. The Commission notes that the D.C. Circuit has held that the Commission may not permit an ILEC to avoid § 251(c) obligations as applied to advanced services by setting up a wholly owned affiliate to offer those services. In reaching that conclusion, the court relied on the fact that the affiliate at issue was providing services with equipment originally owned by its ILEC parent, to customers previously served by its ILEC parent, marketed under the name of its ILEC parent. That holding remains applicable here, but the Commission also seeks comment more broadly on when an affiliate should be treated as an incumbent LEC under circumstances beyond those squarely addressed in that decision. What factors or considerations should be

weighed in making that evaluation? Alternatively, to what extent would those same, or similar, considerations be necessary to a finding that the affiliate is a successor or assign of the incumbent LEC within the meaning of 47 U.S.C. 251(h)(1)? Could the affiliate be a successor or assign if it satisfies only a subset of those considerations or different considerations? As another alternative, even if an affiliate is not a successor or assign of the incumbent LEC under 47 U.S.C. 251(h)(1), would the Commission nevertheless be warranted to treat it as an incumbent LEC under 47 U.S.C. 251(h)(2)? To treat the affiliate as an incumbent LEC would require finding that it is a LEC, potentially implicating many of the same issues raised regarding the classification of a retail VoIP provider or its carrier partner as a LEC. Would such affiliates be classified as LECs or based on other factors? If an affiliate is treated as an incumbent LEC in its own right under 47 U.S.C. 251(h)(1) or (h)(2), what are the implications for how 47 U.S.C. 251(c) applies? For example, if a requesting carrier were entitled to IP-to-IP interconnection with that affiliate under 47 U.S.C. 251(c)(2), could it use that interconnection arrangement to exchange traffic only with the customers of the affiliate, or could it use that arrangement to exchange traffic with the original incumbent LEC?

392. Section 251(c)(2)(A), 47 U.S.C. 251(c)(2)(A), requires that interconnection obtained under 251(c)(2) be for the transmission and routing of telephone exchange service and exchange access. The Commission seeks comment on whether traffic exchanged via IP-to-IP interconnection would meet those criteria. The Commission notes in this regard that some providers of facilities-based retail VoIP services state that they are providing those services on a common carrier basis, and expect that those services would include the provision of telephone exchange service

and/or exchange access to the same extent as comparable services provided using TDM or other transmission protocols. Other providers of retail VoIP services assert that, regardless of the classification of the retail VoIP service, their carrier partners are providing telephone exchange service and/or exchange access. Although the record reveals that these carriers typically provide these services at least in part in TDM today, the Commission does not believe that their regulatory status should change if they simply performed the same or comparable functions using a different protocol, such as IP. The Commission seeks comment on these views, as well as on the need to address this question given its holdings that carriers that otherwise have 47 U.S.C. 251(c)(2) interconnection arrangements for the exchange of telephone exchange service and/or exchange access traffic are free to use those arrangements to exchange other traffic—including toll traffic and/or information services traffic—with the incumbent LEC, as well.

393. In the Local Competition First Report and Order, Implementation of the Local Competition Provisions in the Telecommunications Act of 1996, CC Docket Nos. 96-98, 95-185, First Report and Order, 61 FR 45476, August 29, 1996 (Local Competition First Report and Order), the Commission held that an IXC that requests interconnection solely for the purpose of originating or terminating its interexchange traffic, not for the provision of telephone exchange service and exchange access to others is not entitled to interconnection under the language of 47 U.S.C. 251(c)(2)(A) because the IXC is not seeking interconnection for the purpose of providing telephone exchange service, nor is it offering access, but rather is only obtaining access for its own traffic. By contrast, some commenters assert that, in applying 47 U.S.C. 251(c)(2)(A), it is sufficient

for the incumbent LEC to be providing telephone exchange service or exchange access, regardless of whether the requesting carrier is doing so. The Commission seeks comment on this view. Under this interpretation, are there any circumstances when a requesting carrier would not be entitled to interconnection under 47 U.S.C. 251(c)(2) because the incumbent LEC is not providing telephone exchange service or exchange access? For example, might Congress have anticipated that incumbent LECs eventually would offer interexchange services on an integrated basis? To what extent was the Commission's prior interpretation the Local Competition First Report and Order motivated by commenters' concerns that an alternative outcome would permit IXCs to evade the pre-1996 Act exchange access rules, including the payment of access charges, which were preserved under 47 U.S.C. 251(g)? Would those concerns be mitigated insofar as the Commission is superseding the pre-existing access charge regime in the USF/ICC Transformation Order? Are there other reasons why the new interpretation of 47 U.S.C. 251(c)(2)(A) is warranted?

394. Section 251(c)(2)(B), 47 U.S.C. 251(c)(2)(B), requires interconnection at any technically feasible point within the carrier's network. The Commission observes that IP-to-IP interconnection arrangements exist in the marketplace today, and seeks comment on whether they demonstrate that IP-to-IP interconnection is technically feasible at particular points within a carrier's network. To what extent does the requirement that incumbent LECs modify their facilities to the extent necessary to accommodate interconnection or access to network elements inform the evaluation whether IP-to-IP interconnection is technically feasible at particular points in the network?

395. Section 251(c)(2)(C), 47 U.S.C. 251(c)(2)(C), requires that the interconnection provided by an incumbent LEC be at least equal in quality to that provided by the incumbent LEC to itself or to any subsidiary, affiliate, or any other party to which the carrier provides interconnection. To what extent are incumbent LECs interconnecting on an IP-to-IP basis with a subsidiary, affiliate, or any other party today, and at what quality? The Commission previously has interpreted this language to require incumbent LECs to design interconnection facilities to meet the same technical criteria and service standards, such as probability of blocking in peak hours and transmission standards, that are used within their own networks. Consistent with this interpretation, to what extent must an incumbent LEC be using IP transmission in its own network before it could be required to provide IP-to-IP interconnection pursuant to this language, and to what extent is that occurring today? If the incumbent LEC is not otherwise interconnecting on an IP-to-IP basis with a subsidiary, affiliate, or any other party, could the Commission require it to provide IP-to-IP interconnection as long as the other criteria of 47 U.S.C. 251(c)(2) are met? Should such interconnection be understood to be equal in quality to what the incumbent LEC provides others—albeit in a different protocol—or should it be understood to be requiring a superior network?

396. Section 251(c)(2)(D), 47 U.S.C. 251(c)(2)(D), requires that incumbent LECs provide interconnection on rates, terms, and conditions that are just, reasonable, and nondiscriminatory. In the Local Competition First Report and Order, the Commission found that minimum national standards for just, reasonable, and nondiscriminatory terms and conditions of interconnection will be in the public interest and will provide guidance to the parties and the states in the arbitration process and

thereafter. If the Commission concludes that IP-to-IP interconnection is required under 47 U.S.C. 251(c)(2), should it follow a similar approach and adopt minimum national standards? If so, what should those standards be? If not, what standards would be used to resolve arbitrations regarding the implementation of 47 U.S.C. 251(c)(2)?

397. Sections 201 and 332. Historically, the Commission has imposed interconnection obligations pursuant to 47 U.S.C. 201. Section 201, 47 U.S.C. 201, applies to interstate services, as well as to interconnection involving CMRS providers under 47 U.S.C. 332(c)(1)(B). Do sections 201 (and 332 in the case of CMRS providers), 47 U.S.C. 201, 332, provide the Commission authority to mandate IP-to-IP interconnection, including for intrastate traffic either alone, or in conjunction with other provisions of the Act and the Clayton Act? If so, what standards or requirements would be appropriate, and how would those obligations be implemented? How should any IP-to-IP interconnection requirements regarding the exchange of access traffic be reconciled with the historical regulatory framework governing the exchange of such traffic with LECs, as well as with the Commission's action in the accompanying USF/ICC Transformation Order to supersede the preexisting access charge regime and adopt a transition to a new regulatory framework for intercarrier compensation for access traffic?

398. Section 706 of the 1996 Act. Some commenters suggest that section 706, 47 U.S.C. 1302, would provide the Commission authority to regulate IP-to-IP interconnection. The Commission seeks comment on the relationship between the Commission's statutory mandate in section 706, 47 U.S.C. 1302, and regulation of IP-to-IP interconnection. If section 706, 47 U.S.C. 1302, provides Commission authority to regulate IP-to-IP interconnection, what standards or requirements would be appropriate,

and how would those obligations be implemented? If the Commission were to rely on section 706 of the 1996 Act, 47 U.S.C. 1302, to require IP-to-IP interconnection, would it also need to adopt associated complaint procedures, or could the existing informal and formal complaint processes, which derive from 47 U.S.C. 208, nonetheless be interpreted to extend more broadly than alleged violations of Title II duties?

399. Section 256. There also is some record support for imposing IP-to-IP interconnection requirements under section 256 of the Act, 47 U.S.C. 256. Section 256(a)(2), 47 U.S.C. 256(a)(2), says that the purpose of the section is to ensure the ability of users and information providers to seamlessly and transparently transmit and receive information between and across telecommunications networks. Do commenters agree that 47 U.S.C. 256 authorizes Commission regulation of IP-to-IP interconnection? In particular, to what extent could 47 U.S.C. 256 provide a source of authority for such regulation given the statement in 47 U.S.C. 256(c) that nothing in this section shall be construed as expanding or limiting any authority that the Commission may have under law in effect before February 8, 1996? Even if it is not a direct source of authority in that regard, should it inform the Commission's interpretation and application of other statutory provisions to require IP-to-IP interconnection?

400. Title I Authority over IP-to-IP Interconnection. Does the Commission have ancillary authority to regulate IP-to-IP interconnection? For example, Sprint notes that the Commission has subject matter jurisdiction over traffic such as packetized voice traffic, and asserts that regulation of IP-to-IP interconnection is reasonably ancillary to the Commission's authority under the Act. Sprint also asserts that its IP-to-IP interconnection proposals for the exchange of packetized voice traffic are incidental to,

and would affirmatively promote, specifically delegated powers under 47 U.S.C. 251-52 regarding network interconnection, intercarrier compensation, and dispute resolution. Sprint further argues that its proposed rules would advance other statutory policies regarding the promotion of competition, and the promotion of communications services, including advanced telecommunications services and the Internet, among other things. Thus, Sprint contends that even if packetized voice services are . . . classified as information services, the Commission still possesses the authority to adopt these rule proposals under its Title I ancillary authority. The Commission seeks comment on Sprint's analysis and other evaluations of whether the Commission has ancillary authority to regulate IP-to-IP interconnection in particular ways.

401. Other Sources of Authority. The Commission also seeks comment on any other sources of Commission authority for adopting a policy framework for IP-to-IP interconnection. What is the scope and substance of the Commission's authority to address IP-to-IP interconnection under that authority?

Q. Further Call Signaling Rules for VoIP

402. In the USF/ICC Transformation Order accompanying this FNPRM, the Commission adopts revised call signaling rules to address intercarrier compensation arbitrage practices that led to unbillable or phantom traffic. These rules apply to providers of interconnected VoIP service as that term is defined in the Commission's rules. The Commission also adopts a framework of intercarrier compensation obligations that applies to all VoIP-PSTN traffic, which is defined as traffic exchanged over PSTN facilities that originates and/or terminates in IP format and includes voice traffic from interconnected VoIP service providers as well as providers of one-way VoIP service that

allow end users to place calls to, or receive calls from the PSTN, but not both (referred to herein as one-way VoIP service).

403. The Commission recognizes that the scope of the intercarrier compensation obligations for VoIP providers adopted in the USF/ICC Transformation Order is broader than the definition of interconnected VoIP in its rules to which the call signaling obligations will apply. And, as with any instance where similar entities are treated differently under its rules, the Commission is concerned about creating additional arbitrage opportunities. But, the Commission also recognizes that there may be technical difficulties associated with applying its revised call signaling rules to one-way VoIP service providers. The August 3 Public Notice sought comment on the application of call signaling rules to one-way VoIP service providers. There was relatively little comment on this issue, with some commenters suggesting that the Commission should not delay adoption of other intercarrier compensation reforms pending resolution of this issue. Now that the rules applicable to VoIP service providers adopted in the USF/ICC Transformation Order provide additional context, the Commission seeks comment again on the need for signaling rules for one-way VoIP service providers.

404. If call signaling rules apply to one-way VoIP service providers, how could these requirements be implemented? Would one-way VoIP service providers have to obtain and use numbering resources? If call signaling rules were to apply signaling obligations to one-way VoIP service providers, at what point in a call path should the required signaling originate, i.e. at the gateway or elsewhere? Are there alternative approaches for how signaling rules could operate for originating callers that do not have a telephone number? In addition, would signaling rules be needed for all one-way VoIP

service providers? Or, given the terminating carrier's need for the information provided under the Commission's signaling rules, is it sufficient to focus only on providers of one-way VoIP service services that allow users to terminate voice calls to the PSTN (but not those that only allow users to receive calls from the PSTN)?

405. If one-way VoIP service providers were permitted to use a number other than an actual North American Numbering Plan (NANP) telephone number associated with an originating caller in required signaling, would such use lead to unintended or undesirable consequences? If so, should other types of carriers or entities also be entitled to use alternate numbering? Would there need to be numbering resources specifically assigned in the context of one-way VoIP services? Are there other signaling issues that the Commission should consider with regard to one-way VoIP calls?

R. New Intercarrier Compensation Rules

406. Finally, the Commission seeks comment on whether the new rules adopted in the USF/ICC Transformation Order may result in any conflicts or inconsistencies. This could include conflicts or inconsistencies within the newly adopted rules or conflicts or inconsistencies between the new rules and the Commission's existing rules. If commenters believe conflicts or inconsistencies are present, the Commission asks that they identify the specific rule or rules that may be affected, explain the perceived conflict or inconsistency, and proposes language to address the conflict or inconsistency. Also, the Commission seeks comment on whether the new and revised rules it adopts reflect all of the modifications to the intercarrier compensation regimes made in the USF/ICC Transformation Order. If not, the Commission asks that parties

identify in their comments the potential problem areas and proposes specific language to address the possible oversight.

II. PROCEDURAL MATTERS

A. Initial Regulatory Flexibility Analysis

407. As required by the Regulatory Flexibility Act of 1980, as amended (RFA), the Commission has prepared this Initial Regulatory Flexibility Analysis (IRFA) of the possible significant economic impact on a substantial number of small entities by the policies and rules proposed in this FNPRM. Written comments are requested on this IRFA. Comments must be identified as responses to the IRFA and must be filed by the deadlines for comments on the FNPRM. The Commission will send a copy of the FNPRM, including this IRFA, to the Chief Counsel for Advocacy of the Small Business Administration (SBA). In addition, the FNPRM and IRFA (or summaries thereof) will be published in the Federal Register.

B. Need for, and Objectives of, the Proposed Rules

408. The FNPRM seeks comment on a variety of issues relating to comprehensive reform of universal service and intercarrier compensation. As discussed in the USF-ICC Transformation Order accompanying the FNPRM, the Commission believes that such reform will eliminate waste and inefficiency while modernizing and reorienting these programs on a fiscally responsible path to extending the benefits of broadband throughout America. Bringing robust, affordable broadband to all Americans is the infrastructure challenge of the 21st century. To allow the Commission to help meet this challenge, the FNPRM asks for comment in a number of specific areas.

i. Universal Service

409. First, for providers receiving Connect America Fund (CAF) support, the FNPRM seeks further comment on what public interest obligations should apply to the receipt of these funds. How should broadband service be measured, and how should "reasonable comparability" be determined for fixed and mobile voice and broadband services.

410. The FNPRM also seeks comment on several proposed additional requirements, including whether the Commission should require CAF recipients to offer IP-to-IP interconnection for voice service, beyond whatever framework it adopts more broadly, whether CAF recipients be required to make interconnection points and backhaul capacity available so that unserved high-cost communities could deploy their own broadband networks, and whether the Commission should create a fund for a Technology Opportunities Program in order to assist communities with deploying their own broadband networks.

411. In the USF-ICC Transformation Order, the Commission concludes that high-cost support received by incumbent rate-of-return carriers should be phased out over five years in study areas where an unsubsidized facilities-based provider offers voice and broadband services meeting the specified public interest obligations. The FNPRM seeks comment on the specific methodology that should be used to identify those areas, including the appropriateness of the preliminary analysis staff performed.

412. The Commission also begins a represcription of the authorized interstate rate of return, and the FNPRM asks parties to identify what data the Commission should collect to complete the represcription, the current applicability of the formulas contained

in the Commission's rules for performing necessary calculations, as well as whether the remaining Regional Bell Operating Companies (RBOCs) or some other group of carriers should be used as a surrogate for incumbent local exchange carriers (ILECs) that do not issue stock or borrow money solely to support interstate services.

413. In the USF-ICC Transformation Order, the Commission adopts a rule to use benchmarks for reasonable costs to impose limits on reimbursable capital and operating costs for high-cost loop support received by rate-of-return companies, and concludes that it should also impose limits on reimbursable capital and operating costs for interstate common line support received by rate-of-return companies. In the FNPRM, the Commission seeks comments on a specific methodology for calculating individual company caps for HCLS set forth in Appendix H, and seeks comment on how specifically to implement such a limit for ICLS.

414. In response to the USF/ICC Transformation NPRM, 76 FR 11632, March 2, 2011, several associations representing rural ILECs (Rural Associations) proposed the creation of a new broadband-focused CAF mechanism that ultimately would entirely replace existing support mechanisms for rate-of-return carriers. Subsequently, the Rural Associations provided draft rules that provide additional context regarding the operation of their proposed CAF. In the FNPRM, the Commission seeks comment on this proposal and ask whether and how it could be modified consistent with the framework adopted in the USF-ICC Transformation Order to provide a path forward for rate-of-return or carriers to invest in extending broadband to unserved areas.

415. In the FNPRM, the Commission proposes that a recipient of high-cost and CAF support should be required to post financial security as a condition to receiving

support to ensure that it has committed sufficient financial resources to complying with its public interest obligations under the Commission's rules. For example, should an irrevocable standby letter of credit be required, and if so, for what amount? Further, the FNPRM seeks comment on what penalties might be appropriate for failure to meet build-out requirements, service quality standards, or failure to provide information to verify continuing eligibility to receive support.

416. The CAF will target funding to areas where federal support is needed to maintain and expand modern networks capable of delivering broadband and voice services. In the FNPRM, aiming to ensure that obligations and funding are appropriately matched while avoiding consumer disruption in access to communications services, the Commission seeks comment on what Commission action may be appropriate to adjust existing service obligations for eligible telecommunications carriers (ETCs) as funding shifts to new, more targeted support mechanisms.

417. The FNPRM describes the Phase II of the Mobility Fund, which will provide ongoing support for mobile broadband and high quality voice-grade services. The Commission seeks comment on the overall design for this phase of the Mobility Fund, including the use of reverse auctions, or the possible use of a model. Funding in the second phase of the Mobility Fund is intended for geographic areas where there is no private sector business case to provide mobile broadband and high quality voice-grade services. Comment is sought on how best to: (1) identify these areas; (2) establish bidding and coverage units; (3) maximize consumer benefits; (4) establish the term of support; (5) identify provider eligibility requirements; and (6) set public interest obligations.

418. The FNPRM next proposes general auction rules for Phase II of the Mobility Fund to govern the initial auction process, including options for basic auction design, application procedures, permissible communications and public disclosure of auction-related information, auction defaults, and auction suspension or cancellation. The FNPRM reaffirms the Commission's commitment to address Tribal needs and seeks comment on how ongoing universal service support for mobile advanced services could be tailored to meet the needs in Tribal lands. The Commission seeks comment on the adoption for Mobility Fund Phase II of two bidding mechanisms intended to promote greater service on Tribal lands: a bidding credit for Tribally-owned or controlled entities and a mechanism that would allocate a specified number of "priority units" to particular unserved geographic areas within Tribal lands that would reduce the per-unit amount of bids covering those unserved areas. The Commission also seeks comment on the adoption of a small business bidding preference and the small business definition that should apply if it adopts such a bidding preference. In addition, comment is sought on accountability and oversight rules applicable to the second phase of the Mobility Fund. Finally, the FNPRM seeks comment on the use of an economic model to determine support for mobile wireless providers rather than competitive bidding, including possible model design and potential changes to the proposed framework for mobility support that could be necessary if support is determined using a model.

419. In the USF-ICC Transformation Order, the Commission adopts a framework for USF support in areas served by price cap carriers where support will be determined using a combination of a forward-looking broadband cost model and competitive bidding. The FNPRM addresses proposals for this competitive bidding

process, where applicable. Comment is sought on: (1) the use of a forward looking engineering cost model to identify areas eligible for competitive bidding; (2) establishing bidding and coverage units; (3) maximizing consumer benefits; (4) establishing the term of support; (5) identifying provider eligibility requirements; and (6) setting public interest obligations.

420. The FNPRM next proposes general auction rules governing the auction process, including options for basic auction design, application procedures, permissible communications and public disclosure of auction-related information, auction defaults, and auction suspension or cancellation. The FNPRM also seeks comment on whether to establish special provisions to help ensure service in Tribal lands. The FNPRM seeks comment on the adoption for the competitive bidding process of a bidding credit for Tribally-owned or controlled entities and a Tribal priority units mechanism along the same lines proposed for Phase II of the Tribal Mobility Fund. The Commission also seeks comment on the adoption of a small business bidding preference and the small business definition that should apply if it adopts such a bidding preference. In addition, comment is sought on accountability and oversight rules that would apply to recipients of CAF support awarded through a competitive bidding process.

421. In establishing a new Remote Areas Fund (RAF), the budget of which will be at least $100 million, the USF-ICC Transformation Order addresses the Commission's commitment to ensure that the less than one percent of Americans living in areas where the cost of deploying traditional terrestrial broadband networks is extremely high can obtain affordable broadband through other technology platforms. The FNPRM seeks comment on how RAF support should be provided and how the program should be

implemented. Comment is sought on how to: (1) identify geographic areas eligible for support; (2) establish bidding and coverage units; (3) maximize consumer benefits; (4) establish the term of support; (5) identify provider eligibility requirements; and (6) set public interest requirements. In addition, the FNPRM seeks comment on how best to structure the RAF general implementation issues, provider qualifications, and public interest obligations, such as service performance criteria and pricing. The FNPRM also seeks comment on related matters like portable consumer subsidy issues and service terms and conditions. In addition, the FNPRM requests comment on several auction approaches to target CAF funding in extremely high cost areas and general auction rules for an auction process, including options for basic auction design and for the auction and post-auction processes, as well as eligibility, accountability, and oversight issues. The FNPRM also seeks comment on the adoption of a bidding preference for small businesses if competitive bidding is used to provide support from the RAF and the size of any small business bidding credit should the Commission adopt one. The Commission seeks comment on the small business definition that should apply if it adopts such a small business preference for remote area support auctions.

ii. Intercarrier Compensation

422. The USF-ICC Transformation Order adopts a bill-and-keep methodology as the default end state for all intercarrier compensation traffic. Although it specifies the transition for certain terminating access rates and caps all interstate and most intrastate charges, it does adopt a transition to a bill-and-keep methodology for all ICC rates, including originating switched access, and certain transport rate elements. The FNPRM seeks comment on the appropriate transition to bill-and-keep for those rate elements not

reduced in the USF-ICC Transformation Order, and asks what recovery, if any, should be provided. The FNPRM also asks whether Commission action is necessary to address concerns that have been raised regarding transit services, and are other charges implicated by the transition to bill-and-keep?

423. The FNPRM seeks comment on any interconnection and related issues that must be addressed to implement bill-and-keep in an efficient and equitable manner. Specifically, comment is sought on points of interconnection, how they are established, what if anything, the Commission should do going forward, and the continued relevance of points of interconnection in a bill-and-keep regime. Likewise, comment is sought on defining the "network edge," the point where bill-and-keep applies and the point to which a provider is responsible for delivering its traffic to another provider. Comment is also sought on the role of tariffs and interconnection agreements for structuring intercarrier relationships moving forward, including the feasibility of extending our interconnection rules to all telecommunications carriers, including competitive LECs and IXCs, and asks questions about commenters' concerns about potential arbitrage that might occur under a bill-and-keep methodology.

424. The FNPRM also seeks comment on the recovery mechanism adopted in the USF-ICC Transformation Order, as well as the pre-existing rules regarding subscriber line charges (SLCs). With respect to the recovery adopted in the USF-ICC Transformation Order, comment is sought about the elimination of the access replacement charge (ARC) at a date certain and, if so, when. The FNPRM also asks about modifying the baseline for recovery for rate-of-return carriers by, for example, increasing the percentage of reduction each year and also alternative approaches to the use of true-

ups in calculating recovery for rate-of-return carriers. And, the FNPRM asks if ICC CAF support for rate-of-return carriers should be subject to a defined phase-out? In addition, parties are asked to comment on existing SLCs, which are not addressed here. In particular, the FNPRM asks about the appropriate cap for these charges, the long-term role, if any, for SLCs as carriers move to IP networks, and what, if anything, the Commission should do about how carriers advertise SLCs and ARCs.

425. The FNPRM seeks comment on a number of issues regarding IP-to-IP interconnection in light of the Commission's goal of facilitating industry progression to all-IP networks. In particular, the FNPRM seeks comments on implementation of the USF-ICC Transformation Order's statement that the Commission expects that all carriers will negotiate in good faith for IP-to-IP interconnection arrangements for the exchange of voice traffic, as well as associated implementation and enforcement. The FNPRM seeks comment on the appropriate statutory authority for our expectation of good faith negotiations, and other possible regulatory authority for the Commission to adopt a policy framework governing IP-to-IP interconnection. In addition, if the Commission addresses IP-to-IP interconnection through a statutory framework historically applied to TDM traffic, the FNPRM seeks comment on whether any resulting changes will be required to the application of those historical TDM interconnection requirements, either through rule changes or forbearance.

426. Comment is also sought on the scope of the traffic exchange that should be encompassed by any IP-to-IP interconnection policy framework to avoid intervention in areas where the market will operate efficiently. The FNPRM seeks comment on the appropriate role for the Commission regarding IP-to-IP interconnection and seeks

specific comment on certain proposed policy frameworks, including the policy merits of each approach, and associated implementation issues, including any forbearance from statutory requirements that would be needed to implement the particular framework for IP-to-IP interconnection.

427. The FNPRM asks whether call signaling rules are needed for one-way VoIP providers, and if so, what they should be and how they should apply. And finally, parties are asked to comment on any conflicts or inconsistencies they believe are present as a result of the new rules adopted in the USF-ICC Transformation Order, either conflicts or inconsistencies within the new rules or between the new rules and existing Commission rules.

C. Legal Basis

428. The legal basis for any action that may be taken pursuant to the FNPRM is contained in sections 1, 2, 4(i), 201-205, 214, 218-220, 251, 252, 254, 256, 303(r), 332, 403, and 706 of the Communications Act of 1934, as amended, 47 U.S.C. 151, 152, 154(i), 201-205, 214, 218-220, 251, 252, 254, 256, 303(r), 332, 403, and 706, and sections 1.1 and 1.1421 of the Commission's rules, 47 CFR §§ 1.1, 1.421.

D. Description and Estimate of the Number of Small Entities to Which the Proposed Rules Will Apply

429. The RFA directs agencies to provide a description of, and where feasible, an estimate of the number of small entities that may be affected by the proposed rules, if adopted. The RFA generally defines the term "small entity" as having the same meaning as the terms "small business," "small organization," and "small governmental jurisdiction." In addition, the term "small business" has the same meaning as the term

"small-business concern" under the Small Business Act. A small-business concern" is one which: (1) is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the SBA.

430. Small Businesses. Nationwide, there are a total of approximately 27.5 million small businesses, according to the SBA.

431. Wired Telecommunications Carriers. The SBA has developed a small business size standard for Wired Telecommunications Carriers, which consists of all such companies having 1,500 or fewer employees. According to Census Bureau data for 2007, there were 3,188 firms in this category, total, that operated for the entire year. Of this total, 3144 firms had employment of 999 or fewer employees, and 44 firms had employment of 1000 employees or more. Thus, under this size standard, the majority of firms can be considered small.

432. Local Exchange Carriers (LECs). Neither the Commission nor the SBA has developed a size standard for small businesses specifically applicable to local exchange services. The closest applicable size standard under SBA rules is for Wired Telecommunications Carriers. Under that size standard, such a business is small if it has 1,500 or fewer employees. According to Commission data, 1,307 carriers reported that they were incumbent local exchange service providers. Of these 1,307 carriers, an estimated 1,006 have 1,500 or fewer employees and 301 have more than 1,500 employees. Consequently, the Commission estimates that most providers of local exchange service are small entities that may be affected by the rules and policies proposed in the FNPRM.

433. Incumbent Local Exchange Carriers (incumbent LECs). Neither the Commission nor the SBA has developed a size standard for small businesses specifically applicable to incumbent local exchange services. The closest applicable size standard under SBA rules is for Wired Telecommunications Carriers. Under that size standard, such a business is small if it has 1,500 or fewer employees. According to Commission data, 1,307 carriers reported that they were incumbent local exchange service providers. Of these 1,307 carriers, an estimated 1,006 have 1,500 or fewer employees and 301 have more than 1,500 employees. Consequently, the Commission estimates that most providers of incumbent local exchange service are small businesses that may be affected by rules adopted pursuant to the FNPRM.

434. The Commission has included small incumbent LECs in this present RFA analysis. As noted above, a "small business" under the RFA is one that, inter alia, meets the pertinent small business size standard (e.g., a telephone communications business having 1,500 or fewer employees), and "is not dominant in its field of operation." The SBA's Office of Advocacy contends that, for RFA purposes, small incumbent LECs are not dominant in their field of operation because any such dominance is not "national" in scope. The Commission has therefore included small incumbent LECs in this RFA analysis, although it emphasize that this RFA action has no effect on Commission analyses and determinations in other, non-RFA contexts.

435. Competitive Local Exchange Carriers (competitive LECs), Competitive Access Providers (CAPs), Shared-Tenant Service Providers, and Other Local Service Providers. Neither the Commission nor the SBA has developed a small business size standard specifically for these service providers. The appropriate size standard under

SBA rules is for the category Wired Telecommunications Carriers. Under that size standard, such a business is small if it has 1,500 or fewer employees. According to Commission data, 1,442 carriers reported that they were engaged in the provision of either competitive local exchange services or competitive access provider services. Of these 1,442 carriers, an estimated 1,256 have 1,500 or fewer employees and 186 have more than 1,500 employees. In addition, 17 carriers have reported that they are Shared-Tenant Service Providers, and all 17 are estimated to have 1,500 or fewer employees. In addition, 72 carriers have reported that they are Other Local Service Providers. Of the 72, seventy have 1,500 or fewer employees and two have more than 1,500 employees. Consequently, the Commission estimates that most providers of competitive local exchange service, competitive access providers, Shared-Tenant Service Providers, and Other Local Service Providers are small entities that may be affected by rules adopted pursuant to the FNPRM.

436. Interexchange Carriers (IXCs). Neither the Commission nor the SBA has developed a size standard for small businesses specifically applicable to interexchange services. The closest applicable size standard under SBA rules is for Wired Telecommunications Carriers. Under that size standard, such a business is small if it has 1,500 or fewer employees. According to Commission data, 359 companies reported that their primary telecommunications service activity was the provision of interexchange services. Of these 359 companies, an estimated 317 have 1,500 or fewer employees and 42 have more than 1,500 employees. Consequently, the Commission estimates that the majority of interexchange service providers are small entities that may be affected by rules adopted pursuant to the FNPRM.

437. Prepaid Calling Card Providers. Neither the Commission nor the SBA has developed a small business size standard specifically for prepaid calling card providers. The appropriate size standard under SBA rules is for the category Telecommunications Resellers. Under that size standard, such a business is small if it has 1,500 or fewer employees. According to Commission data, 193 carriers have reported that they are engaged in the provision of prepaid calling cards. Of these, an estimated all 193 have 1,500 or fewer employees and none have more than 1,500 employees. Consequently, the Commission estimates that the majority of prepaid calling card providers are small entities that may be affected by rules adopted pursuant to the FNPRM.

438. Local Resellers. The SBA has developed a small business size standard for the category of Telecommunications Resellers. Under that size standard, such a business is small if it has 1,500 or fewer employees. According to Commission data, 213 carriers have reported that they are engaged in the provision of local resale services. Of these, an estimated 211 have 1,500 or fewer employees and two have more than 1,500 employees. Consequently, the Commission estimates that the majority of local resellers are small entities that may be affected by rules adopted pursuant to the FNPRM.

439. Toll Resellers. The SBA has developed a small business size standard for the category of Telecommunications Resellers. Under that size standard, such a business is small if it has 1,500 or fewer employees. According to Commission data, 881 carriers have reported that they are engaged in the provision of toll resale services. Of these, an estimated 857 have 1,500 or fewer employees and 24 have more than 1,500 employees. Consequently, the Commission estimates that the majority of toll resellers are small entities that may be affected by rules adopted pursuant to the FNPRM.

440. Other Toll Carriers. Neither the Commission nor the SBA has developed a size standard for small businesses specifically applicable to Other Toll Carriers. This category includes toll carriers that do not fall within the categories of interexchange carriers, operator service providers, prepaid calling card providers, satellite service carriers, or toll resellers. The closest applicable size standard under SBA rules is for Wired Telecommunications Carriers. Under that size standard, such a business is small if it has 1,500 or fewer employees. According to Commission data, 284 companies reported that their primary telecommunications service activity was the provision of other toll carriage. Of these, an estimated 279 have 1,500 or fewer employees and five have more than 1,500 employees. Consequently, the Commission estimates that most Other Toll Carriers are small entities that may be affected by the rules and policies adopted pursuant to the FNPRM.

441. 800 and 800-Like Service Subscribers. Neither the Commission nor the SBA has developed a small business size standard specifically for 800 and 800-like service (toll free) subscribers. The appropriate size standard under SBA rules is for the category Telecommunications Resellers. Under that size standard, such a business is small if it has 1,500 or fewer employees. The most reliable source of information regarding the number of these service subscribers appears to be data the Commission collects on the 800, 888, 877, and 866 numbers in use. According to our data, as of September 2009, the number of 800 numbers assigned was 7,860,000; the number of 888 numbers assigned was 5,588,687; the number of 877 numbers assigned was 4,721,866; and the number of 866 numbers assigned was 7,867,736. The Commission does not have data specifying the number of these subscribers that are not independently owned and

operated or have more than 1,500 employees, and thus is unable at this time to estimate with greater precision the number of toll free subscribers that would qualify as small businesses under the SBA size standard. Consequently, it estimates that there are 7,860,000 or fewer small entity 800 subscribers; 5,588,687 or fewer small entity 888 subscribers; 4,721,866 or fewer small entity 877 subscribers; and 7,867,736 or fewer small entity 866 subscribers.

442. Wireless Telecommunications Carriers (except Satellite). Since 2007, the SBA has recognized wireless firms within this new, broad, economic census category. Prior to that time, such firms were within the now-superseded categories of Paging and Cellular and Other Wireless Telecommunications. Under the present and prior categories, the SBA has deemed a wireless business to be small if it has 1,500 or fewer employees. For this category, census data for 2007 show that there were 1,383 firms that operated for the entire year. Of this total, 1,368 firms had employment of 999 or fewer employees and 15 had employment of 1000 employees or more. Similarly, according to Commission data, 413 carriers reported that they were engaged in the provision of wireless telephony, including cellular service, Personal Communications Service (PCS), and Specialized Mobile Radio (SMR) Telephony services. Of these, an estimated 261 have 1,500 or fewer employees and 152 have more than 1,500 employees. Consequently, the Commission estimates that approximately half or more of these firms can be considered small. Thus, using available data, the Commission estimates that the majority of wireless firms can be considered small.

443. Broadband Personal Communications Service. The broadband personal communications service (PCS) spectrum is divided into six frequency blocks designated

A through F, and the Commission has held auctions for each block. The Commission defined "small entity" for Blocks C and F as an entity that has average gross revenues of $40 million or less in the three previous calendar years. For Block F, an additional classification for "very small business" was added and is defined as an entity that, together with its affiliates, has average gross revenues of not more than $15 million for the preceding three calendar years. These standards defining "small entity" in the context of broadband PCS auctions have been approved by the SBA. No small businesses, within the SBA-approved small business size standards bid successfully for licenses in Blocks A and B. There were 90 winning bidders that qualified as small entities in the Block C auctions. A total of 93 small and very small business bidders won approximately 40 percent of the 1,479 licenses for Blocks D, E, and F. In 1999, the Commission re-auctioned 347 C, E, and F Block licenses. There were 48 small business winning bidders. In 2001, the Commission completed the auction of 422 C and F Broadband PCS licenses in Auction 35. Of the 35 winning bidders in this auction, 29 qualified as "small" or "very small" businesses. Subsequent events, concerning Auction 35, including judicial and agency determinations, resulted in a total of 163 C and F Block licenses being available for grant. In 2005, the Commission completed an auction of 188 C block licenses and 21 F block licenses in Auction 58. There were 24 winning bidders for 217 licenses. Of the 24 winning bidders, 16 claimed small business status and won 156 licenses. In 2007, the Commission completed an auction of 33 licenses in the A, C, and F Blocks in Auction 71. Of the 14 winning bidders, six were designated entities. In 2008, the Commission completed an auction of 20 Broadband PCS licenses in the C, D, E and F block licenses in Auction 78.

444. Advanced Wireless Services. In 2008, the Commission conducted the auction of Advanced Wireless Services ("AWS") licenses. This auction, which as designated as Auction 78, offered 35 licenses in the AWS 1710-1755 MHz and 2110-2155 MHz bands ("AWS-1"). The AWS-1 licenses were licenses for which there were no winning bids in Auction 66. That same year, the Commission completed Auction 78. A bidder with attributed average annual gross revenues that exceeded $15 million and did not exceed $40 million for the preceding three years ("small business") received a 15 percent discount on its winning bid. A bidder with attributed average annual gross revenues that did not exceed $15 million for the preceding three years ("very small business") received a 25 percent discount on its winning bid. A bidder that had combined total assets of less than $500 million and combined gross revenues of less than $125 million in each of the last two years qualified for entrepreneur status. Four winning bidders that identified themselves as very small businesses won 17 licenses. Three of the winning bidders that identified themselves as a small business won five licenses. Additionally, one other winning bidder that qualified for entrepreneur status won 2 licenses.

445. Narrowband Personal Communications Services. In 1994, the Commission conducted an auction for Narrowband PCS licenses. A second auction was also conducted later in 1994. For purposes of the first two Narrowband PCS auctions, "small businesses" were entities with average gross revenues for the prior three calendar years of $40 million or less. Through these auctions, the Commission awarded a total of 41 licenses, 11 of which were obtained by four small businesses. To ensure meaningful participation by small business entities in future auctions, the Commission adopted a two-

tiered small business size standard in the Narrowband PCS Second Report and Order, 65 FR 35875, June 6, 2000. A "small business" is an entity that, together with affiliates and controlling interests, has average gross revenues for the three preceding years of not more than $40 million. A "very small business" is an entity that, together with affiliates and controlling interests, has average gross revenues for the three preceding years of not more than $15 million. The SBA has approved these small business size standards. A third auction was conducted in 2001. Here, five bidders won 317 (Metropolitan Trading Areas and nationwide) licenses. Three of these claimed status as a small or very small entity and won 311 licenses.

446. Paging (Private and Common Carrier). In the Paging Third Report and Order, 64 FR 33762, June 24, 1999, the Commission developed a small business size standard for "small businesses" and "very small businesses" for purposes of determining their eligibility for special provisions such as bidding credits and installment payments. A "small business" is an entity that, together with its affiliates and controlling principals, has average gross revenues not exceeding $15 million for the preceding three years. Additionally, a "very small business" is an entity that, together with its affiliates and controlling principals, has average gross revenues that are not more than $3 million for the preceding three years. The SBA has approved these small business size standards. According to Commission data, 291 carriers have reported that they are engaged in Paging or Messaging Service. Of these, an estimated 289 have 1,500 or fewer employees, and two have more than 1,500 employees. Consequently, the Commission estimates that the majority of paging providers are small entities that may be affected by our action. An auction of Metropolitan Economic Area licenses commenced on February

24, 2000, and closed on March 2, 2000. Of the 2,499 licenses auctioned, 985 were sold. Fifty-seven companies claiming small business status won 440 licenses. A subsequent auction of MEA and Economic Area ("EA") licenses was held in the year 2001. Of the 15,514 licenses auctioned, 5,323 were sold. One hundred thirty-two companies claiming small business status purchased 3,724 licenses. A third auction, consisting of 8,874 licenses in each of 175 EAs and 1,328 licenses in all but three of the 51 MEAs, was held in 2003. Seventy-seven bidders claiming small or very small business status won 2,093 licenses. A fourth auction of 9,603 lower and upper band paging licenses was held in the year 2010. Twenty-nine bidders claiming small or very small business status won 3,016 licenses.

447. 220 MHz Radio Service – Phase I Licensees. The 220 MHz service has both Phase I and Phase II licenses. Phase I licensing was conducted by lotteries in 1992 and 1993. There are approximately 1,515 such non-nationwide licensees and four nationwide licensees currently authorized to operate in the 220 MHz band. The Commission has not developed a small business size standard for small entities specifically applicable to such incumbent 220 MHz Phase I licensees. To estimate the number of such licensees that are small businesses, the Commission applies the small business size standard under the SBA rules applicable to Wireless Telecommunications Carriers (except Satellite). Under this category, the SBA deems a wireless business to be small if it has 1,500 or fewer employees. The Commission estimates that nearly all such licensees are small businesses under the SBA's small business size standard that may be affected by rules adopted pursuant to the FNPRM.

448. 220 MHz Radio Service – Phase II Licensees. The 220 MHz service has both Phase I and Phase II licenses. The Phase II 220 MHz service is subject to spectrum auctions. In the 220 MHz Third Report and Order, the Commission adopted a small business size standard for "small" and "very small" businesses for purposes of determining their eligibility for special provisions such as bidding credits and installment payments. This small business size standard indicates that a "small business" is an entity that, together with its affiliates and controlling principals, has average gross revenues not exceeding $15 million for the preceding three years. A "very small business" is an entity that, together with its affiliates and controlling principals, has average gross revenues that do not exceed $3 million for the preceding three years. The SBA has approved these small business size standards. Auctions of Phase II licenses commenced on September 15, 1998, and closed on October 22, 1998. In the first auction, 908 licenses were auctioned in three different-sized geographic areas: three nationwide licenses, 30 Regional Economic Area Group (EAG) Licenses, and 875 Economic Area (EA) Licenses. Of the 908 licenses auctioned, 693 were sold. Thirty-nine small businesses won licenses in the first 220 MHz auction. The second auction included 225 licenses: 216 EA licenses and 9 EAG licenses. Fourteen companies claiming small business status won 158 licenses.

449. Specialized Mobile Radio. The Commission awards small business bidding credits in auctions for Specialized Mobile Radio ("SMR") geographic area licenses in the 800 MHz and 900 MHz bands to entities that had revenues of no more than $15 million in each of the three previous calendar years. The Commission awards very small business bidding credits to entities that had revenues of no more than $3

million in each of the three previous calendar years. The SBA has approved these small business size standards for the 800 MHz and 900 MHz SMR Services. The Commission has held auctions for geographic area licenses in the 800 MHz and 900 MHz bands. The 900 MHz SMR auction was completed in 1996. Sixty bidders claiming that they qualified as small businesses under the $15 million size standard won 263 geographic area licenses in the 900 MHz SMR band. The 800 MHz SMR auction for the upper 200 channels was conducted in 1997. Ten bidders claiming that they qualified as small businesses under the $15 million size standard won 38 geographic area licenses for the upper 200 channels in the 800 MHz SMR band. A second auction for the 800 MHz band was conducted in 2002 and included 23 BEA licenses. One bidder claiming small business status won five licenses.

450. The auction of the 1,053 800 MHz SMR geographic area licenses for the General Category channels was conducted in 2000. Eleven bidders won 108 geographic area licenses for the General Category channels in the 800 MHz SMR band qualified as small businesses under the $15 million size standard. In an auction completed in 2000, a total of 2,800 Economic Area licenses in the lower 80 channels of the 800 MHz SMR service were awarded. Of the 22 winning bidders, 19 claimed small business status and won 129 licenses. Thus, combining all three auctions, 40 winning bidders for geographic licenses in the 800 MHz SMR band claimed status as small business.

451. In addition, there are numerous incumbent site-by-site SMR licensees and licensees with extended implementation authorizations in the 800 and 900 MHz bands. The Commission does not know how many firms provide 800 MHz or 900 MHz geographic area SMR pursuant to extended implementation authorizations, nor how

many of these providers have annual revenues of no more than $15 million. One firm has over $15 million in revenues. In addition, the Commission does not know how many of these firms have 1500 or fewer employees. The Commission assumes, for purposes of this analysis, that all of the remaining existing extended implementation authorizations are held by small entities, as that small business size standard is approved by the SBA.

452. Broadband Radio Service and Educational Broadband Service. Broadband Radio Service systems, previously referred to as Multipoint Distribution Service ("MDS") and Multichannel Multipoint Distribution Service ("MMDS") systems, and "wireless cable," transmit video programming to subscribers and provide two-way high speed data operations using the microwave frequencies of the Broadband Radio Service ("BRS") and Educational Broadband Service ("EBS") (previously referred to as the Instructional Television Fixed Service ("ITFS")). In connection with the 1996 BRS auction, the Commission established a small business size standard as an entity that had annual average gross revenues of no more than $40 million in the previous three calendar years. The BRS auctions resulted in 67 successful bidders obtaining licensing opportunities for 493 Basic Trading Areas ("BTAs"). Of the 67 auction winners, 61 met the definition of a small business. BRS also includes licensees of stations authorized prior to the auction. At this time, the Commission estimates that of the 61 small business BRS auction winners, 48 remain small business licensees. In addition to the 48 small businesses that hold BTA authorizations, there are approximately 392 incumbent BRS licensees that are considered small entities. After adding the number of small business auction licensees to the number of incumbent licensees not already counted, the Commission finds that there are currently approximately 440 BRS licensees that are

defined as small businesses under either the SBA or the Commission's rules. The Commission has adopted three levels of bidding credits for BRS: (i) a bidder with attributed average annual gross revenues that exceed \$15 million and do not exceed \$40 million for the preceding three years (small business) is eligible to receive a 15 percent discount on its winning bid; (ii) a bidder with attributed average annual gross revenues that exceed \$3 million and do not exceed \$15 million for the preceding three years (very small business) is eligible to receive a 25 percent discount on its winning bid; and (iii) a bidder with attributed average annual gross revenues that do not exceed \$3 million for the preceding three years (entrepreneur) is eligible to receive a 35 percent discount on its winning bid. In 2009, the Commission conducted Auction 86, which offered 78 BRS licenses. Auction 86 concluded with ten bidders winning 61 licenses. Of the ten, two bidders claimed small business status and won 4 licenses; one bidder claimed very small business status and won three licenses; and two bidders claimed entrepreneur status and won six licenses.

453. In addition, the SBA's Cable Television Distribution Services small business size standard is applicable to EBS. There are presently 2,032 EBS licensees. All but 100 of these licenses are held by educational institutions. Educational institutions are included in this analysis as small entities. Thus, the Commission estimates that at least 1,932 licensees are small businesses. Since 2007, Cable Television Distribution Services have been defined within the broad economic census category of Wired Telecommunications Carriers; that category is defined as follows: "This industry comprises establishments primarily engaged in operating and/or providing access to transmission facilities and infrastructure that they own and/or lease for the transmission

of voice, data, text, sound, and video using wired telecommunications networks. Transmission facilities may be based on a single technology or a combination of technologies." The SBA defines a small business size standard for this category as any such firms having 1,500 or fewer employees. The SBA has developed a small business size standard for this category, which is: all such firms having 1,500 or fewer employees. According to Census Bureau data for 2007, there were a total of 955 firms in this previous category that operated for the entire year. Of this total, 939 firms had employment of 999 or fewer employees, and 16 firms had employment of 1000 employees or more. Thus, under this size standard, the majority of firms can be considered small and may be affected by rules adopted pursuant to the FNPRM.

454. Lower 700 MHz Band Licenses. The Commission previously adopted criteria for defining three groups of small businesses for purposes of determining their eligibility for special provisions such as bidding credits. The Commission defined a "small business" as an entity that, together with its affiliates and controlling principals, has average gross revenues not exceeding $40 million for the preceding three years. A "very small business" is defined as an entity that, together with its affiliates and controlling principals, has average gross revenues that are not more than $15 million for the preceding three years. Additionally, the Lower 700 MHz Band had a third category of small business status for Metropolitan/Rural Service Area ("MSA/RSA") licenses, identified as "entrepreneur" and defined as an entity that, together with its affiliates and controlling principals, has average gross revenues that are not more than $3 million for the preceding three years. The SBA approved these small size standards. The Commission conducted an auction in 2002 of 740 Lower 700 MHz Band licenses (one

license in each of the 734 MSAs/RSAs and one license in each of the six Economic Area Groupings (EAGs)). Of the 740 licenses available for auction, 484 licenses were sold to 102 winning bidders. Seventy-two of the winning bidders claimed small business, very small business or entrepreneur status and won a total of 329 licenses. The Commission conducted a second Lower 700 MHz Band auction in 2003 that included 256 licenses: 5 EAG licenses and 476 Cellular Market Area licenses. Seventeen winning bidders claimed small or very small business status and won 60 licenses, and nine winning bidders claimed entrepreneur status and won 154 licenses. In 2005, the Commission completed an auction of 5 licenses in the Lower 700 MHz Band, designated Auction 60. There were three winning bidders for five licenses. All three winning bidders claimed small business status.

455. In 2007, the Commission reexamined its rules governing the 700 MHz band in the 700 MHz Second Report and Order, 72 FR 48814, August 24, 2007. The 700 MHz Second Report and Order revised the band plan for the commercial (including Guard Band) and public safety spectrum, adopted services rules, including stringent build-out requirements, an open platform requirement on the C Block, and a requirement on the D Block licensee to construct and operate a nationwide, interoperable wireless broadband network for public safety users. An auction of A, B and E block licenses in the Lower 700 MHz band was held in 2008. Twenty winning bidders claimed small business status (those with attributable average annual gross revenues that exceed $15 million and do not exceed $40 million for the preceding three years). Thirty three winning bidders claimed very small business status (those with attributable average annual gross revenues that do not exceed $15 million for the preceding three years). In

2011, the Commission conducted Auction 92, which offered 16 Lower 700 MHz band licenses that had been made available in Auction 73 but either remained unsold or were licenses on which a winning bidder defaulted. Two of the seven winning bidders in Auction 92 claimed very small business status, winning a total of four licenses.

456. Upper 700 MHz Band Licenses. In the 700 MHz Second Report and Order, the Commission revised its rules regarding Upper 700 MHz band licenses. In 2008, the Commission conducted Auction 73 in which C and D block licenses in the Upper 700 MHz band were available. Three winning bidders claimed very small business status (those with attributable average annual gross revenues that do not exceed $15 million for the preceding three years).

457. 700 MHz Guard Band Licensees. In the 700 MHz Guard Band Order, 65 FR 17594, April 4, 2000, the Commission adopted a small business size standard for "small businesses" and "very small businesses" for purposes of determining their eligibility for special provisions such as bidding credits and installment payments. A "small business" is an entity that, together with its affiliates and controlling principals, has average gross revenues not exceeding $40 million for the preceding three years. Additionally, a "very small business" is an entity that, together with its affiliates and controlling principals, has average gross revenues that are not more than $15 million for the preceding three years. An auction of 52 Major Economic Area (MEA) licenses commenced on September 6, 2000, and closed on September 21, 2000. Of the 104 licenses auctioned, 96 licenses were sold to nine bidders. Five of these bidders were small businesses that won a total of 26 licenses. A second auction of 700 MHz Guard Band licenses commenced on February 13, 2001 and closed on February 21, 2001. All

eight of the licenses auctioned were sold to three bidders. One of these bidders was a small business that won a total of two licenses.

458. Cellular Radiotelephone Service. Auction 77 was held to resolve one group of mutually exclusive applications for Cellular Radiotelephone Service licenses for unserved areas in New Mexico. Bidding credits for designated entities were not available in Auction 77. In 2008, the Commission completed the closed auction of one unserved service area in the Cellular Radiotelephone Service, designated as Auction 77. Auction 77 concluded with one provisionally winning bid for the unserved area totaling $25,002.

459. Private Land Mobile Radio ("PLMR"). PLMR systems serve an essential role in a range of industrial, business, land transportation, and public safety activities. These radios are used by companies of all sizes operating in all U.S. business categories, and are often used in support of the licensee's primary (non-telecommunications) business operations. For the purpose of determining whether a licensee of a PLMR system is a small business as defined by the SBA, the Commission uses the broad census category, Wireless Telecommunications Carriers (except Satellite). This definition provides that a small entity is any such entity employing no more than 1,500 persons. The Commission does not require PLMR licensees to disclose information about number of employees, so the Commission does not have information that could be used to determine how many PLMR licensees constitute small entities under this definition. The Commission notes that PLMR licensees generally use the licensed facilities in support of other business activities, and therefore, it would also be helpful to assess PLMR licensees under the standards applied to the particular industry subsector to which the licensee belongs.

460. As of March 2010, there were 424,162 PLMR licensees operating 921,909 transmitters in the PLMR bands below 512 MHz. The Commission notes that any entity engaged in a commercial activity is eligible to hold a PLMR license, and that any revised rules in this context could therefore potentially impact small entities covering a great variety of industries.

461. Rural Radiotelephone Service. The Commission has not adopted a size standard for small businesses specific to the Rural Radiotelephone Service. A significant subset of the Rural Radiotelephone Service is the Basic Exchange Telephone Radio System ("BETRS"). In the present context, The Commission will use the SBA's small business size standard applicable to Wireless Telecommunications Carriers (except Satellite), *i.e.*, an entity employing no more than 1,500 persons. There are approximately 1,000 licensees in the Rural Radiotelephone Service, and the Commission estimates that there are 1,000 or fewer small entity licensees in the Rural Radiotelephone Service that may be affected by the rules and policies proposed herein.

462. Air-Ground Radiotelephone Service. The Commission has not adopted a small business size standard specific to the Air-Ground Radiotelephone Service. The Commission will use SBA's small business size standard applicable to Wireless Telecommunications Carriers (except Satellite), i.e., an entity employing no more than 1,500 persons. There are approximately 100 licensees in the Air-Ground Radiotelephone Service, and the Commission estimates that almost all of them qualify as small under the SBA small business size standard and may be affected by rules adopted pursuant to the FNPRM.

463. Aviation and Marine Radio Services. Small businesses in the aviation and marine radio services use a very high frequency (VHF) marine or aircraft radio and, as appropriate, an emergency position-indicating radio beacon (and/or radar) or an emergency locator transmitter. The Commission has not developed a small business size standard specifically applicable to these small businesses. For purposes of this analysis, the Commission uses the SBA small business size standard for the category Wireless Telecommunications Carriers (except Satellite), which is 1,500 or fewer employees. Most applicants for recreational licenses are individuals. Approximately 581,000 ship station licensees and 131,000 aircraft station licensees operate domestically and are not subject to the radio carriage requirements of any statute or treaty. For purposes of our evaluations in this analysis, the Commission estimates that there are up to approximately 712,000 licensees that are small businesses (or individuals) under the SBA standard. In addition, between December 3, 1998 and December 14, 1998, the Commission held an auction of 42 VHF Public Coast licenses in the 157.1875-157.4500 MHz (ship transmit) and 161.775-162.0125 MHz (coast transmit) bands. For purposes of the auction, the Commission defined a "small" business as an entity that, together with controlling interests and affiliates, has average gross revenues for the preceding three years not to exceed $15 million dollars. In addition, a "very small" business is one that, together with controlling interests and affiliates, has average gross revenues for the preceding three years not to exceed $3 million dollars. There are approximately 10,672 licensees in the Marine Coast Service, and the Commission estimates that almost all of them qualify as "small" businesses under the above special small business size standards and may be affected by rules adopted pursuant to the FNPRM.

464. Fixed Microwave Services. Fixed microwave services include common carrier, private operational-fixed, and broadcast auxiliary radio services. At present, there are approximately 22,015 common carrier fixed licensees and 61,670 private operational-fixed licensees and broadcast auxiliary radio licensees in the microwave services. The Commission has not created a size standard for a small business specifically with respect to fixed microwave services. For purposes of this analysis, the Commission uses the SBA small business size standard for Wireless Telecommunications Carriers (except Satellite), which is 1,500 or fewer employees. The Commission does not have data specifying the number of these licensees that have more than 1,500 employees, and thus is unable at this time to estimate with greater precision the number of fixed microwave service licensees that would qualify as small business concerns under the SBA's small business size standard. Consequently, the Commission estimates that there are up to 22,015 common carrier fixed licensees and up to 61,670 private operational-fixed licensees and broadcast auxiliary radio licensees in the microwave services that may be small and may be affected by the rules and policies adopted herein. The Commission notes, however, that the common carrier microwave fixed licensee category includes some large entities.

465. Offshore Radiotelephone Service. This service operates on several UHF television broadcast channels that are not used for television broadcasting in the coastal areas of states bordering the Gulf of Mexico. There are approximately 55 licensees in this service. The Commission is unable to estimate at this time the number of licensees that would qualify as small under the SBA's small business size standard for Cellular and

Other Wireless Telecommunications services. Under that SBA small business size standard, a business is small if it has 1,500 or fewer employees.

466. 39 GHz Service. The Commission created a special small business size standard for 39 GHz licenses – an entity that has average gross revenues of $40 million or less in the three previous calendar years. An additional size standard for "very small business" is: an entity that, together with affiliates, has average gross revenues of not more than $15 million for the preceding three calendar years. The SBA has approved these small business size standards. The auction of the 2,173 39 GHz licenses began on April 12, 2000 and closed on May 8, 2000. The 18 bidders who claimed small business status won 849 licenses. Consequently, the Commission estimates that 18 or fewer 39 GHz licensees are small entities that may be affected by rules adopted pursuant to the FNPRM.

467. Local Multipoint Distribution Service. Local Multipoint Distribution Service ("LMDS") is a fixed broadband point-to-multipoint microwave service that provides for two-way video telecommunications. The auction of the 986 LMDS licenses began and closed in 1998. The Commission established a small business size standard for LMDS licenses as an entity that has average gross revenues of less than $40 million in the three previous calendar years. An additional small business size standard for "very small business" was added as an entity that, together with its affiliates, has average gross revenues of not more than $15 million for the preceding three calendar years. The SBA has approved these small business size standards in the context of LMDS auctions. There were 93 winning bidders that qualified as small entities in the LMDS auctions. A total of 93 small and very small business bidders won approximately 277 A Block licenses and

387 B Block licenses. In 1999, the Commission re-auctioned 161 licenses; there were 32 small and very small businesses winning that won 119 licenses.

468. 218-219 MHz Service. The first auction of 218-219 MHz spectrum resulted in 170 entities winning licenses for 594 Metropolitan Statistical Area (MSA) licenses. Of the 594 licenses, 557 were won by entities qualifying as a small business. For that auction, the small business size standard was an entity that, together with its affiliates, has no more than a $6 million net worth and, after federal income taxes (excluding any carry over losses), has no more than $2 million in annual profits each year for the previous two years. In the 218-219 MHz Report and Order and Memorandum Opinion and Order, the Commission established a small business size standard for a "small business" as an entity that, together with its affiliates and persons or entities that hold interests in such an entity and their affiliates, has average annual gross revenues not to exceed $15 million for the preceding three years. A "very small business" is defined as an entity that, together with its affiliates and persons or entities that hold interests in such an entity and its affiliates, has average annual gross revenues not to exceed $3 million for the preceding three years. These size standards will be used in future auctions of 218-219 MHz spectrum.

469. 2.3 GHz Wireless Communications Services. This service can be used for fixed, mobile, radiolocation, and digital audio broadcasting satellite uses. The Commission defined "small business" for the wireless communications services ("WCS") auction as an entity with average gross revenues of $40 million for each of the three preceding years, and a "very small business" as an entity with average gross revenues of $15 million for each of the three preceding years. The SBA has approved these

definitions. The Commission auctioned geographic area licenses in the WCS service. In the auction, which was conducted in 1997, there were seven bidders that won 31 licenses that qualified as very small business entities, and one bidder that won one license that qualified as a small business entity.

470. 1670-1675 MHz Band. An auction for one license in the 1670-1675 MHz band was conducted in 2003. The Commission defined a "small business" as an entity with attributable average annual gross revenues of not more than $40 million for the preceding three years and thus would be eligible for a 15 percent discount on its winning bid for the 1670-1675 MHz band license. Further, the Commission defined a "very small business" as an entity with attributable average annual gross revenues of not more than $15 million for the preceding three years and thus would be eligible to receive a 25 percent discount on its winning bid for the 1670-1675 MHz band license. One license was awarded. The winning bidder was not a small entity.

471. 3650–3700 MHz band**.** In March 2005, the Commission released a Report and Order and Memorandum Opinion and Order that provides for nationwide, non-exclusive licensing of terrestrial operations, utilizing contention-based technologies, in the 3650 MHz band (i.e., 3650–3700 MHz). As of April 2010, more than 1270 licenses have been granted and more than 7433 sites have been registered. The Commission has not developed a definition of small entities applicable to 3650–3700 MHz band nationwide, non-exclusive licensees. However, the Commission estimates that the majority of these licensees are Internet Access Service Providers (ISPs) and that most of those licensees are small businesses.

472. 24 GHz – Incumbent Licensees. This analysis may affect incumbent licensees who were relocated to the 24 GHz band from the 18 GHz band, and applicants who wish to provide services in the 24 GHz band. The applicable SBA small business size standard is that of "Cellular and Other Wireless Telecommunications" companies. This category provides that such a company is small if it employs no more than 1,500 persons. The Commission believes that there are only two licensees in the 24 GHz band that were relocated from the 18 GHz band, Teligent and TRW, Inc. It is our understanding that Teligent and its related companies have less than 1,500 employees, though this may change in the future. TRW is not a small entity. Thus, only one incumbent licensee in the 24 GHz band is a small business entity.

473. 24 GHz – Future Licensees. With respect to new applicants in the 24 GHz band, the size standard for "small business" is an entity that, together with controlling interests and affiliates, has average annual gross revenues for the three preceding years not in excess of $15 million. "Very small business" in the 24 GHz band is an entity that, together with controlling interests and affiliates, has average gross revenues not exceeding $3 million for the preceding three years. The SBA has approved these small business size standards. These size standards will apply to a future 24 GHz license auction, if held.

474. Satellite Telecommunications. Since 2007, the SBA has recognized satellite firms within this revised category, with a small business size standard of $15 million. The most current Census Bureau data are from the economic census of 2007, and the Commission will use those figures to gauge the prevalence of small businesses in this category. Those size standards are for the two census categories of "Satellite

Telecommunications" and "Other Telecommunications." Under the "Satellite Telecommunications" category, a business is considered small if it had $15 million or less in average annual receipts. Under the "Other Telecommunications" category, a business is considered small if it had $25 million or less in average annual receipts.

475. The first category of Satellite Telecommunications "comprises establishments primarily engaged in providing point-to-point telecommunications services to other establishments in the telecommunications and broadcasting industries by forwarding and receiving communications signals via a system of satellites or reselling satellite telecommunications." For this category, Census Bureau data for 2007 show that there were a total of 512 firms that operated for the entire year. Of this total, 464 firms had annual receipts of under $10 million, and 18 firms had receipts of $10 million to $24,999,999. Consequently, the Commission estimates that the majority of Satellite Telecommunications firms are small entities that might be affected by rules adopted pursuant to the FNPRM.

476. The second category of Other Telecommunications "primarily engaged in providing specialized telecommunications services, such as satellite tracking, communications telemetry, and radar station operation. This industry also includes establishments primarily engaged in providing satellite terminal stations and associated facilities connected with one or more terrestrial systems and capable of transmitting telecommunications to, and receiving telecommunications from, satellite systems. Establishments providing Internet services or voice over Internet protocol (VoIP) services via client-supplied telecommunications connections are also included in this industry." For this category, Census Bureau data for 2007 show that there were a total of 2,383

firms that operated for the entire year. Of this total, 2,346 firms had annual receipts of under $25 million. Consequently, the Commission estimates that the majority of Other Telecommunications firms are small entities that might be affected by our action.

477. Cable and Other Program Distribution. Since 2007, these services have been defined within the broad economic census category of Wired Telecommunications Carriers; that category is defined as follows: "This industry comprises establishments primarily engaged in operating and/or providing access to transmission facilities and infrastructure that they own and/or lease for the transmission of voice, data, text, sound, and video using wired telecommunications networks. Transmission facilities may be based on a single technology or a combination of technologies." The SBA has developed a small business size standard for this category, which is: all such firms having 1,500 or fewer employees. According to Census Bureau data for 2007, there were a total of 955 firms in this previous category that operated for the entire year. Of this total, 939 firms had employment of 999 or fewer employees, and 16 firms had employment of 1000 employees or more. Thus, under this size standard, the majority of firms can be considered small and may be affected by rules adopted pursuant to the FNPRM.

478. Cable Companies and Systems. The Commission has developed its own small business size standards, for the purpose of cable rate regulation. Under the Commission's rules, a "small cable company" is one serving 400,000 or fewer subscribers, nationwide. Industry data indicate that, of 1,076 cable operators nationwide, all but eleven are small under this size standard. In addition, under the Commission's rules, a "small system" is a cable system serving 15,000 or fewer subscribers. Industry data indicate that, of 7,208 systems nationwide, 6,139 systems have under 10,000

subscribers, and an additional 379 systems have 10,000-19,999 subscribers. Thus, under this second size standard, most cable systems are small and may be affected by rules adopted pursuant to the FNPRM.

479. Cable System Operators. The Act also contains a size standard for small cable system operators, which is "a cable operator that, directly or through an affiliate, serves in the aggregate fewer than 1 percent of all subscribers in the United States and is not affiliated with any entity or entities whose gross annual revenues in the aggregate exceed $250,000,000." The Commission has determined that an operator serving fewer than 677,000 subscribers shall be deemed a small operator, if its annual revenues, when combined with the total annual revenues of all its affiliates, do not exceed $250 million in the aggregate. Industry data indicate that, of 1,076 cable operators nationwide, all but ten are small under this size standard. The Commission notes that it neither requests nor collects information on whether cable system operators are affiliated with entities whose gross annual revenues exceed $250 million, and therefore is unable to estimate more accurately the number of cable system operators that would qualify as small under this size standard.

480. Open Video Services. The open video system ("OVS") framework was established in 1996, and is one of four statutorily recognized options for the provision of video programming services by local exchange carriers. The OVS framework provides opportunities for the distribution of video programming other than through cable systems. Because OVS operators provide subscription services, OVS falls within the SBA small business size standard covering cable services, which is "Wired Telecommunications Carriers." The SBA has developed a small business size standard for this category,

which is: all such firms having 1,500 or fewer employees. According to Census Bureau data for 2007, there were a total of 955 firms in this previous category that operated for the entire year. Of this total, 939 firms had employment of 999 or fewer employees, and 16 firms had employment of 1000 employees or more. Thus, under this second size standard, most cable systems are small and may be affected by rules adopted pursuant to the Notice. In addition, the Commission notes that it has certified some OVS operators, with some now providing service. Broadband service providers ("BSPs") are currently the only significant holders of OVS certifications or local OVS franchises. The Commission does not have financial or employment information regarding the entities authorized to provide OVS, some of which may not yet be operational. Thus, again, at least some of the OVS operators may qualify as small entities.

481. Internet Service Providers. Since 2007, these services have been defined within the broad economic census category of Wired Telecommunications Carriers; that category is defined as follows: "This industry comprises establishments primarily engaged in operating and/or providing access to transmission facilities and infrastructure that they own and/or lease for the transmission of voice, data, text, sound, and video using wired telecommunications networks. Transmission facilities may be based on a single technology or a combination of technologies." The SBA has developed a small business size standard for this category, which is: all such firms having 1,500 or fewer employees. According to Census Bureau data for 2007, there were 3,188 firms in this category, total, that operated for the entire year. Of this total, 3144 firms had employment of 999 or fewer employees, and 44 firms had employment of 1000 employees or more. Thus, under this size standard, the majority of firms can be

considered small. In addition, according to Census Bureau data for 2007, there were a total of 396 firms in the category Internet Service Providers (broadband) that operated for the entire year. Of this total, 394 firms had employment of 999 or fewer employees, and two firms had employment of 1000 employees or more. Consequently, the Commission estimates that the majority of these firms are small entities that may be affected by rules adopted pursuant to the FNPRM.

482. Internet Publishing and Broadcasting and Web Search Portals. Our action may pertain to interconnected VoIP services, which could be provided by entities that provide other services such as email, online gaming, web browsing, video conferencing, instant messaging, and other, similar IP-enabled services. The Commission has not adopted a size standard for entities that create or provide these types of services or applications. However, the Census Bureau has identified firms that "primarily engaged in 1) publishing and/or broadcasting content on the Internet exclusively or 2) operating Web sites that use a search engine to generate and maintain extensive databases of Internet addresses and content in an easily searchable format (and known as Web search portals)." The SBA has developed a small business size standard for this category, which is: all such firms having 500 or fewer employees. According to Census Bureau data for 2007, there were 2,705 firms in this category that operated for the entire year. Of this total, 2,682 firms had employment of 499 or fewer employees, and 23 firms had employment of 500 employees or more. Consequently, the Commission estimates that the majority of these firms are small entities that may be affected by rules adopted pursuant to the FNPRM.

483. <u>Data Processing, Hosting, and Related Services</u>. Entities in this category "primarily … provid[e] infrastructure for hosting or data processing services." The SBA has developed a small business size standard for this category; that size standard is $25 million or less in average annual receipts. According to Census Bureau data for 2007, there were 8,060 firms in this category that operated for the entire year. Of these, 7,744 had annual receipts of under $ $24,999,999. Consequently, the Commission estimates that the majority of these firms are small entities that may be affected by rules adopted pursuant to the FNPRM.

484. <u>All Other Information Services</u>. The Census Bureau defines this industry as including "establishments primarily engaged in providing other information services (except news syndicates, libraries, archives, Internet publishing and broadcasting, and Web search portals)." Our action pertains to interconnected VoIP services, which could be provided by entities that provide other services such as email, online gaming, web browsing, video conferencing, instant messaging, and other, similar IP-enabled services. The SBA has developed a small business size standard for this category; that size standard is $7.0 million or less in average annual receipts. According to Census Bureau data for 2007, there were 367 firms in this category that operated for the entire year. Of these, 334 had annual receipts of under $5.0 million, and an additional 11 firms had receipts of between $5 million and $9,999,999. Consequently, the Commission estimates that the majority of these firms are small entities that may be affected by our action.

E. Description of Projected Reporting, Recordkeeping, and Other Compliance Requirements for Small Entities

485. In this FNPRM, the Commission seeks public comment on additional steps to complete its comprehensive universal service and intercarrier compensation reform. The transition to complete the reform of the universal service programs and new intercarrier compensation rules could affect all carriers, including small entities, and may include new administrative processes. In proposing these reforms, the Commission seeks comment on various reporting, recordkeeping, and other compliance requirements that may apply to all carriers, including small entities. The Commission seeks comment on any costs and burdens on small entities associated with the proposed ruled, including data quantifying the extent of those costs or burdens.

1. Universal Service

486. In the Order, the Commission adopts a rule requiring that actual speed and latency be measured on each ETCs access network from the end-user interface to the nearest Internet access point, as well as a rule that requires ETCs to certify to and report the results to USAC on an annual basis. In this FNPRM, the Commission seeks comment on whether the Commission should adopt a specific measurement methodology beyond what is described in the Order and the format in which ETCs should report their results. Specifically, the Commission seeks comment on whether it should specify a uniform reporting format, such as a format that can be produced to the Universal Service Administrative Company ("USAC") and auditable such that USAC or the state commissions may confirm that a provider is, in fact, providing broadband at the required minimum speeds. The Commission also seeks comment on whether providers should be

required to provide the underlying raw measurement data to USAC and, if so, whether there are legitimate concerns with the confidentiality of such data. In the alternative, the Commission seeks comment on whether it would be sufficient to have a provider certify to USAC that its network is satisfying the minimum broadband metrics and retain the results of its own performance measurement to be produced on request in the course of possible future audits.

487. In the Order, the Commission also directs the Wireline Competition Bureau and Wireless Telecommunications Bureau to develop and conduct a survey of voice and broadband rates in order to compare urban and rural voice and broadband rates. In this FNPRM, the Commission seeks comment on the components of the survey.

488. In this FNPRM, the Commission seeks comment on the Rural Association's proposed creation of a new broadband-focused CAF mechanism that ultimately would entirely replace existing support mechanisms for rate-of-return carriers. The Commission seeks comment on what information it would need to require from carriers in order to evaluate and implement this proposal.

489. Under the Order, rate-of-return carriers will continue to receive for some time a modified version of their legacy universal service support. In this FNPRM, the Commission seeks comment on the appropriate data and methodologies the Commission should use to calculate the weighted average cost of capital used to identify the rate-of-return required to maintain the current value of a firm.

490. The Commission proposes to apply to recipients of Mobility Fund Phase II support, CAF support, and Remote Areas Fund support the same rules for accountability and oversight. Thus recipients of USF support through any of these funding mechanisms

would be required to meet the same reporting, audit, and record retention requirements. Because of differences between Mobility Fund support and other USF high cost support mechanisms, the Commission proposes that Mobility Fund Phase II support recipients include the same additional information in their annual reports as Mobility Fund Phase I support recipients. This information includes maps with service area and population information, linear road mile coverage, and drive test data, as well as updated project information. To minimize waste, fraud, and abuse, the Commission proposes to require individuals who are eligible for CAF support for remote areas to certify that they are eligible and periodically verify their continued eligibility.

491. Where the Commission uses competitive bidding to award Mobility Fund II support, support in areas where the price cap ETC declines to make a state-level commitment, or support for remote areas, the Commission proposes to use a two-stage application process, including ownership disclosure requirements, similar to that used in spectrum auctions and adopted for Mobility Fund Phase I.

492. The Commission also seeks comment in the FNPRM on whether there are specific requirements in the existing annual reporting rule for ETCs that should be modified to reflect basic differences in the nature and purpose of the support provided for mobile services. The Commission further seeks comment on any other aspects of its annual reporting requirements that should be modified to better reflect the nature of mobile services being offered and the objectives of the USF support provided for them.

2. Intercarrier Compensation

493. In the FNPRM, the Commission seeks comment and data on issues that must be addressed to complete its comprehensive reform of the intercarrier compensation

system. These issues include the appropriate path or transition to modernize the existing rules as needed to bring all intercarrier compensation to the ultimate end point of bill-and-keep, if and how carriers should be allowed to recover revenues that might be reduced by any additional intercarrier compensation reforms, and data to analyze the effects of proposed reforms and need for revenue recovery.

494. Compliance with a transition to a new system for all intercarrier compensation may impact some small entities and may include new or reduced administrative processes. For carriers that may be affected, obligations may include certain reporting and recordkeeping requirements to determine and establish their eligibility to receive recovery from other sources as intercarrier compensation rates are reduced. Additionally, these carriers may need to modify some administrative processes relating to the billing and collection of intercarrier compensation to comply with any new or revised rules the Commission adopts as a result of the FNPRM.

495. Modifications to the rules to address potential arbitrage opportunities or additional call signaling rules for VoIP traffic also will affect certain carriers, potentially including small entities. To the extent that the Commission further modifies the rules adopted in the Order as a result of the FNPRM, providers might be required to modify or adopt administrative, recordkeeping, or other processes to implement those changes. Moreover, the FNPRM considers possible rule modifications to require IP-to-IP interconnection, which may require service providers to modify some administrative processes. Further, possible rule modifications to address potential arbitrage, if adopted, may affect certain carriers. For example, carriers that engage in such arbitrage may be subject to revised tariff filing or other requirements. However, these impacts are

mitigated by the certainty and reduced litigation that should occur as a result of the reforms adopted, including arbitrage loopholes that the Commission has closed in the Order.

F. Steps Taken to Minimize the Significant Economic Impact on Small Entities, and Significant Alternatives Considered

496. The RFA requires an agency to describe any significant, specifically small business, alternatives that it has considered in reaching its proposed approach, which may include the following four alternatives (among others): "(1) the establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities; (2) the clarification, consolidation, or simplification of compliance and reporting requirements under the rules for such small entities; (3) the use of performance rather than design standards; and (4) an exemption from coverage of the rule, or any part thereof, for such small entities."

497. The FNPRM seeks comment from all interested parties. The Commission is aware that some of the proposals under consideration may impact small entities. Small entities are encouraged to bring to the Commission's attention any specific concerns they may have with the proposals outlined in the FNPRM.

498. The Commission expects to consider the economic impact on small entities, as identified in comments filed in response to the FNPRM, in reaching its final conclusions and taking action in this proceeding. The reporting, recordkeeping, and other compliance requirements in the FNPRM could have an impact on both small and large entities. The Commission believes that any impact of such requirements is outweighed

by the accompanying public benefits. Further, these requirements are necessary to ensure that the statutory goals of Section 254 of the Act are met without waste, fraud, or abuse.

499. In the FNPRM, the Commission seeks comment on several issues and measures that may apply to small entities in a unique fashion. Specifically, the FNPRM seeks comment on whether small businesses should be eligible for a bidding preference if competitive bidding is used to provide Mobility Fund Phase II support, support in areas where the price cap ETC declines to make a state-level commitment, or support for remote areas. Entities seeking the small business bidding preference would be required to provide information about their gross revenues. The Commission believes that the benefits to small businesses of a bidding preference, if adopted, would significantly outweigh the burden of any additional information disclosure requirements. In addition, the Commission seeks comment on the data it will need to complete its represcription of the authorized interstate rate of return. Although data is requested from the industry generally, small carriers may be differently affected by the ultimate prescription of a new rate of return.

500. The FNPRM seeks comment on several issues relating to bill-and-keep implementation, including how points of interconnection obligations will function for rural and non-incumbent LECs, definition of the network edge, and the future role of tariffs and interconnection agreements, The Commission also seeks comment on the appropriate sequence and timing of intercarrier rate reductions for those rate elements not covered by its Order adopting of bill-and-keep as the ultimate end-point for reform, particularly for originating switched access, dedicated transport, tandem switching and tandem transport in some circumstances. The Commission seeks comment on the

potential impact to small entities of reduced intercarrier rates for these additional rate elements, including whether a different transition period might be appropriate for particular classes of carriers.

501. The FNPRM also seeks comment on how recovery of reduced intercarrier compensation revenues in the future would impact carriers, and how recovery, if any, for those reduced revenues should be addressed. The Commission asks if the recovery approach adopted should be different depending on the type of carrier or regulation. The Commission also invites comment on specific recovery considerations for rate-of-return carriers and whether any cost or revenue recovery mechanism could provide rate-of-return carriers with greater incentives for efficient operation.

502. Finally, the Commission seeks comment on whether separate consideration for small entities is necessary or appropriate for each of the following issues discussed in the FNPRM: the potential impact of additional call signaling rules governing VoIP traffic; the potential impact of rules relating to potential future arbitrage, including revised tariff-filing requirements; and the potential impact of rules relating to IP-to-IP interconnection and related issues. Specifically with regard to the IP-to-IP interconnection, the FNPRM seeks comment on the scope of traffic exchange that should be included, responsibility for costs of IP-to-TDM conversions, and the statutory framework and appropriate scope of any IP-to-IP interconnection obligation.

G. Federal Rules that May Duplicate, Overlap, or Conflict with the Proposed Rules

503. None.

H. Paperwork Reduction Act Analysis

504. The FNPRM contains proposed new information collection requirements. The new requirements will be submitted to the Office of Management and Budget (OMB) for review under section 3507(d) of the Paperwork Reduction Act (PRA). The Commission, as part of its continuing effort to reduce paperwork burdens, invites the general public and OMB to comment on the information collection requirements contained in this document, as required by PRA. In addition, pursuant to the Small Business Paperwork Relief Act of 2002, the Commission seeks specific comment on how it might "further reduce the information collection burden for small business concerns with fewer than 25 employees."

I. Filing Requirements

505. Comments and Reply Comments. Pursuant to §§ 1.415 and 1.419 of the Commission's rules, interested parties may file comments and reply comments. Comments on the matters synopsized in paragraphs 1 - 303 of the Supplementary Information and proposed 47 CFR part 54, subparts L, M, and N are due on or before January 18, 2012 and reply comments on the matters synopsized in paragraphs 1 - 303 of the Supplementary Information and proposed 47 CFR part 54, subparts L, M, and N are due on or before February 17, 2012. Comments on the matters synopsized in paragraphs 304 - 406 of the Supplementary Information are due on or before February 24, 2012 and reply comments on the matters synopsized in paragraphs 304 - 406 of the Supplementary Information are due on or before March 30, 2012. All filings should refer to CC Docket No 01-92, WC Docket Nos. 10-90, 07-135, and 05-337 and GN Docket No. 09-51, and WT Docket No. 10-208. Comments may be filed using: (1) the Commission's Electronic

Comment Filing System (ECFS), (2) the Federal Government's eRulemaking Portal, or (3) by filing paper copies.

List of Subjects in 47 CFR Part 54

Communications Common Carriers, Reporting and Record Keeping Requirements, Telecommunications, Telephone.

FEDERAL COMMUNICATIONS COMMISSION

Marlene H. Dortch,
Secretary.

For the reasons discussed in the preamble, the Federal Communications Commission proposes to amend 47 CFR part 54 to read as follows:

PART 54 – UNIVERSAL SERVICE

1. The authority citation for part 54 continues to read as follows:

Authority: 47 U.S.C. 151, 154(i), 201, 205, 214, 219, 220, 254, 303(r), 403, and 1302 unless otherwise noted.

2. Revise subpart L to part 54 to read as follows:

Subpart L – Mobility Fund

Sec.

Subpart L – Mobility Fund

§ 54.1011 Mobility Fund – Phase II.

The Commission will use competitive bidding, as provided in part 1, subpart AA, of this chapter, to determine the recipients of support available through Phase II of the Mobility

Fund and the amount(s) of support that they may receive for specific geographic areas, subject to applicable post-auction procedures.

§ 54.1012 Geographic areas eligible for support.

(a) Mobility Fund Phase II support may be made available for census blocks or other areas identified as eligible by public notice.

(b) Except as provided in § 54.1014, coverage units for purposes of conducting competitive bidding and disbursing support based on designated road miles will be identified by public notice for each area eligible for support.

§ 54.1013 Provider eligibility.

(a) Except as provided in § 54.1014, an applicant shall be an Eligible Telecommunications Carrier in an area in order to receive Mobility Fund Phase II support for that area. The applicant's designation as an Eligible Telecommunications Carrier may be conditional subject to the receipt of Mobility Fund support.

(b) An applicant shall have access to spectrum in an area that enables it to satisfy the applicable performance requirements in order to receive Mobility Fund Phase II support for that area. The applicant shall certify, in a form acceptable to the Commission, that it such access at the time it applies to participate in competitive bidding and at the time that it applies for support and that it will retain such access for ten (10) years after the date on which it is authorized to receive support.

(c) An applicant shall certify that it is financially and technically qualified to provide the services supported by Mobility Fund Phase II in order to receive such support.

§ 54.1014 Service to Tribal Lands.

(a) A Tribally-owned or –controlled entity that has pending an application to be designated an Eligible Telecommunications Carrier may participate in an auction by bidding for support in areas located within the boundaries of the Tribal land associated with the Tribe that owns or controls the entity. To bid on this basis, an entity shall certify that it is a Tribally-owned or –controlled entity and identify the applicable Tribe and Tribal lands in its application to participate in the competitive bidding. A Tribally-owned or -controlled entity shall receive any Mobility Fund Phase II support only after it has become an Eligible Telecommunications Carrier.

(b) In any auction for support solely in Tribal lands, coverage units for purposes of conducting competitive bidding and disbursing support based on designated population will be identified by public notice for each census block eligible for support.

(c) Tribally-owned or –controlled entities may receive a bidding credit with respect to bids for support within the boundaries of associated Tribal lands. To qualify for a bidding credit, an applicant shall certify that it is a Tribally-owned or –controlled entity and identify the applicable Tribe and Tribal lands in its application to participate in the competitive bidding. An applicant that qualifies shall have its bid(s) for support in areas within the boundaries of Tribal land associated with the Tribe that owns or controls the applicant reduced by twenty-five (25) percent or purposes of determining winning bidders without any reduction in the amount of support available.

(d) A winning bidder for support in Tribal lands shall notify and engage the Tribal governments responsible for the areas supported.

(1) A winning bidder’s engagement with the applicable Tribal government shall consist, at a minimum, of discussion regarding:

(i) A needs assessment and deployment planning with a focus on Tribal community anchor institutions;

(ii) Feasibility and sustainability planning;

(iii) Marketing services in a culturally sensitive manner;

(iv) Rights of way processes, land use permitting, facilities siting, environmental and cultural preservation review processes; and

(v) Compliance with Tribal business and licensing requirements

(2) A winning bidder shall notify the appropriate Tribal government of its winning bid no later than five (5) business days after being identified by public notice as a winning bidder.

(3) A winning bidder shall certify in its application for support that it has substantively engaged appropriate Tribal officials regarding the issues specified in paragraph (d)(1) of this section, at a minimum, as well as any other issues specified by the Commission, and provide a summary of the results of such engagement. A copy of the certification and summary shall be sent to the appropriate Tribal officials when it is sent to the Commission.

(4) A winning bidder for support in Tribal lands shall certify in its annual report, pursuant to § 54.1019(a)(5), and prior to disbursement of support, pursuant to § 54.1018, that it has substantively engaged appropriate Tribal officials regarding the issues specified in paragraph 54.1014(d)(1) of this section, at a minimum, as well as any other issues specified by the Commission, and provide a summary of the results of such engagement. A copy of the certification and summary shall be sent to the appropriate Tribal officials when it is sent to the Commission.

§ 54.1015 Application process.

(a) Application to Participate in Competitive Bidding for Mobility Fund Phase II Support. In addition to providing information specified in § 1.21001(b) of this chapter and any other information required by the Commission, an applicant to participate in competitive bidding for Mobility Fund Phase II support shall:

(1) Provide ownership information as set forth in § 1.2112(a) of this chapter;

(2) Certify that the applicant is financially and technically capable of meeting the public interest obligations of § 54.1016 in each area for which it seeks support;

(3) Disclose its status as an Eligible Telecommunications Carrier in any area for which it will seek support or as a Tribal entity with a pending application to become an Eligible Telecommunications Carrier in any such area, and certify that the disclosure is accurate;

(4) Describe the spectrum access that the applicant plans to use to meet obligations in areas for which it will bid for support, including whether the applicant currently holds a license for or leases the spectrum, and certify that the description is accurate and that the applicant will retain such access for at least ten (10) years after the date on which it is authorized to receive support;

(5) Make any applicable certifications required in § 54.1014.

(b) Application by winning bidders for Mobility Fund Phase II support.

(1) Deadline. Unless otherwise provided by public notice, winning bidders for Mobility Fund Phase II support shall file an application for Mobility Fund Phase II support no later than 10 business days after the public notice identifying them as winning bidders.

(2) Application Contents. (i) Identification of the party seeking the support, including ownership information as set forth in § 1.2112(a) of this chapter.

(ii) Certification that the applicant is financially and technically capable of meeting the public interest obligations of § 54.1016 in the geographic areas for which it seeks support.

(iii) Proof of the applicant's status as an Eligible Telecommunications or as a Tribal entity with a pending application to become an Eligible Telecommunications Carrier in any area for which it seeks support and certification that the proof is accurate.

(iv) A description of the spectrum access that the applicant plans to use to meet obligations in areas for which it is winning bidder for support, including whether the applicant currently holds a license for or leases the spectrum, and certification that the description is accurate and that the applicant will retain such access for at least ten (10) years after the date on which it is authorized to receive support.

(v) A detailed project description that describes the network, identifies the proposed technology, demonstrates that the project is technically feasible, discloses the budget and describes each specific phase of the project, e.g., network design, construction, deployment and maintenance.

(vi) Certifications that the applicant has available funds for all project costs that exceed the amount of support to be received from Mobility Fund Phase II and that the applicant will comply with all program requirements.

(vii) Any guarantee of performance that the Commission may require by public notice or other proceedings, including but not limited to the letters of credit required in §54.1017, or a written commitment from an acceptable bank, as defined in §54.1017(a)(1), to issue such a letter of credit.

(viii) Certification that the applicant will offer service in supported areas at rates that are within a reasonable range of rates for similar service plans offered by mobile wireless providers in urban areas for a period during the term of the support the applicant seeks.

(ix) Any applicable certifications and showings required in §54.1014.

(x) Certification that the party submitting the application is authorized to do so on behalf of the applicant.

(xi) Such additional information as the Commission may require.

(3) Application Processing. (i) No application will be considered unless it has been submitted in an acceptable form during the period specified by public notice. No applications submitted or demonstrations made at any other time shall be accepted or considered.

(ii) Any application that, as of the submission deadline, either does not identify the applicant seeking support as specified in the public notice announcing application procedures or does not include required certifications shall be denied.

(iii) An applicant may be afforded an opportunity to make minor modifications to amend its application or correct defects noted by the applicant, the Commission, the Administrator, or other parties. Minor modifications include correcting typographical errors in the application and supplying non-material information that was inadvertently omitted or was not available at the time the application was submitted.

(iv) Applications to which major modifications are made after the deadline for submitting applications shall be denied. Major modifications include, but are not limited to, any changes in the ownership of the applicant that constitute an assignment or change of control, or the identity of the applicant, or the certifications required in the application.

(v) After receipt and review of the applications, a public notice shall identify each winning bidder that may be authorized to receive Mobility Fund Phase II support, after the winning bidder submits a Letter of Credit and an accompanying opinion letter as required by § 54.1016, in a form acceptable to the Commission, and any final designation as an Eligible Telecommunications Carrier that any Tribally-owned or –controlled applicant may still require. Each such winning bidder shall submit a Letter of Credit and an accompanying opinion letter as required by § 54.1016, in a form acceptable to the Commission, and any required final designation as an Eligible Telecommunications Carrier no later than 10 business days following the release of the public notice.

(vi) After receipt of all necessary information, a public notice will identify each winning bidder that is authorized to receive Mobility Fund Phase II support.

§ 54.1016 Public interest obligations.

(a) Deadline for Construction. A winning bidder authorized to receive Mobility Fund Phase II support shall, no later than three (3) years after the date on which it was authorized to receive support, submit data from drive tests covering the area for which support was received demonstrating mobile transmissions supporting voice and data to and from the network covering 75% of the designated coverage units in the area deemed uncovered, or an applicable higher percentage established by public notice prior to the competitive bidding, and meeting or exceeding the following:

(1) Outdoor minimum data transmission rates of 200 kbps uplink and 768 kbps downlink at vehicle speeds appropriate for the roads covered;

(2) Transmission latency low enough to enable the use of real time applications, such as VoIP.

(b) Coverage Test Data. Drive tests submitted in compliance with a recipient's public interest obligations shall cover roads designated in the public notice detailing the procedures for the competitive bidding that is the basis of the recipient's support. Scattered site tests submitted in compliance with a recipient's public interest obligations shall be in compliance with standards set forth in the public notice detailing the procedures for the competitive bidding that is the basis of the recipient's authorized support.

(c) Collocation Obligations. During the period when a recipient shall file annual reports pursuant to § 54.1019, the recipient shall allow for reasonable collocation by other providers of services that would meet the technological requirements of Mobility Fund Phase II on newly constructed towers that the recipient owns or manages in the area for which it receives support. In addition, during this period, the recipient may not enter into facilities access arrangements that restrict any party to the arrangement from allowing others to collocate on the facilities.

(d) Voice and Data Roaming Obligations. During the period when a recipient shall file annual reports pursuant to § 54.1019, the recipient shall comply with the Commission's voice and data roaming requirements that were in effect as of October 27, 2011, on networks that are built through Mobility Fund Phase II support.

(e) Liability for Failing To Satisfy Public Interest Obligations. A winning bidder authorized to receive Mobility Fund Phase II support that fails to comply with the public interest obligations in this paragraph or any other terms and conditions of the Mobility Fund Phase II support will be subject to repayment of the support disbursed together with an additional performance default payment. Such a winning bidder may be disqualified from receiving Mobility Fund Phase II support or other USF support. The additional performance default amount will be a percentage of the Mobility Fund Phase II support that the applicant has been and is eligible to request be disbursed to it pursuant to § 54.1018. The percentage will be determined as specified in the public notice detailing competitive bidding procedures prior to the commencement of competitive bidding. The percentage will not exceed twenty percent.

§ 54.1017 Letter of credit.

(a) Before being authorized to receive Mobility Fund Phase II support, a winning bidder shall obtain an irrevocable standby letter of credit which shall be acceptable in all respects to the Commission. Each winning bidder authorized to receive Mobility Fund Phase II support shall maintain the standby letter of credit or multiple standby letters of credit in an amount equal to the amount of Mobility Fund Phase II support that the winning bidder has been and is eligible to request be disbursed to it pursuant to § 54.1018 plus the additional performance default amount described in § 54.1016(e), until at least 120 days after the winning bidder receives its final distribution of support pursuant to this section.

(1) The bank issuing the letter of credit shall be acceptable to the Commission. A bank that is acceptable to the Commission is

(i) Any United States Bank that

(A) Is among the 50 largest United States banks, determined on the basis of total assets as of the end of the calendar year immediately preceding the issuance of the letter of credit,

(B) Whose deposits are insured by the Federal Deposit Insurance Corporation, and

(C) Who has a long-term unsecured credit rating issued by Standard & Poor's of A- or better (or an equivalent rating from another nationally recognized credit rating agency); or

(ii) Any non-U.S. bank that

(A) Is among the 50 largest non-U.S. banks in the world, determined on the basis of total assets as of the end of the calendar year immediately preceding the issuance of the letter of credit (determined on a U.S. dollar equivalent basis as of such date),

(B) Has a branch office in the District of Columbia or such other branch office agreed to by the Commission,

(C) Has a long-term unsecured credit rating issued by a widely-recognized credit rating agency that is equivalent to an A- or better rating by Standard & Poor's, and

(D) Issues the letter of credit payable in United States dollars.

(2) [Reserved]

(b) A winning bidder for Mobility Fund Phase II support shall provide with its Letter of Credit an opinion letter from its legal counsel clearly stating, subject only to customary assumptions, limitations, and qualifications, that in a proceeding under Title 11 of the United States Code, 11 U.S.C. 101 et seq. (the "Bankruptcy Code"), the bankruptcy court would not treat the letter of credit or proceeds of the letter of credit as property of the winning bidder's bankruptcy estate under section 541 of the Bankruptcy Code.

(c) Authorization to receive Mobility Fund Phase II support is conditioned upon full and timely performance of all of the requirements set forth in § 54.1016, and any additional terms and conditions upon which the support was granted.

(1) Failure by a winning bidder authorized to receive Mobility Fund Phase II support to comply with any of the requirements set forth in § 54.1015 or any other term or conditions upon which support was granted, or its loss of eligibility for any reason for Mobility Fund Phase II support will be deemed an automatic performance default, will entitle the Commission to draw the entire amount of the letter of credit, and may disqualify the winning bidder from the receipt of Mobility Fund Phase II support or additional USF support.

(2) A performance default will be evidenced by a letter issued by the Chief of either the Wireless Bureau or Wireline Bureau or their respective designees,

which letter, attached to a standby letter of credit draw certificate, and shall be sufficient for a draw on the standby letter of credit for the entire amount of the standby letter of credit.

§ 54.1018 Mobility Fund Phase II disbursements.

(a) A winning bidder for Mobility Fund Phase II support will be advised by public notice whether it has been authorized to receive support. The public notice will detail disbursement will be made available.

(b) Mobility Fund Phase II support will be available for disbursement to a winning bidder authorized to receive support on a quarterly basis for ten (10) years following the date on which it is authorized.

(c) Prior to each disbursement request, a winning bidder for support in a Tribal land will be required to certify that it has substantively engaged appropriate Tribal officials regarding the issues specified in §54.1014(d)(1), at a minimum, as well as any other issues specified by the Commission and to provide a summary of the results of such engagement.

(d) Prior to each disbursement request, a winning bidder will be required to certify that it is in compliance with all requirements for receipt of Mobility Fund Phase II support at the time that it requests the disbursement.

§ 54.1019 Annual reports.

(a) A winning bidder authorized to receive Mobility Fund Phase II support shall submit an annual report no later than April 1 in each year for the five years after it was so authorized. Each annual report shall include the following, or reference the inclusion of the following in other reports filed with the Commission for the applicable year:

(1) Electronic Shapefiles site coverage plots illustrating the area newly reached by mobile services at a minimum scale of 1:240,000;

(2) A list of relevant census blocks previously deemed unserved, with road miles and total resident population and resident population residing in areas newly reached by mobile services (based on Census Bureau data and estimates);

(3) If any such testing has been conducted, data received or used from drive tests, or scattered site testing in areas where drive tests are not feasible, analyzing network coverage for mobile services in the area for which support was received;

(4) Certification that the winning bidder offers service in supported areas at rates that are within a reasonable range of rates for similar service plans offered by mobile wireless providers in urban areas;

(5) Any applicable certifications and showings required in § 54.1014; and

(6) Updates to the information provided in § 54.1015(b)(2)(v).

(b) The party submitting the annual report must certify that they have been authorized to do so by the winning bidder.

(c) Each annual report shall be submitted to the Office of the Secretary of the Commission, clearly referencing WT Docket No. 10-208; the Administrator; and the relevant state commissions, relevant authority in a U.S. Territory, or Tribal governments, as appropriate

§ 54.1020 Record retention for Mobility Fund Phase II.

A winning bidder authorized to receive Mobility Fund Phase II support and its agents are required to retain any documentation prepared for, or in connection with, the award of Mobility Fund Phase II support for a period of not less than ten (10) years after the date on which the winning bidder receives its final disbursement of Mobility Fund Phase II support.

3. Add subpart M to part 54 to read as follows:

Subpart M – Connect America Fund Phase II Competitive Bidding

Sec.

Subpart M – Connect America Fund Phase II Competitive Bidding

§ 54.1101 Connect America Fund (CAF) Phase II Competitive Bidding.

The Commission will use competitive bidding, as provided in part 1, subpart AA, of this chapter, to determine the recipients of support available through Connect America Fund Phase II Competitive Bidding and the amount(s) of support that they may receive for specific geographic areas, subject to applicable post-auction procedures.

§ 54.1102 Geographic areas eligible for support.

(a) CAF Fund Phase II Competitive Bidding support may be made available for census blocks or other areas identified as eligible by public notice.

(b) Except as provided in § 54.1104, coverage units for purposes of conducting competitive bidding and disbursing support based on the number of residential and business locations will be identified by public notice for each area eligible for support.

§ 54.1103 Provider eligibility.

(a) Except as provided in § 54.1104, an applicant shall be an Eligible Telecommunications Carrier in an area in order to receive CAF Phase II Competitive Bidding support for that area. The designation may be conditional subject to the receipt of CAF Phase II Competitive Bidding support.

(b) An applicant shall certify that is financially and technically qualified to provide the services supported by CAF Phase II Competitive Bidding support in order to receive such support.

§ 54.1104 Service to Tribal Lands.

(a) A Tribally-owned or –controlled entity that has pending an application to be designated an Eligible Telecommunications Carrier may participate in an auction by bidding for support in areas located within the boundaries of the Tribal land associated with the Tribe that owns or controls the entity. To bid on this basis, an entity shall certify that it is a Tribally-owned or –controlled entity and identify the applicable Tribe and Tribal lands in its application to participate in the competitive bidding. A Tribally-owned or -controlled entity shall receive any CAF Phase II Competitive Bidding support only after it has become an Eligible Telecommunications Carrier.

(b) Tribally-owned or –controlled entities may receive a bidding credit with respect to bids for support within the boundaries of associated Tribal lands. To qualify for a bidding credit, an applicant shall certify that it is a Tribally-owned or –controlled entity and identify the applicable Tribe and Tribal lands in its application to participate in the competitive bidding. An applicant that qualifies shall have its bid(s) for support in areas within the boundaries of Tribal land associated with the Tribe that owns or controls the applicant reduced by twenty-five (25) percent or purposes of determining winning bidders without any reduction in the amount of support available.

(c) A winning bidder for support in Tribal lands shall notify and engage the Tribal governments responsible for the areas supported.

(1) A winning bidder's engagement with the applicable Tribal government shall consist, at a minimum, of discussion regarding:

(i) A needs assessment and deployment planning with a focus on Tribal community anchor institutions;

(ii) Feasibility and sustainability planning;

(iii) Marketing services in a culturally sensitive manner;

(iv) Rights of way processes, land use permitting, facilities siting, environmental and cultural preservation review processes; and

(v) Compliance with Tribal business and licensing requirements

(2) A winning bidder shall notify the appropriate Tribal government of its winning bid no later than five (5) business days after being identified by public notice as a winning bidder.

(3) A winning bidder shall certify in its application for support that it has substantively engaged appropriate Tribal officials regarding the issues specified in paragraph (c)(1) of this section, at a minimum, as well as any other issues specified by the Commission, and provide a summary of the results of such engagement. A copy of the certification and summary shall be sent to the appropriate Tribal officials when it is sent to the Commission.

(4) A winning bidder for support in Tribal lands shall certify in its annual report, pursuant to § 54.1106, and prior to disbursement of support, pursuant to § 54.1107, that it has substantively engaged appropriate Tribal officials regarding the issues specified in paragraph (c)(1) of this section, at a minimum, as well as any other issues specified by the Commission, and provide a summary of the results of such engagement. A copy of the certification and summary shall be sent to the appropriate Tribal officials when it is sent to the Commission.

§ 54.1105 Application process.

(a) Application to Participate in CAF Phase II Competitive Bidding. In addition to providing information specified in §1.21001(b) of this chapter and any other information required by the Commission, an applicant to participate in competitive bidding for CAF Phase II support shall:

(1) Provide ownership information as set forth in § 1.2112(a) of this chapter;

(2) Certify that the applicant is financially and technically capable of meeting the public interest obligations of § 54.1106 in each area for which it seeks support;

(3) Disclose its status as an Eligible Telecommunications Carrier in any area for which it will seek support or as a Tribal entity with a pending application to become an Eligible Telecommunications Carrier in any such area, and certify that the disclosure is accurate.

(4) Make any applicable certifications required in § 54.1104 of this chapter.

(b) Application by Winning Bidders for CAF Phase II Support.

(1) Deadline. Unless otherwise provided by public notice, winning bidders for CAF Phase II support shall file an application for CAF Phase II support no later than 10 business days after the public notice identifying them as winning bidders.

(2) Application Contents. (i) Identification of the party seeking the support, including ownership information as set forth in § 1.2112(a) of this chapter.

(ii) Certification that the applicant is financially and technically capable of meeting the public interest obligations of §54.1106 in the geographic areas for which it seeks support.

(iii) Proof of the applicant's status as an Eligible Telecommunications Carrier or as a Tribal entity with a pending application to become an Eligible Telecommunications Carrier in any area for which it seeks support and certification that the proof is accurate.

(iv) Certification that the applicant will offer service in supported areas at rates that are within a reasonable range of rates for similar service plans offered by providers in urban areas for a period extending until 5 years after the date on which it is authorized to receive support.

(v) Any applicable certifications and showings required in § 54.1104.

(vi) Certification that the party submitting the application is authorized to do so on behalf of the applicant.

(vii) Such additional information as the Commission may require.

(3) Application Processing. (i) No application will be considered unless it has been submitted in an acceptable form during the period specified by public notice. No applications submitted or demonstrations made at any other time shall be accepted or considered.

(ii) Any application that, as of the submission deadline, either does not identify the applicant seeking support as specified in the public notice announcing application procedures or does not include required certifications shall be denied.

(iii) An applicant may be afforded an opportunity to make minor modifications to amend its application or correct defects noted by the applicant, the Commission, the Administrator, or other parties. Minor modifications include correcting typographical errors in the application and supplying non-material information that was inadvertently omitted or was not available at the time the application was submitted.

(iv) Applications to which major modifications are made after the deadline for submitting applications shall be denied. Major modifications include, but are not limited to, any changes in the ownership of the applicant that constitute an assignment or change of control, or the identity of the applicant, or the certifications required in the application.

(v) A tribally-owned or –controlled winning bidder that was not as an Eligible Telecommunications Carrier shall provide its final designation as an Eligible Telecommunications Carrier.

(vi) After receipt of all necessary information, the Commission shall release a public notice identifying each winning bidder that is authorized to receive CAF Phase II support.

§ 54.1106 Public interest obligations and annual reports.

A winning bidder authorized to receive CAF Phase II shall satisfy all public interest obligations and annual reporting requirements of § 54.313.

§ 54.1107 Connect America Fund (CAF) Phase II Competitive Bidding Disbursements.

(a) A winning bidder for CAF Phase II Competitive Bidding support will be advised by public notice whether it has been authorized to receive support. The public notice will detail how disbursement will be made available.

(b) CAF Phase II Competitive Bidding support will be available for disbursement to each winning bidder authorized to receive support on a quarterly basis for five (5) years after it is authorized to receive support.

(c) Prior to each disbursement request, a winning bidder for support in a Tribal land will be required to certify that it has substantively engaged appropriate Tribal officials regarding the issues specified in § 54.1104(c)(1), at a minimum, as well as any other issues specified by the Commission and to provide a summary of the results of such engagement.

(d) Prior to each disbursement request, a winning bidder will be required to certify that it is in compliance with all requirements for receipt of CAF Phase II Competitive Bidding support at the time that it requests the disbursement.

4. Add subpart N to part 54 to read as follows:

Subpart N – Remote Areas Fund

Sec.

Subpart N – Remote Areas Fund

§ 54.1201 Remote Areas Fund.

This subpart sets forth procedures for determining the recipients of universal service support pursuant to the Remote Areas Fund and the amount(s) of support that each recipient respectively may receive.

§ 54.1202 Geographic areas eligible for support.

Remote Areas Fund support may be made available for census blocks or other areas identified by public notice.

§ 54.1203 Provider eligibility.

(a) An applicant applying for Remote Areas Fund support must be designated an Eligible Telecommunications Carrier in any area for which it will seek support. The designation may be conditional subject to the receipt of Remote Areas Fund support.

(b) An applicant applying for Remote Areas Fund support must certify that is financially and technically qualified to provide the supported services.

§ 54.1204 Public interest obligations and annual reports.

(a) Except as expressly provided in this paragraph or otherwise by the Commission, an applicant authorized to receive Remote Areas Fund support shall satisfy all public interest obligations and annual reporting requirements of § 54.313 for applicants receiving CAF Phase II support.

(b) An applicant for Remote Areas Fund support must pass the per location support received along to the subscriber at the qualifying location as a discount on the price of service. Provided, however, that the subscriber must pay, or provide a deposit of, an amount sufficient to assure that the subscriber is able to pay for the services to which they subscribe and to provide an incentive to comply with any terms of the service agreements regarding use and return of equipment.

§ 54.1205 Remote Areas Fund Disbursements.

(a) An applicant for Remote Areas Fund support will be advised by public notice that it is authorized to receive support. Procedures by which applicants authorized to receive support may obtain disbursements will be provided by public notice.

(b) Remote Areas Fund support will be available for disbursement to an applicant authorized to receive support on a quarterly basis for five (5) years following its authorization.

(c) Remote Areas Fund support will be disbursed in an amount calculated based on the number of newly served residences or households within an eligible area. For purposes of this paragraph, “residence” and “household” shall use the same definition applied in the Lifeline Program. Applicants for Remote Areas Fund support must certify the number of qualifying locations newly served in the most recent quarter, specifying the number of signed contracts for qualifying locations, and certify that each location meets the qualifying criteria established by the Commission.

(d) Prior to each disbursement request, an applicant authorized to receive support will be required to certify that it is in compliance with all requirements for receipt of Remote Areas Fund support at the time that it requests the disbursement.

[FR Doc. 2011-31924 Filed 12/15/2011 at 8:45 am; Publication Date: 12/16/2011]