Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
Review of the Commission's Rules Regarding	)	
the Pricing of Unbundled Network Elements	)	WC Docket No. 03-173
and the Resale of Service by Incumbent Local	)	
Exchange Carriers	)	
	)	
	)	
	)	

NOTICE OF PROPOSED RULEMAKING

Adopted: September 10, 2003 **Released:** September 15, 2003

Comment Date: 60 days after Federal Register publication of this Notice
Reply Comment Date: 105 days after Federal Register publication of this Notice

By the Commission: Chairman Powell, Commissioners Abernathy, Martin, and Adelstein issuing separate statements; Commissioner Copps approving in part, dissenting in part, and issuing a separate statement.

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I. INTRODUCTION

1. In this Notice of Proposed Rulemaking (NPRM), the Commission begins its first comprehensive review of the rules applicable to the pricing of unbundled network elements (UNEs) pursuant to section 252(d)(1) of the Communications Act of 1934 (the "Act"), as amended by the Telecommunications Act of 1996 (the "1996 Act"). The Commission adopted

its current UNE pricing rules, which base UNE prices on the Total Element Long Run Incremental Cost (TELRIC) of a UNE, in 1996 in the *Local Competition Order*.[1] The Commission stated at that time that it would continue to review its pricing rules based on the results of state arbitration proceedings and provide additional guidance as necessary.[2] We have not undertaken a comprehensive review of the TELRIC methodology in the seven years since it was adopted, and it is appropriate to conduct such a review at this time.

2. Our concerns in evaluating the TELRIC pricing rules are somewhat different than those present at the time the Commission adopted its *Local Competition Order*. At that time, local competition was largely a theoretical exercise and we placed a premium on the need to stimulate entry into the local exchange market. To ensure that UNE prices provided appropriate economic signals for competitive and investment purposes, we adopted a forward-looking cost methodology that calculates the cost today of building and operating an efficient facility, as opposed to the cost of an existing facility at the time it was built.[3] In stating that forward-looking costs were intended to send appropriate economic signals, we mean that UNE prices in excess of forward-looking costs would encourage competitors to build facilities when the more efficient course might be to lease facilities from the incumbent LEC, while prices below forward-looking costs might encourage them to rely on the incumbent's facilities when the more efficient course might be to construct their own facilities. At the same time, we anticipated that UNE prices based on forward-looking costs also would not discourage investment by incumbent LECs because such prices would allow them to recover their costs.

3. Today, now that competition has taken root in many areas of the country, we initiate this proceeding to consider whether our pricing methodology is working as intended and, in particular, whether it is conducive to efficient facilities investment. To the extent that the application of our TELRIC pricing rules distorts our intended pricing signals by understating forward-looking costs, it can thwart one of the central purposes of the Act: the promotion of facilities-based competition. While our UNE pricing rules must produce rates that are just, reasonable and nondiscriminatory, consistent with the Act's goal of promoting sustainable competition, they should not create incentives for carriers to avoid investment in facilities.[4]

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[1] *Implementation of the Local Competition Provisions in the Telecommunications Act of 1996*, CC Docket No. 96-98, First Report and Order, 11 FCC Rcd 15499 (1996) (*Local Competition Order*), *aff'd in part and vacated in part sub nom. Comp. Tel. Assoc. v. FCC*, 117 F.3d 1068 (8th Cir. 1997) and *Iowa Utils. Bd. v. FCC*, 120 F.3d 753 (8th Cir. 1997), *aff'd in part and remanded*, *AT&T v. Iowa Utils. Bd.*, 525 U.S. 366 (1999); *on remand Iowa Utils. Bd. v. FCC*, 219 F.3d 744 (8th Cir. 2000) (*Iowa Utilities II*), *reversed in part sub nom. Verizon Communications, Inc. v. FCC*, 535 U.S. 467 (2002) (*Verizon v. FCC*).

[2] *Local Competition Order*, 11 FCC Rcd at 15813, para. 620.

[3] *Id*. at 15844, para. 672 ("We believe the prices that potential entrants pay for these elements should reflect forward-looking costs in order to encourage efficient levels of investment and entry.").

[4] *See, e.g., Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers*, Report and Order and Order on Remand and Further Notice of Proposed Rulemaking, CC Docket No. 01-338, FCC 03-36, para. 682 (released Aug. 21, 2003) (*Triennial Review Order*) ("Establishing UNE prices based on an unreasonably low cost of capital would discourage competitive LECs from investing in their own facilities and thus slow the development of facilities-based competition."). The Supreme Court found that competitive LECs had invested $55 billion from 1996-2000 and that "a regulatory scheme that can boast such substantial competitive capital spending

4. This NPRM solicits comment on tentative conclusions and modifications to our current UNE pricing regime that seek to preserve its forward-looking emphasis and its pro-competitive purposes, while at the same time making it more transparent and theoretically sound. Specifically, we propose to simplify TELRIC pricing, while simultaneously improving the accuracy of its pricing signals, by resolving one of the key internal tensions that marks its current application: the assumption that for some purposes rates should reflect a market with widespread facilities-based competition but, for other purposes, rates should reflect a market with a single dominant carrier. We seek comment on an approach that bases UNE prices on a cost inquiry that is more firmly rooted in the real-world attributes of the existing network, rather than the speculative attributes of a purely hypothetical network.

5. The Supreme Court in *Verizon v. FCC* affirmed our choice of TELRIC as a permissible methodology for states to use in ratemaking proceedings.[5] The court held that the Commission's decision to adopt a forward-looking cost methodology was a reasonable interpretation of the statute and that the Commission did not err in rejecting alternative methodologies advocated by the incumbent LECs.[6] The court also rejected arguments that various aspects of the TELRIC methodology were unlawful.[7] Nevertheless, the TELRIC rules have proven to take a great deal of time and effort to implement, and have been the subject of extensive criticism. In particular, critics argue that the TELRIC methodology is flawed due to an alleged emphasis on unrealistic efficiency assumptions. They contend that these unrealistic assumptions result in rates that are so far below an incumbent LEC's "actual" costs that neither incumbent LECs nor competitive LECs have an incentive to invest in new facilities.[8]

6. Since 1996, virtually all states have conducted at least one round of cost proceedings under these rules. State pricing proceedings under the TELRIC regime have been extremely complicated and often last for two or three years at a time.[9] State commissions

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over a 4-year period is not easily described as an unreasonable way to promote competitive investment." *Verizon v. FCC*, 535 U.S. at 517. As of 2002, that figure had increased to $71 billion. *See Appropriate Framework for Broadband Access to the Internet over Wireline Facilities*, CC Docket Nos. 02-33, 01-318, 01-321, Letter from Jonathan Askin, General Counsel, Association for Local Telecommunications Services, to Marlene H. Dortch, Secretary, FCC, Attach. at 11 (filed July 17, 2003). As one court of appeals has noted, however, "the existence of investment of a specified level tells us little or nothing about incentive effects. The question is how such investment compares with what would have occurred" under a different regulatory regime. *United States Telecom. Ass'n v. FCC*, 290 F.3d 415, 425 (D.C. Cir. 2002).

5 *Verizon. v. FCC*, 535 U.S. at 497-529.

6 *Id*. at 507-08 ("Having considered the proffered alternatives and the reasons the FCC gave for rejecting them, we cannot say that the FCC acted unreasonably in picking TELRIC to promote the mandated competition.").

7 *Id*. at 523.

8 *See infra* notes 98 and 100.

9 *See, e.g.*, *Application by Verizon New England Inc., Bell Atlantic Communications, Inc. (d/b/a Verizon Long Distance), NYNEX Long Distance Company (d/b/a Verizon Enterprise Solutions), Verizon Global Networks, Inc., and Verizon Select Services, Inc., for Authorization to Provide In-Region, InterLATA Services in Rhode Island*, CC Docket No. 01-324, Memorandum Opinion and Order, 17 FCC Rcd 3300, 3312-15, paras. 21-26 (2002) (*Verizon Rhode Island 271 Order*) (Rhode Island Public Utilities Commission conducted a four-year series of proceedings to establish UNE rates); *Application by BellSouth Corporation, BellSouth Telecommunications, Inc., and BellSouth*

typically are presented with at least two conflicting cost models, and hundreds of inputs to those models, all supported by the testimony of expert witnesses. These cases are extremely complex, as state commissions must make dozens of detailed decisions regarding the calculation of the forward-looking cost of building a local telecommunications network. The drain on resources for the state commissions and interested parties can be tremendous. We also note that, for any given carrier, there may be significant differences in rates from state to state, and even from proceeding to proceeding within a state. We are concerned that such variable results may not reflect genuine cost differences but instead may be the product of the complexity of the issues, the very general nature of our rules, and uncertainty about how to apply those rules. The resulting rates might not, therefore, achieve fully the Commission's goal of sending appropriate economic signals.

7. Part of the difficulty that states and interested parties have encountered springs from the excessively hypothetical nature of the TELRIC inquiry. Because of the general nature of our rules, state commissions have wide latitude in applying the "most efficient technology" standard under the current rules. This creates the potential for a TELRIC proceeding to become a "black box" from which a variety of possible rates may emerge. In the absence of more specific guidance, this can make network modeling opaque and make it difficult to understand how actual UNE rates are derived. The lack of predictability in UNE rates is difficult to reconcile with our desire that UNE prices send correct economic signals. Moreover, these complicated and time-consuming proceedings may work to divert scarce resources from carriers that otherwise would use those resources to compete in local markets.

8. We also request comment in this proceeding on our resale pricing rules. Section 251(c)(4) requires incumbent LECs to "offer for resale at wholesale rates any telecommunications service that the carrier provides at retail to subscribers who are not telecommunications carriers."[10] Section 252(d)(3) of the Act requires that state commissions establish wholesale rates for resold services based on the incumbent LEC's retail rates, "excluding the portion thereof attributable to any marketing, billing, collection, and other costs that will be avoided by the local exchange carrier."[11] This section of the Act is independent of section 252(d)(1), which sets forth the pricing standard for UNEs and interconnection.[12] The Commission's resale pricing rules were vacated by the U.S. Court of Appeals for the Eighth

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Long Distance, Inc., for Authorization to Provide In-Region, InterLATA Services in Florida and Tennessee, WC Docket No. 02-307, Memorandum Opinion and Order, 17 FCC Rcd 25828, 24840-44, paras. 24-31 (2002) (*BellSouth Florida/Tennessee 271 Order*) (Florida Public Service Commission conducted a two-year proceeding to set UNE rates (for the second time); Tennessee Regulatory Authority established UNE rates over four years in a two-phased proceeding); *Application by Qwest Communications International, Inc. for Authorization to Provide In-Region, InterLATA Services in the States of Colorado, Idaho, Iowa, Montana, Nebraska, North Dakota, Utah, Washington and Wyoming*, WC Docket No. 02-314, Memorandum Opinion and Order, 17 FCC Rcd 26303, 26412-14, paras. 186-190 (2002) (*Qwest 9-State 271 Order*) (Colorado Public Utilities Commission established UNE rates (for the second time) in a 25-month proceeding).

[10] 47 U.S.C. § 251(c)(4).

[11] 47 U.S.C. § 252(d)(3).

[12] *Compare* 47 U.S.C. §§ 251(c)(4)(A), 252(d)(3) (resale standard) *with* 47 U.S.C. §§ 251(c)(3), 252(d)(1) (UNE standard).

Circuit in 2000.[13]

9. Our objective in this proceeding is to modify or clarify the Commission's rules in order to help state commissions more easily develop UNE prices and resale discounts that meet the statutory standards established by Congress in section 252(d) and to provide more certainty and consistency in the results of these state proceedings. Based on the wealth of experience that has been developed over the last seven years, we hope to compile a substantial record on a broad range of issues related to UNE pricing and resale discounts. We are particularly interested in the perspective of the state commissions on the successes and failures of our current rules, and the possible modifications that would most help them in fulfilling their important statutory role in setting UNE prices and resale discounts.

II. BACKGROUND

A. General Ratemaking Principles

10. "Cost of service" ratemaking methodologies,[14] whether based on forward-looking cost, historical cost, or some other methodology, follow a common approach to estimating recurring monthly charges.[15] Specifically, a recurring rate set in a regulatory ratemaking proceeding generally will be based on the sum of three separate cost components – operating costs, depreciation expense, and return on capital.[16] In addition to recurring rates, regulators generally establish non-recurring charges (NRCs) that allow a carrier to recover the cost of certain labor activities at the time the activity is performed. We discuss each of these components briefly below.

11. Operating Costs. Operating costs are the non-capital costs associated with

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[13] *Iowa Utilities II*, 219 F.3d at 754-756, 765 (vacating rules 47 C.F.R. §§ 51.609, 51.611), *rev'd on other grounds sub nom. Verizon v. FCC*, 535 U.S. 1646.

[14] Cost of service ratemaking is different from price caps and other forms of price regulation that adjust prices from one period to the next based on factors other than a carrier's cost of providing service, such as anticipated productivity and inflation.

[15] *See Verizon v. FCC*, 535 U.S. at 487-88 ("The enduring feature of ratesetting from *Smyth v. Ames* to the institution of price caps was the idea that calculating a rate base and then allowing a fair rate of return on it was a sensible way to identify a range of rates that would be just and reasonable to investors and ratepayers."). The Supreme Court recognized that TELRIC essentially follows this same approach, but with a rate base "valued in terms of . . . equipment an incumbent may not own." *Id*. at 501.

[16] ALFRED KAHN, THE ECONOMICS OF REGULATION, PRINCIPLES AND INSTITUTIONS, Vol. 1 at 26-27 (1970) (KAHN) (Regulators "need to make determinations about which costs they were prepared to authorize for inclusion in the computed company cost-of-service; and of these, which could be charged directly as operating expenses and thus included in annual revenue requirements dollar for dollar, and which capitalized, thus entering the cost of service in the form of annual allowances for depreciation and return on the undepreciated portion of the investment."); JAMES C. BONBRIGHT, ET AL., PRINCIPLES OF PUBLIC UTILITY RATES at 200 (2d ed. 1988) (BONBRIGHT) ("Under the usual forms of regulation, a fair return is the excess in operating revenues over operating expenses for which a commission will make provision in a rate case as a component of the company's annual revenue requirements. The operating expenses include allowances for depreciation and for nearly all taxes, not even excepting corporate income taxes.").

operating a network, including maintenance expense, administrative expense, and an allocation of other common and overhead costs. Under an historical cost methodology, rates are designed to recover all operating costs unless disallowed by the regulator.[17] Under a forward-looking methodology, operating costs may be estimated in a variety of ways. For instance, they may be estimated by multiplying the projected investment by an expense factor, sometimes referred to as an annual charge factor (ACF), which is typically the ratio of current expenses to current investment.[18] Alternatively, expenses may be estimated by applying productivity and inflation factors to a carrier's current expenses.[19]

12. Depreciation Expense. Depreciation expense represents an effort to recover the decline in the economic value of capital assets over time.[20] There are various ways to estimate depreciation expense. For example, under straight-line depreciation, the initial capital investment in an asset is divided by its useful life to derive an annual depreciation expense.[21] Economic depreciation, in contrast, is intended to reflect the actual decline in the economic value of a capital asset between one period and the next. The difference between the two is largely one of timing, as both approaches recover the same total investment over the life of the asset. Depreciation expense is difficult to estimate because it requires the regulator to predict the service life of the asset and how its value declines over time. The economic value of a capital asset is likely to decline more quickly if new, more efficient (*i.e.*, more productive or less expensive) capital assets are introduced that would increase the net present value of expected cash flows associated with the new assets. Consequently, to estimate economic depreciation it is necessary to estimate the likely decline in the value of an existing asset that will result from improvements in technology.

13. Return on Capital. The return on capital is estimated by multiplying a firm's cost of capital by its investment base. The cost of capital is the cost a firm will incur in raising funds in a competitive capital market.[22] The cost of capital is generally estimated as a weighted average of the cost of equity and the cost of debt. The rate financial markets will demand before they are willing to purchase a particular company's debt or equity will depend on the market's

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[17] CHARLES F. PHILLIPS, JR., THE REGULATION OF PUBLIC UTILITIES at 255 (3d ed. 1993) (PHILLIPS) (citing *Mississippi River Fuel Corp. v. Federal Power Comm.*, 163 F. 2d 433, 437 (D.C. Cir. 1947) ("Expenses . . . are facts. They are to be ascertained, not created, by the regulatory authorities. If properly incurred, they must be allowed as part of the composition of rates. Otherwise, the so-called allowance of a return upon investment, being an amount over and above expenses, would be a farce.")).

[18] *Federal-State Joint Board on Universal Service*, CC Docket Nos. 96-45, 97-160, Tenth Report and Order, 14 FCC Rcd 20156, 20301-02, 20304, paras. 341, 346 (1999) (*USF Inputs Order*), *aff'd sub nom. Qwest Corp. v. FCC*, 258 F.3d 1191 (10th Cir. 2001).

[19] *Qwest 9-State Order*, 17 FCC Rcd at 26419-20, paras. 202-04 (rejecting argument that a 4 percent reduction in expenses to reflect productivity, net of inflation, was inconsistent with TELRIC requirements).

[20] KAHN at 32 (Depreciation "is an imputed cost, introduced to take account of the fact that the economic life of capital assets is limited; to distribute the decline in their value – which is a genuine cost of production – over their economic life, in order to assure its recoupment from customers.").

[21] *Id*. at 117; BONBRIGHT at 276-77.

[22] KAHN at 45.

assessment of that firm's overall risk.[23] As with depreciation, the calculation of the cost of capital is complicated and subject to dispute. One reason that a cost of capital is difficult to calculate is that the calculation depends on an assessment of a particular firm's risk going forward. Regulators, however, generally only have data on the cost of debt and equity that particular firms or groups of firms have experienced in the past.[24]

14. Non-recurring costs. Estimating non-recurring costs and determining how to recover them raise issues different from recurring costs. In the regulatory context, non-recurring costs are one-time costs that a firm incurs in supplying a facility or service to a customer or other carrier. Examples of non-recurring costs include the cost of having a technician turn up (or install) a second line to a customer, the cost of a technician cutting over a loop to a carrier's collocation cage, and the cost of removing load coils so that digital subscriber line (DSL) service can be provided over copper loops. One important characteristic of non-recurring charges is that they generally represent a sunk investment to the customer or carrier that must pay them, and they therefore can constitute a barrier to entry.[25]

B. Ratemaking Under the 1996 Act

1. UNE Prices

15. Under the ratemaking process for UNEs established in the 1996 Act, incumbent LECs and requesting carriers in a given state may negotiate an agreement with respect to UNE prices. The state commission must approve such an agreement unless it is discriminatory or otherwise contrary to the public interest.[26] If parties are unable to agree and an arbitration is necessary, section 252(d)(1) of the Act provides that rates for interconnection and UNEs shall be "based on the cost (determined without reference to a rate-of-return or other rate-based proceeding) of providing the interconnection or network element" and "may include a reasonable profit."[27] The prohibition on reference to a rate-base/rate-of-return proceeding renders section 252(d)(1) "radically unlike all previous statutes" in that it "appears to be an explicit disavowal of the familiar public utility model of rate regulation."[28]

16. In the *Local Competition Order*, the Commission adopted guidelines to be applied when parties cannot agree and state commissions are called on to arbitrate disputes regarding the prices for interconnection and UNEs pursuant to section 252(d)(1).[29] Specifically, the

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[23] ROGER A. MORIN, REGULATORY FINANCE, UTILITIES' COST OF CAPITAL at 20 (1994).

[24] KAHN at 45-46.

[25] *Local Competition Order*, 11 FCC Rcd at 15875-76, para. 749.

[26] 47 U.S.C. § 252(e)(2).

[27] 47 U.S.C. § 252(d)(1).

[28] *Verizon v. FCC*, 535 U.S. at 1661.

[29] *Local Competition Order*, 11 FCC Rcd at 15844-56, paras. 672-703. The Commission also concluded that rates for reciprocal compensation under section 252(d)(2) should be based on the same principles. *Id*. at 16023, para. 1054.

Commission adopted a forward-looking economic cost (FLEC) methodology, which it called "Total Element Long Run Incremental Cost" or "TELRIC." TELRIC is based on the assumption that competition would constrain the value of an incumbent LEC network and the price that could be charged for use of that network. In other words, the "cost" of the element for purposes of section 252(d)(1) equals the price that an incumbent LEC would be able to charge for an element in a competitive market.[30]

17. The Commission's TELRIC pricing rules equate the incumbent LEC's cost of providing network elements with the cost today of building a local network that can provide all the services its current network provides, using the least-cost, most-efficient technology currently available.[31] The Commission added one additional constraint on the design of this reconstructed network: the new network must take as given the existing wire center locations.[32] Because of this constraint, the TELRIC methodology adopted by the Commission often is characterized as a "scorched node" approach to costing. In describing this methodology, the Commission stated that regulators should use economic depreciation in calculating depreciation expense, and that they should adjust the cost of capital to reflect the risks faced by the incumbent as competition is introduced into its local market.[33]

18. The TELRIC methodology assumes that the relevant increment of output is all current and reasonably projected future demand, *i.e.*, it is designed to calculate the total cost of building a new, efficient network.[34] UNE prices are then calculated by dividing the total cost for a particular element by the number of units of that element. For example, if the TELRIC of all outside loop plant were $10 million and the network had one million loops, then the TELRIC of a loop would be $10. In other words, TELRIC calculates the long-run *average* incremental cost of a network element.

19. In the *Local Competition Order*, the Commission concluded that, as a general rule, rates for unbundled network elements should recover costs in the manner in which they are incurred.[35] The Commission stated that recurring costs should be recovered through recurring charges.[36] The Commission further stated that non-recurring costs could be recovered either through non-recurring charges or recurring charges (provided that the regulated firm did not

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[30] *Id*. at 15846, para. 679 ("Adopting a pricing methodology based on forward-looking economic costs best replicates, to the extent possible, the conditions of a competitive market.").

[31] *Id*. at 15848-49, para. 685; 47 C.F.R. §§ 51.501 – 51.511.

[32] *Local Competition Order*, 11 FCC Rcd at 15848-49, para. 685 (the assumption of existing wire centers "mitigates incumbent LECs' concerns that a forward-looking pricing methodology ignores existing network design, while basing prices on efficient new technology that is compatible with existing infrastructure"); 47 C.F.R. § 51.505(b)(1).

[33] *Local Competition Order*, 11 FCC Rcd at 15856, para. 703.

[34] *Id*. at 15850, para. 690.

[35] *Id*. at 15874, para. 743.

[36] *Id*. at 15874-75, para. 745-48.

recover more than the total forward-looking cost).[37] The Commission's primary focus in the *Local Competition Order* was the calculation of recurring costs. It said little about how a state regulator should provide for recovery of non-recurring costs, although it did require the use of forward-looking costs.

20. The TELRIC rules were the subject of lengthy litigation over both the Commission's jurisdiction to establish them and whether the Commission reasonably interpreted the statute in establishing them. The Supreme Court upheld the Commission's jurisdiction to establish a pricing methodology for UNEs and interconnection in *AT&T v. Iowa Utilities Board*.[38] The court found that section 201(b) of the Act gives the Commission authority to prescribe rules and regulations necessary to carry out the Act, including the local competition provisions in sections 251 and 252.[39] The court stated that this authority is not diminished by the Act's delegation of ratesetting authority to the states under section 252(c)(2).[40]

21. Subsequently, in *Verizon v. FCC*, the Supreme Court affirmed the substance of the Commission's TELRIC rules.[41] As noted above, the court rejected arguments by incumbent LECs that the statute requires a pricing standard that considers historical costs.[42] The court found that the Commission's decision to adopt a forward-looking cost methodology was a reasonable interpretation of the statute.[43] In particular, the court found that the Commission's rules "may provide incentives and opportunities for competitors to build their own network elements" and that competitors had in fact done so in the four years following passage of the 1996 Act.[44] The court also rejected arguments that various aspects of the TELRIC methodology were unlawful, and it found that the constitutional claims advanced by the incumbent LECs were premature in the absence of a challenge to a specific TELRIC-based rate.[45]

22. In the *Triennial Review* proceeding, several parties requested that the Commission clarify or modify the TELRIC methodology.[46] In response, we clarified the existing rules with

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[37] *Id*. at 15875-76, paras. 749-50

[38] *AT&T v. Iowa Utils. Bd.*, 525 U.S. at 378-85.

[39] *Id*. at 378.

[40] *Id*. at 384 ("The FCC's prescription, through rulemaking, of a requisite pricing methodology no more prevents the States from establishing rates than do the statutory 'Pricing standards' set forth in section 252(d).").

[41] *Verizon v. FCC*, 535 U.S. at 523.

[42] *Id*. at 501.

[43] *Id*. at 507-08.

[44] *Id*. at 507 ("Inefficiencies built into the scheme may provide incentives and opportunities for competitors to build their own network elements."); *id*. at 516 ("The entrants have presented figures showing that they have invested in new facilities to the tune of $55 billion since the passage of the Act.").

[45] *Id*. at 523.

[46] Letter from Cronan O'Connell, Vice President – Federal Regulatory, Qwest, to Marlene H. Dortch, Secretary, Federal Communications Commission at 12 (Oct. 28, 2002) (Qwest TELRIC Letter); Letter from Chris Frentrup, Senior Economist, WorldCom, to Ms. Marlene Dortch, Secretary, Federal Communications Commission at 8 (Oct.

respect to two key components of TELRIC – cost of capital and depreciation.[47] The Commission made clear that, in establishing a TELRIC-based cost of capital, state commissions must reflect the risk of participating in a market with facilities-based competition.[48] With respect to depreciation, the Commission declined to mandate a particular set of asset lives. We did, however, clarify that it was appropriate for state commissions to employ accelerated depreciation in order to reflect accurately the anticipated decline in the value of assets in a competitive market.[49]

2. Resale

23. Section 252(d)(3) of the Act requires that state commissions establish wholesale rates for resold services based on the incumbent LEC's retail rates, "excluding the portion thereof attributable to any marketing, billing, collection, and other costs that will be avoided by the local exchange carrier."[50] As noted above, this section of the Act is independent of section 252(d)(1), which sets forth the cost-based pricing standard for UNEs and interconnection.[51]

24. In the *Local Competition Order*, the Commission adopted a "reasonably avoidable" standard governing the costs that must be considered avoided when calculating the wholesale discount.[52] That is, the Commission found that any costs that "reasonably can be avoided" by the incumbent LEC when it provides a service at resale must be considered avoided in determining the wholesale discount.[53]

25. The Commission's original resale pricing rules were vacated by the Eighth Circuit in *Iowa Utilities II* because the court found that the rules were inconsistent with the plain meaning of the statute.[54] In *Iowa Utilities II*, the Eighth Circuit found that the appropriate standard for determining avoided costs is not those costs that "can be avoided," but rather "those costs that the [incumbent LEC] will actually avoid incurring in the future."[55] Further, the court

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23, 2002); Letter from William M. Daley, President, SBC Communications, Inc., to Hon. Michael K. Powell, Chairman, FCC (Sept. 4, 2002); Letter from James W. Cicconi, General Counsel and Executive Vice President, AT&T, to Honorable Michael Powell, Chairman, Federal Communications Commission, Attach. at 3 (July 26, 2002); Letter from William P. Barr, Executive Vice President and General Counsel, Verizon, to Honorable Michael Powell, Chairman, Federal Communications Commission (July 16, 2002).

47 *Triennial Review Order* at paras. 675-91.

48 *Id*. at para. 680.

49 *Id*. at para. 690.

50 47 U.S.C. § 252(d)(3).

51 *See supra* para. 8.

52 *Local Competition Order*, 11 FCC Rcd at 15956-15957, para. 912.

53 47 C.F.R. § 51.609(b).

54 *Iowa Utilities II*, 219 F.3d at 754-756, 765.

55 *Id*. at 755.

explained that, when determining avoided costs, the state commission may not assume that the incumbent is acting as a wholesaler only, but rather must assume that the incumbent provider is acting as both a wholesale and a retail provider.[56] The Commission has not conducted any further rulemaking to provide additional guidance on establishing wholesale discounts.

C. Review of UNE Prices Under Section 271

26. Pursuant to section 271(d) of the Act, the Commission is responsible for reviewing applications by Bell Operating Companies (BOCs) for authority to provide in-region interLATA services.[57] As part of that review, the Commission considers whether a BOC offers access to UNEs at prices that comply with section 252(d)(1).[58] In reviewing state pricing decisions in the section 271 context, the Commission does not conduct a *de novo* review. Rather, given that the purpose of our section 271 review is to determine whether a BOC has opened its local market to competitors, the Commission determines whether the state has established rates that are within the range that a reasonable application of TELRIC principles would produce.[59]

27. In a number of cases, the Commission found that various aspects of state pricing decisions appeared to be inconsistent with the forward-looking cost principles on which our rules are based.[60] Because an error in one component of a pricing decision does not necessarily mean that UNE prices do not comply with TELRIC, the Commission developed an alternative method, known as benchmarking, by which BOCs can demonstrate that their UNE rates are in the range that TELRIC principles would produce.[61] Under the benchmarking alternative, a BOC can demonstrate that its rates in a particular state, adjusted for known cost differences, are at or below the level of rates in another state in its region that the Commission already has found to be

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[56] *Id*.

[57] 47 U.S.C. § 271(d).

[58] 47 U.S.C. § 271(c)(2)(B)(ii).

[59] *See, e.g.*, *Joint Application by SBC Communications Inc., Southwestern Bell Telephone Company, and Southwestern Bell Communications Services, Inc. d/b/a Southwestern Bell Long Distance for Provision of In-Region, InterLATA Services in Kansas and Oklahoma*, CC Docket No. 00-217, Memorandum Opinion and Order, 16 FCC Rcd 6237, 6266, para. 59 (2001) (*SBC Kansas/Oklahoma 271 Order*), *remanded in part sub nom. Sprint Communications Co. v. FCC*, 271 F.3d 549 (D.C. Cir. 2001).

[60] *SBC Kansas/Oklahoma 271 Order*, 16 FCC Rcd at 6275-76, para. 80; *Application of Verizon New England Inc., Bell Atlantic Communications, Inc. (d/b/a Verizon Long Distance), NYNEX Long Distance Company (d/b/a Verizon Enterprise Solutions) and Verizon Global Networks Inc., For Authorization to Provide In-Region, InterLATA Services in Massachusetts*, CC Docket No. 01-9, Memorandum Opinion and Order, 16 FCC Rcd 8988, 9006-07, paras. 38-39 (2001) (*Verizon Massachusetts 271 Order*); *Verizon Rhode Island 271 Order*, 17 FCC Rcd at 3318-19, paras. 34-45.

[61] *See, e.g.*, *Verizon Massachusetts 271 Order*, 16 FCC Rcd at 9006-08, paras. 37, 40; *Verizon Rhode Island 271 Order*, 17 FCC Rcd at 3320-21, paras. 38-40; *Qwest 9-State 271 Order*, 17 RCC Rcd at 25429-30, 26458-60, paras. 228, 280-82.

TELRIC-compliant.[62]

28. Because it is difficult to demonstrate that state pricing decisions fully comply with TELRIC principles during the statutory 90-day review period for section 271 applications, the BOCs have made frequent use of the benchmarking alternative. Indeed, in a number of cases, BOCs reduced rates below the rate established by the state commission in order to satisfy our benchmarking test.[63] Thus, to the extent that errors in applying TELRIC rules may have resulted in inappropriately high UNE rates in some states, the benchmarking process has acted to constrain these rates. The Commission has no comparable process, however, for identifying or correcting rates when an error in applying the TELRIC rules results in rates that are inappropriately low.[64] Although we have addressed some specific cost input disputes as they have arisen in section 271 proceedings, our disposition of those disputes has provided no systematic guidance on pricing issues. We embark on this proceeding to provide states and interested parties comprehensive guidance lacking in our consideration of section 271 applications.

III. FORWARD-LOOKING METHODOLOGY

29. Before addressing the detailed issues related to UNE pricing, we first must determine whether to alter the Commission's fundamental decision to use a methodology that sets prices on the basis of the forward-looking cost of providing UNEs. Although some incumbent LECs continue to press for UNE rates based on an historical cost methodology, in this proceeding we reaffirm our commitment to forward-looking costing principles. As the Supreme Court has made clear, an approach based on forward-looking cost is an entirely reasonable approach to follow under section 252(d)(1).[65] Below we briefly examine a number of alternative pricing theories, as well as the relative merits of a forward-looking cost methodology.

30. Forward-Looking Cost. A forward-looking costing methodology considers what it would cost today to build and operate an efficient network (or to expand an existing network) that can provide the same services as the incumbent's existing network. The benefit of a forward-looking approach is that it gives potential competitors efficient price signals in deciding whether to invest in their own facilities or to lease the incumbent's facilities. That is, if construction of new facilities by a competitive LEC would cost less than leasing facilities at prices based on FLEC, the efficient result is for the new entrant to build its own facilities.[66]

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[62] Relative cost differences among states are determined by reference to the results of the Synthesis Model that the Commission uses for universal service purposes. *See, e.g.*, *SBC Kansas/Oklahoma 271 Order*, 16 FCC Rcd at 6276-77, paras. 81-84; *Verizon Massachusetts 271 Order*, 16 FCC Rcd at 9007-08, para. 40.

[63] *See, e.g.*, *Qwest 9-State 271 Order*, 17 FCC Rcd at 26431, 26433-34, 26436-37, 26439-40, 26442, 26444-45, 16448, 25451, 26460, paras. 230, 235, 241, 246, 249, 255, 261, 268, 283.

[64] As discussed in paragraph 40 *infra*, the Commission did state in the *Local Competition Order* that it would consider incumbent LEC claims that particular rates were confiscatory.

[65] *Verizon v. FCC*, 535 U.S. at 507-08.

[66] As we discuss in section IV.H *infra*, the effectiveness of FLEC-based UNE prices in signaling whether it is efficient for a carrier to enter a particular market may depend in large part on whether retail rates are cost-based.

Assuming that the modeling method is accurate, a forward-looking cost approach more closely approximates the costs that would exist in a competitive market than does an historical cost approach by revealing potential efficiencies that might not otherwise be apparent.

31. As noted above, the Commission's rules have been criticized for some of the assumptions incorporated into the forward-looking approach adopted in 1996. For example, critics argue that the assumption that new technology will be deployed instantaneously and ubiquitously is unrealistic even in the most competitive markets.[67] We note that these criticisms are directed at the version of forward-looking cost adopted by the Commission, and are not criticisms of forward-looking cost *per se*.[68]

32. Historical cost. Traditional rate-base/rate-of-return ratemaking has generally been based on the use of historical costs, *i.e*., the costs the regulated firm incurred in building its network and providing service and that it recorded in its books of account. As an initial matter, an historical cost approach is highly dependent on the accuracy of an incumbent LEC's accounting records, which potentially creates a significant information asymmetry that benefits the incumbent LECs. In addition to the problems associated with reliance on incumbent LEC accounting records, the use of historical costs does not necessarily provide efficient investment signals to potential entrants. As many economists have noted, it is forward-looking costs, not historical costs, that are relevant in setting prices in competitive markets.[69] If historical costs are higher than the forward-looking costs an entrant would face, setting rates on the basis of historical cost could result in UNE prices that deter entry generally, or cause entrants to build their own facilities even when it is inefficient to do so. Conversely, if historical costs are lower than forward-looking costs, UNE rates based on historical costs might cause entrants to lease facilities when it was more efficient either to build their own or not to enter a particular market.

33. The Supreme Court found that "the statutory language places a heavy presumption against any method resembling the traditional embedded-cost-of-service model of ratesetting."[70] The court noted that any use of embedded costs would allow LECs to pass on to competitors the results of past inefficiencies, which is at odds with the objective of forcing all

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[67] Alfred E. Kahn, Timothy J. Tardiff and Dennis L. Weisman, *The Telecommunications Act at three years: An economic evaluation of its implementation by the Federal Communications Commission*, 11 Info. and Econ. Policy 319, 326-27 (1999).

[68] *Id*. at 324-25.

[69] *Id*. ("Among economists, there is widespread agreement in principle that (1) the costs that would be the basis for efficient prices would be forward-looking, rather than historical and (2) the prices set on that basis should emulate the ones that would emerge from local exchange competition, if it were feasible."); ARMEN A. ALCHIAN AND WILLIAM R. ALLEN, EXCHANGE AND PRODUCTION at 222 (3d ed. 1983) ("Once [an item] is acquired, [its cost is] irrelevant to the setting of price in competitive markets."); N. GREGORY MANKIW, PRINCIPLES OF ECONOMICS at 291 (1997) ("The irrelevance of sunk costs explains how real businesses make decisions."); PAUL A. SAMUELSON AND WILLIAM D. NORDHAUS, ECONOMICS at 167 (16th ed. 1998) ("One of the most important lessons of economics is that you should look at the marginal costs and marginal benefits of decision and ignore past or sunk costs.").

[70] *Verizon v. FCC*, 535 U.S. at 512.

carriers to make efficient choices.[71]

34. Efficient Component Pricing Rule (ECPR). The ECPR posits that interconnection and UNE rates should be based on the incumbent's incremental cost of providing the service, where that incremental cost includes the incumbent's opportunity cost, measured in terms of foregone profits. Advocates of the ECPR claim that this rule most closely parallels the method a firm in a competitive market would employ when faced with the opportunity of selling inputs to firms that intend to compete with it in the final product market.[72] Advocates further claim that the ECPR not only will ensure that the incumbent will be indifferent between selling inputs to a competitor versus selling final products to end-user customers, but that it will also ensure efficient entry.[73]

35. In the *Local Competition Order*, the Commission rejected the ECPR approach. It found that ECPR would discourage competition because it relies on prevailing retail prices (which are not cost-based and may reflect monopoly rents) in setting the rates new entrants pay incumbents for inputs.[74] The Supreme Court agreed that ECPR had flaws similar to a historical cost methodology because the "opportunity cost" of providing the UNE is based on the amount of lost revenue, which in turn is a function of embedded costs, or is not related to cost at all.[75]

36. Ramsey Pricing. The Commission in 1996 also considered and rejected Ramsey pricing, which is a method for allocating common costs among retail services.[76] Under this approach, common costs are allocated among services in inverse proportion to the elasticity of demand for a particular service. The Commission found that Ramsey pricing would raise prices for the most critical bottleneck elements and therefore would undermine the pro-competitive objectives of the 1996 Act.[77] The Supreme Court agreed with the Commission that Ramsey pricing is inconsistent with the Act because rates would be highest for those elements that are most difficult to replicate, thus deterring the competitive entry that is one of the principal goals of the Act.[78]

37. We conclude that our decision remains sound to base UNE prices on the forward-looking cost of providing UNEs. This approach is supported both by the Supreme Court's endorsement of our forward-looking cost methodology and its concerns regarding alternative

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[71] *Id*.

[72] J. Gregory Sidak and Daniel F. Spulber, *The Tragedy of the Telecommons: Government Pricing of Unbundled Network Elements Under the Telecommunications Act of 1996*, 97 Columbia L. Rev. 1081, 1093-94 (1997).

[73] *Id*. at 1098-99.

[74] *Local Competition Order*, 11 FCC Rcd at 15859-60, paras. 709-11.

[75] *Verizon v. FCC*, 535 U.S. at 514.

[76] *Local Competition Order*, 11 FCC Rcd at 15853, para. 696.

[77] *Id*.

[78] *Verizon v. FCC*, 535 U.S. at 515-16.

pricing methodologies that rely in whole or in part on embedded costs. We also note the general absence of criticism showing that a forward-looking costing methodology *per se* is flawed or unreasonable. Accordingly, we decline to open an inquiry into alternative pricing theories. Instead, this NPRM will focus on, and solicit comments regarding, clarifications or modifications of the current FLEC-based rules that will more fully satisfy the Commission's policy goals and the statutory requirements of section 252(d)(1).

IV. UNE PRICING

A. Overarching Issues

1. Goals of UNE Pricing

38. In the *Local Competition Order*, the Commission found that a UNE pricing regime should achieve two objectives. First, UNE prices should be set in a manner that sends efficient entry and investment signals to all competitors.[79] Second, UNE prices should provide incumbent LECs an opportunity to recover the forward-looking costs of providing UNEs.[80] We ask parties to comment on whether these should remain the primary goals of the Commission's UNE pricing rules. If not, parties should identify alternative pricing goals and explain what circumstances have changed since 1996 that would justify changing the Commission's objectives.

39. Because the Commission designed UNE prices to serve two distinct objectives – providing appropriate economic signals with respect to efficient competitive entry and investment while providing incumbent LECs with the opportunity to recover the forward-looking costs of providing UNEs – determining whether UNE prices for a given carrier in a given state have been set at the "correct" level is an extremely complicated task. With respect to the first objective, we seek comment on how the Commission could measure empirically whether those prices are sending appropriate signals with respect to competitive entry and investment? What should we expect to see in the market if UNE prices are sending correct economic signals? At what speed and over what period of time would we expect entry and investment to occur?

40. With respect to cost recovery, we note that the Commission offered incumbent LECs the opportunity to seek relief from the TELRIC pricing rules if they could demonstrate the rules had been applied to produce confiscatory rates, and the Commission did not foreclose the possibility of establishing a separate mechanism to recover embedded costs not recovered through UNE rates.[81] Does the availability of this relief diminish the need for us to be concerned

[79] *Local Competition Order*, 11 FCC Rcd at 15844, para. 672 ("We believe that the prices that potential entrants pay for these elements should reflect forward-looking economic costs in order to encourage efficient levels of investment and entry.").

[80] 47 U.S.C. § 252(d)(1). UNE prices need not, however, provide for full recovery of historical costs. *Local Competition Order*, 11 FCC Rcd at 15857-58, para. 705 ("Neither a methodology that establishes prices for interconnection and access to network elements directly on the costs reflected in the regulated books of account, nor a price based on forward-looking costs plus an additional amount reflecting embedded costs, would be consistent with the approach we are adopting.").

[81] *Local Competition Order*, 11 FCC Rcd at 15872, para. 739.

with whether UNE rates provide for full cost recovery? In measuring the reasonableness of UNE prices, is a comparison to an incumbent LEC's historical costs relevant? We note in this respect that the Supreme Court called into question whether historical costs were even accurate.[82] Does this criticism undermine our ability to make any kind of reliable comparison? Are there other comparisons that would provide a more useful measure of whether UNE rates are providing an appropriate level of cost recovery?

41. Are there other goals the Commission should consider in establishing a UNE pricing methodology? For example, two goals identified in the universal service context – transparency and verifiability – also may be relevant to a state commission's ability to determine UNE costs in a reasonable time frame.[83] By transparency we mean that the logic and algorithms of a cost study or cost model should be revealed to and understandable by the parties and regulators. For example, if a cost model were presented in an electronic spreadsheet, but all the formulae were concealed so that parties could not ascertain the underlying assumptions, the model would not be transparent. By verifiability we mean that data or inputs that are used to estimate costs should be derived from public sources, or they should be able to be verified or audited without undue cost and delay. We ask parties to comment on the importance of transparency and verifiability. Are these goals as important as the investment and cost recovery goals discussed above? Is there any way for the Commission to measure whether these goals are being achieved?

2. Impact of Triennial Review

42. In the *Triennial Review Order*, the Commission made a number of significant changes to the regime for determining what elements must be unbundled by an incumbent LEC. In particular, the Commission adopted a new interpretation of section 251(d)(2) for determining whether requesting telecommunications carriers are entitled to access to an unbundled network element.[84] We seek comment on the relationship, if any, between this new interpretation and the Commission's UNE pricing rules.

43. The unbundling obligations set forth in the *Triennial Review Order* with respect to hybrid fiber/copper loops are limited.[85] What implications does this limitation have for a pricing methodology based on forward-looking costs? The Commission's TELRIC methodology attempts to measure the cost of discrete network elements, rather than that of particular network

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[82] *Verizon v. FCC*, 535 U.S. at 512 ("[T]he temptation would remain to overstate book costs to ratemaking commissions and so perpetuate the intractable problems that led to the price-cap innovation."); *id* at 1676 ("the 'book' value or embedded costs of capital presented to traditional ratemaking bodies often bore little resemblance to the economic value of capital"); *id*. at 518 ("[B]ook costs may be overstated by approximately $5 billion." (quoting *FCC Releases Audit Report on RBOCs' Property Records*, Report No. CC 99-3 (rel. February 25, 1999)).

[83] *Federal-State Joint Board on Universal Service*, CC Docket No. 96-45, First Report and Order, 12 FCC Rcd 8776, 8915, para. 250 (1997) (*USF First Report and Order*) (subsequent history omitted).

[84] *Triennial Review Order* at paras. 55-172.

[85] Specifically, incumbent LECs are not required to provide unbundled access to hybrid loops for the provision of packetized broadband services. Incumbent LECs must continue to provide unbundled access to TDM features, functions and capabilities of their hybrid loops. *Id*. at paras. 285-97.

technologies, in order to minimize the difficulties inherent in allocating joint and common costs.[86] Previously, UNEs were, with limited exceptions, not defined with regard to technology. What adjustments, if any, should states make to recognize this more limited availability of UNE loops? Should the price of an entire copper loop be the same as the price of the portion of a hybrid fiber/copper loop that must be unbundled? In either case, how should prices for these loop elements be developed? How should the costs of fiber be allocated given the limited availability of hybrid fiber/copper loops? In addition, the Commission's new UNE loop rules limit the availability of fiber loops.[87] If a competitive LEC leases a copper loop that has been otherwise replaced by a fiber loop (and therefore depreciated fully), is a price based on forward-looking cost still appropriate? What adjustments should be made so that requesting carriers are not charged for operating costs, such as maintenance, associated with deployment of fiber networks to which they have limited access?

44. In addition to limiting unbundling requirements with respect to the local loop, the *Triennial Review Order* also limited unbundling obligations with respect to high-capacity loops, switching, and transport.[88] Specifically, under the new rules, high-capacity loops and transport elements might not be available in all geographic areas. Similarly, the switching element may not be available in all geographic areas or for all customer classes. How should states develop costs for UNEs that no longer are required to be provided throughout a carrier's service area (*i.e.*, if the "total element" no longer is unbundled)? For example, does our finding that competitive LECs are not impaired without access to unbundled local circuit switching when serving the enterprise market change the manner in which unbundled switching costs should be developed? We encourage parties to identify other ways in which decisions in the *Triennial Review Order* should affect the Commission's UNE pricing rules.

3. Relationship to Universal Service

45. In the *Universal Service* proceeding, the Commission decided that funding should be based on the forward-looking cost of providing universal service.[89] The Commission identified criteria to guide the selection of a forward-looking universal service cost model.[90] It then applied these criteria in developing a computer cost model (the Synthesis Model) and selecting the inputs necessary to develop forward-looking costs.[91] Currently, the Commission

[86] *Local Competition Order*, 11 FCC Rcd at 15852, para. 695 ("Because the unbundled network elements correspond, to a great extent, to discrete network facilities, and have different operating characteristics, we expect that common costs should be smaller than the common costs associated with the long-run incremental cost of a service.").

[87] *Triennial Review Order* at paras. 273-84.

[88] *Id*. at paras. 201-02 (summarizing high capacity loop requirements), 419-28 (summarizing switching requirements), 359-60, 534 (summarizing transport requirements).

[89] *USF First Report and Order*, 12 FCC Rcd at 8776, 8888, 8889-90, 8903-17, paras. 199, 223-226, 232-251.

[90] *Id.*, 12 FCC Rcd at 8912-16, para. 250.

[91] *Federal-State Joint Board on Universal Service*, CC Docket Nos. 96-45, 97-160, Fifth Report and Order, 13 FCC Rcd 21323, 21335-62, paras. 26-92 (1998) (*USF Platform Order*); *USF Inputs Order*, 14 FCC Rcd at 20171-350, paras. 29-439.

uses the model to determine high-cost support for non-rural carriers based on a comparison of forward-looking costs among states.[92]

46. In developing the model and inputs necessary to calculate universal service funding, the Commission did not intend to provide any systematic guidance to states in the area of TELRIC rate-setting. Indeed, the Commission emphasized at the time that its decisions on particular inputs were made solely for the purpose of calculating universal service support and may not be appropriate for the calculation of UNE prices.[93] For these reasons, we continue to discourage states from using the nationwide inputs for the purpose of developing UNE prices.

47. In the absence of more specific guidance from the Commission, however, some state regulators have utilized our *USF Inputs Order* to reach conclusions regarding the TELRIC-based cost of building a network. Although we understand why state regulators might refer to the *USF Inputs Order* in developing forward-looking costs, in at least some cases there might be unintended and undesirable consequences that result from extrapolating from statements made in the context of universal service funding. For example, the Commission stated in the *USF Inputs Order* that it is necessary "to assume that the telephone industry will have at least the same opportunity to share the cost of building plant that existed when the plant was first built."[94] This statement was intended to address only the issue of structure sharing in the universal service model, but it has been interpreted by some states as endorsing a backward-looking approach for other inputs in a TELRIC model, such as the relative frequency of various construction types (*e.g.*, boring through concrete, trenching through dirt).[95] Applying this particular statement from the *USF Inputs Order* out of context erroneously assumes away not just the features of an incumbent LEC's existing network but also attributes of the real world in which incumbents and competitors operate.

48. Our approach is not to single out these applications for special critique, but to suggest more broadly that imposing some real-world boundaries on the UNE cost inquiry is needed to ensure that appropriate pricing signals are sent to the market. The questions we ask in this proceeding are directed solely at our UNE pricing rules. In a number of places, however, we seek comment on the relevance of Commission statements in the universal service context for specific UNE pricing rules. We also invite parties to comment on the relationship between the

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[92] *See Qwest Corp. v. FCC*, 258 F.3d 1191 (10th Cir. 2001) (affirming *USF Inputs Order* but remanding non-rural high-cost support methodology for further explanation). The Commission currently has in place for rural carriers an interim, five-year plan under which they receive support based on embedded costs. *See Federal-State Joint Board on Universal Service*, CC Docket No. 96-45, Fourteenth Report and Order, 16 FCC Rcd 11244 (2000).

[93] *USF Inputs Order*, 14 FCC Rcd at 20172, para. 32 ("The federal cost model was developed for the purpose of determining federal universal service support and it may not be appropriate to use nationwide values for other purposes, such as determining prices for unbundled network elements. We caution parties from making any claims in other proceedings based upon the input values we adopt in this Order.").

[94] *Id*. at 20261, para. 244 n.504.

[95] Qwest TELRIC Letter at 9.

two sets of rules.[96]

B. Network Assumptions

1. General Theory

49. Perhaps the most controversial aspect of the TELRIC rules is the assumption that the cost of a UNE should be calculated based on the cost of ubiquitous deployment of the most efficient technology currently available.[97] In implementing this requirement, current TELRIC models typically are designed to answer the following question: If a single carrier were to build an efficient network today to serve all customer locations within a particular geographic area, taking as given only the locations of existing wire centers, how much would it cost to construct and maintain the network?

50. One of the central internal tensions in the application of the TELRIC methodology is that it purports to replicate the conditions of a competitive market by assuming that the latest technology is deployed throughout the hypothetical network, while at the same time assuming that this hypothetical network benefits from the economies of scale associated with serving all of the lines in a study area. In the real world, however, even in extremely competitive markets, firms do not instantaneously replace all of their facilities with every improvement in technology.[98] Thus, even the most efficient carrier's network will reflect a mix of new and older technology at any given time.

51. Simultaneously assuming a market inhabited by multiple competitors and one with a ubiquitous carrier with a very large market share may work to reduce estimates of forward-looking costs below the costs that would actually be found even in an extremely competitive market.[99] It therefore may undermine the incentive for either competitive LECs or

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[96] However, we will not consider any changes to the model or inputs used in calculating universal service support in this proceeding.

[97] *Local Competition Order*, 11 FCC Rcd at 15848-49, para. 685; 47 C.F.R. § 51.505(b)(1).

[98] *See, e.g.*, Dennis L. Weisman, *The (in)efficiency of the "efficient firm" cost standard*, Antitrust Bulletin (Spring 2000) ("If regulators had sufficient information to implement the efficient-firm cost standard, competition would be wholly unnecessary. In this respect, the efficient-firm cost standard is fatally flawed because it confuses mandating the competitive outcome with fostering the competitive process."); Kahn, Tardiff and Weisman, 11 Info. and Econ. Policy at 326 ("In a world of continuous technological progress, it would be irrational for firms constantly to update their facilities in order *completely* to incorporate today's lowest -cost technology.") (emphasis in original); *id* at 322 ("[C]ompetitive prices will not tend, in a technologically dynamic industry, to be equated to the lowest cost of duplicating a service with the most recent technology."); *but see* David Gabel and David I. Rosenbaum, *Who's Taking Whom: Some Comments and Evidence on the Constitutionality of TELRIC*, 52 Fed. Comm. L. J. 239, 254 (2000) ("As regards the so-called 'hypothetical nature of the regulatory judgments' required for the implementation of the TELRIC methodology, it is uncertain as to whether the factual inquiry required for the conduct of a proper TELRIC study is any more hypothetical in nature than the judgments called for in determining whether or not capital costs, some of which were incurred decades ago, were 'prudently' made or 'used and useful.'").

[99] The clarifications we made to our TELRIC rules in the *Triennial Review Order* begin to address this concern. Specifically, by clarifying that a consistent set of assumptions is to be used for all the components of TELRIC (operating expenses, cost of capital, and depreciation) and that accelerated depreciation may be used to reflect the

incumbent LECs to build new facilities, even when it is efficient for them to do so.[100] We seek comment on this concern.

52. We tentatively conclude that our TELRIC rules should more closely account for the real-world attributes of the routing and topography of an incumbent's network in the development of forward-looking costs. We seek comment on whether such an approach would address claims that our TELRIC rules currently distort a competitor's decision whether to invest in new facilities or to lease an incumbent's existing facilities. Yet we also wish to ensure that a reformed TELRIC methodology does not swing in the other direction and give incumbents undue advantages. We seek comment on this tentative conclusion and, in particular, on how such an approach may differ from the practices of state commissions in UNE pricing proceedings.

53. We seek comment on proposals that would achieve these objectives. We seek comment on whether it is appropriate to assume that the cost of an existing element is the cost of that element if it were being replaced today. Under this approach, the cost to the incumbent LEC of using its existing facilities is the cost that would actually be incurred (including actual placement costs) to place new facilities in the same location. As discussed above, the UNE pricing methodology, while forward-looking, must be representative of the real world and should not be based on the totally hypothetical cost of a most-efficient provider building a network from scratch. To that end, the UNE cost study should be based upon the incumbent LEC's actual network topography and currently available, forward-looking technologies.

54. Alternatively, we seek comment on whether we should define the relevant network as one that that incorporates upgrades planned by the incumbent LEC over some objective time horizon (*e.g.*, three or five years), as documented, for example, in an incumbent LEC's actual engineering plans. Although this approach would take as given whatever existing facilities will remain in the network at the end of the designated period, it also should capture technological evolution within that period. Such an approach may provide an appropriate middle ground between the hypothetical assumptions required under our current rules and the replacement cost approach described in the previous paragraph. Finally, we seek comment on any other alternatives that would ground our TELRIC rules in the attributes of an incumbent's existing network. We ask parties to comment on whether any or all of these approaches would produce results that are more consistent across states and send better entry and investment signals to incumbents and competitors.

55. In the *Local Competition Order*, the Commission defined the term "long run" to

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anticipated decline in value of assets over their useful life, we have provided state commissions additional guidance that should help to avoid unreasonable rates that might be caused by inconsistent assumptions.

[100] *See, e.g.*, Thomas M. Jorde, J. Gregory Sidak and David J. Teece, *Innovation, Investment and Unbundling*, 17 Yale J. Reg. 1 (Winter 2000) ("[M]andatory unbundling confers a second-mover advantage and substantially decreases a CLEC's incentives to make a sunk investment."); Sidak and Spulber, 97 Columbia L. Rev. 1081 ("If the incumbent LEC, the putative owner of the local network, no longer can recover the costs of investments that it would make on a forward-looking basis – let alone keep any economic rents accruing to such investments – then entrants become free riders and the incumbent LEC's incentive to make further investment in the local exchange network evaporates."); *but see* Gabel and Rosenbaum, 52 Fed. Comm. L. J. at 264-65.

mean a period long enough for all of a firm's costs to become variable or avoidable.[101] Does our tentative conclusion compel us to shift from a long-run average cost methodology to a short-run average cost methodology? If so, what are the consequences of such a shift? To the extent the cost of a UNE under such an approach would in part be based on the existing incumbent LEC network, is such an approach consistent with the "heavy presumption" against the use of embedded costs?[102] Would it be more effective to retain a long-run pricing methodology, but provide specific guidance to the states on the appropriate long-run assumptions upon which to base network inputs?

56. We ask parties to suggest other ways of defining the network that is to be modeled in a UNE pricing proceeding. To what extent should network assumptions reflect evidence of the network decisions made by competitive LECs? Parties should explain in detail the network assumptions they advocate and the competitive assumptions implicit in their proposals. Parties also should explain whether they are proposing a theory based on short-run costs or long-run costs, and how their proposed definition of the network will produce more accurate economic signals and more consistent results than our current regime.

57. The dispute as to the relevant network for pricing purposes is in large part a dispute over what constitutes efficiency. Is our current approach of looking at efficiency at a single point in time consistent with the longer time horizon, and corresponding uncertainties, that carriers actually consider when deciding to invest in long-lived assets that are expensive, if not impossible, to redeploy? What is the efficiency standard that the Commission should use in order to achieve UNE prices that send the correct economic signals regarding investment, while still achieving the necessary level of cost recovery? To what extent is the efficiency standard related to assumptions about the state of competition? For example, the requirement in the current rules to assume the most efficient technology currently available is based on the assumption that competitors would deploy the most efficient technology on a widespread basis, thereby constraining the value of the incumbent LEC network. We ask parties to be very specific in defining the standard of efficiency and explaining how to determine whether a network is optimized for economic efficiency.

58. A central principle of the current UNE pricing rules is that competitive LECs should not pay UNE rates that compensate incumbent LECs for past inefficiencies.[103] We ask parties to comment on whether there is any reason to depart from this principle. One of the reasons that the Commission moved from rate-of-return regulation to price cap regulation of some carriers was to create a strong incentive for carriers to operate as efficiently as possible. Given that most large incumbent LECs have been subject to forms of price cap regulation at the state level for some time and at the federal level since 1991, is there reason for the Commission

[101] *Local Competition Order*, 11 FCC Rcd at 15845, para. 677; *see also USF First Report and Order*, 12 FCC Rcd at 8913, para. 250(3).

[102] *Verizon v. FCC*, 535 U.S. at 512.

[103] *Id*. at 511-12.

to find that an incumbent LEC's practices presumptively are efficient?[104] Why or why not? We ask incumbent LECs to comment on what portion of their networks were installed since the onset of price cap regulation. What would be the effect of a presumption of efficiency on a state commission's pricing proceeding? What type of evidence would be sufficient to rebut this presumption? How difficult would it be for competitive LECs to develop such evidence? What effect should any asymmetry in access to information about incumbent LECs' practices and their costs have on any presumptions we may create? If we modify our network assumptions to track more closely the incumbent LEC's existing network, how will CLECs that purchase UNEs receive the benefit of efficiency gains that should be occurring in the network? Is the adoption of some sort of productivity factor a necessary part of any transition to network assumptions that rely on the existing network?

59. Parties that propose changing our network assumptions should explain whether assuming a different network than under the current rules would lead to higher UNE prices. Will that create more situations in which a competitive LEC will choose to build its own facilities, rather than lease from the incumbent LEC? What is the consequence of such an approach in situations where it is not economically feasible for a competitive LEC to build its own facilities? In assessing the potential impact on UNE rates of a change in network assumptions, we note that any move away from the Commission's current assumptions about competition and technology affects other aspects of the rate calculation. For example, the cost of capital might be lower under a regime that looked at an incumbent LEC's existing network, rather than the "most efficient" network available today, because keeping existing facilities might be less risky than investing in new facilities.[105] We ask parties that favor a change in network assumptions to identify how such a change would affect each component of the pricing rules (*e.g.*, operating expenses, cost of capital, depreciation).

60. We ask parties to discuss whether a regime focused more closely on the existing network of an incumbent LEC would be easier for state commissions to implement than the current TELRIC regime. The results produced under the current TELRIC rules depend in large part on the assumptions made by the regulator with respect to the level of competition and the spread of new technology. Even if the current approach is correct as a matter of economic theory, the resulting decisions are predictive, and reliance on these assumptions may increase the likelihood of error. Would an approach based on real-world attributes of an incumbent LEC's network eliminate much of the speculation that now takes place within the context of a UNE pricing proceeding? Are there benefits to a "scorched node" approach that outweigh the potential for error? For example, we note that any move toward a version of forward-looking cost that places greater reliance on the attributes of an incumbent LEC's existing network raises issues of transparency and verifiability. Unlike most ratesetting regimes that rely on contested proceedings, the Commission's TELRIC rules put the parties to a pricing dispute on relatively

[104] As noted by the Supreme Court, the "price-cap scheme starts with rates generated by the conventional cost-of-service formula." *Id*. at 487. The court also stated that "price caps do not eliminate gamesmanship," but "they do give companies an incentive to 'improve productivity to the maximum extent possible.'" *Id*. (quoting *Policy and Rules Concerning Rates for Dominant Carriers*, CC Docket No. 87-313, Second Report and Order, 5 FCC Rcd 6786, 6787-88, paras. 7-9 (1990)).

[105] *Triennial Review Order* at paras. 680-82.

equal footing because information on the current cost of current technology is not solely under the control of the incumbent LEC.[106] In contrast, an approach that relies more heavily on information regarding the incumbent's existing network or planned upgrades could give the incumbent a significant advantage in a rate proceeding. We seek comment on whether focusing the cost inquiry on an incumbent's existing network might place competitive LECs at an informational disadvantage in litigating any factual issues about which the incumbent LEC, as owner of that network, may have better information.

61. We welcome proposals for concrete procedural safeguards designed to minimize risks of an informational imbalance resulting from the methodological reforms discussed in this NPRM. For example, states might require that the parties engage in a limited discovery period before submitting their cost proposals, to ensure that both the incumbents and competitors are working from the same data. At the same time, we seek comment on ways in which UNE pricing proceedings, which often last for years under our current rules, can be streamlined without placing any party at a material informational disadvantage. For example, can and should we provide guidance to the states as to the appropriate topics of discovery for particular categories of cost disputes? Can and should we obviate the need for excessive discovery by identifying, whenever possible, objective sources of inputs to be used in calculating TELRIC rates? If so, what should those sources be? Are there other procedural requirements that we could establish that might facilitate resolution of UNE pricing proceedings?

2. Specific Network Inputs

62. In addition to our tentative conclusion that a forward-looking pricing methodology should more closely account for the real-world attributes of the routing and topography of an incumbent LEC's network, we believe there are a number of aspects of the current "efficient network" assumption that might benefit from clarification or modification. We discuss some of these issues below, and we encourage parties to identify additional steps we might take to produce prices that satisfy the objectives that we have identified.

a. Network Routing and Construction

63. To establish prices based on forward-looking costs, states must make assumptions about how a network will be routed and what construction techniques will be used in building it. We seek comment on the network routing assumptions that would be consistent with our tentative conclusion that prices should account for the real-world attributes of the routing and topography of an incumbent LEC's network. Specifically, how critical are the locations of existing rights-of-way, existing poles, and existing conduit (all of which are located on existing roads and routed around existing natural obstacles) for all wireline carriers (incumbents and new entrants) when new facilities are built? Is there any theoretical basis for an approach that does not assume the existence of existing roads, buildings, and natural obstacles?

64. Regardless of whether we adopt our tentative conclusion, should we modify the "scorched node" theory and adopt routing assumptions more closely tied to an incumbent LEC's

[106] *See Verizon v. FCC*, 535 U.S. at 522.

existing network? One approach, for example, might be to extend the assumption of existing switch locations to other parts of the network (*e.g.*, existing feeder routes, existing remote terminal locations). Another approach might be to require that states assume that the network is built along existing rights-of-way, and that those rights-of-way are in their current condition (*e.g.*, paved or unpaved). Parties supporting this approach should explain how states can best determine current right-of-way routes, whether a standard based on existing rights-of-way provides parties other than the incumbent LEC an opportunity to participate effectively, and how such routes can be compared to the routes of incumbent LECs and the routes generated by computer cost models.

65. We seek comment on other principles we could apply in deciding on the appropriate network routing and construction techniques for costing purposes. Parties should explain how their proposed network principles reflect the variables that incumbent and competitive LECs consider in making routing and construction decisions. To the extent parties propose principles based on the real-world attributes of an incumbent LEC's existing network, they should explain in detail how a state commission would establish the forward-looking cost of an existing network, and how such a costing approach differs from "rate-of-return or other rate-based" methodologies that are prohibited under section 252(d)(1). We note that, in the *USF Platform Order*, the Commission declined to verify the Synthesis Model's outside plant design parameters by comparing them to incumbent LEC outside plant on the ground that incumbent LEC networks "may not represent the least-cost, most-efficient design in some cases."[107] We invite parties to discuss the applicability of this conclusion, if any, in the context of UNE pricing.

66. Under our current TELRIC rules, the rates established in a state pricing proceeding depend significantly on the computer cost model adopted by the state commission. We ask parties to comment on whether, and how, our tentative conclusion to account more closely for the real-world routing and topography of an incumbent's network would affect the ability of carriers to use computer cost models. Is it more difficult to model an existing network than a hypothetical one? We invite state commissions to comment on whether they have adopted cost models that are capable of reflecting existing network routing.

b. Technology

67. Our current rules require states to assume that the "most efficient telecommunications technology currently available" is used throughout the network.[108] The Commission concluded in the *Local Competition Order* that the forward-looking pricing methodology for interconnection and UNEs should be based on a "reconstructed local network [that] will employ the most efficient technology for reasonably foreseeable capacity requirements."[109] At the same time, the Commission recognized a need for "basing prices on

[107] *USF Platform Order*, 13 FCC Rcd at 21349-50, para. 66.

[108] 47 C.F.R. § 51.505(b)(1).

[109] *Local Competition Order*, 11 FCC Rcd at 15848-49, para. 685.

efficient, new technology that is compatible with the existing infrastructure."[110]

68. As noted above, it is unlikely that any carrier, no matter how competitive the marketplace, would deploy new technology instantaneously and ubiquitously throughout its network. Even if the objective is to replicate the results of a competitive market, an approach that reconstructs the network over time seems to be more appropriate than one that assumes the instantaneous deployment of 100 percent new technology.

69. We seek comment on how our tentative conclusion above affects the technology assumptions used to develop UNE prices. Of what relevance is the Commission's statement in the universal service context that "[e]xisting incumbent LEC plant is not likely to reflect forward-looking technology or design choices"?[111] How should a state commission determine the price for equipment in the incumbent LEC network that no longer is widely used in the industry, such as analog switches or older versions of digital loops carrier systems? How does an approach that replicates an incumbent LEC's existing technology compare to a "reproduction cost" methodology?[112]

70. We encourage parties to identify the specific factors that influence their decisions with respect to how quickly to deploy new technology. How, if at all, should we factor in the uncertainty associated with the timing and efficiency of new technology? Of what relevance, if any, is the pace at which incumbent LECs have deployed new technologies in the past (*e.g.*, digital switches)? If our goal is to replicate the results of a competitive market, is there evidence as to the diffusion rates of new technology in competitive markets as opposed to monopoly markets that might inform our analysis?[113]

c. Structure Sharing

71. "Structure sharing" refers to how much of the cost of installing poles, digging trenches, and placing conduit would be shared on a forward-looking basis by the incumbent LEC with other entities, such as power companies, cable operators, or other telecommunications carriers. The more sharing that is assumed, the lower the cost to the incumbent LEC of

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[110] *Id*.

[111] *USF Platform Order*, 13 FCC Rcd at 21336, para. 30.

[112] Under a reproduction cost methodology, the regulator takes the incumbent's existing network as given and then estimates what it would cost to replace the existing network with new facilities that are identical to the existing facilities. *See, e.g.,* KAHN at 109-116. Thus, if the existing network contained an analog switch, under the reproduction cost approach, the regulator would try to determine what it would cost today to purchase a brand new analog switch. This approach generally has been discredited. As Justice Brandeis recognized nearly eighty years ago, "[i]f the aim were to ascertain the value (in its ordinary sense) of the utility property, the enquiry would be, not what it would cost to reproduce identical property, but what it would cost to establish a plant which could render the service, or in other words, at what cost could an equally efficient substitute be then produced." *Missouri ex rel. S.W. Bell Tel.Co. v. Public Serv. Comm'n*, 262 U.S. 276, 312 (1923) (Brandeis, J. dissenting).

[113] *See, e.g.,* Shelanski, *Competition and Deployment of New Technology in U.S. Telecommunications*, 2000 U. Chi. Legal F. 85, 115 ("When deployment times and market structures are matched, faster deployment times correlate with more competitive markets. . . . [A]verage deployment times speed up as markets become more competitive.").

providing the element. The *Local Competition Order* provides no guidance on this practical issue.[114] Structure sharing has been a consistently difficult issue for state commissions to resolve, particularly with respect to buried and underground plant.[115] The difficulty arises from confusion over the appropriate assumptions to make about construction by entities other than the incumbent LEC under TELRIC's "scorched node" construct.

72. We ask parties to offer suggestions on how the Commission might provide guidance to state commissions on the method for establishing structure sharing percentages, particularly in light of our tentative conclusion that the pricing methodology should account for real-world attributes of the routing and topography of an incumbent LEC's network. Is it appropriate to consider sharing opportunities that were available at the time the plant was built, as the Commission suggested in the *USF Inputs Order*?[116] How relevant are an incumbent LEC's actual sharing percentages? Are they dispositive? If the incumbent LEC's actual data are not dispositive, what other sources of data should be used in developing structure sharing inputs? Are there factors that either encourage or discourage parties from sharing construction costs today (*e.g.*, municipal ordinances requiring joint construction)? If so, how should these factors be reflected in the sharing percentages used to calculate UNE prices? Parties should provide empirical data with respect to their experiences sharing construction costs with other entities.

d. Fill Factors

73. A fill factor represents the percentage of the capacity of a particular facility or piece of equipment that is used on average over its life. Increasing fill factors has the effect of lowering costs by reducing the amount of spare capacity that must be allocated to working units. For example, if the investment in loop plant is $1 million and there are 1000 total loops, the investment per working loop would be $2000 if the fill factor were 50 percent, but only $1429 per loop with a 70 percent fill factor. The *Local Competition Order* provides no guidance to state commissions on this specific issue beyond the general requirement that the network should be sized to meet reasonably foreseeable demand.[117] In the *USF Inputs Order*, the Commission

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[114] The Commission addressed the issue of structure sharing percentages in the universal service proceeding. It adopted percentages that varied by type of structure (aerial, buried, or underground) and line density. Parties generally agreed that sharing occurs more frequently with aerial structure and in higher density zones, although they disagreed on the extent of sharing. The Commission explained that its determination of structure sharing percentages requires a degree of predictive judgment. It stated that "a forward-looking mechanism must estimate the structure sharing opportunities available to a carrier operating in the most-efficient manner," and that "the forward-looking practice of a carrier does not necessarily equate to the historical practice of the carrier." *USF Inputs Order*, 14 FCC Rcd at 20262, para. 247. Parties in that proceeding did not submit accurate and verifiable data with respect to existing sharing percentages, but even if they had the Commission said that it would have needed to decide whether or not those existing percentages were appropriate starting points for determining input values. *Id.* at 20262, para. 245. Given the divergence of opinion on the extent of structure sharing opportunities in the future, the Commission expressly anticipated revisiting this issue at a later date. *Id*.

[115] Sharing of pole space among utilities is a well-established practice that has been subject to regulation under section 224 since before the 1996 Act.

[116] *USF Inputs Order*, 14 FCC Rcd at 20261, para. 244 n.504.

[117] *Local Competition Order*, 11 FCC Rcd at 15847, para. 682. We note that competitive LECs raised issues related to fill factors in limited instances during section 271 proceedings before the Commission. In one case, the

established forward-looking fill factors based on current demand, which it defined to include excess capacity for short-term growth, rather than on ultimate demand, which it found to be too speculative.[118]

74. We seek comment on appropriate guidelines for states to follow in establishing fill factors. What factors do states currently consider in developing fill factors? How relevant are an incumbent LEC's existing fill factors in establishing forward-looking costs? Should they be dispositive given our tentative conclusion to more closely account for the real-world attributes of the routing and topography of an incumbent LEC's network? If an incumbent LEC's existing fill factors are not dispositive, what other evidence should a state commission consider? Would it be relevant if competitors routinely operated facilities at a higher or lower fill? Should state commissions consider "carrier of last resort" obligations in deciding on the appropriate fill factor? Would the fill factors of other incumbent LECs be relevant to demonstrate achievable efficiencies?

75. Would we expect carriers to operate at higher or lower fill factors as the level of facilities-based competition increases in a market? Is there empirical evidence that distinguishes between the fill factors that carriers experience in competitive markets and monopoly markets? Would carriers in competitive markets be expected to reduce prices in order to increase fill? How are fill factors likely to vary as the rate of demand growth varies? Finally, we seek comment on methods for quantifying dynamically efficient fill factors on a forward-looking basis.

e. Switch Discounts

76. An issue that has arisen in numerous section 271 proceedings is whether to base unbundled switching prices on payments that the incumbent LEC makes to the vendor for: (1) an entirely new (or replacement) switch; (2) growth equipment, such as line or trunk termination equipment, added to the existing switch to increase capacity and satisfy growing demand; (3) technology upgrades to existing equipment, such as the processor, to increase speed and capacity that make new features and services possible; or (4) some combination of these. This issue arises because switch manufacturers typically offer a relatively large price discount for an entirely new switch and a smaller discount on growth or upgrade equipment added to an existing switch.

77. The Commission has found that state commissions in setting UNE rates "may take into account that there will be growth in a network in the future and that it may not be cost-effective to acquire all of the projected switching capacity needed over the life of the switch at

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Commission concluded that a fill factor of 30 percent for distribution cable in Oklahoma was too low and violated TELRIC principles because it assumed that too much of the capacity would be idle for an indefinite time, contrary to TELRIC's presumption of an efficient network. *SWBT Kansas/Oklahoma 271 Order*, 16 FCC Rcd at 6275-76, para. 80.

[118] *USF Inputs Order*, 14 FCC Rcd at 20243-44, para. 199 ("[T]he fact that the industry may build distribution plant sufficient to meet demand for ten or twenty years does not necessarily suggest that these costs should be supported by the federal universal service support mechanism.").

the outset."[119] The Commission, therefore, has rejected an assumption that the appropriate switching discount for TELRIC pricing purposes must be based on a purchase of 100 percent new switches.[120] The Commission recognized that certain vendors provide a greater discount for new switches and a smaller discount for growth additions, and that the large initial discount is available only when an overall purchase of both new and growth equipment is planned. Cost models may in a forward-looking manner take into account specific new and growth discounts that carriers receive in contracts with vendors and, accordingly, may reflect a reasonable combination of new and growth switch deployment.[121]

78. Because switching equipment has a high degree of modularity, carriers over time grow their switches and upgrade them with new technology as it evolves on the premise that this is a better way to minimize costs than purchasing a switch large enough to satisfy anticipated demand over the entire life of the switch. We seek comment on whether unbundled switching costs should be based on the prices that an efficient incumbent LEC or other entrant would pay for switching equipment over the life of the switch and not at a particular point in the switch's life cycle, *e.g.*, not at the beginning of the life cycle when the carrier is paying vendors for a new switch, nor at the end of the switch's life when a carrier is paying vendors primarily for growth additions or technology upgrades to the switch. In addressing this question, parties also should explain what assumptions they make with respect to line demand and technology improvements. Is it reasonable to assume that switched access line demand will grow? Is it reasonable to assume continued improvement in switching technology? What assumptions have state commissions made with respect to vendor discounts? Parties also should explain their assumptions regarding vendor pricing strategies, and the basis for those assumptions.

79. The basic formula for developing a price for an element is to divide total cost by total demand. In the case of switching, does the total cost consist of a new switch reflecting a relatively large vendor discount plus growth and upgrade equipment reflecting relatively small discounts? Should this cost then be spread over total demand consisting of all the lines served by the new, growth, and upgraded equipment over the switch's life? We ask for comment on the use of this principle in developing a price that is based on costs of equipment installed in increments over the life of the switch. Parties also should explain whether, and how, these calculations should account for the time value of money. Should the future costs associated with growth and upgrade equipment be discounted to their present value? Should the same treatment apply to additional future demand associated with that equipment? Is the appropriate discount

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[119] *Application by Verizon New Jersey Inc., Bell Atlantic Communications, Inc. (d/b/a Verizon Long Distance) NYNEX Long Distance Company (d/b/a Verizon Enterprise Solutions), Verizon Global Networks Inc., and Verizon Select Services Inc., for Authorization to Provide In-Region, InterLATA Services in New Jersey*, WC Docket No. 02-67, Memorandum Opinion and Order, 17 FCC Rcd 12275, 12293, para. 43 (2002) (*Verizon New Jersey 271 Order*).

[120] *Verizon New Jersey 271 Order*, 17 FCC Rcd at 12293, para. 43.

[121] *Joint Application by BellSouth Corporation, BellSouth Telecommunications, Inc., and BellSouth Long Distance, Inc for Provision of In-Region, InterLATA Services in Georgia and Louisiana*, CC Docket No. 02-35, Memorandum Opinion and Order, 17 FCC Rcd 9018, 9059-60, para. 82 (2002). Similarly, although we recognize that an efficient competitor might anticipate some growth additions over the long run, the Commission has found that rates based on an assumption of 100 percent growth additions and no new switches do not comply with TELRIC principles. *Verizon Rhode Island 271 Order*, 17 FCC Rcd at 3318, para. 34.

rate the cost of capital used in calculating UNE prices generally?

80. Assuming that unbundled switching prices should reflect vendor prices for switch equipment that is installed in increments over the life of the switch (not the price that the carrier pays for equipment at any one point in the life cycle of the switch), we seek comment on whether the starting point for calculating costs should be a new switch that is installed today. We also seek comment on whether unbundled switching prices should reflect, in addition to costs for the initial switch equipment, costs of growth additions and technology upgrades, growth additions alone, or upgrades alone for the years following the initial installation. Commenters that believe current prices should recover costs of future upgrades should explain why current competitive LECs should pay for benefits that they do not yet receive. In light of our conclusion that UNE pricing should continue to be based on a forward-looking methodology, we ask commenters to describe in detail any rationale for supporting or rejecting UNE prices based on vendor prices that incumbent LECs currently pay for equipment they are installing today in existing switches, *i.e.*, vendor prices for growth additions and technology upgrades made at a particular point in the life cycle of an existing switch.

81. We ask parties to explain in detail the methodology that should be used to develop total cost and total demand under this approach. We also invite parties to submit studies showing how to develop an unbundled switching price. These studies should assume that service is provided using modern digital switches that are installed today. We ask that commenters develop this price for either an incumbent LEC's study area or a UNE zone within a study area. One study should develop the costs of initial new equipment and all future growth equipment that is expected to be installed periodically over the life of the switch. A second study should develop costs for these two components plus costs of all future technology upgrade equipment that is expected to be installed periodically over the life of the switch. Parties should explain and fully document the methodology, assumptions, and data they use to estimate these costs and the demand over which these costs are spread.[122] If a commenter believes UNE prices should be based on a switch technology other than digital technology, that party may submit other studies in addition to, rather than in place of, the studies requested above.

C. Cost of Capital

82. In the *Local Competition Order*, the Commission stated that the "currently authorized rate of return at the federal or state level is a reasonable starting point" in determining the cost of capital and that incumbent LECs "bear the burden of demonstrating with specificity that the business risks that they face providing unbundled network elements and interconnection

[122] At a minimum, commenters should document the following assumptions: (1) switched access line annual rate of growth, (2) switched access minutes of use annual rate of growth, (3) annual rate of growth of busy hour minutes of use per switched access line, (4) how frequently growth equipment is added to the switch to satisfy growing demand, *e.g.*, yearly, every two years, etc., (5) how frequently technology upgrade equipment is added, (6) expected useful life of a switch installed today, (7) cost of capital used to calculate the present value of all current and future costs and all current and future demand, and (8) how frequently the central processor, switch memory and other "getting started" equipment are entirely replaced with new equipment, or augmented by adding equipment, to increase capacity for satisfying growing demand or providing advanced features and services. The getting started cost of the switch, also known as the "first cost," is for the central processor, memory, maintenance, administrative, test, spare and other common equipment.

services would justify a different risk-adjusted cost of capital or depreciation rate."[123] The Commission noted that 11.25 percent was the currently authorized rate of return at the federal level, but it held that states may "adjust the cost of capital if a party demonstrates to a state commission that either a higher or lower level of cost of capital is warranted."[124]

83. In the *Triennial Review Order*, the Commission clarified that a TELRIC-based cost of capital should reflect the risks of a competitive market.[125] Because the objective of TELRIC is to establish a price that replicates the price that would exist in a market in which there is facilities-based competition, the Commission held that TELRIC prices should reflect the risk of losing customers to other facilities-based carriers.[126] The Commission found that calculating rates based on an assumption of a forward-looking network that uses the most efficient technology (*i.e.*, the network that would be deployed in a competitive market), without also compensating for the risks associated with investment in such a network, would reduce artificially the value of the incumbent LEC network and send improper pricing signals to competitors.[127] The Commission stated that establishing UNE prices based on an unreasonably low cost of capital would discourage competitive LECs from investing in their own facilities and thus slow the development of facilities-based competition.

84. As noted above, the importance of this clarification was to confirm that state commissions must use a consistent set of assumptions when they calculate the three components of rates (operating expenses, cost of capital, and depreciation expense).[128] That is, if the network assumptions are based on projections about what a network would look like in the long-run assuming facilities-based competition, the same approach should be followed in developing the cost of capital. We invite parties to comment on whether this principle should apply even if the Commission adopts a UNE pricing methodology that is tied more closely to the existing network of an incumbent LEC. If we ultimately were to find that state commissions should consider an incumbent LEC's existing network in calculating the investment in the network, should they also calculate cost of capital based on the existing competitive risk associated with that network?

85. We ask parties to identify the specific variables that determine the cost of capital under the network assumptions that they advocate, and to offer suggestions as to how to quantify the various components of risk that should be reflected in a company's cost of capital. What are the theoretical arguments that support the use of these variables? Is there empirical evidence regarding the effect each variable has on a carrier's cost of capital? How should the cost of debt and cost of equity be weighted? How should states determine the appropriate capital structure? Is incremental investment typically funded through debt or equity? Should the cost of capital

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123 *Local Competition Order*, 11 FCC Rcd at 15856, para. 702.

124 *Id.*

125 *Triennial Review Order* at paras. 680-84.

126 *Id.* at para. 680.

127 *Id.* at paras. 680-82.

128 *Id.* at paras. 682, 689.

reflect this?

86. In the *Triennial Review Order*, we recognized that one important risk factor to consider is the risk of losing customers to facilities-based competitors. How should this risk be measured? What is the relationship between this risk and the network assumptions that we adopt? Is it always the case that supplying a given product or service in a fully competitive market is more risky than supplying the same product or service in a market in transition from monopoly to competition? We also ask parties to address the role of fixed and sunk costs, assumptions about the level and kind of competition, and entry strategies of competitors in affecting risk and cost of capital of incumbent carriers.

87. We ask parties to comment on the relationship, if any, between our unbundling rules and the risk of stranded investment. The *Local Competition Order* suggested that the availability of long-term contracts presented one mechanism by which incumbent LECs might reduce the risk of stranded investment.[129] We ask parties to discuss whether long-term contracts have been used in the provision of UNEs. If they have not, why not? Does the process of setting prices at forward-looking costs in an industry in which costs generally are decreasing, and revising these prices periodically, discourage entry into long-term contracts? How, if at all, should any increased risk of stranded investment due to the use of month-to-month contracts be considered in calculating the cost of capital? How can this risk be quantified? Does the use of economic depreciation eliminate the need to compensate separately an incumbent LEC for any additional risk of stranded investment?

88. We also ask parties to comment on ways in which the Commission might simplify the task of setting the cost of capital. For example, if we retain our current rules, and the cost of capital is intended to reflect the risk of participating in a market with facilities-based competition, is there any reason that the cost of capital would vary among different states, or among different companies? If not, would it be appropriate for the Commission to establish a particular cost of capital for states to employ? If we move to a pricing regime that looks more closely at the incumbent LEC's actual network, are there any presumptions we could establish to facilitate selection of a cost of capital? We ask parties to provide studies in support of their proposals. Regardless of our network assumptions, are there particular models for projecting cost of capital that clearly should or should not be used? Are there particular data sources that should or should not be given deference? We ask parties to identify proxy companies or industries for use in estimating the UNE cost of capital and to explain in detail why they believe the identified proxies are appropriate.[130]

89. In the *Triennial Review Order*, the Commission also clarified that a TELRIC-based cost of capital should reflect any unique risks (above and beyond the competitive risks discussed above) associated with new services that might be provided over certain types of

[129] *Local Competition Order*, 11 FCC Rcd at 15849, para. 687.

[130] Because no actual company is in the business solely of providing UNEs, it is necessary to determine the risk associated with the UNE business by using as a proxy existing companies or industries that are believed to have a comparable level of risk.

facilities.[131] The Commission reiterated its finding from the *Local Competition Order* that different UNEs may have different costs of capital[132] and clarified that the use of UNE-specific costs of capital is an acceptable method of reflecting in UNE prices any risk associated with new facilities that employ new technology and offer new services. We ask parties to comment on when it would be appropriate for a state commission to establish different costs of capital for different UNEs. What types of risks would distinguish one element from another with respect to cost of capital? Would such an approach accurately reflect how incumbent LECs actually raise capital (*i.e.*, on an entity-wide as opposed to a per-facility basis) and, if not, is this relevant?

90. Although states have had the option of establishing UNE-specific costs of capital since 1996, we are not aware of any states that have followed this approach. We ask parties to comment on the reasons why such an approach has not been implemented. We are particularly interested in comments from state commissions that have considered and rejected this approach. Are there steps the Commission could take to facilitate the ability of states to establish UNE-specific costs of capital? Do the benefits of using a cost of capital that more accurately reflects the risk associated with providing a particular UNE outweigh the administrative burden of such an approach?

91. We ask parties to explain whether different proxy groups should be used to estimate the cost of capital for different UNEs. If parties believe that different proxy groups should be used, they should identify these proxy groups and explain in detail why these are appropriate. An alternative approach would be to estimate the cost of capital based on a single proxy group and then adjust that cost of capital according to the relative risk of the particular UNE. Parties that favor such an approach should explain in detail how to make the relative risk adjustments. Please also identify the proxy group of companies used as the starting point to estimate the cost of capital and explain in detail why this proxy group is appropriate.

D. Depreciation Expense

92. Economic depreciation is a method of reflecting anticipated declines in the net present value of an asset over the course of its useful life. If equipment prices are expected to decline over time, the value of equipment currently in use in the network (and therefore the price under a forward-looking methodology) should decline over time at the same rate. Calculating the appropriate rate of price decline is quite complicated because it is based largely on projections about future events. In UNE pricing cases, however, the task is made even more difficult by the manner in which most computer cost models calculate prices. Specifically, most models include a levelization function that imposes a constant price schedule over the life of the asset. As we discuss in more detail below, there is an inherent tension between levelizing prices, on the one hand, and establishing UNE prices that reflect anticipated equipment price changes, on the other hand.

93. There are two components of depreciation – the useful life of the asset, and the

[131] *Triennial Review Order* at para. 683.

[132] *Local Competition Order*, 11 FCC Rcd at 15856, para. 702 ("We note that the risk-adjusted cost of capital need not be uniform for all elements.").

rate at which the asset is depreciated over that useful life. In the *Local Competition Order*, the Commission stated that properly designed depreciation schedules should take into account expected declines in the value of goods.[133] Similarly, the Commission's rules require the use of "economic depreciation" but provide no additional detail.[134] In the *Triennial Review Order*, we declined to mandate any particular set of economic lives because there was no record to support such a finding.[135] With respect to the rate of depreciation, however, we clarified that a carrier may accelerate recovery of the initial capital outlay for an asset over its life to reflect any anticipated decline in its value.[136] Recovering more of the initial capital outlay for the asset in the early years would enable a carrier to recover less in later years, thereby allowing it to compete with carriers that have purchased new, lower-priced equipment in those later years.[137]

1. Asset Lives

94. The useful life of an asset normally is determined by comparing the operating cost of the existing asset with the operating cost plus the investment cost of a new asset that performs the same functions (assuming the new equipment will generate the same revenue as the existing equipment). Estimating asset lives is difficult because the estimate depends on the physical life of the existing asset, the expected operating cost of the existing asset, and the expected investment and operating cost of new assets, some of which may not yet have been invented.

95. In 1994 and 1995, the Commission simplified its depreciation process by establishing a "safe harbor" range of asset lives for use by incumbent LECs.[138] The Commission modified the range for digital switching equipment in 1999.[139] Asset lives prescribed by the Commission were intended to be forward-looking when they were established,[140] and the Supreme Court specifically found that FCC-prescribed asset lives were a reasonable starting point for developing the depreciation expense to be used in setting UNE prices.[141]

96. In the *Biennial Review Depreciation Order*, the Commission noted that more than

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[133] *Id.* at 15849, para. 686.

[134] 47 C.F.R. § 51.505(b)(3).

[135] *Triennial Review Order* at para. 688.

[136] *Id.* at paras. 689-91.

[137] *Id.* at para. 690.

[138] *Simplification of the Depreciation Prescription Process*, CC Docket No. 92-296, Second Report and Order, 9 FCC Rcd 3206 (1994); Third Report and Order, 10 FCC Rcd 8442 (1995).

[139] *1998 Biennial Review – Review of Depreciation Requirements for Incumbent Local Exchange Carriers*, CC Docket No. 98-137, Report and Order, 15 FCC Rcd 242, 247-48, para. 13 (1999) (*Biennial Review Depreciation Order*).

[140] *See USF Inputs Order*, 14 FCC Rcd at 20344-45, para. 426 ("We believe this process of combining statistical analysis of historical information with forecasts of equipment replacement generates forward-looking projected lives that are reasonable estimates of economic lives and, therefore, are appropriate measures of depreciation.").

[141] *Verizon v. FCC*, 535 U.S. at 519-20.

20 states have used FCC regulatory lives in calculating TELRIC-based UNE prices. In the same order, the Commission rejected the use of asset lives reflected in financial reporting. [142] It did, however, permit incumbent LECs to seek waivers that would allow them to use financial book lives,[143] although no LEC has yet sought a waiver under these rules. This decision did not, however, specifically consider whether FCC lives or financial book lives are more appropriate for use in a TELRIC calculation. In the universal service proceeding, the Commission used FCC-prescribed regulatory lives in running the Synthesis Model.[144] In its section 271 decisions, the Commission has found both FCC regulatory lives and financial book lives to be consistent with TELRIC principles.[145] Similarly, in the *Triennial Review Order*, the Commission declined to mandate one set of asset lives or the other.[146]

97. The issue of asset lives is one where we believe more guidance from the Commission would be helpful to state commissions. Although the record in the *Triennial Review* proceeding did not offer a basis for providing such guidance, this NPRM provides an opportunity for parties to present evidence to support such guidance.

98. In past decisions, the Commission has been reluctant to rely solely on financial reporting lives out of concern that Generally Accepted Accounting Principles (GAAP) might permit companies to adopt depreciation methods that result in excessive depreciation expense.[147] Is this reluctance warranted in the context of UNE ratesetting? Do the financial lives used to develop earnings reported to shareholders match those that companies use to plan their future capital expenditures? If not, are the financial lives used to develop reported earnings shorter or longer than those that companies use to plan their capital expenditures? Please explain why these lives differ, assuming that they do. We request that competitive LECs and incumbent LECs submit the lives that they use to plan their capital expenditures.

99. We seek comment on how financial reporting lives are developed and whether they accurately represent the anticipated economic life of assets. For example, how do financial reporting lives reflect the potential impact of future technologies? With respect to the major categories of plant and equipment (switching, loops, interoffice transport), is there objective evidence that anticipated changes in technology will cause equipment installed today to have shorter lives than the same equipment that was installed in the past? Is there objective evidence that potential advances in technology may actually lengthen the useful life of some types of

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[142] *Biennial Review Depreciation Order*, 15 FCC Rcd at 262-63, para. 48 ("We believe that giving incumbent LECs the right to select, for regulatory purposes, any depreciation rate allowed by GAAP [Generally Accepted Accounting Principles] is inappropriate as long as incumbent LECs reserve the right to make claims for regulatory relief based on the increased depreciation that would result from granting them that flexibility.").

[143] *Id*. at 252-53, para. 25 (establishing waiver requirements).

[144] *USF Inputs Order*, 14 FCC Rcd at 20344, para. 426.

[145] *See, e.g., Verizon Rhode Island 271 Order*, 17 FCC Rcd at 3316-17, para. 30 (FCC lives); *SBC Kansas/Oklahoma 271 Order*, 16 FCC Rcd at 6274, para. 76 (financial lives).

[146] *Triennial Review Order* at para. 688.

[147] *Biennial Review Depreciation Order*, 15 FCC Rcd at 263, para. 48.

assets? What asset lives are appropriate for equipment in the existing incumbent LEC network that is, or soon will be, obsolete? How relevant, if at all, is the actual retirement experience of an incumbent LEC, its depreciation reserves, or its projected investment plans for the near future? Is there other objective evidence the Commission should consider in this regard? We encourage parties to provide studies forecasting the economic lives of the major local exchange carrier assets in support of their proposals.

100. We also seek comment on whether compliance with GAAP results in any systematic bias. For example, does the "conservatism" principle underlying GAAP lead to a downward bias in asset lives?[148] How much discretion does GAAP give incumbent LECs in setting asset lives? Will pressure from the financial markets ensure that asset lives are estimated accurately? Does the use of different asset lives for different regulatory purposes create incentives for regulatory arbitrage?

101. We also ask parties to comment on whether FCC regulatory lives reflect the competition and technology assumptions required under a forward-looking costing methodology. We note that it has been almost a decade since the Commission first established forward-looking asset lives, and the Commission last adjusted its "safe harbor" asset lives in 1999.[149] Are these lives still accurate? We ask parties to explain whether the validity of FCC asset lives depends in part on whether the Commission retains a scorched node approach to network design or instead adopts its tentative conclusion that forward-looking costs should more closely account for the real-world attributes of the routing and topography of an incumbent LEC's network.

2. Depreciation Rate

102. As noted above, economic depreciation is a method of reflecting anticipated declines in the net present value of an asset over the course of its useful life. Where equipment prices are expected to decline over time, the value of existing network assets (and therefore prices under a forward-looking methodology) should decline at the same rate. In the *Triennial Review Order*, we stated that front-loading depreciation may be appropriate in such situations, although we noted that there were a number of unanswered questions regarding precisely how carriers could reflect anticipated equipment price changes in their UNE prices.[150] This proceeding presents an opportunity to explore these questions.

103. As noted above, the rate of equipment price changes, if normalized to reflect advances in technology, should be a significant factor in calculating TELRIC prices. We ask

[148] GAAP is "guided by the conservatism principle which holds, for example, that when alternative expense amounts are acceptable, the alternative having the least favorable effect on net income should be used." *Biennial Review Depreciation Order*, 15 FCC Rcd at 263, para. 48 (quoting *Simplification of the Depreciation Prescription Process*, CC Docket No. 92-296, Report and Order, 8 FCC Rcd 8025, 8044 (1993)).

[149] *Simplification of the Depreciation Prescription Process*, CC Docket No. 92-296, Second Report and Order, 9 FCC Rcd 3206 (1994); Third Report and Order, 10 FCC Rcd 8442 (1995); *Biennial Review Depreciation Order*, 15 FCC Rcd at 247-48, para. 13.

[150] *Triennial Review Order* at paras. 690-91. Conversely, back-loading depreciation may be appropriate when equipment prices are rising.

parties to comment on the relationship between the rate of change in equipment prices and the rate of change in final product prices. To what extent do companies in competitive markets consider changes in the economic efficiency of assets (*e.g.*, price changes, technological advances) in deciding how quickly to recover investments? How can we measure anticipated changes in the efficiency of equipment? To be useful, must any measurement of equipment price changes also reflect advances in the capabilities of the equipment? Are there publicly available price indices that adjust for changes in economic efficiency that could be used in establishing depreciation schedules? Are there other sources of information that would be more appropriate for use in establishing rates based on a forward-looking costing methodology? Parties should explain how different sources of data address changing capabilities of equipment over time. Parties also should explain whether recent declines in equipment costs, if any, are useful in establishing a general approach going forward, or are they instead extraordinary events caused by the recent sudden decline in markets for telecommunications equipment generally and therefore not reliable indicators of general trends in equipment pricing?

104. If the investment cost of equipment declines from year to year, UNE prices also should decline from year to year, all else being equal. Similarly, if investment costs are expected to increase from year to year, then UNE prices also should increase from year to year. A regime with wholesale prices that change over time may be a rational response to a market where investment costs are changing and facilities-based competition exists or is expected to exist. We ask parties to comment on the costs and benefits of such a regime. We also ask parties to address whether adjustments to depreciation expense represent the best mechanism for reflecting anticipated equipment price changes in UNE prices. If UNE prices can be adjusted directly to reflect anticipated equipment price changes, there may be no need to develop complicated mechanisms for reflecting such changes in depreciation expense.

105. One of the difficulties in reflecting changing equipment costs in UNE prices is that most cost models used in setting TELRIC prices do not reflect the actual investment patterns of carriers. Carriers continually invest in new assets and depreciate (and eventually retire) old assets. In contrast, the cost models typically assume that the entire investment in the network is made at a single point in time, and that no additional investment is made in subsequent periods. This same process is then repeated each time a state commission sets new rates. Because the return on investment will decline in each period as the base of undepreciated investment declines, even straight-line depreciation will result in rapidly declining prices over time unless recovery is levelized across time periods. Consequently, a "levelization" function is included in most cost models to replicate real-world investment and recovery patterns.

106. The levelization of rates that occurs in most cost models appears to be inconsistent with the concept of adjusting UNE prices to reflect anticipated changes in equipment prices. We ask parties to comment on this statement and to discuss the consequence of running current cost models without the levelization function. Does the use of levelization send incorrect signals to the extent that it produces UNE prices that do not vary over time even when input prices are rising or falling? Would there be dramatic variation in rates from year to year if rates were not levelized? Would this type of variation distort the economic signals regarding the efficient use of incumbent LEC facilities by competitors?

107. An alternative method of reflecting economic depreciation might be to recover

through depreciation expense the difference between the current value of the asset and the anticipated value of the asset at the next rate proceeding. As a practical matter, how would such an approach work? How would the anticipated future value of assets be determined? One issue that arises under this alternative approach is whether and how prices should be adjusted if a state commission's expectations regarding equipment prices prove to be incorrect. We ask parties to comment on this approach to economic depreciation and to identify other approaches that might be used.

108. Given the potential difficulties associated with some of the mechanisms described above, we ask parties to comment on whether a reduction in asset lives might be used as a proxy for changing investment costs. Under what circumstances would a carrier retire an asset before the end of its useful life? Once an asset is in service, is it reasonable to assume that it would be retired early only if the net present value of the expected future cash flows associated with buying and operating new technology is higher than the expected cash flows associated with operating the old asset? If the use of shorter asset lives increases the amount of cost recovery, is this an appropriate method of reflecting anticipated technological improvements that would lower costs? Is there a risk of over-recovery if asset lives are shortened? Is there evidence that this is how unregulated companies account for the uncertainties associated with equipment price changes and other consequences of advancing technology?

E. Expense Factors

109. One area of controversy in state pricing proceedings has been the calculation of monthly operating expenses. In theory, the monthly operating cost should be calculated by estimating the total forward-looking operating expense associated with a particular network element (*e.g.*, by conducting time and motion studies of likely maintenance activities) and then dividing the total operating expense by the appropriate number of units, such as lines, to obtain the expected average operating expense. Such an approach is difficult to implement in practice, however, so regulators often estimate projected operating expenses by multiplying the projected investment in the network by an annual cost factor (ACF).[151] An ACF typically is a ratio of current expenses to current investment for a particular account. The ratio is multiplied by the projected investment to obtain the projected expenses. An alternative method of calculating monthly operating costs is to look at current operating expenses and make any adjustments to reflect anticipated experience in the period for which the projection is made, such as adjustments for productivity and inflation.

110. We seek comment on these approaches to estimating expenses. Is one approach clearly superior to the others? Under the network assumptions required by our TELRIC rules, is it correct to assume that expenses will be reduced in proportion to reductions in investment? Would such an assumption be more acceptable if we changed the network assumptions to more closely track an incumbent LEC's existing network? Would it be reasonable to assume that an incumbent LEC's current expenses represent the forward-looking costs of operating a network? Why or why not? Are there approaches to projecting expenses that do not rely on an incumbent LEC's past experience, such as benchmarking to other companies? Are there other approaches

[151] *See, e.g., USF Inputs Order*, 15 FCC Rcd at 20301-02, 20304, paras. 341, 346.

that might be used to estimate expenses more accurately?

111. We invite parties to provide empirical evidence that demonstrates the factors that most influence the level of expenses. For example, are outside plant expenses more likely to be correlated to changes in labor rates, the level of outside plant investment, or some other factor or combination of factors? Do the same factors control the expenses associated with switching and transport, or are there other factors upon which those expenses should be based? Do the factors that influence expenses vary by state or by carrier? Is the level of expenses affected by the assumed life of an asset for depreciation purposes? For example, if we shorten asset lives as a proxy for accelerated depreciation, as discussed above, would it also be appropriate to reduce operating expenses under the assumption that the carrier would avoid the higher expense of operating an asset at the end of its useful life?

112. If we find that the best method of projecting expenses is to make forward-looking adjustments to actual expenses, what type of adjustments would be appropriate? If adjustments are made for inflation and productivity, how should those factors be measured? Are an incumbent LEC's past productivity gains a relevant consideration, or should we look at measures of productivity across carriers, or across the industry generally? From what sources should this information be developed?

113. We ask parties to address any specific issues that arise in connection with estimating non-plant expenses, such as customer care or common overhead. How should these costs be allocated among different elements? Is it appropriate to allocate these costs to non-recurring charges, or should they be recovered only through recurring charges?

F. Non-Recurring Charges

114. As discussed above, non-recurring costs may be thought of as the "installation" or "set-up" costs an incumbent LEC incurs processing and provisioning a competitive LEC order for a UNE. Non-recurring charges (NRCs) constitute an upfront cost to the competitive LEC that is generally not recoverable if it subsequently loses the end-user customer served with the UNE. Consequently, as the Commission recognized in the *Local Competition Order*, NRCs can be a serious barrier to entry, especially if they are unduly high.[152]

115. In the *Local Competition Order*, the Commission concluded that, as a general rule, rates for unbundled network elements should recover costs in the manner in which they are incurred.[153] The Commission required that recurring costs be recovered through recurring charges, rather than through a non-recurring charge.[154] It gave discretion to state commissions, however, to require incumbent LECs to recover non-recurring costs through recurring charges over a reasonable period of time. The Commission found that recovery of non-recurring costs through recurring charges was a "common practice" that "fully compensated" the incumbent

[152] *Local Competition Order*, 11 FCC Rcd at 15875, para. 747.

[153] *Id*. at para. 743.

[154] *Id*. at 15874-75, para. 745.

LECs for their non-recurring costs.[155] It also required that states take steps to ensure an equitable distribution of non-recurring costs among carriers that benefit from a non-recurring activity (*e.g.*, by providing the initial competitive LEC a *pro rata* refund of charges paid when a subsequent competitive LEC uses the same facility).[156]

1. Identification of Costs

116. The subject of NRCs presents two sets of issues that have been a constant source of dispute in state proceedings and in section 271 applications since 1996. The first set of issues relates to what costs an incumbent LEC should be permitted to recover for the activities needed to initiate service to a competitive LEC. In TELRIC proceedings, a significant issue has been whether the state commission should assume a state-of-the-art network in calculating non-recurring costs just as it does with recurring costs, as our rules suggest,[157] or whether it should use a different network assumption that more closely reflects the costs associated with providing services on the incumbent LEC's existing network.

117. We believe that consistency among the various components of rates is important. Using one set of network assumptions for recurring charges and a different set of network assumptions for NRCs potentially results in some over-recovery or under-recovery. Nevertheless, we are sensitive to the practical concern that network assumptions that depart significantly from an incumbent LEC's existing network might preclude recovery of the cost of non-recurring activities that would be required in establishing a competitive market. We ask parties to address whether our tentative conclusion in paragraph 52 should apply with respect to NRCs and, if it does, whether this ensures that incumbent LECs will be able to recover all of their forward-looking costs of non-recurring activities.

118. A related issue that often arises in state proceedings is the relationship between NRCs for manual activities and an incumbent LEC's operational support systems (OSS). In light of our tentative conclusion to more closely account for the real-world attributes of the routing and topography of the incumbent LEC's existing network in developing forward-looking costs, what assumptions should be made with respect to the capability of the incumbent LEC's OSS? Should the costs associated with OSS be recovered through expense factors or should separate charges be permitted? If charges to recover OSS costs are permitted, how should they be calculated? Should incumbent LECs be permitted to recover through separate OSS charges the costs associated with systems that are used for both wholesale and retail services? Given that many OSS upgrades affect both wholesale and retail functions, how should regulators allocate OSS costs between these functions? Should all costs of opening an incumbent LEC's OSS to competitors be borne by the competitors, or are there costs that are more appropriately spread among the incumbent LEC's retail customers as well?

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[155] *Id*. at 15875-76, para. 749.

[156] *Id*. at 15876, paras. 750-51.

[157] 47 C.F.R. § 51.507(e) ("Non-recurring charges . . . shall not permit an incumbent LEC to recover more than the total forward-looking cost of providing the applicable element.").

119. Even with highly automated systems, some manual activities always will be needed. We ask parties to comment on the particular activities that are not susceptible to automation. How should state commissions determine the cost of performing these activities? We note that testimony on these issues in state TELRIC proceedings typically relies primarily, if not exclusively, upon the subjective opinions of panels of subject matter experts.[158] We seek comment on how state commissions might develop more objective evidence on non-recurring costs. Would a shift to network assumptions that more closely track the incumbent LEC's existing network eliminate some of the speculation that often characterizes state proceedings? Is it appropriate to establish a presumption that an incumbent LEC's current practices with respect to non-recurring activities are efficient, or are an incumbent LEC's incentives to be efficient diminished when competitive LECs are the primary users of a particular activity?

2. Recovery of Costs

120. The second set of issues relates to whether non-recurring costs should be recovered through NRCs or through recurring charges. The costs at issue generally are labor costs, *i.e.*, the cost of sending a technician to a customer location, a remote terminal, or a central office to perform some activity that is necessary for the competitive LEC to be able to serve an end user. Beyond a general preference for recovery through recurring charges,[159] the *Local Competition Order* provided no guidance to the states as to how they should distinguish between costs recoverable through NRCs and costs to be treated as operating expenses that are recovered through recurring charges.

121. One possible guideline for making this difficult decision would be to limit recovery through NRCs to those costs that exclusively benefit the competitive LEC ordering the UNE. This approach provides a mechanism by which an incumbent LEC can recover the cost of activities related to the initiation of service by competitive LECs, while at the same time reducing the barriers to entry for competitive LECs. The cost of activities for which NRCs are not permitted generally would be recovered in recurring charges through expense factors, just as LECs recover costs associated with repair and maintenance of their networks.[160]

122. Would allowing NRCs only for activities that solely benefit a specific competitive LEC reduce the number of activities for which NRCs would be permitted? For example, should installation of a cross-connect at a feeder/distribution interface (FDI) be subject to a NRC if such a facility typically remains in place after a customer terminates service? Conversely, should placement of a cross-connect from the main distribution frame (MDF) in a central office to a competitive LEC's collocation space remain subject to a NRC because only the competitive LEC that orders the cross-connect would benefit from the work?

123. We also ask parties to comment on how an approach that limits NRCs to activities

[158] *See Qwest 9-State 271 Order*, 17 FCC Rcd at 26425, paras. 214, 216.

[159] *Local Competition Order*, 11 FCC Rcd at 15875-76, para. 749.

[160] A possible exception to this approach would be in cases where the incumbent LEC can demonstrate that the cost was not considered in calculating the expense factor, *e.g.*, where it did not need to perform the activity for its own operations and competitive LECs were not yet requesting the activity.

benefiting a particular CLEC would be implemented by the states. Although such an approach would reduce the likelihood that NRCs would impose a barrier to competitive entry, would it also provide incumbent LECs with full recovery of their forward-looking costs? Would such an approach simplify the calculation of NRCs by state commissions? Is it necessary under such an approach to back out certain costs from the calculation of expenses to avoid double recovery? Is there a simple way to make such an adjustment? How should carriers that have paid a NRC for a particular activity be credited if an incumbent LEC subsequently eliminates the NRC and recovers those same costs through recurring charges?

124. We solicit comment on whether a contrary approach, allowing NRCs for every activity related to a competitive LEC order, would provide sufficient incentive for incumbent LECs to use mechanized processes when it is efficient to do so. Would allowing NRCs for all such activities increase the potential for over-recovery of these costs? Would regulators need to develop mechanisms to back out these costs in developing expense factors? Would it be necessary to develop some type of refund mechanism if other carriers also benefit from the work? Parties that oppose limiting the activities for which NRCs are permitted should suggest practical methods for making such adjustments in order to avoid double recovery of costs.

125. We invite parties to offer other suggestions on principles that states could apply to identify when it is appropriate to recover costs through NRCs, and the consequence of those principles on competitive entry and cost recovery. For example, of what relevance are the NRCs imposed by incumbent LECs on retail customers? Could those NRCs serve as a basis for assessing the reasonableness of NRCs imposed on competitive LECs? Could we resolve concerns about the level of NRCs by eliminating or reducing the allocation of common costs and overhead to activities for which NRCs are imposed?

3. Disconnection Costs

126. Beyond these general issues related to when NRCs should be imposed and what costs they should recover, we note that there are a number of specific issues that are a continuing source of controversy in state pricing proceedings. One issue that arises in many proceedings is the question of disconnect costs. Incumbent LECs typically favor recovering the cost of disconnecting UNEs at the time of installation, while competitive LECs generally argue that such costs, if they exist at all, should be recovered at the time service actually is disconnected.[161]

127. We note that calculating the appropriate charge for disconnection may be more complex if it is imposed at the time of installation. As an initial matter, it is difficult to predict how often disconnect costs actually will be incurred. Many NRCs that incumbent LECs charge their retail customers cover both installation and disconnection of service, and therefore the cost of disconnecting a UNE may already have been recovered by the incumbent LEC.[162] In other cases, the customer may switch to another carrier and the cost of rearranging the facilities would be recovered through the installation charge on the new carrier. We ask parties to provide empirical evidence with respect to the frequency with which facilities actually are disconnected

[161] *Qwest 9-State 271 Order*, 17 FCC Rcd at 26326-27, paras. 218-20.

[162] *Id*. at 26426, para. 219.

and the costs are not recovered through other charges.

128. Another possible complication if disconnect costs are recovered at the time of installation is that the charge should be discounted to reflect the time value of money over the average period for which the competitive LEC is expected to use the UNE. In the absence of objective evidence on which to base this calculation, accelerating the recovery of disconnect costs is likely to lead to an under-recovery or over-recovery of costs. We ask parties that favor such an approach to explain whether there are other factors that outweigh the consequences of having an intentional mismatch between costs and revenues.

4. Loop Conditioning

129. A second specific issue that has created significant disputes at the state level is loop conditioning. In the *UNE Remand Order*, the Commission stated that incumbent LECs could charge for conditioning loops, notwithstanding the fact that such activity may not be necessary in a forward-looking network.[163] The Commission required the states to ensure that any line conditioning charges comply with FCC pricing rules for non-recurring costs.[164] In the *Triennial Review Order*, the Commission stated that state commissions have discretion to determine whether loop conditioning costs are forward-looking costs, and whether those costs should be recovered through recurring charges or non-recurring charges.[165]

130. We ask parties to comment on when and how the costs associated with loop conditioning should be recovered. The Commission noted in the *UNE Remand Order* that, pursuant to industry engineering standards, loops under 18,000 feet in length generally should be free of impairments such as load coils and excessive bridged taps.[166] Under a forward-looking costing methodology, should competitive LECs be required to pay the costs of conditioning such loops? Does the answer to this question depend on whether we retain the network assumptions of the current TELRIC rules? We noted in the *Triennial Review Order* that one option available to state commissions would be to permit NRCs for loop conditioning only in extraordinary circumstances, such as copper loops that are longer than 18,000 feet.[167] Is this a useful distinction? How, if at all, should such NRCs be distributed among the competitive LEC requesting the conditioning and future carriers that provide DSL service over the conditioned loop?

G. Rate Structure

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[163] *Implementation of the Local Competition Provisions of the Telecommunications Act of 1996*, CC Docket No. 96-98, Third Report and Order and Fourth Further Notice of Proposed Rulemaking, 15 FCC Rcd 3696, 3784, para. 193 (1999) ("*UNE Remand Order*") (subsequent history omitted).

[164] *UNE Remand Order*, 15 FCC Rcd at 3784, para. 194.

[165] *Triennial Review Order* at para. 641.

[166] *UNE Remand Order*, 15 FCC Rcd at 3784, para. 193.

[167] *Triennial Review Order* at para. 641. We note that load coils are not necessary for voice service on loops less than 18,000 feet in length and generally can be removed in a batch process; on loops in excess of 18,000 feet, however, load coils are needed for voice service and typically must be removed one loop at a time.

131. The rules adopted in the *Local Competition Order* contain a variety of requirements regarding how UNE rates should be structured. Charges for dedicated facilities, including unbundled loops and dedicated transport, must be flat-rated.[168] The costs of shared facilities, on the other hand, may be recovered through flat-rated or usage-based charges, as long as the rate structure efficiently apportions costs among users.[169] The Commission also allowed, but did not require, the use of peak-period pricing for local switching and other shared facilities.[170]

132. We seek comment on whether, and under what circumstances, changes are needed to our rate structure requirements. Would it be appropriate to require that switching costs be recovered solely through flat-rated charges? What are the benefits and drawbacks of such an approach? Would flat-rated recovery of switching costs comply with the statutory pricing standard under section 252(d)(1)? Would flat-rated prices also be appropriate for shared transport? For example, should the costs of shared transport be allocated among carriers using a facility based on the proportion of lines each carrier connects to the transport facility?

H. Rate Deaveraging

133. In the *Local Competition Order*, the Commission found that geographically deaveraged rates more closely reflect the cost of providing UNEs.[171] The Commission required states to establish at least three cost-based rate zones.[172] During the course of section 271 proceedings, both incumbent LECs and competitive LECs raised concerns about the consequences of UNE rate deaveraging. In addressing these concerns, the Commission has noted that the combination of retail rates that include implicit support flows (and therefore are not entirely cost-based) and the availability of cost-based, deaveraged UNE rates could affect entry incentives with respect to different geographic areas within a state.[173]

134. The *Local Competition Order* also addressed the subject of "class-of-service" deaveraging. The Commission found that there was no evidence that the cost of providing particular UNEs varies with the type of retail service or retail customer.[174] As with geographic deaveraging, the requirement to average UNE rates across different classes of customers affects how attractive customers might be to competitive LECs in states where similar averaging is not

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[168] 47 C.F.R. § 51.509(a), (c).

[169] *Id.* § 51.509(b), (d), (e); *Local Competition Order*, 11 FCC Rcd at 15878, para. 755.

[170] *Local Competition Order*, 11 FCC Rcd at 15878, para. 756-57.

[171] *Id*. at 15882-83, para. 764.

[172] *Id*. at 15882-83, para. 765.

[173] *See, e.g.*, *Application by Verizon New England Inc., Bell Atlantic Communications, Inc. (d/b/a Verizon Long Distance), NYNEX Long Distance Company (d/b/a Verizon Enterprise Solutions), Verizon Global Networks Inc., and Verizon Select Services Inc., for Authorization To Provide In-Region, InterLATA Services in Vermont*, CC Docket No. 02-7, Memorandum Opinion and Order, 17 FCC Rcd 7625, 7661-64, paras. 65-69 (2002) (discussing the relationship between possible retail rate subsidies and UNE "price squeeze" allegations).

[174] *Local Competition Order*, 11 FCC Rcd at 15883, para. 766.

required for retail services. For example, if retail business rates are higher than retail residential rates for a comparable service, but prices are the same for the UNEs necessary to provide that service, we would expect competitive LECs to target high-margin business customers and to avoid low-margin residential customers.

135. Although our *Triennial Review Order* explains how the Commission's impairment standard takes into account implicit support flows among retail services, that order does not directly address issues related to differences in the averaging of incumbent LEC retail rates and UNE rates.[175] Given the Commission's limited ability to influence or control retail local exchange rates, how can the Commission achieve its goal of sending appropriate economic signals with respect to competitive entry and investment? Would changes to our deaveraging policies with respect to UNEs address these concerns or are there alternative steps that the Commission might take?

136. We seek comment on whether, and under what circumstances, we should retain the requirement of geographic deaveraging. What are the consequences of deaveraging UNE prices in states where retail rates are not similarly deaveraged? Would it be appropriate to require deaveraging only in states where retail rates are deaveraged? Is it possible to reconcile such an approach with the cost-based pricing standard contained in section 252(d)?

137. We seek comment on whether, and under what circumstances, to retain the requirement to average rates across different classes of service. Parties that favor elimination or modification of this requirement should present evidence demonstrating that the costs of serving different classes of customers are sufficiently different to warrant deaveraging of those rates. For example, is there objective evidence that the cost of serving business customers is either higher or lower than the cost of serving residential customers? If so, what is the cause of these cost differences? Is deaveraging UNE rates across classes of customers appropriate if retail rates do not reflect these same cost differences?

I. Rate Changes Over Time

138. One issue on which all parties likely agree is that UNE pricing proceedings under the Commission's current rules require a substantial commitment of resources from everyone involved. A typical UNE pricing proceeding may take two to three years to complete, which results in rates that may be outdated at the time they are adopted. Moreover, even as circumstances change, states may be reluctant to adopt new prices to reflect those changes because they are not willing to commit the resources needed for these proceedings.

139. We ask parties to comment on whether there might be mechanisms that could be used to adjust UNE prices over time, thereby reducing the need for state commissions to conduct a full UNE pricing proceeding every few years. Such an approach might, for example, be similar to many price cap regimes, which periodically adjust rates based on productivity and inflation factors. How might such an approach work for UNE prices? In particular, we ask parties how productivity factors might be calculated. Could a single productivity factor be used, or would it

[175] *Triennial Review Order* at paras. 154-69.

be necessary to develop different factors for different UNEs? Could a national factor be used or would it be necessary to develop state-specific productivity factors? What sources of data could we use to derive these factors? We invite parties to provide empirical evidence regarding productivity, such as productivity studies, that we could use to establish productivity factors if we pursue this approach.

140. If the use of productivity factors to adjust rates periodically is feasible, should it be mandatory? Or should states retain the ability to conduct a full UNE pricing proceeding at their discretion? Would a periodic adjustment to rates in lieu of a full UNE pricing proceeding be sufficient to satisfy a state's legal obligations under section 252? Are there methods other than the use of productivity factors that could be used to make periodic rate adjustments?

V. RESALE PRICING

141. Section 252(d)(3) of the Act requires that state commissions establish wholesale rates for resold services based on the incumbent LEC's retail rates, "excluding the portion thereof attributable to any marketing, billing, collection, and other costs that will be avoided by the local exchange carrier."[176] In the *Local Competition Order*, the Commission adopted a "reasonably avoidable" standard governing the costs that must be considered avoided when calculating the wholesale discount.[177] That is, the Commission found that any costs that "reasonably can be avoided" by the incumbent LEC when it provides a service at resale must be considered avoided in determining the wholesale discount.[178]

142. The Commission's original resale pricing rules were vacated by the Eighth Circuit in *Iowa Utilities II* because the court found that the rules were inconsistent with the plain meaning of the statute.[179] The Eighth Circuit found that the appropriate standard for determining avoided costs is not those costs that "can be avoided," but rather "those costs that the [incumbent LEC] will actually avoid incurring in the future."[180] Further, the court explained that, when determining avoided costs, the state commission may not assume that the incumbent is acting as a wholesaler only, but rather must assume that the incumbent provider is acting as both a wholesale and a retail provider.[181] The Commission has not conducted any further rulemaking to provide additional guidance on establishing wholesale discounts.

143. In light of *Iowa Utilities II*, we ask parties to comment on the need for the Commission to adopt new rules implementing section 252(d)(3). Is the statutory language, as interpreted by the Eighth Circuit, sufficiently clear that further guidance from the Commission is unnecessary? Parties that favor the establishment of national rules should explain what those

[176] 47 U.S.C. § 252(d)(3).

[177] *Local Competition Order*, 11 FCC Rcd at 15956-15957, para. 912.

[178] 47 C.F.R. § 51.609(b).

[179] *Iowa Utilities II*, 219 F.3d at 754-756, 765.

[180] *Id*. at 755.

[181] *Id*.

rules would require. For example, does the court's decision that the discount should be calculated as if the carrier were both a wholesale and retail provider require the Commission or the state commission to make some type of assumption as to how much competition there is in the marketplace, or did the court simply intend for the state to consider the current level of competition and the current split between an incumbent LEC's retail and wholesale services?

144. Is it necessary, or helpful, for the Commission to identify categories of costs that either are presumptively avoided or presumptively not avoided? For example, is it still appropriate for the Commission to conclude, as it did in the *Local Competition Order*, that all marketing, billing, and collection costs are avoided?[182] Parties that favor the Commission establishing this type of presumption should provide objective evidence demonstrating the type of costs that incumbent LECs actually avoid when they provide services to competitors for resale. Under the interpretation of the section 252(d)(3) adopted by the Eighth Circuit, how should common costs be treated? If an incumbent LEC is assumed to be both a retail and a wholesale provider, what types of common costs, if any, actually will be avoided when the incumbent LEC resells services?

145. We ask parties to discuss whether it is necessary, or helpful, for the Commission to establish any evidentiary guidelines with respect to the resale discount. Should incumbent LECs be obligated to file cost studies in support of their proposed discounts, or are there alternative showings that might be sufficient? If studies are required, what level of detail should they contain? Must direct and indirect avoided costs be specifically identified?

146. In the *Local Competition Order*, the Commission concluded that the Subscriber Line Charge (SLC) imposed on retail customers should be paid by resellers, but that it was not subject to the resale discount.[183] Although the SLC relates to interstate access services, which are not subject to the resale discount, it is charged to end users and paid by end users to recover costs for which they are the cost causer. The SLC could, therefore, be considered a retail service for purposes of section 251(c)(4). We ask parties to address whether it would be appropriate for the Commission to revisit its prior analysis of whether the SLC should be subject to the resale discount.

VI. INTERCONNECTION PRICING AND RECIPROCAL COMPENSATION

147. Under section 252(d)(1), interconnection is subject to the same cost-based pricing standard as UNEs.[184] We ask parties to comment on whether there is any reason that changes to the current pricing rules for UNEs should not also apply to interconnection provided pursuant to section 251(c)(2). We note that the Commission is considering issues related to the costs associated with interconnecting networks in the pending *Intercarrier Compensation* proceeding.[185] Parties are invited to comment on the relationship between the section 252(d)(1)

[182] *Local Competition Order*, 11 FCC Rcd at 15958, para. 917.

[183] *Id*. at 15984, para. 984.

[184] 47 U.S.C. § 252(d)(1).

[185] *Developing a Unified Intercarrier Compensation Regime*, CC Docket No. 01-92, Notice of Proposed Rulemaking, 16 FCC Rcd 9610 (2001) (*Intercarrier Compensation NPRM*).

pricing standard and proposals for recovery of interconnection costs that are now under consideration in the *Intercarrier Compensation* proceeding. We also invite parties to comment on issues related to the pricing of collocation, which also is subject to the section 252(d)(1) pricing standard. For example, we solicit comment on whether charges for direct current (DC) power should be based on the number of amps consumed or the number of amps fused.

148. In the *Local Competition Order*, the Commission also decided that TELRIC pricing was appropriate for reciprocal compensation under section 251(b)(5).[186] In the *Intercarrier Compensation* proceeding, the Commission sought comment on whether a different interpretation of the "additional cost" standard in section 252(d)(2) was warranted.[187] We ask parties to address whether the Commission should continue to apply the same pricing rules to UNEs and to reciprocal compensation. What would be the consequences of having different pricing regimes for these two different functions?

VII. IMPLEMENTATION ISSUES

149. We ask parties to comment on how any changes to the Commission's UNE pricing rules should be implemented by the states. The pricing standard imposed under section 252(d)(1) applies when states are called on to arbitrate disputes regarding the pricing of interconnection and unbundled network elements.[188] In most states, however, it appears that rates are established in generic proceedings that are not specific to the arbitration between any particular pair of carriers. We ask parties to explain how state commissions have proceeded in establishing prices under section 252(d)(1).

150. We seek comment on whether we should establish a national timetable pursuant to which states will conduct new UNE cost proceedings to reset all rates in accordance with any new rules. If we establish a timetable for initiating new UNE rate proceedings, should we require that such proceedings be resolved within a certain time period, consistent with our direction to the states to perform the granular inquiries set forth in the *Triennial Review* proceeding? If so, is a nine-month time period sufficient to establish new UNE prices? What recourse should carriers have if a state fails to act in the allotted time? Rules that address such considerations could quickly bring consistency and certainty to the UNE market, and we seek comment on our authority to adopt them.

151. We also seek comment on whether it may be appropriate to establish a true-up mechanism for the difference between what a competitor pays for network elements under rates established pursuant to the current TELRIC rules and what that competitor would pay for the same facilities or services under rates established pursuant to any new rules we may adopt in this proceeding. If a true-up mechanism is appropriate, to what period should any true-up be applicable? Should the beginning of the true-up period be the effective date of the final Commission order in this proceeding? Or is some other true up period more appropriate? We

[186] *Local Competition Order*, 11 FCC Rcd at 16023, para. 1054.

[187] *Intercarrier Compensation NPRM*, 16 FCC Rcd at 9646, para. 101.

[188] 47 U.S.C. § 252(d)(1).

have recognized in several contexts that the use of interim rates subject to true-up is an appropriate means of protecting all parties' interest when permanent rates under the governing cost methodology have not yet been set.

VIII. PROCEDURAL MATTERS

A. Initial Paperwork Reduction Act Analysis

152. This Notice of Proposed Rulemaking (NPRM) contains either a proposed or modified information collection. As part of the continuing effort to reduce paperwork burdens, we invite the general public and the Office of Management and Budget (OMB) to comment on the information collections contained in this NPRM, as required by the Paperwork Reduction Act of 1995, 44 U.S.C. § 3501 *et seq*. Public and agency comments are due at the same time as other comments on this NPRM; OMB comments are due 60 days from the date of publication of this NPRM in the Federal Register. Comments should address: 1) whether the proposed collection of information is necessary for the proper performance of the functions of the Commission, including whether the information shall have practical utility; 2) the accuracy of the Commission's burden estimates; 3) ways to enhance the quality, utility, and clarity of the information collected; and 4) ways to minimize the burden of the collection of information on the respondents, including the use of automated collection techniques or other forms of information technology.

B. Initial Regulatory Flexibility Act Analysis

153. As required by the Regulatory Flexibility Act of 1980, as amended (RFA),[189] the Commission has prepared the present 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 NPRM. Written public 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 NPRM provided below in Section C. The Commission will send a copy of the NPRM, including this IRFA, to the Chief Counsel for Advocacy of the Small Business Administration.[190] In addition, the NPRM and IRFA (or summaries thereof) will be published in the Federal Register.[191]

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

154. In this NPRM, the Commission initiates the first comprehensive review of TELRIC pricing rules since they were adopted. Section 252(d)(1) of the Act sets forth the pricing standard for UNEs. Section 252(d)(3) of the Act requires that state commissions establish wholesale rates for resold services based on the incumbent LEC's retail rates. Seven years ago, the Commission adopted its current rules that base UNE prices on the Total Element

[189] *See* 5 U.S.C. § 603. The IRFA, see 5 U.S.C. § 601-612, has been amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA) Pub. L. No. 104-121, Title II, 110 Stat 857 (1996).

[190] *See* 5 U.S.C. § 603(a).

[191] *See id.*

Long Run Incremental Cost (TELRIC) of a UNE.[192] The Commission stated at that time that it would continue to review its pricing rules based on the results of state arbitration proceedings and provide additional guidance as necessary.

155. Based on the wealth of experience that has been developed over the last seven years, the Commission initiates this proceeding to consider whether the TELRIC methodology for pricing UNEs under the Act is working as intended and whether it is conducive to efficient facilities investment. The Commission also requests comment in this proceeding on its resale pricing rules. Incumbent LECs are required to resell retail services pursuant to section 251(c)(4) of the Act. This NPRM seeks to preserve the forward-looking emphasis and pro-competitive purposes of TELRIC, while simplifying this methodology. The Commission's objective is to help state commissions more easily develop UNE prices and resale discounts that meet the statutory standards established by Congress in section 252(d) and to provide more certainty and consistency in the results of these state proceedings.

156. Although the Commission has addressed some specific TELRIC cost input disputes as they have arisen in section 271 proceedings, the Commission's disposition has provided no systematic guidance on pricing issues. This proceeding will provide states and interested parties comprehensive guidance lacking in our consideration of section 271 applications. In the *Triennial Review Order*, the Commission clarified the existing rules regarding two key components of TELRIC – cost of capital and depreciation.[193]

157. Because of the general nature of the Commission's rules and the hypothetical and complex nature of the TELRIC inquiry, it is often difficult to understand how actual UNE rates are derived. Uncertainty or inconsistency in how to apply TELRIC rules may also result in rates that significantly vary from state to state without regard to genuine cost differences. This lack of predictability in UNE rates is difficult to reconcile with the Commission's desire that UNE prices send correct economic signals for competitive and investment purposes. This NPRM seeks to simplify TELRIC pricing, provide more specific guidance to make the TELRIC rate-setting process less speculative and improve the accuracy of its pricing signals.

2. Legal Basis

158. This *Notice* is adopted pursuant to sections 1, 4(i), (4j), 201-205, 251, 252, and 303 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 151, 154(i), (j), 201-205, 251, 252, and 303.

3. Description and Estimate of the Number of Small Entities to which the Proposed Rules Will Apply

159. The RFA directs agencies to provide a description of and, where feasible, an

[192] *Implementation of the Local Competition Provisions in the Telecommunications Act of 1996*, CC Docket No. 96-98, First Report and Order, 11 FCC Rcd 15499 (1996).

[193] *Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers*, Report and Order and Order on Remand and Further Notice of Proposed Rulemaking, CC Docket No. 01-338, FCC 03-36 (released August 21, 2003).

estimate of the number of small entities that will be affected by the proposed rules.[194] The RFA generally defines the term "small entity" as having the same meaning as the terms "small business," "small organization," and "small governmental jurisdiction."[195] In addition, the term "small business" has the same meaning as the term "small business concern" under the Small Business Act.[196] 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 Small Business Administration (SBA).[197] The term "small governmental jurisdiction" is defined as "governments of cities, towns, townships, villages, school districts, or special districts, with a population of less than fifty thousand."[198] As of 1997, there were about 87,453 governmental jurisdictions in the United States.[199] This number includes 39,044 county governments, municipalities, and townships, of which 37,546 (approximately 96.2%) have populations of fewer than 50,000, and of which 1,498 have populations of 50,000 or more. Thus, we estimate the number of small governmental jurisdictions overall to be 84,098 or fewer. We also note that the term "small governmental jurisdiction" includes state regulatory bodies commonly known as state public utilities commissions or public service commissions which may be directly affected by this NPRM.

160. In this section, we further describe and estimate the number of small entity licensees and regulatees that may also be indirectly affected by rules adopted pursuant to this NPRM. The most reliable source of information regarding the total numbers of certain common carrier and related providers nationwide, as well as the number of commercial wireless entities, appears to be the data that the Commission publishes in its *Trends in Telephone Service* report.[200] The SBA has developed small business size standards for wireline and wireless small businesses within the three commercial census categories of Wired Telecommunications Carriers,[201] Paging,[202] and Cellular and Other Wireless Telecommunications.[203] Under these categories, a

194 5 U.S.C. §§ 603(b)(3), 604(a)(3).

195 *Id*. § 601(6).

196 *Id*. § 601(3) (incorporating by reference the definition of "small business concern" in the Small Business Act, 15 U.S.C. § 632). Pursuant to 5 U.S.C. § 601(3), the statutory definition of a small business applies "unless an agency, after consultation with the Office of Advocacy of the Small Business Administration and after opportunity for public comment, establishes one or more definitions of such terms which are appropriate to the activities of the agency and publishes such definitions(s) in the Federal Register."

197 15 U.S.C. § 632.

198 5 U.S.C. § 601(5).

199 U.S. Census Bureau, *Statistical Abstract of the United States: 2000*, Section 9, pages 299-300, Tables 490 and 492.

200 FCC, Wireline Competition Bureau, Industry Analysis and Technology Division, *Trends in Telephone Service*, Table 5.3 (May 2002) (*Trends in Telephone Service*).

201 13 C.F.R. § 121.201, North American Industry Classification System (NAICS) code 513310 (changed to 517110 in October 2002).

202 *Id*. § 121.201, NAICS code 513321 (changed to 517211 in October 2002).

203 *Id*. § 121.201, NAICS code 513322 (changed to 517212 in October 2002).

business is small if it has 1,500 or fewer employees. Below, using the above size standards and others, we discuss the total estimated numbers of small businesses that might be affected by our actions.

161. We have 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 wired telecommunications carrier having 1,500 or fewer employees), and "is not dominant in its field of operation."[204] 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.[205] We have therefore included small incumbent LECs in this RFA analysis, although we emphasize that this RFA action has no effect on Commission analyses and determinations in other, non-RFA contexts.

162. *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.[206] According to Census Bureau data for 1997, there were 2,225 firms in this category, total, that operated for the entire year.[207] Of this total, 2,201 firms had employment of 999 or fewer employees, and an additional 24 firms had employment of 1,000 employees or more.[208] Thus, under this size standard, the great majority of firms can be considered small.

163. *Incumbent Local Exchange Carriers (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.[209] According to Commission data,[210] 1,329 carriers reported that they were engaged in the provision of local exchange services. Of these 1,329 carriers, an estimated 1,024 have 1,500 or fewer employees and 305 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 the rules and policies adopted herein.

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[204] 5 U.S.C. § 601(3).

[205] Letter from Jere W. Glover, Chief Counsel for Advocacy, SBA, to William E. Kennard, Chairman, FCC (May 27, 1999). The Small Business Act contains a definition of "small business concern," which the RFA incorporates into its own definition of "small business." *See* 15 U.S.C. § 632(a); 5 U.S.C. § 601(3). SBA regulations interpret "small business concern" to include the concept of dominance on a national basis. 13 C.F.R. § 121.102(b).

[206] 13 C.F.R. § 121.201, NAICS code 513310 (changed to 517110 in October 2002).

[207] U.S. Census Bureau, 1997 Economic Census, Subject Series: Information, "Establishment and Firm Size (Including Legal Form of Organization)," Table 5, NAICS code 513310 (issued October 2000).

[208] *Id.* The census data do not provide a more precise estimate of the number of firms that have employment of 1,500 or fewer employees; the largest category provided is "Firms with 1,000 employees or more."

[209] 13 C.F.R. § 121.201, NAICS code 513310 (changed to 517110 in October 2002).

[210] *Trends in Telephone Service* at Table 5.3.

164. *Competitive Local Exchange Carriers (CLECs)*. Neither the Commission nor the SBA has developed a size standard for small businesses specifically applicable to providers of competitive exchange services or to competitive access providers or to "Other Local Exchange Carriers," all of which are discrete categories under which TRS data are collected. 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.[211] According to Commission data,[212] 532 companies reported that they were engaged in the provision of either competitive access provider services or competitive local exchange carrier services. Of these 532 companies, an estimated 411 have 1,500 or fewer employees and 121 have more than 1,500 employees.[213] In addition, 55 carriers reported that they were "Other Local Exchange Carriers." Of the 55 "Other Local Exchange Carriers," an estimated 53 have 1,500 or fewer employees and two have more than 1.500 employees.[214] Consequently, the Commission estimates that most providers of competitive local exchange service, competitive access providers, and "Other Local Exchange Carriers" are small entities that may be affected by the rules and policies adopted herein.

165. *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.[215] According to Commission data,[216] 229 companies reported that their primary telecommunications service activity was the provision of interexchange services. Of these 229 companies, an estimated 181 have 1,500 or fewer employees and 48 have more than 1,500 employees.[217] Consequently, the Commission estimates that the majority of interexchange service providers are small entities that may be affected by the rules and policies adopted herein.

166. *Operator Service Providers (OSPs)*. Neither the Commission nor the SBA has developed a size standard for small businesses specifically applicable to operator service providers. 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.[218] According to Commission data,[219] 22 companies reported that they were

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[211] 13 C.F.R. § 121.201, NAICS code 513310 (changed to 517110 in October 2002).

[212] *Trends in Telephone Service* at Table 5.3.

[213] *Id.*

[214] *Id.*

[215] 13 C.F.R. § 121.201, NAICS code 513310 (changed to 517110 in October 2002).

[216] *Trends in Telephone Service* at Table 5.3.

[217] *Id.*

[218] 13 C.F.R. § 121.201, NAICS code 513310 (changed to 517110 in October 2002).

[219] *Trends in Telephone Service* at Table 5.3.

engaged in the provision of operator services. Of these 22 companies, an estimated 20 have 1,500 or fewer employees and two have more than 1,500 employees.[220] Consequently, the Commission estimates that the great majority of operator service providers are small entities that may be affected by the rules and policies adopted herein.

167. *Payphone Service Providers (PSPs).* Neither the Commission nor the SBA has developed a size standard for small businesses specifically applicable to payphone services providers. 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.[221] According to Commission data,[222] 936 companies reported that they were engaged in the provision of payphone services. Of these 936 companies, an estimated 933 have 1,500 or fewer employees and three have more than 1,500 employees.[223] Consequently, the Commission estimates that the great majority of payphone service providers are small entities that may be affected by the rules and policies adopted herein.

168. *Prepaid Calling Card Providers.* The SBA has developed a size standard for a small business within the category of Telecommunications Resellers. Under that SBA size standard, such a business is small if it has 1,500 or fewer employees.[224] According to Commission data,[225] 32 companies reported that they were engaged in the provision of prepaid calling cards. Of these 32 companies, an estimated 31 have 1,500 or fewer employees and one has more than 1,500 employees.[226] Consequently, the Commission estimates that the great majority of prepaid calling card providers are small entities that may be affected by the rules and policies adopted herein.

169. *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.[227] According to Commission's data,[228] 42 companies reported that their primary telecommunications service activity was the provision of payphone services. Of these 42

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220 *Id.*

221 13 C.F.R. § 121.201, NAICS code 513310 (changed to 517110 in October 2002).

222 *Trends in Telephone Service* at Table 5.3.

223 *Id*.

224 13 C.F.R. § 121.201, NAICS code 513330 (changed to 517310 in October 2002).

225 *Trends in Telephone Service* at Table 5.3.

226 *Id.*

227 13 C.F.R. § 121.201, NAICS code 513310 (changed to 517110 in October 2002).

228 *Trends in Telephone Service* at Table 5.3.

companies, an estimated 37 have 1,500 or fewer employees and five have more than 1,500 employees.[229] Consequently, the Commission estimates that most "Other Toll Carriers" are small entities that may be affected by the rules and policies adopted herein.

170. *Wireless Service Providers.* The SBA has developed a small business size standard for wireless firms within the two broad economic census categories of Paging[230] and Cellular and Other Wireless Telecommunications.[231] Under both SBA categories, a wireless business is small if it has 1,500 or fewer employees. For the census category of Paging, Census Bureau data for 1997 show that there were 1320 firms in this category, total, that operated for the entire year.[232] Of this total, 1303 firms had employment of 999 or fewer employees, and an additional 17 firms had employment of 1,000 employees or more.[233] Thus, under this category and associated small business size standard, the great majority of firms can be considered small. For the census category Cellular and Other Wireless Telecommunications firms, Census Bureau data for 1997 show that there were 977 firms in this category, total, that operated for the entire year.[234] Of this total, 965 firms had employment of 999 or fewer employees, and an additional 12 firms had employment of 1,000 employees or more.[235] Thus, under this second category and size standard, the great majority of firms can, again, be considered small.

171. *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.[236] 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."[237] These standards defining "small entity" in the context of broadband PCS auctions have been

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[229] *Id*.

[230] 13 C.F.R § 121.201, NAICS code 513321 (changed to 517211 in October 2002).

[231] *Id*. § 121.201, NAICS code 513322 (changed to 517212 in October 2002).

[232] U.S. Census Bureau, 1997 Economic Census, Subject Series: Information, "Employment Size of Firms Subject to Federal Income Tax: 1997," Table 5, NAICS code 513321 (issued Oct. 2000).

[233] *Id*. The census data do not provide a more precise estimate of the number of firms that have employment of 1,500 or fewer employees; the largest category provided is "Firms with 1,000 employees or more."

[234] U.S. Census Bureau, 1997 Economic Census, Subject Series: Information, "Employment Size of Firms Subject to Federal Income Tax: 1997," Table 5, NAICS code 513322 (issued Oct. 2000).

[235] *Id*. The census data do not provide a more precise estimate of the number of firms that have employment of 1,500 or fewer employees; the largest category provided is "Firms with 1,000 employees or more."

[236] *See Amendment of Parts 20 and 24 of the Commission's Rules – Broadband PCS Competitive Bidding and the Commercial Mobile Radio Service Spectrum Cap*, WT Docket No. 96-59, Report and Order, 61 FR 33859 (July 1, 1996); *see also* 47 C.F.R. § 24.720(b).

[237] *See id*.

approved by the SBA.[238] 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.[239] On March 23, 1999, the Commission re-auctioned 347 C, D, E, and F Block licenses. There were 48 small business winning bidders. On January 26, 2001, the Commission completed the auction of 422 C and F Broadband PCS licenses in Auction No. 35. Of the 35 winning bidders in this auction, 29 qualified as "small" or "very small" businesses. Based on this information, the Commission concludes that the number of small broadband PCS licenses will include the 90 winning C Block bidders, the 93 qualifying bidders in the D, E, and F Block auctions, the 48 winning bidders in the 1999 re-auction, and the 29 winning bidders in the 2001 re-auction, for a total of 260 small entity broadband PCS providers, as defined by the SBA small business size standards and the Commission's auction rules. Consequently, the Commission estimates that 260 broadband PCS providers are small entities that may be affected by the rules and policies adopted herein.

172. *Narrowband Personal Communications Services.* To date, two auctions of narrowband personal communications services (PCS) licenses have been conducted. For purposes of the two auctions that have already been held, "small businesses" were entities with average gross revenues for the prior three calendar years of $40 million or less. Through these auctions, the Commission has awarded a total of 41 licenses, out of which 11 were obtained by small businesses. To ensure meaningful participation of small business entities in future auctions, the Commission has adopted a two-tiered small business size standard in the *Narrowband PCS Second Report and Order*.[240] 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.[241] In the future, the Commission will auction 459 licenses to serve Metropolitan Trading Areas (MTAs) and 408 response channel licenses. There is also one megahertz of narrowband PCS spectrum that has been held in reserve and that the Commission has not yet decided to release for licensing. The Commission cannot predict accurately the number of licenses that will be awarded to small entities in future actions. However, four of the 16 winning bidders in the two previous narrowband PCS auctions were small businesses, as that term was defined under the

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238 *See. e.g., Implementation of Section 309(j) of the Communications Act – Competitive Bidding*, PP Docket No. 93-253, Fifth Report and Order, 59 FR 37566 (July 22, 1994).

239 FCC News, Broadband PCS, D, E and F Block Auction Closes, No. 71744 (released January 14, 1997). *See also Amendment of the Commission's Rules Regarding Installment Payment Financing for Personal Communications Services (PCS) Licenses*, WT Docket No. 97-82, Second Report and Order, 62 FR 55348 (Oct. 24,1997).

240 *Amendment of the Commission's Rules to Establish New Personal Communications Services, Narrowband PCS*, Docket No. ET 92-100, Docket No. PP 93-253, Second Report and Order and Second Further Notice of Proposed Rulemaking, 65 FR 35875 (June 6, 2000).

241 *See* Letter to Amy Zoslov, Chief, Auctions and Industry Analysis Division, Wireless Telecommunications Bureau, FCC, from Aida Alvarez, Administrator, SBA (Dec. 2, 1998).

Commission's Rules. The Commission assumes, for purposes of this analysis, that a large portion of the remaining narrowband PCS licenses will be awarded to small entities. The Commission also assumes that at least some small businesses will acquire narrowband PCS licenses by means of the Commission's partitioning and disaggregation rules.

173. *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, we apply the small business size standard under the SBA rules applicable to "Cellular and Other Wireless Telecommunications" companies. This standard provides that such a company is small if it employs no more than 1,500 persons.[242] According to Census Bureau data for 1997, there were 977 firms in this category, total, that operated for the entire year.[243] Of this total, 965 firms had employment of 999 or fewer employees, and an additional 12 firms had employment of 1,000 employees or more.[244] If this general ratio continues in the context of Phase I 220 MHz licensees, the Commission estimates that nearly all such licensees are small businesses under the SBA's small business size standard.

174. *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 a new service, and is subject to spectrum auctions. In the *220 MHz Third Report and Order*, we 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.[245] 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.[246] 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.[247] Auctions of Phase II

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[242] 13 C.F.R. § 121.201, NAICS code 513322 (changed to 517212 in October 2002).

[243] U.S. Census Bureau, 1997 Economic Census, Subject Series: Information, "Employment Size of Firms Subject to Federal Income Tax: 1997," Table 5, NAICS code 513322 (issued Oct. 2000).

[244] *Id*. The census data do not provide a more precise estimate of the number of firms that have employment of 1,500 or fewer employees; the largest category provided is "Firms with 1,000 employees or more."

[245] *Amendment of Part 90 of the Commission's Rules to Provide for the Use of the 220-222 MHz Band by the Private Land Mobile Radio Service*, PR Docket No. 89-552, GN Docket No. 93-252, PP Docket No. 93-253, Third Report and Order and Fifth Notice of Proposed Rulemaking, 12 FCC Rcd 10943, 11068-70, at paras. 291-95 (1997) (*220 MHz Third Report and Order*).

[246] *Id*. at 11068-70, para. 291.

[247] *See* letter to D. Phythyon, Chief, Wireless Telecommunications Bureau, FCC, from Aida Alvarez, Administrator, SBA (Jan. 6, 1998).

licenses commenced on September 15, 1998, and closed on October 22, 1998.[248] 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.[249]

175. *800 MHz and 900 MHz Specialized Mobile Radio Licenses.* The Commission awards "small entity" and "very small entity" bidding credits in auctions for Specialized Mobile Radio (SMR) geographic area licenses in the 900 MHz bands to firms that had revenues of no more than $15 million in each of the three previous calendar years, or that had revenues of no more than $3 million in each of the previous calendar years.[250] The SBA has approved these size standards.[251] The Commission awards "small entity" and "very small entity" bidding credits in auctions for Specialized Mobile Radio (SMR) geographic area licenses in the 800 MHz bands to firms that had revenues of no more than $40 million in each of the three previous calendar years, or that had revenues of no more than $15 million in each of the previous calendar years.[252] These bidding credits apply to SMR providers in the 800 MHz and 900 MHz bands that either hold geographic area licenses or have obtained extended implementation authorizations. The Commission does not know how many firms provide 800 MHz or 900 MHz geographic area SMR service 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. The Commission assumes, for purposes here, that all of the remaining existing extended implementation authorizations are held by small entities, as that term is defined by the SBA. The Commission has held auctions for geographic area licenses in the 800 MHz and 900 MHz SMR bands. There were 60 winning bidders that qualified as small or very small entities in the 900 MHz SMR auctions. Of the 1,020 licenses won in the 900 MHz auction, bidders qualifying as small or very small entities won 263 licenses. In the 800 MHz auction, 38 of the 524 licenses won were won by small and very small entities. Consequently, the Commission estimates that there are 301 or fewer small entity SMR licensees in the 800 MHz and 900 MHz bands that may be affected by the rules and policies adopted herein.

176. *Paging.* In the Paging *Third Report and Order*, we developed a small business size standard for "small businesses" and "very small businesses" for purposes of determining

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248 *See generally* Public Notice, "220 MHz Service Auction Closes," 14 FCC Rcd 605 (1998).

249 Public Notice, "Phase II 220 MHz Service Spectrum Auction Closes," 14 FCC Rcd 11218 (1999).

250 47 C.F.R. § 90.814(b)(1).

251 *See* Letter from Aida Alvarez, Administration, Small Business Administration to Daniel B. Phythyon, Chief, Wireless Telecommunications Bureau, Federal Communications Commission (Oct. 27, 1997). *See* Letter from Aida Alvarez, Administrator, Small Business Administration to Thomas Sugrue, Chief, Auctions and Industry Analysis Division, Wireless Telecommunications Bureau, Federal Communications Commission (Aug. 10, 1999).

252 47 C.F.R. § 90.814(b)(1) A request for approval of 800 MHz standards was sent to the SBA on May 13, 1999. The matter remains pending.

their eligibility for special provisions such as bidding credits and installment payments.[253] 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 size standards.[254] An auction of Metropolitan Economic Area licenses commenced on February 24, 2000, and closed on March 2, 2000.[255] Of the 985 licenses auctioned, 440 were sold. Fifty-seven companies claiming small business status won. At present, there are approximately 24,000 Private-Paging site-specific licenses and 74,000 Common Carrier Paging licenses. According to the most recent *Trends in Telephone Service,* 471 carriers reported that they were engaged in the provision of either paging and messaging services or other mobile services.[256] Of those, the Commission estimates that 450 are small, under the SBA business size standard specifying that firms are small if they have 1,500 or fewer employees.[257]

177. *700 MHz Guard Band Licensees.* In the 700 MHz Guard Band Order, we 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.[258] A "small business" as 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. An auction of 52 Major Economic Area (MEA) licenses commenced on September 6, 2000, and closed on September 21, 2000.[259] 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

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253 *220 MHz Third Report and Order*, 12 FCC Rcd at 11068-70, paras. 291-295, 62 FR 16004 at paras. 291-295 (1997).

254 *See* Letter from Aida Alvarez, Administrator, Small Business Administration to Thomas Sugrue, Chief, Auctions and Industry Analysis Division, Wireless Telecommunications Bureau, Federal Communications Commission (June 4, 1999).

255 *Revision of Part 22 and Part 90 of the Commission's Rules to Facilitate Future Development of Paging Systems*, WT Docket No. 96-18, PR Docket No. 93-253, Memorandum Opinion and Order on Reconsideration and Third Report and Order, 14 FCC Rcd 10030, 10085, at para. 98 (1999).

256 *Trends in Telephone Service* at Table 5.3.

257 *Id*. The SBA size standard is that of Paging, 13 C.F.R. § 121.201, NAICS code 517211.

258 *See Service Rules for the 746-764 MHz Bands, and Revisions to part 27 of the Commission's Rules*, WT Docket No. 99-168, Second Report and Order, 15 FCC Rcd 5299, 5344, at para. 108 (2000).

259 *See generally* Public Notice, "220 MHz Service Auction Closes," Report No. WT 98-36 (Wireless Telecommunications Bureau, Oct. 23, 1998).

these bidders was a small business that won a total of two licenses.[260]

178. *Rural Radiotelephone Service.* The Commission has not adopted a size standard for small businesses specific to the Rural Radiotelephone Service.[261] A significant subset of the Rural Radiotelephone Service is the Basic Exchange Telephone Radio System (BETRS).[262] The Commission uses the SBA's small business size standard applicable to "Cellular and Other Wireless Telecommunications," *i.e.*, an entity employing no more than 1,500 persons.[263] 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 adopted herein.

179. *Air-Ground Radiotelephone Service.* The Commission has not adopted a small business size standard specific to the Air-Ground Radiotelephone Service.[264] We will use SBA's small business size standard applicable to "Cellular and Other Wireless Telecommunications," *i.e.*, an entity employing no more than 1,500 persons.[265] There are approximately 100 licensees in the Air-Ground Radiotelephone Service, and we estimate that almost all of them qualify as small under the SBA small business size standard.

180. *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 "Cellular and Other Telecommunications," which is 1,500 or fewer employees.[266] 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, we estimate 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

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260 Public Notice, "700 MHz Guard Band Auction Closes," DA 01-478 (released Feb. 22, 2001).

261 The service is defined in § 22.99 of the Commission's Rules, 47 C.F.R. § 22.99.

262 BETRS is defined in §§ 22.757 and 22.759 of the Commission's Rules, 47 C.F.R. §§ 22.757 and 22.759.

263 13 C.F.R. § 121.201, NAICS code 513322 (changed to 517212 in October 2002).

264 The service is defined in § 22.99 of the Commission's Rules, 47 C.F.R. § 22.99.

265 13 C.F.R § 121.201, NAICS codes 513322 (changed to 517212 in October 2002).

266 *Id*. § 121.201, NAICS code 513322 (changed to 517212 in October 2002).

three years not to exceed $3 million dollars.[267] 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.

181. *Fixed Microwave Services.* Fixed microwave services include common carrier,[268] private operational-fixed,[269] and broadcast auxiliary radio services.[270] 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 the category "Cellular and Other Telecommunications," which is 1,500 or fewer employees.[271] The Commission does not have data specifying the number of these licensees that have more than 1,500 employees, and thus are 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. We noted, however, that the common carrier microwave fixed licensee category includes some large entities.

182. *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.[272] There are presently approximately 55 licensees in this service. We are 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.[273] Under that SBA small business size standard, a business is

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[267] *Amendment of the Commission's Rules Concerning Maritime Communications*, PR Docket No. 92-257, Third Report and Order and Memorandum Opinion and Order, 13 FCC Rcd 19853 (1998).

[268] *See* 47 C.F.R. §§ 101 *et seq*. (formerly, Part 21 of the Commission's Rules) for common carrier fixed microwave services (except Multipoint Distribution Service).

[269] Persons eligible under parts 80 and 90 of the Commission's Rules can use Private Operational-Fixed Microwave services. *See* 47 C.F.R. Parts 80 and 90. Stations in this service are called operational-fixed to distinguish them from common carrier and public fixed stations. Only the licensee may use the operational-fixed station, and only for communications related to the licensee's commercial, industrial, or safety operations.

[270] Auxiliary Microwave Service is governed by Part 74 of Title 47 of the Commission's Rules. *See* 47 C.F.R. Part 74. This service is available to licensees of broadcast stations and to broadcast and cable network entities. Broadcast auxiliary microwave stations are used for relaying broadcast television signals from the studio to the transmitter, or between two points such as a main studio and an auxiliary studio. The service also includes mobile television pickups, which relay signals from a remote location back to the studio.

[271] 13 C.F.R. § 121.201, NAICS code 513322 (changed to 517212 in October 2002).

[272] This service is governed by Subpart I of Part 22 of the Commission's Rules. *See* 47 C.F.R. §§ 22.1001-22.1037.

[273] 13 C.F.R. § 121.201, NAICS code 513322 (changed to 517212 in October 2002).

small if it has 1,500 or fewer employees.[274]

183. *Wireless Communications Services*. This service can be used for fixed, mobile, radiolocation, and digital audio broadcasting satellite uses. The Commission established small business size standards for the wireless communications services (WCS) auction. A "small business" is an entity with average gross revenues of $40 million for each of the three preceding years, and a "very small business" is an entity with average gross revenues of $15 million for each of the three preceding years. The SBA has approved these small business size standards.[275] The Commission auctioned geographic area licenses in the WCS service. In the auction, there were seven winning bidders that qualified as "very small business" entities, and one that qualified as a "small business" entity. We conclude that the number of geographic area WCS licensees affected by this analysis includes these eight entities.

184. *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.[276] 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.[277] The SBA has approved these small business size standards.[278] 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 the rules and polices adopted herein.

185. *Multipoint Distribution Service, Multichannel Multipoint Distribution Service, and ITFS.* Multichannel Multipoint Distribution Service (MMDS) systems, often referred to as "wireless cable," transmit video programming to subscribers using the microwave frequencies of the Multipoint Distribution Service (MDS) and Instructional Television Fixed Service (ITFS).[279] In connection with the 1996 MDS auction, the Commission established a small business size standard as an entity that had annual average gross revenues of less than $40 million in the previous three calendar years.[280] The MDS auctions resulted in 67 successful bidders obtaining

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274 *Id*.

275 *See* Letter to Amy Zoslov, Chief, Auctions and Industry Analysis Division, Wireless Telecommunications Bureau, FCC, from Aida Alvarez, Administrator, SBA (Dec. 2, 1998).

276 *See* Amendment of the Commission's Rules Regarding the 37.0-38.6 GHz and 38.6-40.0 GHz Bands, ET Docket No. 95-183, *Report and Order*, 63 FR 6079 (Feb. 6, 1998).

277 *Id.*

278 *See* Letter to Kathleen O'Brien Ham, Chief, Auctions and Industry Analysis Division, Wireless Telecommunications Bureau, FCC, from Aida Alvarez, Administrator, SBA (Feb. 4, 1998).

279 *Amendment of Parts 21 and 74 of the Commission's Rules with Regard to Filing Procedures in the Multipoint Distribution Service and in the Instructional Television Fixed Service and Implementation of Section 309(j) of the Communications Act – Competitive Bidding*, MM Docket No. 94-131 and PP Docket No. 93-253, Report and Order, 10 FCC Rcd 9589, 9593 at para. 7 (1995).

280 47 C.F.R. § 21.961(b)(1).

licensing opportunities for 493 Basic Trading Areas (BTAs). Of the 67 auction winners, 61 met the definition of a small business. MDS also includes licensees of stations authorized prior to the auction. In addition, the SBA has developed a small business size standard for Cable and Other Program Distribution, which includes all such companies generating $12.5 million or less in annual receipts.[281] According to Census Bureau data for 1997, there were a total of 1,311 firms in this category, total, that had operated for the entire year.[282] Of this total, 1,180 firms had annual receipts of under $10 million and an additional 52 firms had receipts of $10 million or more but less than $25 million. Consequently, we estimate that the majority of providers in this service category are small businesses that may be affected by the rules and policies adopted herein. This SBA small business size standard also appears applicable to ITFS. There are presently 2,032 ITFS licensees. All but 100 of these licenses are held by educational institutions. Educational institutions are included in this analysis as small entities.[283] Thus, we tentatively conclude that at least 1,932 licensees are small businesses.

186. *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.[284] The auction of the 1,030 Local Multipoint Distribution Service (LMDS) licenses began on February 18, 1998 and closed on March 25, 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.[285] 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.[286] The SBA has approved these small business size standards in the context of LMDS auctions.[287] 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. On March 27, 1999, the Commission re-auctioned 161 licenses; there were 40 winning bidders. Based on this information, we conclude that the number of small LMDS licenses consists of the 93 winning bidders in the first auction and the 40 winning bidders in the re-auction, for a total of 133 small entity LMDS providers.

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[281] 13 C.F.R. § 121.201, NAICS code 513220 (changed to 517510 in October 2002).

[282] U.S. Census Bureau, 1997 Economic Census, Subject Series: Information, "Establishment and Firm Size (Including Legal Form of Organization)," Table 4, NAICS code 513220 (issued October 2000).

[283] In addition, the term "small entity" within SBREFA applies to small organizations (nonprofits) and to small governmental jurisdictions (cities, counties, towns, townships, villages, school districts, and special districts with populations of less than 50,000). 5 U.S.C. §§ 601(4)-(6). We do not collect annual revenue data on ITFS licensees.

[284] *See Rulemaking to Amend Parts 1, 2, 21, and 25 of the Commission's Rules to Redesignate the 27.5-29.5 GHz Frequency Band, to Reallocate the 29.5-30.0 GHz Frequency Band, and to Establish Rules and Policies for Local Multipoint Distribution Service and for Fixed Satellite Services*, CC Docket No. 92-297, Second Report and Order, 12 FCC Rcd 12545 (1997).

[285] *Id.*

[286] *See id*.

[287] *See* Letter to Dan Phythyon, Chief, Wireless Telecommunications Bureau, FCC, from Aida Alvarez, Administrator, SBA (Jan. 6, 1998).

187. *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.[288] In the *218-219 MHz Report and Order and Memorandum Opinion and Order*, we 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.[289] 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.[290] The SBA has approved these size standards.[291] We cannot estimate, however, the number of licenses that will be won by entities qualifying as small or very small businesses under our rules in future auctions of 218-219 MHz spectrum.

188. *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.[292] According to Census Bureau data for 1997, there were 977 firms in this category, total, that operated for the entire year.[293] Of this total, 965 firms had employment of 999 or fewer employees, and an additional 12 firms had employment of 1,000 employees or more.[294] Thus, under this size standard, the great majority of firms can be considered small. These broader census data notwithstanding, we believe that there are only two licensees in the 24 GHz band that were relocated from the 18 GHz band, Teligent[295] and TRW, Inc. It is our understanding that Teligent and its related companies have less than

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[288] *Implementation of Section 309(j) of the Communications Act – Competitive Bidding*, PP Docket No. 93-253, Fourth Report and Order, 59 FR 24947 (May 13, 1994).

[289] *Amendment of Part 95 of the Commission's Rules to Provide Regulatory Flexibility in the 218-219 MHz Service*, WT Docket No. 98-169, Report and Order and Memorandum Opinion and Order, 64 FR 59656 (Nov. 3, 1999).

[290] *Id*.

[291] *See* Letter to Daniel B. Phythyon, Chief, Wireless Telecommunications Bureau, Federal Communications Commission, from Aida Alvarez, Administrator, Small Business Administration (Jan. 6, 1998).

[292] 13 C.F.R. § 121.201, NAICS code 513322 (changed to 517212 in October 2002).

[293] U.S. Census Bureau, 1997 Economic Census, Subject Series: Information, "Employment Size of Firms Subject to Federal Income Tax: 1997," Table 5, NAICS code 513322 (issued Oct. 2000).

[294] *Id*. The census data do not provide a more precise estimate of the number of firms that have employment of 1,500 or fewer employees; the largest category provided is "Firms with 1,000 employees or more."

[295] Teligent acquired the DEMS licenses of FirstMark, the only licensee other than TRW in the 24 GHz band whose license has been modified to require relocation to the 24 GHz band.

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.

189. *24 GHz – Future Licensees.* With respect to new applicants in the 24 GHz band, the small business 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.[296] "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.[297] The SBA has approved these small business size standards.[298] These size standards will apply to the future auction, if held.

190. *Internet Service Providers.* While internet service providers (ISPs) are only indirectly affected by our present actions, and ISPs are therefore not formally included within this present IRFA, we have addressed them informally to create a fuller record and to recognize their participation in this proceeding. The SBA has developed a small business size standard for Online Information Services, which consists of all such companies having $21 million or less in annual receipts.[299] According to Census Bureau data for 1997, there were 2,751 firms in this category, total, that operated for the entire year.[300] Of this total, 2,659 firms had annual receipts of $9,999,999 or less, and an additional 67 had receipts of $10 million to $24,999,999.[301] Thus, under this size standard, the great majority of firms can be considered small.

4. Description of Projected Reporting, Recordkeeping, and Other Compliance Requirements

191. We do not intend that any proposal we may adopt pursuant to this *Notice* will increase existing reporting, recordkeeping or other compliance requirements. Rather, we seek to simplify TELRIC pricing and modify or clarify the Commission's rules to help state commissions more easily develop UNE prices and resale discounts that meet the statutory standards established by Congress in section 252(d) and to provide more certainty and consistency in state proceeding outcomes.

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

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[296] *Amendments to Parts 1, 2, 87 and 101 of the Commission's Rules to License Fixed Services at 24 GHz*, WT Docket No. 99-327, Report and Order, 15 FCC Rcd 16934, 16967 (2000); *see also* 47 C.F.R. § 101.538(a)(2).

[297] *Amendments to Parts 1, 2, 87 and 101 of the Commission's Rules to License Fixed Services at 24 GHz*, WT Docket No. 99-327, Report and Order, 15 FCC Rcd at 16967; *see also* 47 C.F.R. § 101.538(a)(1).

[298] *See* Letter to Margaret W. Wiener, Deputy Chief, Auctions and Industry Analysis Division, Wireless Telecommunications Bureau, FCC, from Gary M. Jackson, Assistant Administrator, SBA (July 28, 2000).

[299] 13 C.F.R. § 121.201, NAICS code 514191 (changed to 518111 in October 2002).

[300] U.S. Census Bureau, 1997 Economic Census, Subject Series: Information, "Receipts Size of Firms Subject to Federal Income Tax: 1997," Table 4, NAICS code 514191 (issued October 2000).

[301] *Id.*

192. 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 or reporting requirements under the rule for 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 small entities.[302]

193. We will consider any proposals made to minimize significant economic impact on small entities. The overall objective of this proceeding is to simplify TELRIC pricing while simultaneously improving the accuracy of its pricing signals. The *Notice* seeks comment on an approach that bases UNE prices on a cost inquiry that is more firmly rooted in the real-world attributes of the existing telecommunications network, rather than the speculative attributes of a purely hypothetical network. This may change the standards applicable to cost studies on which UNE prices are based and indirectly result in changes to rates for UNEs that competitive LECs, including small carriers, order from incumbent LECs.

194. State commissions stand to benefit directly to the extent that we clarify our TELRIC rules and provide more specific guidance so that state proceedings to determine UNE pricing and the resale discount become a less complex and speculative process. Providing greater certainty and consistency in how to apply our rules could help make the regulatory process throughout states more efficient and streamlined, indirectly benefiting small entities which participate in these proceedings. Complicated and time-consuming proceedings may work to divert scarce resources from small carriers that otherwise would use those resources to compete in local markets. Moreover, to the extent that we may be able to enhance the TELRIC ratemaking process, we may better be able to achieve the Commission's goal of sending appropriate economic signals to the marketplace for efficient competition and entry among providers that include small entities.

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

195. None.

C. Ex Parte Presentations

196. This matter shall be treated as a "permit-but-disclose" proceeding in accordance with the Commission's *ex parte* rules.[303] Persons making oral *ex parte* presentations are reminded that memoranda summarizing the presentations must contain summaries of the substance of the presentations and not merely a listing of the subjects discussed. More than a one- or two-sentence description of the views and arguments presented generally is required.[304]

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[302] 5 U.S.C. § 603(c).

[303] 47 C.F.R. § 1.1200 *et seq*.

[304] *Id*. § 1.1206(b)(2).

Other requirements pertaining to oral and written presentations are set forth in section 1.1206(b) of the Commission's rules.[305]

D. Comment Filing Procedures

197. Pursuant to sections 1.415 and 1.419 of the Commission's rules,[306] interested parties may file comments not later than 60 days after publication of this Notice in the Federal Register and may file reply comments not later than 45 days after the date for filing comments. In order to facilitate review of comments and reply comments, parties should include the name of the filing party and the date of the filing on all pleadings. Comments and reply comments must clearly identify the specific portion of the NPRM to which a particular comment or set of comments is responsive. Each new section should begin on a new page. If a portion of a party's comments does not fall under a particular topic listed in the Table of Contents, such comments be included in a clearly labeled section at the beginning or end of the filing.

198. Comments may be filed using the Commission's Electronic Comment Filing System (ECFS) or by filing paper copies.[307] Comments filed through the ECFS can be sent as an electronic file via the Internet to <http://www.fcc.gov/cgb/ecfs>. Generally, only one copy of an electronic submission must be filed. If multiple docket or rulemaking numbers appear in the caption of this proceeding, however, commenters must transmit one electronic copy of the comments to each docket or rulemaking number referenced in the caption. In completing the transmittal screen, commenters should include their full name, U.S. Postal Service mailing address, and the applicable docket or rulemaking number. Parties may also submit an electronic comment by Internet e-mail. To get filing instructions for e-mail comments, commenters should send an e-mail to <ecfs@fcc.gov>, and should include the following words in the body of the message, "get form." A sample form and directions will be sent in reply.

199. Parties who choose to file by paper must file an original and five copies of each filing. Two (2) copies of the comments should also be sent to the Chief, Pricing Policy Division, Wireline Competition Bureau, Federal Communications Commission, 445 12th Street, S.W., Washington, DC 20554.

200. Filings can be sent by hand or messenger delivery, by commercial overnight courier, or by first-class or overnight U.S. Postal Service mail (although we continue to experience delays in receiving U.S. Postal Service mail).

- The Commission's contractor, Vistronix, Inc., will receive hand-delivered or messenger-delivered paper filings for the Commission's Secretary at 236 Massachusetts Avenue, NE, Suite 110, Washington, DC 20002 The filing hours at this location are 8 a.m. to 7 p.m. All hand deliveries must be held together with

[305] *Id*. § 1.1206(b).

[306] *Id*. §§ 1.415, 1.419.

[307] *See Electronic Filing of Documents in Rulemaking Proceedings*, 63 FR 24121 (1998).

rubber bands or fasteners. Any envelopes must be disposed of before entering the building.

- Commercial overnight mail (other than United States 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 mail, Express Mail, and Priority Mail should be sent to 445 12th Street, S.W., Washington, DC 20554. The Commission advises that electronic media not be sent through USPS.
- All filings must be addressed to the Commission's Secretary, Office of the Secretary, Federal Communications Commission.

201. Documents in this docket are available for public inspection and copying during business hours at the FCC Reference Information Center, Portals II, 445 12th Street, S.W., Room CY-A257, Washington, DC 20554. The documents may also be purchased from Qualex International, telephone (202) 863-2893, facsimile (202) 863-2898.

202. Written comments by the public on the proposed and/or modified information collections are due on the same day as comments on the NPRM, i.e., on or before 60 days after publication of the NPRM in the Federal Register. Written comments must be submitted by OMB on the proposed and/or modified information collections on or before 60 days after publication of the NPRM in the Federal Register. In addition to filing comments with the Secretary, a copy of any comments on the information collections contained herein should be submitted to Judith B. Herman, Federal Communications Commission, Room 1-C804, 445 12th Street, S.W., Washington, D.C. 20554, or via the Internet to jbherman@fcc.gov, and to Jeanette Thornton, OMB Desk Officer, Room 10236 NEOB, 725 17th Street, N.W., Washington, D.C. 20503 or via the Internet to JThornto@omb.eop.gov.

IX. ORDERING CLAUSES

203. IT IS ORDERED that, pursuant to the authority contained in sections 1, 4(i), 4(j), 201-205, 251, 252, and 303 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 151, 154(i), (j), 201-205, 251, 252, and 303, NOTICE IS HEREBY GIVEN of the rulemaking described above and COMMENT IS SOUGHT on those issues.

204. IT IS FURTHER ORDERED that the Commission's Consumer Information Bureau, Reference Information Center, SHALL SEND a copy of this Notice of Proposed Rulemaking, including the Initial Regulatory Flexibility Analysis, to the Chief Counsel for Advocacy of the Small Business Administration.

FEDERAL COMMUNICATIONS COMMISSION

Marlene H. Dortch
Secretary

SEPARATE STATEMENT
OF CHAIRMAN MICHAEL K. POWELL

Re: Review of the Commission Rules Regarding the Pricing of Unbundled Network Elements and the Resale of Services by Incumbent Local Exchange Carriers (WC Docket No. 03-173 (Adopted September 10, 2003)

Seven years is a long time in the telecommunications industry. At the time the Commission initially adopted its pricing rules in 1996, it promised to review them after states had implemented the first round of pricing decisions. I am pleased that today – seven years after the first pricing rules were adopted – the Commission has moved to keep the promise we made in 1996. Today's Notice represents the first-ever comprehensive and directed approach to reviewing our TELRIC pricing methodology.

Now that competition has taken root in many areas of the country, we initiate this proceeding to consider whether our pricing rules are working as intended, in particular, whether it is conducive to facilities investment. The stakes are high: without the correct pricing signals in the market, our rules can thwart a central purpose of the Act, the development of facilities-based competition.

The hypothetical nature of the TELRIC inquiry has been difficult for states to implement and has resulted in a lack of consistency that disadvantages incumbents and competitors alike. It is my hope that at the end of this proceeding the market will benefit from a methodology that is less theoretically freewheeling. The tentative conclusion stated in the item supports this policy direction. While I have heard some concern surrounding the tentative conclusion, our commitment to retaining a forward-looking approach is unwavering – what we are debating is the extent to which realistic assumptions about the incumbent's network should be included in our pricing rules. I believe that an approach grounded in the real-world attributes of the incumbent's network would address claims that our TELRIC rules currently distort a competitor's decision whether to invest in new facilities or to lease an incumbent's existing facilities.

I look forward to reviewing the submissions in the proceeding and working with state regulators to capture the experience they have gained implementing our pricing methodology. Finally, I appreciate the support of my colleagues in initiating a fair and balanced review of our pricing rules.

SEPARATE STATEMENT OF COMMISSIONER KATHLEEN Q. ABERNATHY

Re: Review of the Commission's Rules Regarding the Pricing of Unbundled Network Elements and the Resale of Service by Incumbent Local Exchange Carriers, WC Docket No. 03-173 (adopted Sept. 10, 2003).

Since joining the Commission, I have advocated taking a fresh look at the Commission's UNE pricing rules, and I am pleased that we are commencing such a proceeding today. The Notice recognizes two key problems with the TELRIC pricing standard. First, it is a black box that permits inconsistent results among the states for reasons unrelated to actual cost differentials, and it also permits internal inconsistencies within individual rate proceedings. Second, the excessively hypothetical nature of the Commission's existing standard sends inappropriate investment signals and produces irrational pricing in some instances.

The Notice we adopt today sets us down a different path — one bounded by the real-world attributes of incumbent LECs' networks and the recognition that wireline networks cannot incorporate new technologies instantaneously. I support the tentative conclusion in the Notice that reflects these concepts. In fact, despite the controversy often surrounding tentative conclusions, I believe that most carriers agree that the UNE pricing standard should be constrained by reality, as opposed to being purely hypothetical. Incumbents and competitors simply disagree about the extent to which current prices are grounded in realistic assumptions about network architecture and usage patterns. This rulemaking will put their competing claims to the test, and it will give parties the opportunity to propose a variety of methodological changes concerning how states determine input values. It will also enable the Commission to modify pricing rules in accordance with the changes to our unbundling regime that were adopted in the *Triennial Review Order*. I commend the Wireline Competition Bureau and my colleagues for drafting a comprehensive and balanced NPRM, and I look forward to reviewing the record and adopting revised rules.

STATEMENT OF
COMMISSIONER MICHAEL J. COPPS,
APPROVING IN PART AND DISSENTING IN PART

Re: *Review of the Commission's Rules Regarding the Pricing of Unbundled Network Elements and the Resale of Service by Incumbent Local Exchange Carriers (WC Docket No. 03-173)*

Seven years ago, the Commission adopted a forward-looking economic cost policy for pricing unbundled network elements. We did the right thing. The Supreme Court blessed our action—pretty heady stuff for a Commission not always accustomed to such approbations from above. So we're building on solid ground here, with no judicial charge to start all over or to perform drastic reconstruction. It's clear to me that from time to time we should review and recalibrate our policy, known as Total Element Long Run Incremental Cost, or TELRIC. We have a duty to adjust it over time to ensure that, as Congress intended, incumbents are justly compensated for their network costs plus a reasonable profit. At the same time, we need to ensure that competitors pay prices that induce efficient market entry. There is also the need to adjust our policy to reflect the new realities of the recent *Triennial Review*.

To a significant extent we initiate a proceeding today that lays the groundwork for accomplishing these objectives. There is much in this item that I am pleased to support. I regret, however, that I cannot support today's Notice of Proposed Rulemaking *en toto*. I just don't believe the record at hand justifies the making of important, even if tentative, conclusions. Such tentative conclusions often have a curious way of becoming final. On the basis of little or no prior record, the majority today adopts a tentative conclusion concerning so-called real-world network attributes that I believe is confusing and inconsistent with basic premises of TELRIC that were upheld as a reasonable interpretation of Section 252(d)(1) by the Supreme Court. For a Commission striving to provide clarity to an industry, this is a strange way to do it.

Moreover, some of the questions that flow from this tentative conclusion come close to saying that the assumptions that undergird our TELRIC policy are misdirected and flawed. Again, these are the same assumptions that passed muster with the highest court in the land. I have no objection to asking probing questions; I just think that a tentative conclusion here is unnecessary and probably unwise.

Despite this reservation, I appreciate my colleagues' willingness to engage in a dialogue and their efforts to accommodate some of my concerns. I think this is a stronger item as a result. I look forward to our continuing work together on this.

Finally, I hope—I really hope—that we can encourage all the parties interested in TELRIC to sit together and discuss the issues attending it in something approaching candor and maybe even a little cooperation. I think all the company CEOs and others directly impacted have heard my plea on this over the past two years since I came here.

Frankly, it was easier to get the Russians and the Chinese to sit down with us during the latter days of the Cold War than it is to convene a TELRIC dialogue. It's not that I expect everyone to come to a joyous outcome on this, but rather just a hope that there might be one or two or maybe even three facts we could agree on and then see if from a small patch of common ground we can't do some building out. I'd like to see everyone a part of this—incumbents and competitors, our Commission and the State Commissions, traditional and non-traditional stakeholders. Crafting appropriate rules for our unbundled network element pricing policy will be a daunting task. We cannot get it done without less rhetoric and more dialogue among all the players. Toward that end, Mr. Chairman and my colleagues, I would very much like to see us hold some hearings or a forum to bring the players together, or perhaps even commence a Joint Conference to jumpstart discussion and engage our counterparts in the States on this important topic. I think this would be an excellent way to follow through on the work this proceeding today commences.

STATEMENT OF COMMISSIONER KEVIN J . MARTIN

Re: *Review of the Commission's Rules Regarding the Pricing of Unbundled Network Elements and the Resale of Service by Incumbent Local Exchange Carriers.* **WC Docket No. 03-173**

I am pleased that we are taking action to alter our existing TELRIC pricing regime. Today, we tentatively conclude that our unbundled network element pricing methodology, while forward-looking, should be based upon the incumbent local exchange carrier's actual network rather than the totally hypothetical assumptions contained in a cost proxy model. I believe that the prices for unbundled network elements should be based on the forward-looking replacement cost of the ILEC's network.

As I have long stated, I believe that that the TELRIC rules should be reviewed and revised. I have also stated before that the existing TELRIC formula may provide incumbent service providers with an insufficient return on investment capital for new infrastructure. Today's item, in conjunction with our decision in the recent Triennial Review Order, begins the process to provide the necessary adjustments to the TELRIC formula that will more accurately reflect incumbent costs and help spur deployment in new facilities and services.

While I am pleased that we are initiating this proceeding, I am cognizant that the Wireline Competition Bureau's interpretation of the TELRIC pricing rules in the recent Virginia Arbitration Order may not reflect the direction and spirit of today's decision

STATEMENT OF
COMMISSIONER JONATHAN ADELSTEIN

Re: Review of the Commission's Rules Regarding the Pricing of Unbundled Network Elements and the Resale of Service by Incumbent Local Exchange Carriers, WC Docket No. 03-173

I lend my support to today's Notice because I believe that it is reasonable and appropriate to look once again at our pricing rules for unbundled network elements, interconnection, and resale of service under Sections 251 and 252 of the Act. These pricing rules, while certainly esoteric, have an enormous impact on the telecommunications industry and on consumers. If prices for unbundled network elements are too high, competitors may face much greater hurdles than Congress intended -- particularly given our recent decision in the Triennial Review Order, that limits unbundling to those facilities for which competitors are truly impaired -- and may be limited in the services which they can offer. On the other hand, if the prices for unbundled elements are too low, this could have serious consequences for our nation's incumbent carriers. For the American consumers who obtain more than 18 million lines from competitors by resale or unbundled elements, our decision can mean the difference between having a choice of providers or returning to a world of one option. So, the stakes are high.

While I am sympathetic to concerns that this Notice may open another source of regulatory instability, it has been seven years since the FCC adopted these rules and this is the first comprehensive review. Through the Triennial Review process, our section 271 review, and discussions with carriers, numerous concerns have been raised. We must look carefully at these concerns and it is fair to open this dialogue.

That said, I enter this proceeding with a very open mind. Our TELRIC pricing rules have been challenged in almost every forum and on just about every basis since their adoption in August of 1996. Despite those challenges, our rules have been upheld by the highest court of the land. The Supreme Court's affirmation of our rules sent a strong signal that the Commission had struck the right balance. Indeed, by making parts of the incumbents' network available to competitors at economic cost, our rules enable consumers to reap the benefits of the incumbents' economies of scope and scale, as well as the benefits of competition. Moreover, the investment that these rules have encouraged has been remarkable; as noted by the Supreme Court, competitors have invested approximately 51 billion dollars between 1996 and 2000, which is now up to 71 billion dollars according to recent estimates. I recognize, however, that there may be ways to improve these rules.

Given the Supreme Court's endorsement of our existing rules, the importance of this proceeding, and the fact that we have no direct record on these issues, I would strongly prefer to issue this Notice without any tentative conclusions, simply seeking comment on how we might improve our rules. The Notice seeks comment on several alternatives for modifying our rules, but I am pleased that the item does not specifically endorse any single alternative methodology. I nonetheless join in a limited tentative conclusion that our TELRIC rules should more closely account for certain real-world factors – namely, the routing and topography of the incumbent LEC's network. Because this issue has become a flash-point for criticism of our TELRIC rules, I

believe that it is worthwhile to signal to the outside community that the FCC has concerns about how our rules account for these factors. I should make clear, however, that I remain open to all possibilities in this proceeding and will look carefully at the evidence filed on this and other issues.

It is critical that we develop a full and comprehensive record in this proceeding and that we not rush to judgment before analyzing this record. To this end, I encourage and fully expect that we will see active participation by our colleagues from the state public utility commissions. They have front line experience implementing our rules and are perhaps best positioned to explain how the current rules have been implemented, where they are ambiguous, where they are problematic, and where they have functioned well.

I would like to thank my colleagues, particularly the Chairman, for seeking our input on this item and working to accommodate many of our concerns. I would also like to thank Bill and his team for their hard work on this item and to wish them well as we kick off what will be, I'm sure, a challenging proceeding.