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PUBLIC NOTICE

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COMMON CARRIER BUREAU REQUESTS FURTHER COMMENT ON SELECTED ISSUES REGARDING THE FORWARD-LOOKING ECONOMIC COST MECHANISM FOR UNIVERSAL SERVICE SUPPORT

CC Docket Nos. 96-45, 97-160

Comment Date: May 26, 1998
Reply Comment Date: June 9, 1998

In the *Universal Service Order*, the Commission determined that federal universal service high cost support should be based on forward-looking economic cost.[1] In this Public Notice, we seek to augment the record on certain issues relating to the creation of a federal forward-looking economic cost mechanism, including the appropriate input values for that mechanism and the level of the revenue benchmark. Comments from interested parties are due on May 26, 1998, and reply comments are due on June 9, 1998.

Background:

On May 8, 1997, the Commission released a *Report and Order* on Universal Service. In the *Universal Service Order*, the Commission adopted a plan for universal service support for rural, insular, and high cost areas that will replace existing implicit federal subsidies with explicit, competitively neutral federal universal service support mechanisms. The Commission adopted the Joint Board's recommendation that an eligible carrier's level of universal service support should be based upon the forward-looking economic cost of constructing and operating the network facilities and functions used to provide the services that will be supported by the federal universal service support mechanisms. The Commission determined that, beginning January 1, 1999, non-rural carriers will receive support based on the forward-looking economic cost of providing the supported services. The Commission

[1] Federal State Joint Board on Universal Service, *Report & Order*, CC Docket No. 96-45, 12 FCC Rcd 8776, 8899 paras. 224-25, (1997) (*Universal Service Order*), as corrected by Federal State Joint Board on Universal Service, CC Docket 96-45, *Errata*, FCC 97-157 (rel. June 4, 1997), *appeal pending, Texas Office of Public Utility Counsel v. FCC*, No. 97-60421 (5th Cir. filed June 25, 1997); *see also Recommended Decision*, 12 FCC Rcd at 232 para. 270.

further determined that high cost support for rural carriers should continue essentially unchanged and should not be based on forward-looking costs until further review has been completed, but no sooner than 2001.

Consistent with the Joint Board's recommendation, the Commission concluded in the *Universal Service Order* that it would need to determine costs based on a careful analysis of efficient network design, engineering practices, available technologies, and current technology costs. That is, to determine forward-looking costs, the Commission decided to look at all of the costs and cost-causative factors that go into building a network. The Commission decided to do this in two stages: first, it would look at the network design, engineering, and technology issues relevant to designing a network to provide the supported services. Second, the Commission said that it would look at the costs of the components of the network, such as cabling and switch costs, and various capital cost parameters, such as debt-equity ratios and depreciation rates ("input values")

In a Further Notice of Proposed Rulemaking (*Further Notice*), the Commission established a multi-phase plan to develop a federal mechanism that would send the correct signals for entry, investment, and innovation.[2] In particular, the Commission sought comment on the platform design and input values that it should adopt in a federal mechanism to estimate the cost of each of the elements of the telephone network necessary for non-rural carriers to provide the supported services to high cost areas. On July 9, 1997, the Bureau sought information through a "Data Request" from certain non-rural local exchange carriers (LECs) and holding companies to assist the Commission in evaluating the models and selecting a federal mechanism.[3]

Issues for Comment:

We have already received significant comment in response to the *Further Notice* and *Data Request*. In light of the passage of time, however, we wish to give parties the opportunity to update their comments regarding the input values that should be used in the federal mechanism and in setting the level of the revenue benchmark. We also seek further comment on certain issues that may not have been adequately addressed by commenters in response to the *Further Notice* or *Data Request*. We note that parties' arguments for and against specific input values are significantly more persuasive when accompanied by supporting empirical data, including the assumptions on which those data are based. If empirical data are unavailable, we encourage parties to explain how proposed input values are otherwise verifiable and appropriate. By seeking additional comments on specific input values, we are not prejudging the outcome of issues raised in the Report to Congress or in the Public Notice on Proposals to Revise the Methodology for Determining Universal Service

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[2] Federal-State Joint Board on Universal Service, Forward-Looking Mechanism for High Cost Support for Non-Rural LECs, *Further Notice of Proposed Rulemaking*, CC Docket Nos. 96-45, 97-160, 12 FCC Rcd 18,514 (rel. July 18, 1997) (*Further Notice*).

[3] Federal-State Joint Board on Universal Service, CC Docket No. 96-45, *Order*, DA 97-1432 (rel. July 9, 1997) (*Data Request*).

Support.[4] We emphasize that we are not seeking comment in this Public Notice on the network design, engineering and technology issues.

The issues relating to input values were outlined in the *Further Notice* and *Data Request*, and parties are encouraged to review the *Further Notice* and *Data Request* closely before preparing any comments concerning inputs. Parties that have already filed thorough comments concerning inputs in response to the *Further Notice* and *Data Request* should not reiterate those comments; the Commission will consider inputs comments filed in response to the *Further Notice* and *Data Request*, as well as comments filed in response to this Public Notice, in selecting the input values for the federal mechanism.

A. Inputs Issues

1. Customer Location Data

In the *Further Notice*, the Commission requested comment on the use of data that associate the location of each customer with latitudinal and longitudinal coordinates (geocode data) in a forward-looking economic cost mechanism.[5] In a *Public Notice* released on November 13, 1997, the Common Carrier Bureau (Bureau) recommended that "models be capable of accepting and using geocode data to the extent that such data are available and reliable."[6]

The only geocode data currently on the record are those provided by the proponents of the HAI model.[7] The Metromail database on which HAI's residential geocodes are based is a commercial database developed primarily for the purpose of direct marketing. HAI's geocodes for businesses are based on a database of business addresses compiled by Dun & Bradstreet.

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[4] See Federal-State Joint Board on Universal Service, Report to Congress, CC Docket No. 96-45 (April 10, 1998) at para. 197 ("We are committed to issuing a reconsideration order in response to the petitions filed asking the Commission to reconsider the decision to fund 25 percent of the required support amount."); Proposals to Revise the Methodology for Determining Universal Service Support, Public Notice, DA 98-715 (rel. April 15, 1998) ("We seek to augment the record by encouraging interested parties to submit additional proposals for modifying the Commission's methodology [for determining the appropriate level of federal universal service support for non-rural carriers].").

[5] *Further Notice*, 12 FCC Rcd at 18,536, 18,579-80 paras. 44, 176.

[6] Guidance To Proponents Of Cost Models In Universal Service Proceeding: Customer Location and Outside Plant, *Public Notice*, CC Docket Nos. 96-45, 97-160, DA-2372 (rel. Nov. 13, 1997).

[7] HAI was submitted by AT&T and MCI. *See* Letter from Richard N. Clarke, AT&T, to Magalie Roman Salas, FCC, dated Dec. 11, 1997). Versions of HAI filed before February 3, 1998, were known as the Hatfield Model.

We seek comment on any alternative source of geocode data, or databases that could be used to develop geocodes for use in 1999, including information on the openness, reliability, and cost of the data.[8] For example, WorldCom notes the availability of global positioning satellite (GPS) devices, which they contend can provide latitude and longitude coordinates that are more precise than geocoding methods utilized by HAI.[9] We seek comment on whether the benefits of geocoding using a GPS device outweigh the burdens associated with developing the data, compared to alternative methods of obtaining geocoded data. We also request comment on other possible methods and technologies for geocoding business and residential locations, and their associated costs, in particular for partial use in determining support for 1999. Commenters suggesting alternative sources of data should include empirical evidence documenting and verifying the accuracy of these data sources, including how these data are typically used, who is currently using the data, the extent to which these data would be available for determining support in 1999, and the criteria used to develop these data.

2. Maximum Copper Loop Length

In addition, we seek to augment the record on the appropriate maximum loop length that the federal mechanism should assume is permissible without the use of significantly more expensive electronics. The proponents of the BCPM model[10] assert that copper loops longer than 12,000 feet would require the use of a substantially more expensive extended-range card in the digital loop carrier (DLC), while the HAI proponents assert that copper lengths can extend to 18,000 feet using only a slightly more expensive card in the DLC. The resolution of this question has a significant effect on cost estimates because the maximum copper length constrains the maximum size of a serving area. We seek comment on this issue. In particular, we seek comment on the type and cost of line cards required to serve loops between 12,000 and 18,000 feet from a DLC remote terminal.

3. Defining "Households"

We also seek further comment on the appropriate input value to measure the number of households used in the federal mechanism. The sixth criterion identified in the *Universal*

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[8] In filings with the Common Carrier Bureau, several incumbent LECs have represented that they have geocoded a relatively large percentage of their customers. *See, e.g.*, Letter from Ted Hackman, Cincinnati Bell, to Secretary, FCC, dated April 24, 1998 (99.8%,99.6%, and 99.2% of its customer accounts for Ohio, Kentucky, and Indiana, respectively); Letter from W. Scott Randolph, GTE, to Secretary, FCC, dated April 27, 1998.

[9] A GPS device can associate the physical structure to which a carrier provides services, such as a house, with coordinates identified by satellite technology. Letter from David Porter, WorldCom, to William Caton, FCC, dated Oct. 16, 1997 (World Com Oct. 16 *ex parte*) at 3.

[10] BCPM is sponsored by BellSouth, U S West, and Sprint Local Telephone Company. *See* Submission to CC Docket Nos. 96-45 and 97-160 by Bellsouth, U S West, and Sprint dated Dec. 11, 1997.

Service Order specifies that a "model must estimate the cost of providing service for all businesses and households within a geographic region."[11] It appears that the Census Bureau uses the term "households" as a term of art to refer to occupied housing units.[12] Different parties have advocated alternative interpretations of the sixth criterion. BCPM identifies the cost of outside plant that would serve all housing units,[13] occupied or not, while HAI identifies the cost of serving Census-defined households with telephones.[14]

We encourage parties to submit additional comment on the appropriate universe of "households" that should be assumed for purposes of calculating the forward-looking cost of providing the supported services: total housing units (occupied and unoccupied), total households (housing units that are occupied), or households with telephones.[15] We also seek comment on the HAI proponents' assumption that uninhabited housing units or households without telephones are more likely to be located in remote areas than households with telephones.

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[11] *Universal Service Order*, 12 FCC Rcd at 8915 para. 250.

[12] *See* the Census Bureau's website at http://www.census.gov/population/estimates/housing/prhuhht1.txt (defining a housing unit as "a house, an apartment, a mobile home, a group of rooms or a single room that is occupied (or if vacant, is intended for occupancy) as a separate living quarters."). *See also* the Census Bureau's website at http://www.census.gov/population/methods/sthhmet.txt ("A housing unit is classified as vacant if no one is living in it, unless its occupants are only temporarily absent. . . . Vacant units are excluded if they are open to the elements; that is, the roof, walls, windows, and/or doors no longer protect the interior from the elements, or if there is positive evidence that the unit is condemned or is to be demolished.")

[13] BCPM December 11 submission, Model Methodology at 8.

[14] AT&T and MCI *ex parte*, December 23, 1997.

[15] We note that the question of which "households" and business locations should be included for purposes of estimating the forward-looking cost of providing the supported services is distinct from the question of which lines should be supported. Indeed, we specified that the model must estimate the costs incurred to provide multi-line business services, special access, private lines and multiple residential connections. *Universal Service Order*, 12 FCC Rcd at 8915 para. 250. *Cf. Recommended Decision*, 12 FCC Rcd 87, 132-134, paras. 89-92 (1996) (recommending that support should be provided only for primary residential connections and single-line business connections, and that business connections should receive a lower level of support).

In particular, we seek comment on alternative sources of data to those used in HAI[16] and BCPM[17] for determining the number of residential and business customers located in either the wire center, Census Block Group (CBG),[18] or CB.[19] Any such information should include empirical evidence documenting and verifying the accuracy, cost, and current availability of these data sources. We ask commenters to address whether we should require incumbent LECs to provide the universal service administrator with wire center boundary data and the number of residential, multi-line and single-line business lines served in each wire center.

4. Depreciation

In the Universal Service Order, the Commission articulated a set of criteria that acceptable cost studies or models must meet in order to be used to determine federal high-cost support. These criteria were adopted to ensure consistency in the calculations of federal universal service support. In criterion five, the Commission noted that "(e)conomic lives and future net salvage percentages used in calculating depreciation expense should be within the FCC-authorized range and use currently authorized depreciation lives."[20]

We seek comment on the particular values of depreciation lives and future net salvage percentages we should use to determine the forward-looking cost of providing supported services in a competitive environment. Commenters submitting specific proposals should submit the data and a description of the methodologies used to derive their estimates of depreciation lives and future net salvage values for all classes of assets. Because economic lives may differ from physical lives for a variety of reasons, we ask commenters to identify all of the factors used to derive their estimates. Commenters should discuss and quantify the impact all factors considered in their analysis have on projected economic lives

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[16] In determining the number of customers in a Census Block (CB) or wire center, HAI utilizes the PNR National Access Line Model (NALM). The PNR NALM uses PNR survey information, the Local Exchange Routing Guide (LERG), Business Location Research (BLR) wire center boundaries, a Dun & Bradstreet business database, the Metromail household database, the Claritas 1996 demographic database, and U.S. Census Bureau estimates to calculate both the number of residential and business locations and access lines in each CB, and in each wire center in the United States.

[17] BCPM also uses U.S. Census Bureau data and business line data obtained from PNR.

[18] A census block group is a collection of census blocks. The Bureau of the Census defines a "census block group" as "generally contain[ing] between 250 and 550 housing units, with the ideal size being 400 housing units." U.S. Census Bureau, 1990 Census of Population and Housing, at App. A, "Area Classifications" (issued Mar. 1992).

[19] We note that our request for a source of accurate and reliable data about the number of residential and business customers in a geographic area is related to our request for accurate, reliable, and extensive geocode data.

[20] *Universal Service Order*, 12 FCC Rcd at 8914 para. 250.

and salvage values. For example, commenters should address the effect potential or actual competition, changes in asset prices, or the desire to introduce new services may have on asset lives. Commenters should also explain fully why their approach is appropriate for a model being used to estimate the forward-looking cost of providing supported services in high-cost areas and whether determining the cost of supported services requires the use of depreciation lives and salvage rates specifically designed for that purpose. Commenters recommending asset lives and salvage values that fall outside of Commission ranges should explain fully why such lives are appropriate. Finally, we note that BCPM and HAI use different methodologies for computing depreciation expenses. HAI uses straight-line depreciation,[21] while BCPM incorporates many different methodologies,[22] to compute depreciation and capital expenses. We seek comment on the specific advantages of the different methodologies available for calculating rates of economic depreciation (including those used in BCPM and HAI), the use of different methodologies for different assets, and the effect of their use on calculated costs. Commenters should provide studies supporting the methodologies advocated.

5. Cost of Installing Outside Plant

In the *Further Notice*, the Commission noted that a carrier's outside plant consists of a mix of aerial, underground, and buried cable. The cost of installing each type of outside plant depends on terrain conditions, line density, and other factors. For example, depending on the situation, cable can be placed in trenches dug by hand or with a backhoe, or it may be plowed directly into the ground. The total cost of construction depends upon the cost of each of these activities and the percentage of cable that is placed in each manner. In the *Further Notice*, the Commission tentatively concluded that installation costs for cable should vary based on terrain and line density and reached other tentative conclusions about the cost of installing outside plant.[23] The model proponents have filed default values for the cost of each of these activities and the percentage of cable that would be installed in each manner. We seek comment on the tentative conclusions in the *Further Notice* and the model proponents' default values. Additionally, Dr. David Gabel of Queens College has analyzed data from the Rural Utilities Service regarding the cost of installing cables. We seek comment on Dr. Gabel's analysis and whether it is applicable to non-rural carriers.[24] Parties supporting or refuting the appropriateness of the default values, or proposing alternate values, should provide documentation in support of their position. For example, parties may provide information on labor and capital tools rates, along with the quantity of inputs needed to

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[21] HAI Dec. 11 submission, Model Description at 67.

[22] BCPM Dec. 11 submission, Model Methodology at 80.

[23] *See Further Notice*, 12 FCC Rcd at 18,541-18,544, paras. 60-69.

[24] Dr. Gabel's paper is available on the World Wide Web at http://www.nrri.ohio-state.edu/, and also via a link from the Commission's Universal Service home page.

construct the plant. Commenters should also address whether it is appropriate to use a composite rate for the nation or whether these rates should differ by state or region.

B. Revenues to be Included and Level of the Benchmark

In the *Universal Service Order*, the Commission determined that the level of federal high cost support that eligible non-rural carriers will receive will be 25 percent of the difference between the estimated forward-looking economic cost of providing the supported services and a revenue benchmark.[25] The Joint Board recommended that the Commission adopt a nationwide revenue benchmark to calculate such support. Because the "cost estimated by the proxy models includes the cost of the facilities used to provide [local, discretionary, access, and other] services,"[26] the Joint Board concluded that the benchmark should include revenues generated by all of the services provided over the network being modeled.[27] Further, the Joint Board recommended that the Commission adopt separate benchmarks for residential and business services.[28] In April 1997, a majority of the state members of the Joint Board concluded that the Commission should establish a benchmark based on cost -- specifically, the national average proxy cost -- rather than revenue against which to compare costs in a given area in order to determine support for that area.[29]

In the *Universal Service Order*, the Commission adopted the Joint Board's recommendation to establish a revenue-based benchmark, but indicated its intention to seek comment on the specific benchmark or benchmarks that should be used.[30] In the *Universal Service Order*, the Commission found that the calculation of the revenue benchmarks must be consistent with the method of calculating the forward-looking cost of constructing and operating the network.[31] In particular, it indicated in the *Universal Service Order* that the Commission would clarify the appropriate amount of access charge revenue that should be

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[25] *Universal Service Order*, 12 FCC Rcd at 8925-8926 para. 270. *See also* Federal-State Joint Board on Universal Service, *Report to Congress*, CC Docket No. 96-45, FCC 98-67, paras. 219-231 (rel. April 10, 1998). *See also* Common Carrier Bureau Seeks Comment on Proposals to Revise the Methodology for Determining Universal Service Support, *Public Notice*, DA 98-715 (rel. April 15, 1998).

[26] The Joint Board stated that "[d]iscretionary services include services that are added on to basic local service, e.g., call waiting, call forwarding or caller ID." *Recommended Decision*, 12 FCC Rcd at 246 n.1002.

[27] *Recommended Decision*, 12 FCC Rcd at 246-47.

[28] *Recommended Decision*, 12 FCC Rcd at 247.

[29] Second State Proxy Models Report at 14.

[30] *Universal Service Order*, 12 FCC Rcd at 8919-20, 8923-24 paras. 259, 266.

[31] *Universal Service Order*, 12 FCC Rcd at 8924 para. 267. Specifically, for purposes of determining support, a revenue benchmark could be considered consistent with forward-looking cost estimates if all of the facilities used to deliver services included in the revenue benchmark are included in the cost estimates.

included in the revenue benchmark.[32] We seek comment generally on the amount of access revenues that should be included in the benchmark. Also, in the *Universal Service Order*, the Commission noted that the models filed in this proceeding do not include estimates of the costs of all the elements used in the delivery of access services.[33] Because access charges currently are above cost, however, the Commission concluded that "unless and until both interstate and intrastate access charges have been reduced to recover only per-minute switch and transport costs, access revenues should be included in the benchmark."[34] Similarly, the Commission also stated that "[w]e will seek further information to clarify the appropriate amount of . . . intraLATA toll revenue that should be included in the revenue benchmark."[35] We, therefore, seek comment on whether we should exclude from the revenue-benchmark estimates, for purposes of determining universal service support, the incremental costs associated with the provision of services that are not supported by universal service but which contribute to the revenue benchmark. We seek comment on this issue and ask commenters to provide estimates of the amount that should be deducted from the benchmark. We note that the models exclude the costs of switching and transport for intraLATA toll and interstate and intrastate access services. Alternatively, we seek comment on whether the models should be altered to include the incremental costs associated with the provision of services that are not supported by universal service but which contribute to the revenue benchmark.

We also encourage parties to provide further information about the services that can be provided over the network that the universal service mechanism is designed to support, and the revenues related to those services, because such information will enable us to set the benchmarks accurately. Based on 1994 data received in response to our earlier data request in CC Docket No. 80-286, the Commission suggested in the *Universal Service Order* that the benchmarks might be set at approximately $31 for residential service and $51 for business service.[36]

Final Regulatory Flexibility Analysis

In the *Universal Service Order* we conducted a Final Regulatory Flexibility Analysis (FRFA),[37] as required by the Regulatory Flexibility Act (RFA).[38] We received no petitions

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[32] *Universal Service Order*, 12 FCC Rcd at 8924 para. 267.

[33] *Universal Service Order*, 12 FCC Rcd at 8921 para. 262.

[34] *Universal Service Order*, 12 FCC Rcd at 8921 para. 262.

[35] *Universal Service Order*, 12 FCC Rcd at 8924 para. 267.

[36] *Universal Service Order*, 12 FCC Rcd at 8924 para. 267.

[37] *Universal Service Order*, 12 FCC Rcd at 9219-9260 paras. 870-983.

for reconsideration of that FRFA. In this present Public Notice, the Commission promulgates no additional final rules, and our action does not affect the previous analysis. If commenters believe that the proposals discussed in this Public Notice require additional RFA analysis, they should include a discussion of these issues in their comments.

Procedure for Filing:

Parties should familiarize themselves with the *FNPRM* before formulating their comments. Comments should reference CC Docket Nos. 96-45, 97-160 and *must include the DA number shown on this Public Notice*. Interested parties must file an original and five copies of their comments with the Office of Secretary, Federal Communications Commission, Room 222, 1919 M Street, N.W., Washington, D.C. 20554. Parties should send three copies of their comments to Sheryl Todd, Common Carrier Bureau, Federal Communications Commission, 2100 M. St, N.W., 8th Floor, Washington, D.C. 20554. Parties should send one copy of their comments to the Commission's copy contractor, International Transcription Service, 1231 20th Street, N.W., Washington, D.C. 20036.

Pursuant to section 1.1206 of the Commission's Rules, 47 C.F.R. § 1.1206, this proceeding will be conducted as a permit-but-disclose proceeding in which *ex parte* communications are permitted subject to disclosure.

For further information, please contact: Brad Wimmer, Accounting Policy Division, Common Carrier Bureau, (202) 418-7400.

Action by the Deputy Chief, Common Carrier Bureau.

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[38] *See* 5 U.S.C. § 604. The RFA, *see* 5 U.S.C. § 601 *et. seq.*, has been amended by the Contract With America Advancement Act of 1996, Pub. L. No. 104-121, 110 Stat. 847 (1996) (CWAAA). Title II of the CWAAA is the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA).