

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

In the matter of)	
)	
Iowa Telecommunications Service, Inc.)	
Tariff FCC No. 1, Transmittal No. 31)	WC Docket No. 03-135
)	

ORDER DESIGNATING ISSUES FOR INVESTIGATION

Adopted: June 11, 2003

Released: June 11, 2003

Direct Case Due by: July 2, 2003

Oppositions to Direct Case Due by: July 14, 2003

Rebuttal Due by: July 21, 2003

By the Chief, Pricing Policy Division:

I. INTRODUCTION

1. On November 26, 2001, Iowa Telecommunications Service, Inc. (Iowa Telecom) filed a petition asking the Commission to forbear from application of the rule imposing a deadline for choosing between the average traffic sensitive (ATS) target rate adopted in the *CALLS Order*¹ and an ATS target rate based on forward-looking economic cost (FLEC).² In the alternative, Iowa Telecom sought forbearance from the 0.95 cents per minute ATS target rate set in the *CALLS Order* so that it could reset its ATS target rate at forward-looking cost levels.³ The Commission granted Iowa Telecom's alternative request for forbearance from the 0.95 cents per minute ATS target rate and allowed Iowa Telecom to file a tariff to reset its ATS target rate at

¹ See *Access Charge Reform*, CC Docket No. 96-262, Sixth Report and Order, 15 FCC Rcd 12962, 13029, para. 162 (2000) (*CALLS Order*) (subsequent history omitted). The *CALLS Order* established an integrated access charge reform and universal service regime for price cap local exchange carriers (LECs), including Iowa Telecom. Each price cap LEC had to choose either to subscribe to the rate levels established by the *CALLS Order* for the full, five-year term, or to submit a cost study setting a new rate based on FLEC. Price cap LECs electing *CALLS Order* rates subject the ATS rate contained in their interstate access rates to an X-factor of 6.5 percent until certain target levels are reached. 15 FCC Rcd at 13028-29, para. 161. All price cap LECs, including Iowa Telecom, elected the ATS target rates set in the *CALLS Order*.

² *Petition for Forbearance of Iowa Telecommunications Services, Inc. d/b/a Iowa Telecom Pursuant to 47 U.S.C. 160(c) from the Deadline for Price Cap Carriers to Elect Interstate Access Rates Based on the CALLS Order or a Forward Looking Cost Study*, CC Docket No. 01-331 (filed Nov. 26, 2001) (*Forbearance Petition*). See also 15 FCC Rcd at 12985, para. 61.

³ *Id.* at iii and 2.

FLEC.⁴ In granting Iowa Telecom's Forbearance Petition and allowing Iowa Telecom to reset its ATS target rate, the Commission stated: "Upon filing of a tariff, supported by a forward-looking cost study, we will undertake a tariff investigation to determine Iowa Telecom's forward-looking ATS target rate for the remainder of the CALLS plan's five-year term."⁵

2. On March 25, 2003, Iowa Telecom filed Transmittal No. 31, proposing a new ATS target rate of 1.4876 cents per minute, to become effective April 9, 2003.⁶ Subsequently Iowa Telecom corrected the calculations underlying its proposed new ATS target rate.⁷ On April 1, 2003, AT&T Corporation (AT&T), WorldCom, and Sprint Communications Company, L.P. (Sprint) filed petitions against Iowa Telecom's tariff.⁸ On April 7, 2003, Iowa Telecom filed its reply.⁹ On April 8, 2003, we suspended Transmittal No. 31 for one day, imposed an accounting order, and initiated this investigation.¹⁰ In this order we designate for investigation, pursuant to sections 204 and 205 of the Communications Act of 1934, as amended (the Act),¹¹ certain issues regarding the rates and underlying cost support in tariff Transmittal No. 31 to ensure that Iowa Telecom's proposed new ATS target rate is based on FLEC.¹² We take particular care in conducting this investigation because Iowa Telecom is the only price cap LEC to propose an ATS target rate based on FLEC.

II. BACKGROUND

3. Consistent with the Commission's decision in the *Forbearance Petition Order*, Iowa Telecom has "elect[ed] to submit a cost study based on forward-looking economic cost" for its ATS rates.¹³ The Commission first articulated its concept of FLEC in establishing pricing

⁴ *Petition for Forbearance of Iowa Telecommunications Services, Inc. d/b/a Iowa Telecom Pursuant to 47 U.S.C. 160(c) from the Deadline for Price Cap Carriers to Elect Interstate Access Rates Based on the CALLS Order or a Forward Looking Cost Study*, CC Docket No. 01-331, Order, 17 FCC Rcd 24319 (2002) (*Forbearance Petition Order*).

⁵ *Forbearance Petition Order*, 17 FCC Rcd at 24327, para. 23. The CALLS plan's five year term expires July 1, 2005.

⁶ Iowa Telecommunications Service, Inc., Tariff FCC No. 1, Transmittal No. 31 (Mar. 25, 2003).

⁷ Iowa Telecommunications Service, Inc., Tariff FCC No. 1, Transmittal No. 31, Letter from Gregory J. Vogt, Counsel for Iowa Telecom to Marlene H. Dortch, Secretary, Federal Communications Commission (May 1, 2003) (Iowa Telecom May 1 *Ex Parte* Letter).

⁸ Iowa Telecommunications Service, Inc., Tariff FCC No. 1, Transmittal No. 31, Petition of AT&T Corp. (AT&T Petition); WorldCom Petition to Suspend and Investigate (WorldCom Petition); Petition of Sprint (Sprint Petition) (Apr. 1, 2003).

⁹ Iowa Telecommunications Service, Inc., Tariff FCC No. 1, Transmittal No. 31, Reply of Iowa Telecom (Apr. 7, 2003) (Iowa Telecom Reply).

¹⁰ Iowa Telecommunications Service, Inc., Tariff FCC No. 1, Transmittal No. 31, Order, DA 03-1103 (WCB/Pricing Apr. 8, 2003) (*Suspension Order*).

¹¹ 47 U.S.C. §§ 204 and 205.

¹² The Commission's obligation to ensure that Iowa Telecom's rates are based on FLEC is particularly compelling where, as here, the Commission's forbearance from applying the CALLS Plan ATS target rate was based on a finding that, in accordance with the statutory forbearance criteria, permitting Iowa Telecom to charge a FLEC-based ATS target rate would not harm consumers, would be consistent with the public interest, and would enhance competition among providers of telecommunications services. See 47 U.S.C. § 160. See also *Forbearance Petition Order*, 17 FCC Rcd at 24321, 24325-26, paras. 10, 17-19.

¹³ *CALLS Order*, 15 FCC Rcd at 12984, para. 57.

principles for interconnection and unbundled network elements in the *Local Competition Order*.¹⁴ There the Commission found that prices in a competitive market will tend toward long run incremental cost,¹⁵ and it adopted a pricing standard called Total Element Long Run Incremental Cost (TELRIC), a type of forward-looking pricing methodology designed to derive prices that “replicate[], to the extent possible” what the incumbent LEC would be able to charge in a competitive market, where competition limits the prices that a firm can charge.¹⁶ TELRIC equates the current market value of the existing network of an incumbent LEC with the cost the incumbent would incur today if it built a local network that could provide all the services its current network provides, to meet reasonably foreseeable demand, using the least-cost, most-efficient technology currently available.¹⁷ The Commission added that forward-looking cost does not include embedded or accounting costs that firms incurred in the past and recorded as past operating expenses and depreciation.¹⁸

III. ISSUES DESIGNATED FOR INVESTIGATION

A. Cost Study

4. The *Forbearance Petition Order* requires Iowa Telecom to submit a cost study based on FLEC, but it does not stipulate the use of a specific FLEC standard, e.g., TELRIC.¹⁹ To the extent that Iowa Telecom’s cost study relies on a FLEC-based standard other than TELRIC, it should describe this standard in detail and explain exactly where and how in its cost study this alternative standard is applied. We also note that the materials Iowa Telecom submitted in support of its new ATS target rate consist of a summary cost study. The summary determines rates based on the cost and network design inputs submitted by Iowa Telecom. The summary description provides limited information regarding the inputs, or how Iowa Telecom derived them. In response to requests from Commission staff, Iowa Telecom supplemented its initial tariff filing with additional data on May 1, May 19 and May 30, 2003.²⁰ Commission staff is reviewing Iowa Telecom’s most recent data submission. Therefore, to the extent that Iowa Telecom believes that the information we request in this order has already been provided, Iowa Telecom should cite with specificity to where in the record the information is located.²¹

¹⁴ *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*).

¹⁵ *Id.* at 15844-45, para. 675.

¹⁶ *Id.* at 15846, para. 679.

¹⁷ *Id.* at 15848-49, para. 685. *See also* 47 C.F.R. §§ 51.501-51.511.

¹⁸ *Id.* at 15845, 15857-58, paras. 675, 705.

¹⁹ *Forbearance Petition Order*, 17 FCC Rcd at 24317, para. 23.

²⁰ Iowa Telecom May 1 *Ex Parte* Letter; Iowa Telecommunications Service, Inc., Tariff FCC No. 1, Transmittal No. 31, Letter from Gregory J. Vogt, Counsel for Iowa Telecom to Marlene H. Dortch, Secretary, Federal Communications Commission (May 19, 2003) (Iowa Telecom May 19 *Ex Parte* Letter) (attaching letter to Aaron Goldschmidt, Assistant Division Chief, Pricing Policy Division, Federal Communications Commission that addresses tandem switching as well as other issues raised by Commission staff) (subsequent citations to Goldschmidt Letter); Letter from Gregory J. Vogt, Counsel for Iowa Telecom to Marlene H. Dortch, Secretary, Federal Communications Commission (May 30, 2003) (Iowa Telecom May 30 *Ex Parte* Letter) (providing further explanation of data submitted May 19, 2003).

²¹ If Iowa Telecom has submitted requested information in a computer format other than Microsoft Word or Microsoft Excel, it should provide a written explanation of the information.

B. Network Design

5. The first issue designated for investigation is the reasonableness of the network assumptions Iowa Telecom makes in the cost study supporting its proposed ATS target rate. The maps of the future switching and transport networks that Iowa Telecom provides indicate that Iowa Telecom uses different time periods to estimate the switching and transport costs from which it derives its proposed ATS target rate.²² Iowa Telecom bases its proposed ATS target rate on costs of switch replacements that it will make over the next two years, because, it says, once its new rate becomes effective, the CALLS plan will be in effect for only about two and one-half more years.²³ For transport costs, however, Iowa Telecom appears to base its cost estimates on a network that would be built over a much longer period.²⁴ We direct Iowa Telecom to explain the basis for the use of these study periods, how each is consistent with FLEC, and why it is reasonable to use different study periods for switching and transport in determining costs of its assumed network.²⁵ Iowa Telecom should provide the dates for the projected switching and transport networks on its two network maps. Iowa Telecom also should provide an explanation of all terms used on the maps and in the keys to the maps. In particular, what are the clusters that are shown on the maps? Do they imply a host/remote configuration? Iowa Telecom should recalculate its ATS target rate assuming the same study period for both switching and transport costs, and provide the results and analysis underlying that recalculation.

6. Designing a FLEC-based network necessarily includes evaluating the costs of various possible network configurations.²⁶ The Commission's TELRIC rules, for example, provide that wire center locations remain the same, but host switches may become remotes, and remotes may become remote terminals.²⁷ Iowa Telecom, however, has not provided any evidence that it considered possible alternative configurations to its existing network.²⁸ We direct Iowa Telecom to answer the following questions: Did Iowa Telecom perform any evaluation to determine whether its network design was the most cost-effective? Did Iowa Telecom consider the possible consolidation of exchanges, replacing hosts with remotes and

²² Iowa Telecom May 1 *Ex Parte* Letter.

²³ Iowa Telecommunications Service, Inc., Tariff FCC No. 1, Transmittal No. 31, Statement of Howard Shelanski at 6 (Mar. 24, 2003) (Shelanski Statement); Iowa Telecom May 1 *Ex Parte* Letter.

²⁴ Iowa Telecom May 1 *Ex Parte* Letter. *See also* Shelanski Statement at 5: “[T]he study assumes that forward-looking technology is used to fully replace switching and interoffice transport equipment throughout Iowa Telecom’s network, and therefore estimates costs based on a much more advanced network than Iowa will actually have physically in place during the [two-year switching] study period.”

²⁵ For TELRIC purposes, the Commission defined forward-looking cost in terms of long run incremental cost, with the term “long run” being “a period long enough that all costs are treated as variable and avoidable.” *Local Competition Order*, 11 FCC Rcd at 15845, 15851, paras. 677, 692.

²⁶ *See, e.g., Local Competition Order*, 11 FCC Rcd at 15848-49, para. 685; 47 C.F.R. § 51.505(b)(1) (requiring long run incremental cost measurement to be based on the *lowest cost* network configuration (emphasis added)).

²⁷ *See, e.g., Local Competition Order*, 11 FCC Rcd at 15849-49, para. 685; 47 C.F.R. § 51.505(b)(1). Remote switches are serving end offices that do not support interoffice trunks. Interoffice traffic originating or terminating at the remote switch is routed over an umbilical connection to or from the host switching system which provides the interoffice trunking. Remote terminal, as the term is used here, refers to the remote terminal of a Digital Loop Carrier (DLC) system, which provides multiplexing of loop traffic but generally has no switching capability.

²⁸ Iowa Telecom states, in fact, that its engineers were instructed by Iowa Telecom’s consultant, Howard Shelanski, to assume the existing configuration of host and remote switches. Iowa Telecommunications Service, Inc., Tariff FCC No. 1, Transmittal No. 31, Affidavit of Dennis R. Kilburg at 2, para. 4 (Mar. 21, 2003) (Kilburg Affidavit).

remotes with remote terminals? Did Iowa Telecom consider using more or fewer fiber rings to see if alternative designs would reduce overall costs? Did Iowa Telecom consider changing the number or location of its tandems? Why or why not? If Iowa Telecom performed any such evaluation or any additional evaluation, it should explain the evaluation and its results in detail.

7. In Iowa Telecom's existing network, many remote switches are not homed to the closest host switch.²⁹ The cost study underlying Iowa Telecom's proposed new ATS target rate maintains this existing network configuration.³⁰ Sending remote traffic to the closest host switch may be more efficient, thus reducing cost. We direct Iowa Telecom to recalculate its ATS target rate assuming that all traffic is routed from a remote to the nearest host (with distance measured in route miles), and provide the results and analysis underlying that recalculation.

8. Iowa Telecom states that it bases the demand forecasts underlying the costs of its assumed network on current usage.³¹ Iowa Telecom should provide detailed work papers demonstrating the development of its demand assumptions and any estimated growth in future demand over current demand. Iowa Telecom should also explain the time period or periods for which its demand estimates are prepared. If Iowa Telecom estimated demand over different time periods for its switching and transport cost studies, it should explain why. Iowa Telecom should also recalculate its ATS target rate estimating demand over the same time period for both switching and transport, and provide the results and analysis underlying that recalculation.

9. With respect to allocating shared and common costs of its assumed network, Iowa Telecom states:

The costs for network equipment used to provide access services are shared among inter- and intrastate access services, and – especially with regard to switching – a variety of services share the platform. The services include: local and intraLATA usage, as well as access minutes, vertical features and billing functions. The transport platform is shared among end-user usage services, carrier access, and private line/special access circuits.³²

Iowa Telecom should indicate the extent to which its assumed network provides services other than interstate switched access service. Iowa Telecom should explain in detail how it allocates the costs of its network among these services, and provide all inputs, calculations, and any other analyses underlying that allocation.³³ If Iowa Telecom's assumed network were in service, would it be capable of providing any of these services to areas where they are currently not available? Do Iowa Telecom's demand calculations account for such new availability? How did Iowa Telecom calculate demand for these other services? Was demand based on current or projected usage? Do the demand calculations reflect the traffic for those services that could

²⁹ Iowa Telecom May 1 *Ex Parte* Letter.

³⁰ Kilburg Affidavit at 2, para. 4.

³¹ Iowa Telecom Cost Study at 16; Shelanski Statement at 10; Kilburg Affidavit at 3, para. 7 (terminal equipment).

³² Iowa Telecom Cost Study at 14.

³³ For example, Iowa Telecom provides its interstate/intrastate allocation for switch-related ATS costs and revenues, but it is not clear how it made that allocation. Iowa Telecom May 19 *Ex Parte* Letter at 10, n.19. Iowa Telecom should provide this information.

reasonably be expected when the facilities become operational?

10. Does Iowa Telecom's assumed network include new land and building purchases and additional administrative and maintenance expenses that are reflected in its proposed ATS target rate? If so, Iowa Telecom should specify the land and buildings to be purchased, the costs assumed for each, and how Iowa Telecom determined these costs. Similarly, Iowa Telecom should identify and explain in detail how it derived estimates for any additional administrative and maintenance expenses included in its calculation of its proposed ATS target rate.

C. Transport

11. The second issue designated for investigation is the reasonableness of the tandem switching and transport costs underlying Iowa Telecom's proposed ATS target rate. At present, Qwest's network overlays Iowa Telecom's network, and, in many cases, Iowa Telecom routes traffic that requires tandem switching to a Qwest tandem rather than an Iowa Telecom tandem.³⁴ Indeed, Qwest provides both transport services and tandem switching through facilities that are at times closer to existing Iowa Telecom switches than tandems and transport facilities that Iowa Telecom assumes that it would deploy in a forward-looking network design.³⁵ There are established prices for Qwest tandem switching services and for leasing capacity on Qwest transport facilities, whether purchased as unbundled network elements or from Qwest's interstate access tariffs.³⁶

12. As an initial matter, we note that one of the stated goals of a forward-looking pricing methodology is to establish prices that approximate what a firm would charge for goods and services in a competitive market.³⁷ In such a market, competition limits the prices that firms in that market can charge.³⁸ Given the proximity of Qwest's network, Iowa Telecom should address why its tandem and transport rates should not be limited to levels no greater than Qwest's rate levels. In addition, Iowa Telecom should recalculate its ATS target rate assuming that traffic it currently routes to Qwest tandems will continue to be routed to those tandems, and provide the results and analysis underlying that recalculation.

13. Iowa Telecom addresses this issue by stating that its incremental cost to utilize its own switches as tandems is far less than Qwest's tariffed tandem switching rate.³⁹ This analysis, however, compares the entire cost of using Qwest's tandems, including the allocated shared and common costs, to the cost of tandem functionality in Iowa Telecom switches, but it does not

³⁴ Kilburg Affidavit at 6, para. 15.

³⁵ We determined the location of Qwest tandems from the Local Exchange Routing Guide (LERG) data base maintained by Telcordia. The LERG contains switch locations and all host-remote relationships. We determined the location of tandems in Iowa Telecom's assumed network from the network maps it provided. See Iowa Telecom May 1 *Ex Parte* Letter.

³⁶ Qwest's UNE rates can be found at http://svartifoss2.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6513387936. Qwest's interstate access rates can be found in Qwest Corporation Tariff FCC No. 1, Transmittal No. 88, 5th Revised Page 6-335 (Aug. 3, 2001).

³⁷ *Local Competition Order*, 11 FCC Rcd at 15846, para. 679.

³⁸ In a market where there are no competitive forces, on the other hand, rate regulation constrains what a firm may charge.

³⁹ Iowa Telecom May 19 *Ex Parte* Letter at 4-5.

include other costs incurred by Iowa Telecom to route traffic to its tandem switches (as opposed to Qwest tandems). Iowa Telecom should explain why, if its incremental cost of providing tandem services is small relative to Qwest's rate, its tandem switching and transport rates are higher than Qwest's UNE tandem switching and transport rates and interstate access rates.

14. The transport network assumed in Iowa Telecom's cost study consists entirely of new, high capacity OC-3 and OC-48 SONET rings.⁴⁰ We direct Iowa Telecom to explain what design and cost minimization tools or techniques it used to design the rings, particularly the OC-48 rings. In its cost study did Iowa Telecom offset its costs of building the fiber network with revenues it may generate by leasing spare capacity to other carriers? If so, Iowa Telecom should provide the analysis underlying this offset. Iowa Telecom provides utilization estimates for its busiest planned OC-48 ring, and states that it determined to use OC-48 rather than lower-capacity OC-12 rings in its assumed network because the terminal equipment for an OC-48 ring costs only a nominal amount more than the terminal equipment for an OC-12 ring.⁴¹ Iowa Telecom should specify which OC-48 and OC-12 products are being compared. For both the OC-48 and OC-12 terminals, Iowa Telecom should indicate whether additional terminals or systems are required to permit adding or dropping of individual DS-1s, or whether the OC-48 and OC-12 terminals support a direct DS-1 interface. Iowa Telecom also should quantify any other cost differences between an OC-12 and an OC-48 ring.⁴²

15. Iowa Telecom's existing fiber network contains both Iowa Telecom's own fiber and fiber leased from other carriers.⁴³ We direct Iowa Telecom to explain whether it determined that the cost of building new fiber in its assumed network was lower than the cost of continuing to lease fiber from other carriers. If so, how did Iowa Telecom make this determination? What assumptions did Iowa Telecom make regarding trends in transport lease costs over the study period for transport? Iowa Telecom should recalculate its ATS target rate assuming that it will continue to lease, rather than build, fiber capacity in its assumed network to the same extent it leases fiber capacity in its existing network, and provide the results and analysis underlying that recalculation.

16. Iowa Telecom's cost study states that three of its assumed fiber rings will be built jointly with other carriers.⁴⁴ We direct Iowa Telecom to provide additional information about shared transport facilities. Does Iowa Telecom share a ring or other transport facility with any of these carriers in its existing network? If so, Iowa Telecom should describe what facilities are shared and how they are shared. The affidavit describing Iowa Telecom's assumed network also states: "Some areas of Iowa Telecom's network do not have the density of exchanges needed to

⁴⁰ Iowa Telecom Cost Study at 4. A SONET (Synchronous Optical NETWORK) OC-3 (Optical Carrier 3) ring has the transport capacity of 84 DS-1s (Digital Signal 1s) between any two adjacent nodes. Each DS-1 trunk has the capacity to carry 24 voice grade channels. An OC-48 four fiber ring has the transport capacity of 1344 DS-1s between any two adjacent nodes. On an OC-48 two-fiber ring, only 672 DS1s are available between nodes to carry traffic if a carrier chooses to use the remaining DS1s to prevent service disruptions.

⁴¹ Iowa Telecom May 19 *Ex Parte* Letter at 2.

⁴² According to Iowa Telecom, such costs include "engineering, associated hardware (*e.g.*, equipment bays, fuse panels, 3/1 multiplexers, etc.) or other loadings." *Id.* at 2, n.1.

⁴³ Iowa Telecom May 1 *Ex Parte* Letter.

⁴⁴ Iowa Telecom Cost Study at 4; Kilburg Affidavit at 2-3, para. 6.

justify establishment of a fiber optic ring comprised of just Iowa Telecom exchanges. . . .”⁴⁵ What density of exchanges determines whether Iowa Telecom would build a new ring on its own or would build a ring jointly with other carriers? How did Iowa Telecom determine how and where nodes would be placed on the jointly built rings? How are costs allocated among the carriers participating in the shared rings? Did Iowa Telecom consider sharing rings with carriers other than the carriers included in its assumed network, and, if so, why did it reject sharing arrangements with those carriers?

17. In Iowa Telecom's assumed network, it appears that there are situations where a host switch homes on a particular tandem, but there is no SONET ring that has nodes in both the tandem and host switching offices. It also appears that there are situations where a remote switch homes on a particular host, but there is no SONET ring that has nodes in both the remote and host switching offices. Such routing may not be consistent with at least some forward-looking assumptions to the extent that it does not result in the most efficient, least cost network – indeed, the interconnection of SONET rings would appear to require additional equipment and consume capacity on multiple rings, resulting in increased cost. For its assumed network, Iowa Telecom should delineate where host switches are on a different SONET ring from their associated tandem, and remote switches are on a different SONET ring from their associated host switch. If such routing exists, Iowa Telecom should explain why it considers this routing consistent with FLEC. In addition, Iowa Telecom should answer the questions regarding particular SONET rings contained in Appendix A. We note that, at the request of Commission staff, Iowa Telecom provided additional information about its assumed transport network on May 1 and May 19, 2003.⁴⁶ On May 30, 2003, also at the request of Commission staff, Iowa Telecom further explained the information it had previously provided.⁴⁷ Commission staff is reviewing this information, which has been provided in different formats. Therefore, if the information requested in Appendix A has already been provided, Iowa Telecom should indicate where it can be located in the various tariff and *ex parte* filings, including document and page number, or, if tabulated, table name and relevant row or column.

18. To estimate costs of its assumed transport network, Iowa Telecom used vendor quotes for fiber terminal equipment and “cost data . . . for materials and labor associated with deploying fiber cable.”⁴⁸ This description provides insufficient information for us to evaluate Iowa Telecom's costs for its assumed fiber transport network. Therefore, to the extent Iowa Telecom has purchased and installed any transport equipment since its formation, we direct Iowa Telecom to: (1) itemize the equipment purchased (type, make, model); (2) indicate when (month/year) each piece of equipment was purchased and provide documentation including vendor contracts or invoices; (3) indicate the amount Iowa Telecom paid for the equipment and itemize and justify all “loadings” and/or “factors” applied in calculating unit investment; (4) indicate whether the equipment is used to provide other services in addition to interstate access service; (5) if an engineered, furnished and installed (EF&I) factor was applied to the equipment price, identify the factor and explain how it was developed; and (6) provide documentation for labor costs, including vendor contracts and invoices.

⁴⁵ Kilburg Affidavit at 2-3, para. 6.

⁴⁶ Iowa Telecom May 1 and May 19 *Ex Parte* Letters.

⁴⁷ Iowa Telecom May 30 *Ex Parte* Letter.

⁴⁸ Kilburg Affidavit at 4, para. 9. *See also* Iowa Telecom Cost Study at 10.

19. In describing the regression analysis underlying its costs for OC-48 fiber rings, Iowa Telecom states that, “We relied on the following equation to estimate OC 48 costs.”⁴⁹ Only a table with no equation follows. Iowa Telecom should provide the equation, and state which function was minimized or maximized in performing the regression analysis.⁵⁰

20. For OC-48 terminals, Iowa Telecom’s cost study refers to price quotes for 33 OC-48 terminals, but it provides the results of a regression calculation that appear to be influenced by price quotes for OC-3 terminals.⁵¹ Did Iowa Telecom use the same or different data to develop costs for OC-3 terminals and OC-48 terminals? We direct Iowa Telecom to perform a new regression analysis using only price quotes for OC-48 terminals, recalculate its ATS target rate based on this new calculation, and provide the results and underlying analysis of that recalculation. If OC-3 terminals must be combined with OC-48 terminals in Iowa Telecom’s assumed network, Iowa Telecom should explain where and why this combination occurs. Iowa Telecom’s cost study refers to price quotes from a single vendor for 55 OC-3 terminals, but it determines the price Iowa Telecom will pay for an OC-3 terminal in its assumed network on the basis of price quotes for only 50 OC-3 terminals.⁵² Iowa Telecom should explain this discrepancy.

21. Iowa Telecom’s cost study allocates two-thirds of underground duct costs to local loops, the costs of which are not recoverable through its ATS rate, and one-third of underground duct costs to interoffice transport, the costs of which are recoverable through its ATS rate.⁵³ Iowa Telecom’s cost study makes no such allocation for buried fiber cable, because, according to Iowa Telecom, “the proportion of the company’s interoffice plant that is shared with loop feeder plant is minimal.”⁵⁴ Iowa Telecom further states that its cost study assumes that the “vast majority” of fiber construction consists of buried fiber cable.⁵⁵ Iowa Telecom should quantify exactly how much of its assumed transport network consists of underground ducts and how much consists of buried cable. Iowa Telecom should explain why it assumes a sharing level for underground ducts that is below the level assumed in the Synthesis Model,⁵⁶ and why it assumes no sharing for buried cable.

22. We direct Iowa Telecom to provide the total number of fiber interoffice route miles in its assumed network, and the total number of interoffice route miles, both fiber and

⁴⁹ Iowa Telecom Cost Study at 9.

⁵⁰ Iowa Telecom’s cost study indicates that the number of DS-1 trunks that can be connected to an OC-3 terminal is always a multiple of 28. *Id.* In the data Iowa Telecom provides for its assumed network, however, the Grinnell OC-48 terminal has 313 DS-1’s, which is not a multiple of 28. *Id.* at 10. Iowa Telecom should explain this discrepancy.

⁵¹ *Id.*

⁵² *Id.* at 9.

⁵³ Iowa Telecom Reply at 21.

⁵⁴ *Id.* Iowa Telecom apparently distinguishes between underground cable, which is laid in ducts, and buried cable, which is buried without being contained in a duct.

⁵⁵ Iowa Telecom Cost Study at 4.

⁵⁶ The Synthesis Model was developed in the Universal Service proceeding to approximate costs for determining universal service subsidies. *Federal-State Joint Board on Universal Service*, CC Docket No. 96-45, Tenth Report and Order, 14 FCC Rcd 20156 (1999). Iowa Telecom’s cost study uses Synthesis Model assumptions for certain values, such as net salvage values, but rejects Synthesis Model assumptions for other values, such as sharing levels between interoffice transport and local feeder plant. Iowa Telecom Reply at 12-13, 21.

copper, in its existing network. What is the total number of miles that Iowa Telecom used in its cost study to calculate its per-mile cost for fiber transport rings? How many fiber route miles in Iowa Telecom's assumed network are along routes that do not exist in its current network? We further direct Iowa Telecom to provide its underlying assumptions and inputs and any analyses other than those already submitted that support its per-mile cost calculation for fiber transport rings.

D. Switching

23. The third issue designated for investigation is the reasonableness of the local switching costs underlying Iowa Telecom's proposed ATS target rate. In its existing network, Iowa Telecom deploys many Nortel Remote Line Concentrating Modules (RLCMs), a small remote switch that can serve up to 640 lines and homes on DMS-10 hosts. In its cost study, Iowa Telecom apparently assumes that the RLCMs will be replaced with larger switches. Many remotes in Iowa Telecom's network serve fewer than 500 lines, indicating that, in some cases, hundreds of lines could be added before the RLCM would need to be replaced. Iowa Telecom should explain why it assumes that all RLCMs will be replaced and provide any demand estimates and analyses that support that assumption. Further, Iowa Telecom should recalculate its proposed ATS target rate, assuming that it will use RLCMs at all sites forecast to serve fewer than 500 lines during the study period for switching costs, and provide the results and analysis underlying that recalculation. Alternatively, remote switches forecast to serve fewer than 500 lines could be replaced with remote terminals of integrated digital loop carrier (IDLC) systems, such as GR-303. Iowa Telecom should explain whether its switch vendor, Nortel, supports an IDLC system for its DMS-100 and DMS-10 switches, or provides an alternative. If Nortel provides such support, Iowa Telecom should explain why its cost study does not assume use of IDLC systems.

24. Both Iowa Telecom's existing network and assumed network consist of 83 host and 211 remote switches.⁵⁷ In its assumed network, Iowa Telecom replaces all existing switches with new Nortel DMS-100 or DMS-10 switches, because Iowa Telecom replaces older switches with such equipment today.⁵⁸ Of the 83 host switches that Iowa Telecom will replace, 10 of the replacement switches will be DMS-100s and 73 will be DMS-10s.⁵⁹ Iowa Telecom bases cost estimates for these switches solely on price quotes provided by Nortel for 39 switches, including one DMS-100 host, no DMS-10 hosts, and 38 DMS-100 and DMS-10 remotes.⁶⁰ We direct Iowa Telecom to provide the following additional information regarding its switch costs:

(a) Iowa Telecom should explain whether the cost inputs for the single DMS-100 host switch are representative of the costs Iowa Telecom would incur to purchase all ten DMS-100s hosts, or whether there are differences among the ten DMS-100 hosts that will cause costs to vary.

(b) The bulk of host switches to be deployed in Iowa Telecom's assumed network are DMS-10 hosts. Iowa Telecom bases its cost calculation for DMS-10 hosts on an

⁵⁷ Kilburg Affidavit at 5, paras. 12-13.

⁵⁸ Iowa Telecom Cost Study at 2; Kilburg Affidavit at 4-5, paras. 11-12; Shelanski Statement at 6.

⁵⁹ Iowa Telecom Cost Study at 2; Kilburg Affidavit at 5, para. 12.

⁶⁰ Iowa Telecom Cost Study at 5 and 6.

“estimated . . . regression equation to determine how much less DMS-10s cost compared to DMS-100s.”⁶¹ Iowa Telecom appears to have estimated the cost of DMS-10 hosts without using any input data on the cost of DMS-10 hosts. Given the absence of input data on DMS-10 host costs, how did Iowa Telecom make its estimate? Did Iowa Telecom obtain vendor quotes for DMS-10s? Why or why not? What additional assumptions did Iowa Telecom make to estimate these costs?

(c) Iowa Telecom appears to use the same inputs to estimate the costs for all the various types of Nortel remote switches, including Remote Switching Center-S (RSCS), STAR, and RLCM switches, although these switches vary in size and have differing start-up costs.⁶² Iowa Telecom should explain why it considers the same assumptions valid for all types of switches.

(d) To the extent Iowa Telecom has purchased and installed any switches of these types since its formation, we direct Iowa Telecom to: (1) itemize the equipment purchased (type, make, and model, specifying the specific model of remote switch); (2) indicate when (month/year) each piece of equipment was purchased and provide documentation including vendor contracts or invoices; (3) indicate the amount Iowa Telecom paid for the equipment and itemize and justify all “loadings” and/or “factors” applied in calculating unit investment; (4) indicate whether the equipment is used to provide other services in addition to interstate access service; (5) if an engineered, furnished and installed (EF&I) factor was applied to the equipment price, identify the factor and explain how it was developed; and (6) provide documentation for labor costs, including vendor contracts and invoices.

25. Iowa Telecom’s cost study states that, based upon the sample of vendor price quotes for 39 switches, Iowa Telecom used a regression analysis to calculate total switch costs. Specifically, Iowa Telecom states that it “used a constrained linear regression . . . where we constrained the coefficient of the trunk port in our regression based on a recent Iowa Telecom trunk port purchase. . . .”⁶³ Thus it appears that Iowa Telecom has inserted data in its regression analysis from a source other than vendor price quotes. Iowa Telecom should identify its source for this additional data, and explain why it inserted this data in its regression analysis. Further, Iowa Telecom should provide the regression calculations without imposing any constraint on the coefficient of trunk port cost, recalculate its ATS target rate based on this new calculation, and provide the results and underlying analysis for that recalculation. In addition, Iowa Telecom should state exactly what functions were being minimized or maximized in the regression analysis.

26. Iowa Telecom’s cost study increases all switch costs by ten percent to reflect the fact that Iowa Telecom will purchase new switches one at a time rather than in quantities.⁶⁴ The cost study also indicates, however, that all switches would be purchased within the next two years.⁶⁵ We direct Iowa Telecom to explain the bases for its assumption that all switches would

⁶¹ *Id.* at 6.

⁶² Start-up costs include all costs incurred to install the switch and make the first line from the switch operational.

⁶³ Iowa Telecom Cost Study at 5.

⁶⁴ Iowa Telecom Cost Study at 6. *See also* AT&T Petition at 7; WorldCom Petition at 3.

⁶⁵ Shelanski Statement at 6; Iowa Telecom May 1 *Ex Parte* Letter.

be purchased individually and why, conversely, it would not be reasonable to assume that it could purchase them in larger quantities, (*e.g.*, the 39 switches for which it obtained vendor quotes under a single volume contract), thus allowing it to negotiate greater price concessions and discounts. Iowa Telecom should recalculate its ATS target rate without the ten percent increase, and provide the results and underlying analysis of that recalculation.

27. Finally, in the *Suspension Order* we questioned whether Iowa Telecom's allocation of only 15 percent of switching costs to the non-traffic sensitive portion of switching costs was unreasonably low, and lower than the percentage reflected in Iowa Telecom's common line tariffs.⁶⁶ In its petition against Iowa Telecom's proposed ATS target rate, AT&T also questioned whether Iowa Telecom was over-recovering its switching costs through both ATS rates and common line charges.⁶⁷ Although Iowa Telecom provided additional legal argument on this issue,⁶⁸ we direct Iowa Telecom to provide information sufficient to demonstrate that it does not, in fact, over-recover its switching costs through a combination of common line and ATS rate elements. We also direct Iowa Telecom to explain whether and how its allocation of switching costs for rate-setting purposes is consistent with its treatment of those costs for separations purposes.

E. Rate Structure

28. The fourth issue designated for investigation is Iowa Telecom's selective adjustment of rates. The Description and Justification accompanying Iowa Telecom's proposed ATS rate states:

Where a specific forward-looking cost was developed for a tariff element and the current rate exceeds the cost, no adjustment in the rate element was made. For those elements that are currently priced under the developed forward-looking cost, the element was increased to cover the cost and achieve the ATS target rate.⁶⁹

In following this procedure, Iowa Telecom essentially treats local switching and transport as a single basket, a treatment that appears to violate the Commission's rate structure rules for price cap carriers.⁷⁰ Although the Commission has forborne from application of the 0.95 cents per minute ATS target rate, Iowa Telecom remains subject to the Commission's rate structure rules. We direct Iowa Telecom to recalculate its tariffed rates, allowing all rates to achieve their full, cost-supported levels, and provide the results and underlying analysis of that recalculation.

IV. FILING PROCEDURES

29. This investigation is designated WC Docket No. 03-xxx. Iowa

⁶⁶ *Suspension Order* at 2, para. 4.

⁶⁷ AT&T Petition at 7-8.

⁶⁸ Iowa Telecom Reply at 16-17; Iowa Telecom May 19 *Ex Parte* Letter at 8.

⁶⁹ Iowa Telecommunications Service, Inc., Tariff FCC No. 1, Transmittal No. 31, Description and Justification at 3 (Mar. 25, 2003).

⁷⁰ See 47 C.F.R. § 61.42. See also *CALLS Order*, 15 FCC Rcd at 12984, para. 58 (adopting the rate structure components of the CALLS Plan as mandatory for all price cap LECs). Sprint claims that this selective adjustment of underlying rates produces a proposed ATS rate that is above forward-looking cost. Sprint Petition at 3.

Telecommunications Service, Inc. (Iowa Telecom) is designated a party to this investigation. Iowa Telecom shall file its direct case no later than **July 2, 2003**. The direct case must respond to the issues designated in this Order. Oppositions or other responses to Iowa Telecom's direct case shall be filed no later than **July 14, 2003**. Iowa Telecom may file a rebuttal to oppositions or other responses no later than **July 21, 2003**. When filing pleadings, please reference WC Docket No. O3-135. An original and four copies of all pleadings should be addressed to Marlene H. Dortch, Secretary, Federal Communications Commission, 445 12th Street, SW, Room TW-B204, Washington, DC 20554. A courtesy copy should be addressed to Chief, Pricing Policy Division, Wireline Competition Bureau, 445 12th Street, S.W., Room 5-A225, Washington, D.C. 20554, and e-mailed to jsaulnie@fcc.gov. A courtesy copy should also be addressed to Qualex International, Portals II, 445 12th Street, S.W., Room CY-B402, Washington, D.C. 20554, telephone (202) 863-2893, facsimile 202-863-2898, or sent via e-mail to qualexint@aol.com. Parties also are strongly encouraged to submit their comments via the Internet through the Electronic Comment Filing System at <<http://www.fcc.gov/e-file/ecfs.html>>. Generally, only one copy of an electronic submission must be filed. In completing the transmittal screen, parties should include their full name, Postal Service mailing address, and the applicable docket number, which in this instance is WC Docket No. 03-135. Parties may also submit an electronic pleading via Internet e-mail. To get filing instructions for e-mail pleadings, parties should send an e-mail to <ecfs@fcc.gov>, and should include the following words in the body of the message: "get form <your e-mail address>." A sample form and directions will be sent in reply.

30. Interested parties who wish to file pleadings via hand-delivery are also notified that the Commission will only receive such deliveries weekdays from 8:00 a.m. to 7:00 p.m., via its contractor, Vistrionix, Inc., located at 236 Massachusetts Avenue, NE, Suite 110, Washington, DC 20002. **The Commission no longer accepts these filings at 9300 East Hampton Drive, Capitol Heights, MD 20743.** Please note that all hand deliveries must be held together with rubber bands or fasteners, and envelopes must be disposed of before entering the building. In addition, this is a reminder that the Commission no longer accepts hand-delivered or messenger-delivered filings at its headquarters at 445 12th Street, SW, Washington, DC 20554. Messenger-delivered documents (e.g., FedEx), including documents sent by overnight mail (other than United States Postal Service (USPS) Express and Priority Mail), must be addressed to 9300 East Hampton Drive, Capitol Heights, MD 20743. This location is open weekdays from 8:00 a.m. to 5:30 p.m. USPS First-Class, Express, and Priority Mail should be addressed to the Commission's headquarters at 445 12th Street, SW, Washington, DC 20554. The following chart summarizes this information:

TYPE OF DELIVERY	PROPER DELIVERY ADDRESS
Hand-delivered paper filings	236 Massachusetts Avenue, NE, Suite 110, Washington, DC 20002 (Weekdays - 8:00 a.m. to 7:00 p.m.)
Messenger-delivered documents (e.g., FedEx), including documents sent by overnight mail (this type excludes USPS Express and Priority Mail)	9300 East Hampton Drive, Capitol Heights, MD 20743 (Weekdays - 8:00 a.m. to 5:30 p.m.)
USPS First-Class, Express, and Priority Mail	445 12 th Street, SW Washington, DC 20554

31. All relevant and timely pleadings will be considered by the Commission. In reaching a decision, the Commission may take into account information and ideas not contained in pleadings, provided that such information, or a writing containing the nature and source of such information, is placed in the public file, and provided that the fact of reliance on such information is noted in the order.

***Ex Parte* Requirements**

32. This investigation is designated a permit-but-disclose proceeding and is subject to the requirements of section 1.1206(b) of the Commission's rules, 47 C.F.R. § 1.1206(b), as revised. Persons making oral *ex parte* presentations are reminded that memoranda summarizing the presentations must contain a summary of the substance of the presentation and not merely a listing of the subjects discussed. More than a one- or two-sentence description of the views and arguments presented is generally required.⁷¹ Other rules pertaining to oral and written presentations are also set forth in section 1.1206(b).

33. Interested parties should address any memoranda summarizing oral *ex parte* presentations or written *ex parte* presentations in this proceeding to Marlene H. Dortch, Secretary, Federal Communications Commission, 445 12th Street, S.W., TW-B204, Washington, D.C. 20554. Parties making either oral or written *ex parte* presentations also should address copies of memoranda summarizing any oral *ex parte* presentations or any written *ex parte* presentations to the Chief, Pricing Policy Division, Wireline Competition Bureau, 445 12th Street, S.W., Room 5-A222, Washington, D.C. 20554 and e-mail copies to jsaulnie@fcc.gov. A courtesy copy also should be addressed to Qualex International, Portals II, 445 12th Street, S.W., Room CY-B402, Washington, D.C. 20554, telephone (202) 863-2893, facsimile (202)-863-2898, or sent via e-mail to qualexint@aol.com. Parties also are strongly encouraged to file copies of memoranda summarizing oral *ex parte* presentations or any written *ex parte* presentations via the Internet through the Electronic Comment Filing System at <<http://www.fcc.gov/e-file/ecfs.html>>.

Paperwork Reduction Act

34. This order designating issues for investigation contains no new or modified information collections subject to the Paperwork Reduction Act of 1995, Pub. Law 104-13.

V. ORDERING CLAUSES

35. ACCORDINGLY, IT IS ORDERED that, pursuant to sections 4(i), 4(j), 201-205, and 403 of the Communications Act, 47 U.S.C. §§ 154(i), 154(j), 201-205, and 403, and pursuant to the authority delegated by sections 0.91 and 0.291 of the Commission's rules, 47 C.F.R. §§ 0.91, 0.291, the issues set forth in this Order ARE DESIGNATED FOR INVESTIGATION.

36. IT IS FURTHER ORDERED that Iowa Telecommunications Service, Inc. SHALL BE a party to this proceeding.

⁷¹ See 47 C.F.R. §1.1206(b)(2), as revised.

37. IT IS FURTHER ORDERED that Iowa Telecommunications Service, Inc. SHALL INCLUDE, in its direct case, a response to each request for information that it is required to answer by this Order.

FEDERAL COMMUNICATIONS COMMISSION

Tamara L. Preiss
Chief, Pricing Policy Division
Wireline Competition Bureau

APPENDIX A

For the SONET ring passing through Chariton and Russell and the SONET ring passing through Creston and Knoxville, and every SONET ring that shares nodes with these two rings, Iowa Telecom should provide:

- All offices⁷² with SONET nodes on the ring;
- Whether the ring is OC-3 or OC-48, two-fiber or four-fiber; Bidirectional Line Switched Ring (BLSR) or Unidirectional PathSwitched Ring (UPSR);
- Number of DS-3s added to or dropped from each ring node;
- Number of trunks connected to each switch in each office along the ring, indicating whether the count is for individual trunks, DS-1s, or some other type of facility;
- Point-to-point transport capacity (expressed as the number of DS-1s) currently in service between each pair of nodes along the ring (*e.g.*, if the assumed ring has nodes at Town 1 and City 2, Iowa Telecom should provide point-to-point capacity between these locations for its existing network),⁷³
- Number of trunks forecast to be served by each switch in each office along the ring at the end of the study period for Iowa Telecom's assumed transport network;
- Point-to-point transport capacity (expressed as the number of DS-1s) forecast to be in service at the end of the study period for Iowa Telecom's assumed transport network between each pair of nodes along the ring (*e.g.*, if the assumed ring has nodes at Town 1 and City 2, Iowa Telecom should provide point-to-point capacity forecasted between these locations).⁷⁴

⁷² As used here, the term "offices" includes facilities that contain switches, ring nodes, or both.

⁷³ This question refers to the number of DS-1s provided or expected to be needed between pairs of offices. In some cases, Iowa Telecom may be providing higher speed services, such as DS-3s or OC-Ns, which are not channelized down to DS-1 or lower speed. In such cases, each unchannelized DS-3 should count as 28 DS-1s, and each unchannelized OC-N should count as 28N DS-1s (*e.g.*, an OC-3 would count as $28 \times 3 = 84$ DS-1s, and an OC-12 would count as $28 \times 12 = 336$ DS-1s).

⁷⁴ For any unchannelized services, Iowa Telecom should use the counting procedure outlined in the preceding footnote.