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BEFORE THE
FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, D.C. 20554

In the Matter of **Qwest Communications International Inc.** Consolidated Application for Authority to Provide In-Region, InterLATA Services in Colorado, Idaho, Iowa, Montana, Nebraska, North Dakota, Utah, Washington and Wyoming	)	WC Docket No. 02-314

DECLARATION OF NATALIE J. BAKER, ARLEEN M. STARR, AND DOUGLASS DENNEY ON BEHALF OF AT&T CORP.

I. QUALIFICATIONS AND BACKGROUND

1. **Natalie J. Baker.** My name is Natalie J. Baker. My business address is 1875 Lawrence Street, Denver, Colorado 80209. I am employed by AT&T Corp., and I serve as District Manager for Local Services and Access Management in the Network System Division for the company's Western Region.

2. My primary responsibility is management of the cost to AT&T for local network elements, interconnection, and carrier access charges in the company's fourteen-state Western Region. In that capacity, and relevant here, I am required to analyze public policy and the attendant wholesale prices for network elements charged to AT&T. Over the last five-plus years, I have participated in arbitrations, permanent cost cases, universal service, and access reform dockets before state commissions in the fourteen-state Qwest Region. I have also supported the AT&T position through industry workshops, ex parte

meetings, and preparation of written comments in various state regulatory and legislative proceedings.

3. I began my career in telecommunications with AT&T Wireless Services (McCaw Cellular Communications) in 1990 where I held several positions including District Manager of Resellers, District Manager of Indirect Distribution, and Retail Development Manager. On January 1, 1996, I assumed the position of Manager with AT&T's Local Infrastructure and Access Management organization in the Network Computing and Systems Division. In December 1998, I was promoted to District Manager, Local Services and Access Management for the Western Region

4. I hold a Ph.D. in Public Affairs at the University of Colorado and Master's degrees in Public Administration and Business Administration from the University of Colorado and the University of Denver respectively. Additionally, I hold a B.S. in Sociology / Education from Indiana University, Bloomington, Indiana.

5. **Arleen M. Starr.** My name is Arleen M. Starr. My business address is 1875 Lawrence Street, Denver, Colorado 80202. I am employed by AT&T as a manager in the Local Services and Access Management organization. My responsibilities include analyzing local exchange carriers' intrastate costing and pricing methodologies and studies. As an expert witness, I have submitted testimony on local and access cost and price issues within AT&T's Western Region. I have previously submitted testimony in Arizona, Colorado, Idaho, Iowa, Minnesota, Montana, Nebraska, New Mexico, North Dakota, Oregon, South Dakota, Utah, Washington and Wyoming.

6. I graduated from DePaul University in 1983 with a Bachelor of Science degree in Commerce, with an emphasis in Accounting. I received a Masters of Business Administration from DePaul University in 1990, with an emphasis in Finance. I have also completed various training seminars offered by AT&T and other educational organizations in marketing, economics, accounting, and costing methods in the telecommunications field.

7. I began my career with AT&T in 1984 in the Consumer Marketing Department. I had various responsibilities in this organization, including managing the expense and capital budgets. From 1986 to 1990, I held various positions in the Financial Regulatory Department in Chicago. My responsibilities included intrastate financial analysis and providing reports and data to the regulatory commissions in the Central Region. From 1992 to 1996, I worked in the product equipment business, with financial responsibilities in the product management, sales, and service areas. I assumed my current responsibilities in May of 1996.

8. **Douglas Denney.** My name is Douglas Denney. I am employed by AT&T as a Manager with Network Services, in the Local Services and Access Management group. My responsibilities include tracking, reviewing and analyzing local wholesale prices in Qwest's region; reviewing cost studies; and representing AT&T as a witness in state regulatory proceedings in the Qwest region relating to local wholesale price/cost issues.

9. I received a B.S. degree in Business Management in 1988. I spent three years doing graduate work at the University of Arizona in Economics, and then I transferred to Oregon State University where I have completed all the requirements for a Ph.D. except

my dissertation. My field of study was Industrial Organization, and I focused on cost models and the measurement of market power. I taught a variety of economics courses at the University of Arizona and Oregon State University. I was hired by AT&T in December of 1996 and have spent most of my time with the Company analyzing cost models.

10. I have testified before most commissions in Qwest's 14-state territory on cost models -- including the HAI Model, BCPM, GTE's ICM, U S WEST's UNE cost models, and the FCC's Synthesis Model. I have also testified about issues relating to the wholesale cost of local service – including universal service funding, unbundled network element pricing, geographic deaveraging, and competitive local exchange carrier access rates.

11. The purpose of our testimony is to demonstrate that the UNE rates adopted by the Iowa, Idaho, Nebraska and North Dakota state commissions are not remotely TELRIC-compliant. We filed similar testimony in response to Qwest's first section 271 application for these states in WC Docket No. 02-148.

12. Qwest argues that the UNE rates set in Iowa, Idaho, Nebraska and North Dakota can stand on their own. They cannot. The state commission in each of these states set rates for loop, switching and other critical elements on the basis of Qwest's "actual" costs rather than efficient forward-looking costs as TELRIC requires.

II. IOWA.

13. The most recent UNE prices adjudicated for Qwest in Iowa are also in clear violation of TELRIC. The Iowa Utilities Board last set UNE and interconnection prices for Qwest in an adjudication in 1998, based on a record compiled in 1996-97. *US West*

Communications, Inc., Docket No. RPU-96-9 (Iowa Utils. Board, Apr. 23, 1998). In its 1998 final decision, the Board expressly declined to apply the TELRIC methodology, explaining that the Board was unwilling to accept its assumption of long run cost optimization. *In re: U S West Communications, Inc.*, Docket No. RPU-96-9 (Iowa Utils. Bd.), Final Decision and Order (issued April 23, 1998), slip op. at 13-14.

14. Qwest's assertion that the Board's overall approach nonetheless complied with "forward-looking economic cost" principles and was "largely consistent with the FCC's TELRIC rules" (Thompson Iowa Pricing Declaration at 15-16) is refuted by the Board's own findings. The Board made clear that it was adopting an incremental cost standard in which Qwest's embedded network and operations are assumed to remain almost entirely unchanged – *i.e.*, a species of *short run* incremental cost:

> [T]he Board finds it is inappropriate to determine UNE prices using TELRIC methodology because it incorporates two assumptions that are difficult to reconcile with the cost-based pricing requirements of 47 U.S.C. § 252(d)(1) and IOWA CODE § 476.101(4)(a)(1). First, TELRIC produces a cost for network elements which assumes that U S West's existing technology will be instantaneously replaced. Second, TELRIC methodology assumes an optimal network that will never exist and which will produce services the current network cannot provide. Since neither of these things will happen, hypothetical TELRIC costs are unlikely to be actual costs U S West will incur to provide UNEs . . .

In re: U S West Communications, Inc., Docket No. RPU-96-9 (Iowa Utils. Bd.), Final Decision and Order (issued April 23, 1998), slip op. at 13-14. The Board described its non-TELRIC cost standard as a measure of the "actual costs U S West will incur in providing unbundled network elements in the near future," rather than the "costs of an imaginary transition from the existing embedded network to a hypothetical forward-looking network." *Id.* at 14-15.

15. The Board elaborated on this point in response to a request for clarification of the April 1998 decision by the Consumer Advocate Division of the Iowa Department of Justice: "the Board's costing and pricing principles use least-cost technology *compatible with the existing embedded network.*" *In re: U S West Communications, Inc.*, Docket No. RPU-96-9 (Iowa Utils. Board), Order Granting Rehearing In Part For Purposes Of Clarification And Correction (issued June 12, 1998), slip op. at 2 (emphasis added). The resulting costs, the Board added, "will be based on *actual costs* U S West *will incur* in providing UNEs." *Id.* at 4 (emphasis added).

16. Qwest's related claim that the cost model inputs adopted by the Board in 1998 were "consistent with the Act" (Thompson Iowa Pricing Declaration at 18 *et seq.*) is also at odds with reality. Consistent with its rejection of TELRIC principles, the Board repeatedly rejected TELRIC-compliant input values in favor of embedded or short run values for several major UNE cost inputs.

17. Thus, for example, the Board accepted U S West's assumption that forward-looking network operations expense would be only 10 percent below embedded levels. Final Decision and Order (issued April 23, 1998), slip op. at 24.

18. Likewise, the Board rejected the structure sharing assumptions of the Hatfield Model (the cost model sponsored by AT&T) because the model was "based on TELRIC," "assumes a 'scorched node' environment," and "also assumes U S West will construct a new local exchange network using the most efficient, currently available technology." *Id.* at 26. Instead, the Board "set structure sharing inputs at levels at which sharing presently

occurs" – *i.e.*, generally at the levels achieved by existing carriers in their embedded plant. *Id.* at 26-27.

19. Similarly, rather than estimate the mix of aerial, buried and underground cable to be found in an efficient forward-looking local network appropriate for Iowa, the Board assumed that the mix of structure would equal the "levels which reflect U S West's plant *presently in use.*" *Id.* at 29 (emphasis added).

20. Unsatisfied with mischaracterizing the Board's 1998 action, Qwest also misstates its subsequent fate on judicial review. Judicial review took place in 1998-99 before the United States District Court for the Southern District of Iowa. Qwest repeatedly cites January 199 findings of the court that the Board's overall costing approach—and specific inputs adopted by the Board—were "appropriate" and "consistent with the Act." *See* Thompson Iowa Pricing Declaration at 7-8, 18 (citing *U S West Communications, Inc. v. Thoms*, Civil No. 97-CV-70082, Order Affirming Some Provisions of the Interconnection Agreements and Remanding Others (S.D. Iowa, Jan. 25, 1999), slip op. at 69-70). Three months later, however, in the wake of the Supreme Court's 1999 decision in *AT&T v. Iowa Utilities Board*, 525 U.S. 366 (1999), the District Court reconsidered and vacated the very findings on which Qwest now relies. *U S West Communications, Inc. v. Thoms*, Civil No. 97-CV-70082 (S.D. Iowa), Memorandum Opinion, Ruling Granting AT&T's and MCI's Motion for Reconsideration and Order Amending Judgment (Apr. 19, 1999). In the latter decision, the court held that the Board's costing approach in fact violated the TELRIC standard, and thus was "inconsistent with current federal law":

> The Board adopted neither the TELRIC option nor the proxy option in establishing rates for interconnection and access to unbundled elements. Indeed, the Board specifically rejected the TELRIC methodology because

> the Board was unwilling to accept two of its underlying assumptions. *See* Board's Final Decision and Order, at 13-14 (April 23, 1998), as modified by order on June 12, 1998. In its stead, the court [sic] adopted an incremental cost approach. *See id.* at 14-15. By adopting a pricing methodology other than those specified in the FCC's pricing rules, *the Board's pricing approach is inconsistent with current federal law.*

U S West Communications, Inc. v. Thoms, Civil No. 97-CV-70082 (S.D. Iowa), Memorandum Opinion, Ruling Granting AT&T's and MCI's Motion for Reconsideration and Order Amending Judgment (Apr. 19, 1999), slip op. at 4-5 (emphasis added). The court remanded the pricing issues to the Board, directing it to "comply with the requirements of the FCC's rules." *Id.* at 5.

21. The Iowa Utilities Board has never complied with the court's remand order. On March 15, 2000, Qwest filed a tariff proposing, *inter alia*, to deaverage its UNE prices (another requirement of the *Local Competition Order* with which the Board had not complied in its 1998 order). On June 22, 2000, the Board issued a notice proposing to consider both the proposed deaveraging and the District Court order in a single docket. On August 2, 2000, however—in the wake of the decision of the Eighth Circuit in *Iowa Utilities Board*, 219 F.3d 744 (2000), overturning the FCC's pricing rules—the Board announced that it would defer the pricing issues raised by the District Court remand until the Supreme Court resolved the fate of the *Local Competition Order*. Hence, the Board limited the scope of the proceeding to Qwest's deaveraging proposal. *In re: U S West Communications, Inc. (n/k/a Qwest Corporation)*, Docket No. RPU-00-1 (TF-00-64), Order Sustaining Objections to Consideration of Certain Remanded Issues (issued Aug. 2, 2000).

22. On June 22, 2001, Qwest filed cost studies in support of rates for elements not covered in the 1996-98 rate proceeding. The Board denied a request by McLeodUSA and the Office of Consumer Advocate to expand the scope of the proceeding to review Qwest's existing UNE prices in compliance with the District Court's 1999 remand order. The further proceedings ordered by the District Court, the Board asserted, were premature "because of the uncertainty regarding the legal status of the FCC's TELRIC pricing rules." *In re: Qwest Corporation*, Docket No. RPU-01-6, Order Granting Intervention and Denying Request to Expand Scope of Proceeding (issued Sept. 19, 2001), slip op. at 5-6.

23. On May 16 and 24, 2002, Qwest filed tariff revisions and an SGAT proposing reductions in certain of its existing rates for UNEs and interconnection. On June 7, 2002, the Board issued an order allowing the rate changes to take effect. The Board made no finding, however, that the reduced rates complied with the FCC's pricing standards or the District Court's remand order, and instituted no proceeding to address these long-outstanding issues. *In re: Qwest Corporation*, Docket No. TF-02-202, Order Approving Tariff (issued June 7, 2002).

24. The net result of these proceedings is that today – six years after enactment of the 1996 Act and the FCC's issuance of its *Local Competition Order* – the Iowa Utilities Board has never prescribed any rates for UNEs or interconnection that even purport to comply with the TELRIC standard.

III. IDAHO.

25. Qwest makes only a token effort to defend Idaho's UNE rates on the merits. That is because the UNE rates in Idaho, like in Iowa, are stale and have never been found to be TELRIC complaint by the IPUC.

26. The UNE rates at issue were set by a series of orders by the IPUC's appointed Arbitrator in 1997. Notably, the Arbitrator himself viewed these rates as "interim." First Order Addressing Substantive Arbitration Issues, *Interconnection Contract Negotiations Between AT&T Communications of the Mountain States, Inc. and US WEST Communications, Inc. Pursuant to 47 U.S.C. Section* 252, USW-T-96-15, at 38 (Id. PUC March 24, 1997) ("*First Arbitration Order*"). In approving these orders, the IPUC conducted no independent review of the UNE rates but simply asserted *ipsi dixit* that "we are satisfied that the resolution of the disputed issues contained in the arbitrator's First Order and Second Order satisfy the Act." Order No. 27050, *Interconnection Contract Negotiations Between AT&T Communications of the Mountain States, Inc. and US WEST Communications, Inc. Pursuant to 47 U.S.C. Section* 252, USW-T-96-15, at 2 (Idaho PUC July 17, 1997) ("*IPUC Arbitration Order*"). Despite the fact that the costs of providing UNEs have declined considerably in the five years since these rates were first determined, the IPUC has yet to set new UNE rates.

27. In reviewing Qwest's Section 271 application, the IPUC recognized that these existing rates could not be deemed to be TELRIC-compliant. The IPUC explained that it is "unable to determine whether Qwest's UNE prices are consistent with the public interest because Qwest has not established UNE prices for its Idaho services." Idaho Public Utilities Commission, Commission Decision On Qwest Corporation's Compliance With

Section 271 Public Interest And Track A Requirements And Section 272 Standards, *US West Communications, Inc.'s Motion For An Alternative Procedure To Manage Its Section 271 Application*, Case No. USW-T-00-3, at 11 (Idaho PUC April 19, 2002) ("*IPUC 271 Order*"). "There is no evidence showing that Qwest's UNE prices reached through an arbitration that occurred four years ago satisfy current FCC TELRIC pricing requirements, that the arbitrated rates are currently effective because AT&T continues to purchase UNEs from the arbitrated prices, or that the UNEs identified in the interconnection agreement meet the complete list of UNEs now required for pricing." *Id.* Thus, the IPUC concluded that "[t]he lack of UNE prices for Qwest remains a gap in Qwest's record for compliance with the Section 271 requirements," *id.*, and "the Commission cannot conclude that Qwest has satisfied all the FCC requirements for approval of Section 271 interLATA service authority." *Id.* at 12.

28. To address this "gap" in its Section 271 Application, Qwest "voluntarily" lowered rates for certain elements. *See* Idaho Public Utilities Commission, Notice of Qwest Corporation's Filing of Generally Available Terms Including Rates For Unbundled Network Elements, *US West Communications, Inc.'s Motion For An Alternative Procedure To Manage Its Section 271 Application*, Case No. USW-T-00-3 (Idaho PUC May 30, 2002). These rates are based on Qwest's "benchmarking" analysis, *see* Thompson Idaho Dec. ¶ 6, which, as explained by Mr. Lieberman is severely flawed. Notably, the IPUC made no independent determination as to whether these rates complied with the Act and the FCC's pricing rules. Idaho Public Utilities Commission, Commission Final Decision on Qwest Corporation's Compliance with Section 271, *US West Communications, Inc.'s Motion For An Alternative Procedure To Manage Its*

Section 271 Application, Case No. USW-T-00-3 (June 10, 2002). Rather, the IPUC found that any complaints about the validity of those rates could be challenged in a separate proceeding. *Id.* at 7.

29. Thus, Qwest's Section 271 application for Idaho must stand or fall on the validity of the UNE rates set in 1997 by the Arbitrator. And as explained above, the Idaho Commission itself has found that these rates cannot be deemed TELRIC-compliant.

30. The arguments provided by Qwest provide no basis for second guessing the IPUC's conclusion in this regard. In fact, the arbitration record reveals several facial violations of the Commission's pricing rules. For example, the Arbitrator refused to set geographically deaveraged rates on the ground that Qwest's retail rates were not deaveraged. *First Arbitration Order* at 28. The FCC's rules, of course, require at least three different geographically deaveraged rate zones. 47 C.F.R. § 51.507.

31. The structure sharing assumptions adopted by the Arbitrator were likewise at odds with the forward-looking costs of an efficient provider of local telephone services. The Arbitrator ordered that UNE rates be set on the basis of the following structure sharing percentages: 33% for aerial cable, 50% for buried cable, and 90% for underground cable. In the *Inputs Order*, the Commission determined that significantly higher structure sharing percentages should be used. *See Inputs Order* ¶ 243 (50% for most aerial cable and 65-100% for most buried and underground cable).

32. Similarly, the common cost factor set by the arbitrator, 13%, is far above forward-looking levels. *First Arbitration Order* at 32. That level was based on Qwest's existing overhead expenses. But as explained above, TELRIC principles dictate that the common cost

factor be set on the basis of the costs of an efficient provider, not Qwest's "actual costs." Clearly, an efficient telecommunications carrier could achieve much lower overheads than Qwest achieved in 1996. This is not a matter of theory, but fact. All the other RBOCs have much already done so. The "average" RBOC (including Qwest) had an overhead of 10.5% in 1998 and 8.3% in 2000. *See* para. 47, *infra.*

33. Finally, the Arbitrator expressly disclaimed setting TELRIC-compliant collocation charges. In its *First Arbitration Order*, the Arbitrator set interim collocation rates based on US WEST's interstate tariff rates for collocation because "[n]either side has proposed collocation prices that are supported by sound cost analysis." *First Arbitration Order* at 34. AT&T subsequently showed that many of these rates were *higher* that the collocation rates actually proposed by US WEST in the arbitration. *Fifth Arbitration Order* at 6. To prevent a gross injustice, the Arbitrator ordered US WEST to reduce its rates to the level that it proposed in the arbitration. *Id.* at 7. However, in light of its prior finding that those rates were not "supported by sound cost analysis," the Arbitrator declared these collocation rates to be interim and admonished the parties to initiate further proceedings on this issue. *Id.* at 6.

IV. NEBRASKA.

34. The UNE rates set by the Nebraska PSC for loops and switching, as well as other key UNEs, are well in excess of TELRIC levels.

35. **Loops.** The loop rates sets by the Nebraska PSC are inflated because of the Nebraska PSC's reliance on the flawed Benchmark Cost Proxy Model ("BCPM"). More specifically, in its *Nebraska Pricing Order*, the Nebraska PSC considered both the cost

model that it should use to set loop rates in Nebraska, as well as the inputs that should be used. Findings and Conclusions, *In the Matter of the Commission, on its own Motion, to Investigate Cost Studies to Establish Qwest Corporation's Rates for Interconnection, Unbundled Network Elements, Transport and Termination, and* Resale, Application No. C-2516/PI-49, ¶¶ 18-74 (Ne. PSC Apr. 23, 2002) ("*Nebraska Pricing Order*"). After rejecting Qwest's "ICM LoopMod" as "inaccurate," *id.* ¶ 68, the Nebraska PSC focused its attention on the other cost models sponsored in this proceeding – the HAI model, the Hybrid Cost Proxy Model ("HCMP"), and BCPM. Without any analysis or citation, the Nebraska PSC declared that "[a]ll are designed to reflect costs an efficient company would incur in providing facilities, using the latest and least-cost technologies." *Id.* ¶ 70.

36. The Nebraska PSC recognized, however, that "results" generated by each model were "sensitive to the choice of inputs." *Id.* ¶ 71. But rather than determine the proper inputs that should be used in each of these "TELRIC" models, the Nebraska PSC simply threw up its hands. *Id.* ¶ 72 ("[T]he Commission is reticent to make specific findings related to individual inputs in this proceeding related to Loop UNE rates."). Instead, the Nebraska PSC found that "any possible bias contained in each model and its associated inputs, will be minimized by utilizing the HAI, HCPM, and BCPM, each model's respective default inputs for cable placement, cost sharing, plant mix, and fill factors." *Id.* ¶ 73. Thus, the Nebraska PSC determined the UNE loop rates for Nebraska by simply taking an average of the three cost models using each model's default inputs. *Id.*.

37. The Nebraska PSC's explanation for this – that the average will minimize "any possible bias" – is mathematical nonsense. To the extent that one (or two) of the models calculate TELRIC-compliant rates, averaging in the results of a flawed cost model will result in

excessive, non-TERIC-compliant rates. And, by including the rates generated by the BCPM, that is precisely what happened here.

38. This can be demonstrated directly by comparing the loop rates set by the Nebraska PSC to loop costs that would be generated by the Commission's HCMP, which all acknowledge uses a properly forward-looking standard. The statewide average loop rate set by the Nebraska PSC is $21.83, while according to the HCPM, the average loop in Nebraska costs $15.62. Thompson Nebraska Dec. ¶ 33. This is exactly in line with the results of AT&T's HAI model. Denney Direct at 4 (July 20, 2001) ($15.67 monthly average loop cost for Nebraska). Thus, the loop rates set by the Nebraska PSC are so high because the BCPM is not forward-looking and generates costs well in excess of those generated by the HCPM and the HAI model.

39. This should come as no surprise to the Commission, because in creating the HCPM, the Commission expressly rejected the underlying methodology employed by the BCPM to calculate loop costs, as well as many of the default inputs used in that model. In its *Platform Order*, 13 FCC Rcd. 21323 (1998), the Commission found that the HAI model's approach for determining how to "group and serve . . . customers in an efficient and technologically reasonable manner" was superior to BCPM's "simplist[ic]" approach that "generat[e]d artificial costs." *Id.* ¶ 46. In particular, the Commission found BCPM's methodology flawed because it would "require separate facilities to serve customers that are [in fact] in close proximity." *Id.* Similarly, in determining what approach should be used to "design" the outside plant, the Commission found that the BCPM, unlike the HAI model, did not "adhere to sound engineering and forward-looking, cost-minimizing principles." *Id.*¶ 54. Thus, the Commission found that BCPM did not use proper

"optimization routines through use of sound network engineering design to use the most cost-effective forward-looking technology." *Id.* ¶ 61.

40. The Commission in its *Platform Order* and subsequent *Inputs Order*, 14 FCC Rcd. 20156 (1999) also rejected many of the key inputs used in the BCPM. For example, the Commission found that BCPM overstated costs by assuming that "loop lengths that exceed 12,000 feet will be fiber cables." *Platform Order* ¶¶ 68, 70. The Commission has also found BCPM "assum[ption] that an efficient telephone company will benefit only marginally from sharing" as contrary to TELRIC principles, which dictate substantial structure sharing. *Id. Inputs Order* ¶¶ 242, 243. And the Commission rejected the cable cost per input values supported by BCPM's sponsors, which were based on cable costs reported by the incumbent LECs, in favor of the publicly available data provided and supported by AT&T and the HAI sponsors. *Id.* ¶¶ 103, 105.

41. **Switching And Other Recurring UNE Rates.** The other recurring UNE rates set by the Nebraska PSC are equally flawed. Reversing course from its approach on loops, the Nebraska PSC rejected the use of AT&T's HAI model to set switching and interoffice transmission UNE rates – despite the fact that the Commission had substantially endorsed HAI's switching cost algorithims and interoffice facilities module, *Platform Order* ¶ 75 – instead relying on Qwest's proprietary ICM. That model, however, is not appropriately forward-looking. As Qwest conceded in the proceedings before the Nebraska PSC, its ICM was developed in order to allow Qwest to "recover, in the prices charged to new entrants, the actual "real world" costs that it incurs to provide interconnection and unbundled network elements. The cost recovery methodology the Commission adopts in this proceeding must allow [Qwest] to recover its actual costs." AT&T Post Hearing Br.

at 27-28 (Apr. 26, 1999) (quoting testimony of Alan Bergman). No amount of semantic gymnastics by Qwest can alter this fundamental defect.

42. Moreover, even if the SCM (the switching portion of the ICM) in fact attempted to calculate the efficient, economic costs of providing switching and interoffice transmission UNEs, the specific inputs used to calculate rates for these UNEs are patently excessive and do not produce TELRIC-compliant rates. Two examples vividly illustrate the failure of the Nebraska PSC to use appropriately forward-looking inputs in the ICM.

43. *Inflation Factor*. A substantial component of the cost of a UNE is the wholesale expense that the ILEC incurs in providing the UNE. Wholesale expenses "represent the cost of maintaining, operating, marketing, and administrating wholesale services and network elements on an annual basis." *Nebraska Pricing Order* ¶ 128. To do this, Qwest used 1999 expenses and then brought those expenses "forward" by applying a productivity factor, which measured efficiency gains since 1999, and an inflation factor, which measured expected increases in the underlying costs since 1999. *Id.* ¶¶ 128-32. The inflation factor in turn had two components, wage increases and material input price increases.

44. The inflation factor set by Qwest is not remotely consistent with basic TELRIC principles. To set the inflation factor, the Nebraska PSC looked at the average annual rate of change in the employment cost index ("ECI") from 1985 to 1995. It then compared that value, 3.79%, to the factor proposed by Qwest, 4.3%. Remarkably, rather than finding this evidence to determine that Qwest's factor was too high, the Nebraska PSC concluded that the 4.3% factor was proper because it was within the "range of the

value calculated by the ECI." *Nebraska Pricing Order* ¶ 149. But these numbers are not close in any relevant sense. The Qwest figure is a more than *20%* greater than the ECI value.

45. Even more egregious, the Nebraska PSC determined that the costs of materials used to provide telecommunications services had increased at an annual rate of change of 1.28%. *Id.* ¶¶ 15-52. The Nebraska PSC derived this figure on the basis of the producer price index ("PPI") for communications equipment for 1985 to 1995. *Id.* This analysis is fundamentally flawed. First, it makes little sense to look at the annual rate of change of communication equipment prices from 1985 to 1995 to "inflate" 1999 vintage expenses. Rather, one would want to look at more recent data that is much more likely to be reflective of future cost changes. That data is available from the Department of Labor on the same website cited by the Nebraska PSC. *See Nebraska Pricing Order* ¶ 152 (citing http://www.bls.gov/ppi/home.htm#overview).[1] And it shows that after 1995, the PPI for Communications equipment leveled off (in 1996) and then began to fall. Thus, the most recent data show that from December 1995 to May 2002, the PPI for communications equipment has fallen nearly 7%.

46. Even this significant decline does not reflect the full magnitude of the decrease in the material costs between 1999 and today. The communications equipment account includes many types of communications equipment that have not experienced the significant cost declines that the core type of equipment used in local networks have

[1] The Department of Labor routinely updates these data and, therefore, statistics on the PPI for communications equipment was available to the Nebraska PSC up through the first quarter of 2002 at the time the Nebraska PSC issued its decision.

experienced. For example, the PPI for communications equipment includes the costs of CB radios, electric marine horns, fire detection systems and traffic signals.[2] As Mr. Lieberman explains, the price for the equipment actually used in local networks has and continues to experience dramatic declines.

47. *Overhead.* The overhead factor set by the Nebraska PSC – 14.1% – is facially excessive. The reason for this is that, as the Nebraska PSC acknowledged in its *Nebraska Pricing Order*, the overhead factor was based on Qwest's "actual overhead expenses" in 1996. *Pricing Order* ¶¶ 161-65; Qwest Nebraska Post-Hearing Br. at 39 (March 1, 1999). But TELRIC requires rates be based on efficient costs, not Qwest's existing costs. Clearly, an efficient telecommunications carrier could achieve much lower overheads than Qwest achieved in 1996. This is not a matter of theory, but fact. All the other RBOCs have already done so. As Mr. Denney showed, the "average" RBOC (including Qwest) had an overhead of 10.5% in 1998 and 8.3% in 2000. Denney Rebuttal at 10 (Aug. 1, 2001).

48. **NRCs.** Cost-based NRCs are essential to meaningful competition. That is because, NRCs are, by definition, a barrier to entry. They are costs that new entrants must pay, but that the incumbent does not. George J. Stigler, THE ORGANIZATION OF INDUSTRY 67 (1968) (an entry barrier is "a cost of producing (at some or every rate of output) which must be borne by a firm which seeks to enter an industry but is not borne by firms already in the industry"); *see also Bell Atlantic-NYNEX Merger Order*, 12 FCC Rcd. 19985, ¶ 129 n.247 (1997) (same). When such entry barriers exist, new entrants must charge higher prices than incumbents to recover their costs.

[2] *See* http://www.osha.gov/oshstats/sicser.html (SIC code 366_).

49. The NRCs set by the Nebraska PSC are competition foreclosing. Qwest's NRCs were calculated by determining the amount of time Qwest employees spend on a particular activity, largely using manual processes, and then multiplying that time by the existing labor rate. *Nebraska Pricing Order* ¶¶ 178, 181. Nonetheless, despite expressly acknowledging the embedded cost nature of the NRCs, the Nebraska PSC labeled them "forward-looking" because they "reflect all planned improvements due to additional mechanization of the service order process." *Id.* ¶ 179; *see also id.* ¶ 180 ("Qwest testified that additional mechanization of the service order process, as negotiated in the 271 service quality process, is reflected in the ENRC.").

50. The federal courts have already rejected the Nebraska PSC's reasoning that an ILEC's existing processes can be the basis for setting TELRIC-based NRCs. In the *Bell Atlantic-Delaware, Inc. v. McMahon*, 80 F. Supp. 2d 218, 250-51 (D. Del. 2000) ("*McMahon*") the court addressed AT&T's challenge to the NRCs established by the Delaware PSC that, like those set by the Nebraska PSC, were based on Bell Atlantic's existing processes for provisioning UNEs. Before this Court, Verizon renewed its argument that its NRCs were "forward-looking" on the ground that, while based on current processes for providing UNEs, Verizon accounted for planned improvements to its existing systems. *See id.* at 250 (citing testimony of Verizon witness Sanford). The Court rejected that argument, finding:

> [t]he mechanization of Bell's current internal service order processes is irrelevant to the legal standard for determining network element costs. At no point in their analysis did the Hearing Examiner's address Bell's proposed NRC charges in light of "the most efficient telecommunications technology currently available and the lowest cost network configuration." 47 C.F.R. §51.505(b)(1). There is simply no mention of the "most efficient, currently available" telecommunications technology – even though the Commission since has conceded that Bell's service order

> processing system does not meet this standard . . . . Where, as here, an agency ignores a controlling legal standard, its rulings are arbitrary and capricious. *See Florida Power Light Co.* 470 U.S. at 743.

McMahon, 280 F. Supp. 2d at 251.

51. There can be no doubt that Qwest's processes are not the most efficient available. Alltel put in considerable evidence demonstrating that its labor costs were lower and that it could process orders more quickly than Qwest because of more advanced systems. The Nebraska PSC refused to even consider this evidence, stating that "Alltel provides no basis that demonstrates why these costs should be similar." *Nebraska Pricing Order* ¶ 191.

52. In short, while assuming "additional mechanization" of Qwest's existing processes does certainly mean that Qwest's NRCs are not set on the basis of the most inefficient processes possible, that is not sufficient to make the NRCs TELRIC-compliant. TELRIC principles in this context require more than simply marginally improving the efficiency of processes that are patently inefficient. Rather, it requires a blank slate approach that disregards Qwest's existing processes and looks to determine the "most efficient, currently available" methods for provisioning UNEs.

53. Qwest's NRCs are invalid for a second, independent reason. The Commission included in its initial billing charge 60% of the costs of *disconnecting* a CLEC customer. *Nebraska Pricing Order* ¶¶ 195. 197.[3] The Nebraska PSC did so on the ground that Qwest claimed that there is "no guarantee" a CLEC will pay once a customer has left the

[3] The Nebraska PSC admitted that it had no data on CLEC customer "churn" and that the numbers that it was using were constructed out of whole cloth. *Id.* ¶ 197.

CLEC. *Id.* Thus, a CLEC must pay up front a portion of the costs of disconnecting a customer even if that customer never actually discontinues service with the CLEC. Of course, with having to pay for "losing" a customer before it even provides services, a CLEC is at a huge competitive disadvantage in winning the customer in the first place.

54. **Collocation Rates.** Finally, there can be no claim by Qwest that the collocation rates adopted in the *Nebraska Pricing Order* have been found to pass muster under TELRIC. In its *Nebraska Pricing Order*, the Nebraska PSC acknowledged that the Staff had demonstrated that Qwest's proposed NRCs were substantially overstated and that it "share[d]" these "valid concerns." *Nebraska Pricing Order* ¶ 217. The Nebraska PSC was also "concerned that costs, such as engineering, essentially may be incurred once, but charged to each job, allowing them to be recovered multiple times." *Id.* Nonetheless, the Nebraska PSC made no attempt to set truly TELRIC-complaint rates, instead finding that the rates should be used as a "starting point for determining the appropriate TELRIC compliant rates." *Id.* To date, the Nebraska PSC has not initiated the promised proceeding to "reexamin[e] Qwest's collocation rates [in order] to determine more accurate TELRIC compliant rates." *Id.* ¶ 218.

V. NORTH DAKOTA.

55. The most recent UNE prices adjudicated for Qwest in North Dakota are also in clear violation of TELRIC. The North Dakota Public Service Commission last adjudicated the UNE prices charged by Qwest to AT&T in an arbitration in 1997. *AT&T Communications of the Midwest Inc. Interconnection Arbitration Application*, Case No. PU-453-96-497 (North Dakota PSC, Order Approving Arbitrated Agreement issued June 23, 1997).

56. In its final decision in the arbitration, the North Dakota PSC stated that the prices set in the arbitration were "interim" only, and were "subject to true up upon the completion of the Commission's cost study for U S West" in a subsequent case. *Id.* at 6 (Finding of Fact No. 2). Since 1997, however, the PSC has neither completed such a cost study nor established permanent rates to replace the interim rates. *See U S West Communications, Inc. Interconnection/Wholesale Price Investigation*, Case No. PU-314-97-12 (North Dakota PSC), Findings of Fact, Conclusions of Law, and Order (Apr. 27, 2000) at 4-5. Nor has the PSC ever adjusted Qwest's interim rates for UNEs and interconnection to reflect changes in Qwest's costs since 1997.

57. Even at the outset, the 1997 arbitrated rates failed to comply with TELRIC. For example, the UNE prices set in the arbitration were designed to recover a weighted average cost of capital of 11.35 percent, based on U S West's testimony that the cost of capital proposed by AT&T, 10.01 percent, failed to reflect the assertedly "substantial increases in competition and business risk" in the post-1996 competitive environment. *See AT&T Communications of the Midwest Inc. Interconnection Arbitration Application*, Case No. PU-453-96-497, Rebuttal Testimony of U S West witness Robert G. Harris (filed Feb. 14, 1997) at 2-11; *id.*, Arbitrator's Decision (March 19, 1997), slip op. at 73. The past five years have exposed the hollowness of this claim. The relevant risks are those of Qwest's wholesale business, not its retail local business or its other, riskier ventures. The risks of incumbent suppliers of UNEs are low, and are likely to remain low for the foreseeable future. *Bell Atlantic-Delaware, Inc. v. McMahon*, 80 F.Supp.2d 218, 240-241 (D.Del. 2000). The Commission's 1996 finding that network elements are likely to remain

"bottleneck, monopoly services" without "significant competition," *Local Competition Order* ¶ 702, has only been underscored by the subsequent collapse of the CLEC sector.

58. The arbitrated UNE prices included a common cost factor of 18 percent, a market even further above forward-looking efficient levels than Qwest's 13 percent markup in Idaho, *supra*. *See AT&T Communications of the Midwest Inc. Interconnection Arbitration Application*, Case No. PU-453-96-497 (North Dakota PSC, Arbitrator's Decision issued March 19, 1997), slip op. at 77.

59. The North Dakota PSC has failed to establish a geographically deaveraged rate structure as required by the Commission. *Cf. Local Competition Order* ¶¶ 764-65; 47 C.F.R. § 51.507(f). In the 1997 arbitration, the PSC denied AT&T's request to establish deaveraged loop rates outright. *AT&T Communications of the Midwest Inc. Interconnection Arbitration Application*, Case No. PU-453-96-497 (North Dakota PSC), Supplemental Decision (Apr. 2, 1997) at 1-3. In 2000, the PSC approved a three-zone rate structure for two-wire loops. The PSC characterized these rates, however, merely as "interim deaveraged interim prices," based on a stipulation that "does not adopt or recognize any particular costing methodology or price deaveraging mechanism." *U S West Communications, Inc. Interconnection/Wholesale Price Investigation*, Case No. PU-314-97-12 (North Dakota PSC), Findings of Fact, Conclusions of Law, and Order (Apr. 27, 2000) at 4. "Further investigation and hearing is required to determine the appropriate methodology for permanent geographic deaveraging of unbundled network elements," the PSC stated. *Id.* at 5. No further proceedings or permanent rates have ensued, however.

60. On May 16, 2002, Qwest filed an SGAT proposing reductions in certain of its existing rates for UNEs and interconnection. The North Dakota PSC allowed the rate changes to take effect on June 7, 2002. The North Dakota PSC made no finding, however, that the reduced rates complied with the FCC's pricing standards and instituted no proceeding to address these long-outstanding issues. *Qwest Filing of a Statement of Generally Available Terms and Conditions Pursuant to 47 U.S.C. § 252(f)*, Case Nos. PU-314-97-193 and PU-314-00-282. Hence, Qwest's Section 271 application for North Dakota must stand or fall on the validity of the rates set in the 1997 arbitration.

VERIFICATION PAGE

I declare under penalty of perjury that the foregoing Declaration is true and correct.

/s/ Natalie Baker

Natalie Baker

Executed on: October 15, 2002

VERIFICATION PAGE

I declare under penalty of perjury that the foregoing Declaration is true and correct.

/s/ Arleen Starr

Arleen Starr

Executed on: October 15, 2002

VERIFICATION PAGE

I declare under penalty of perjury that the foregoing Declaration is true and correct.

/s/ Douglas Denney

Douglas Denney

Executed on: October 15, 2002

Tab H

Before the
Federal Communications Commission
Washington, DC 20554

In the Matter of **Qwest Communications International Inc.** Consolidated Application for Authority to Provide In-Region, InterLATA Services in Colorado, Idaho, Iowa, Montana, Nebraska, North Dakota, Utah, Washington and Wyoming	)	WC Docket No. 02-314

JOINT DECLARATION OF RICHARD CHANDLER AND ROBERT MERCER ON BEHALF OF AT&T CORP.

I. BACKGROUND AND QUALIFICATIONS.

1. **Richard Chandler.** My name is Richard A. Chandler. I am Senior Vice President at HAI Consulting, Inc. I was also Senior Vice President at HAI Consulting, Inc.'s predecessor, Hatfield Associates, Inc.

2. I received BSEE and MSEE degrees from the University of Missouri in 1970 and 1971, respectively, and an MBA from the University of Denver in 1983. I also have completed additional graduate study in electrical engineering at the University of Colorado.

3. I have substantial experience in the telecommunications industry. I began my career as an electronic engineer at the Institute for Telecommunication Sciences studying microwave and optical propagation and analyzing radar systems. I then worked at Bell Laboratories in the exploratory development of customer switching systems. While at Bell Labs, I worked

extensively on packet switching and circuit switching technologies. I then transferred to AT&T, where I was a product manager. My responsibilities at AT&T included, among other things, developing an deploying product strategies for packet and other switching systems. I then joined a startup mobile satellite company as vice president of network engineering. In that role, I developed the ground system network architecture for the proposed system.

4. At HAI (and Hatfield Associates, Inc.), I was (and continue to be) the principal developer of the Hatfield/HAI cost models. In addition, I analyze a wide range of telecommunications technologies and systems for a number of clients.

5. Throughout my career, I have taught graduate-level telecommunications technology courses in digital switching and other digital communications technologies, including transmission and packet switching, basic telephony, and cellular and wireless communications, at the University of Colorado, the University of Denver, and Pace University.

6. I have filed numerous affidavits and declarations concerned with telecommunications technology before this Commission, state regulatory agencies, and in Federal court cases.

7. **Robert Mercer.** My name is Robert A. Mercer. I am the President of BroadView Telecommunications, LLC ("BVT"), a consulting firm specializing in analyses of the telecommunications infrastructures. The address of the firm is 5201 Holmes Place, Boulder, Colorado, 80303.

8. I received a Bachelor of Science degree in Physics from Carnegie Institute of Technology (now Carnegie - Mellon University) in 1964, and a Ph.D. in Physics from Johns

Hopkins University in 1969. After receiving my Ph.D. in Physics from Johns Hopkins University, I was an Assistant Professor of Physics at Indiana University from 1970 until 1973.

9. I then joined Bell Telephone Laboratories. Over the next eleven years, I held a variety of positions in the Network Planning organizations at Bell Labs and AT&T General Departments. My final position at Bell Labs was Director of the Network Architecture Planning Center, where I managed an organization that was responsible for early Bell System planning of the Integrated Services Digital Network (ISDN), as well as systems engineering for new data services being planned by AT&T.

10. I joined Bell Communications Research (Bellcore, now Telcordia Technologies) in January, 1984, where I was Assistant Vice President of Network Compatibility Planning. Among other responsibilities, I directed Bellcore's technology analysis of various legal and regulatory proceedings at the federal and state levels. I also coordinated and provided direction to Bellcore's activities in domestic and international standards activities, and served as a member of the Board of Directors of the American National Standards Institute.

11. After leaving Bellcore in late 1985, I held positions with BDM Corporation and AT&T Bell Laboratories before joining Hatfield Associates, Inc., in early 1987. I held the positions of Senior Consultant, Senior Vice President, and President of the firm. On October 1, 1997, the former principals and employees of Hatfield Associates, Inc., formed HAI Consulting, Inc., and I became the President of that firm. At Hatfield Associates and HAI, I was extensively involved in the development of the various versions of the HAI Model. I also presented testimony on and defended the model in a large number of regulatory proceedings pertaining to the cost of Unbundled Network Elements and Universal Service.

12. In March of 2000, I left HAI to form BroadView Telecommunications. The firm provides strategic planning, education, and expert services related to public and private telecommunications infrastructures, dealing specifically with network architectures, technologies, services, and service providers. At BroadView, I have continued to present and defend the HAI Model in numerous regulatory proceedings.

13. I also hold an adjunct faculty position in the Interdisciplinary Telecommunications Program at the University of Colorado in Boulder, where I have developed an executive seminar on telecommunications developments, teach a course on telecommunications technology, and serve on Masters thesis committees. I have previously taught a course on advanced data communications and computer networking for several years. I have taught many other courses and seminars as well for other organizations and institutions, in the areas of the telecommunications infrastructure, network technologies, broadband networks, data and voice communications, computer networking, and network management.

II. PURPOSE AND SUMMARY.

14. The purpose of our testimony is to demonstrate that the unbundled network element ("UNE") switching rates in Colorado, Washington, Wyoming Utah and Montana are substantially inflated by clear TELRIC errors. We filed similar testimony in response to Qwest first round of section 271 filings in WC Dockets 02-148 and 02-189.

15. As explained below, the Colorado Public Utilities Commission ("CPUC") initially adopted switching rates that were based on a cost study conducted years ago, and that all parties, including the CPUCs own staff, recognized were inflated far above the level that any reasonable application of TELRIC principles would produce. Qwest recognized that these inflated

switching rates would not pass muster in a Section 271 proceeding. Accordingly, Qwest urged CPUC to adopt new switching rates below the rates initially adopted by CPUC, but which were far above the TELRIC-compliant switching rates supported by other parties in that proceeding. Qwest's newly proposed rates were based on the same cost study (HAI 5.2a) supported by the CLECs in that proceeding, using non-TELRIC input assumptions. CPUC never addressed the changed inputs offered by Qwest. Instead, CPUC simply adopted Qwest's proposed switching rates because they were lower than the rates initially adopted by CPUC.

16. A model is only is good as the input assumptions used – an appropriately designed forward-looking cost model will not produce forward-looking cost estimates if it is not populated with forward-looking inputs.[1] And, as explained below, many of the key input values used by Qwest to compute its proposed switching rates violate fundamental TELRIC principles. Because the Colorado PUC failed to adopt TELRIC-compliant inputs, Qwest's rates are vastly overstated.

17. In Part III of this declaration, we summarize the Colorado PUC proceedings that resulted in the UNE switching rates in Qwest's SGAT. We then identify several of the non-TELRIC inputs used to compute Qwest's switching rates. First, we demonstrate that Qwest's switching cost studies improperly reduced the switching "fill factor" used in the HAI 5.2a Model from 94% down to 82.5%. We show that a 94% fill factor is more than sufficient to account for administrative functions and unexpected increases in demand. Second, we show that the input assumptions for the switch port/usage fractions used by Qwest to compute its costs are not forward-looking, and substantially inflate Qwest's switching usage costs.

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[1] *See, e.g., Colorado Pricing Order* at 40 (recognizing that "input assumptions constitute the main difference in the results of the cost models").

18. In Parts IV through VII of this declaration we summarize the Washington, Wyoming Utah and Montana UNE rate proceedings that resulted in Qwest's SGATs. We demonstrate that the methodologies employed by those state commissions to develop Qwest's UNE switching rates, like the methodologies used by CPUC, are inflated by numerous clear TELRIC errors.

III. COLORADO

A. SUMMARY OF COLORADO PRICING PROCEEDINGS.

19. Qwest's Colorado interconnection and UNE switching rates are based on the results of two separate Colorado proceedings. The Colorado PUC initially set permanent Colorado interconnection and UNE rates in a July 28, 1997 order, Docket No. 96S-331T ("*331T Order*").[2] Almost one and a half years later, on November 30, 1999, Qwest (then U S WEST Communications, Inc.) filed a proposed Statement of Generally Available Terms and Conditions ("SGAT") with the Colorado PUC pursuant to 47 U.S.C. § 252(f).[3] Qwest's SGAT contained the rates set in the 1997 *331T Order*, and numerous new rates that had never been reviewed by the Colorado PUC. In response, the Colorado PUC opened Docket No. 99A-577T ("577T Proceeding"), and ordered Qwest to notify all CLECs in Colorado of its new rates. Numerous CLECs, as well as the Colorado Office of the Consumer Counsel ("Colorado OCC") and the Colorado PUC's own staff ("CPUC Staff") intervened in the SGAT proceeding seeking review of the rates set in the *331T Order*. These parties pointed out that that the rates in the *331T Order* – and hence the rates in Qwest's proposed SGAT – were outdated, and fail to reflect changes in technology, changes in the regulatory field, and the merger of U S West with Qwest. These parties also showed that the rates in the *331T Order* were substantially inflated by other clear

[2] *See* Qwest Application, Attachment 5, Appendix C.

[3] 47 U.S.C. § 252(f).

TELRIC errors, and that many of the rates in Qwest's SGAT were never even reviewed by the Colorado PUC.[4] Accordingly, the Colorado PUC released a Procedural Order, on December 29, 2000, in the 577T Proceeding, to review the rates in the *331T Order*.

20. On January 16, 2001, Qwest filed cost studies purporting to support the *331T* rates, and the numerous new rates contained in the SGAT. Qwest supplemented that testimony on April 23, 2001. During June and July of 2001, the CLECs, the Colorado OCC, and the CPUC Staff filed testimony showing that the rates in Qwest's SGAT were, in fact, vastly inflated above TELRIC levels. During that time, the CLECs also submitted new cost studies and new TELRIC-compliant UNE rates based on those cost studies. In particular, AT&T and XO Colorado, Inc. ("XO") filed a recurring cost study that develops recurring rates (including loop and switching rates) using a cost model called HAI Model, Release 5.2a ("HAI 5.2a" or "HAI Model"), and a non-recurring cost study that develops non-recurring charges ("NRCs") using a cost model call NRCM (which stands for "non-recurring cost model"). In late July 2001, only two weeks before the scheduled August hearings, Qwest filed a switching cost study for the first time. The Colorado PUC refused to consider that late filed cost study.[5]

21. On December 21, 2001, the Colorado PUC issued the *Colorado Pricing Order*. In that order, the Colorado Commission recognized that the rates in the *331T Order* were stale, and did not reflect "the changes in technology, the regulatory field, or the merger of U S WEST with

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[4] *See, e.g.*, Before the Public Utilities Commission, State of Colorado, Docket No. 99A-577T, Application of Staff for Reconsideration, Reargument, or Rehearing of Decision No. C01-1302 (January 30, 2002) ("*CPUC Staff RRR*")

[5] Before the Public Utilities Commission of the State of Colorado, Commission Order, Docket No. 99A-577T, at 38 (Mailed December 21, 2001) ("*Colorado Pricing Order*"). This order is attached to Qwest's Application at Attachment 5, Appendix C.

Qwest."[6] However, the Colorado PUC ignored the substantial evidence submitted by AT&T and other LECs identifying TELRIC-compliant switching rates, and said only that "[t]he record of the 99A-577T does not support a determination by the Commission of final local switching rates. The Colorado PUC did not explain why AT&T's proposed switching rates – which are based on the same cost model that the Colorado PUC adopted to compute loop rates – constituted "insufficient" evidence. Based on these "findings," the Colorado PUC left the inflated rates set in the 1997 *331T Proceeding* in place on an interim basis.

22. Of course, even Qwest recognized that the 331T rates were massively overstated and would not pass muster in a federal Section 271 proceeding. Accordingly, Qwest instituted a sequence of two voluntary rate reductions to those rates. Qwest computed those new rates using different inputs to the same HAI 5.2a cost model submitted by AT&T and other CLECs in the 577T Proceeding. Because Qwest changed the HAI 5.2a inputs, the new rates proposed by Qwest – although lower than the 331T rates – were substantially higher than those proposed by AT&T and other parties in the 577T Proceeding. The Colorado PUC never investigated whether Qwest's input changes were TELRIC-compliant. Instead, the Colorado PUC simply adopted Qwest's proposed switching rates, stating that Qwest's proposed switching rates were lower than the stale 331T switching rates that the Colorado PUC adopted in the *Colorado Pricing Order*, and that lower rates "benefit CLECs."[7]

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[6] *See Colorado Pricing Order* at 25-26.

[7] *Colorado Reconsideration Pricing Order* at 7.

B. QWEST'S COLORADO SWITCHING RATES ARE NOT REMOTELY TELRIC COMPLIANT.

23. As noted above, the Colorado PUC approved Qwest's current switching rates solely on the grounds that they are lower than the 331T rates. The fundamental problem with the switching rates adopted by the Colorado PUC in the 1997 *331T Order* is that they are not remotely TELRIC-compliant. As pointed out by the CPUC Staff, the "record in [the 577T docket] . . . establishes that Qwest's proposed prices [*i.e.*, the 331T rates] were overstated through inappropriate cost factor calculations, use of incorrect productivity and inflation factors, and lack of inclusion of merger savings, technology improvements and business improvements."[8] The structure of Qwest's switching rates "have not had a comprehensive review for over 11 years."[9] And Qwest's switching rates are based on "historical costs."[10]

24. Indeed, the 331T rates are based on Qwest's Switching Cost Model ("SCM"), which does not model forward-looking costs. On the contrary, the SCM produces costs for the *existing* switches in Qwest's network, and thus reflects the costs of demonstrably non-forward-looking network designs. As one example, the SCM reflects the fact that Qwest's embedded network has remote switches in the same location as host or stand-alone switches.[11] The problem with that assumption is that, in a forward-looking network, there is no need to collocate remotes switches with host or standalone switches. ILECs typically install remotes to replace older switches in lightly-populated remote areas or to serve subscribers in newly-developing wire centers. ILECs

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[8] CPUC Staff RRR at 3.

[9] CPUC Staff RRR at 5.

[10] CPUC Staff RRR at 5. *see also id.* at 4 ("The Qwest approach ignores the most fundamental TELRIC principle: Existing costs should not be included in wholesale price calculations").

may occasionally deploy a remote switch alongside an older switch in an existing wire center to provide advanced features that the older machine may not be capable of supporting. However, in a forward-looking network, there is no need for such collocation of switches because all of the switches installed in a forward-looking network would include the most advanced technology that is available today, and would be properly sized to reflect the total switching demand that exists in that wire center.

25. As noted above, AT&T and other parties submitted updated TELRIC-compliant switching cost studies, and showed that proper forward-looking TELRIC rates are much lower than Qwest's 331T rates. AT&T's cost study showed that the 331T rates for switching, was inflated by 277%. Even the cost model submitted by Qwest with its rebuttal testimony in the 577T Proceeding, showed that its switching costs had declined compared to its 331T rates.[12] Thus, there is no question that the 331T switching rates are massively overstated and plainly fall outside the range of rates that any reasonable application of TELRIC principles would produce.

26. Because there is no reasonable basis on which to conclude that Qwest's 331T rates are TELRIC-compliant, Qwest's newly implemented switching rates cannot be justified merely on the grounds that those rates are lower than its 331T rates. Qwest has not shown that its new rates are TELRIC-compliant. As we discuss below, these rates are based on demonstrably non-TELRIC-compliant assumptions.

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[11] For example, Qwest's embedded network operates a Nortel DMS-100 standalone switch and Lucent 5ESS remote switch in its Denver Capital Hill wire center. *See* Qwest ICONN database ("ICONN database"), available at http://www.qwest.com/cgi-bin/iconn/iconn_centraloffice.pl.

[12] *See* Rebuttal Testimony of Robert Brigham, Colorado PUC Docket No. 99A-577T, Exhibit RHB-2 (July 20, 2001). Because Qwest provided its switching cost study so late in the 577T Proceeding, the Colorado PUC did not "rely on the [Qwest] switching model" to set switching rates." *Colorado Pricing Order* at 38.

27. Qwest developed its new Colorado switching rates by changing critical inputs to the switching cost study (HAI 5.2a) submitted by AT&T and other CLECs in the 577T Proceeding. As we demonstrate below, Qwest's changes to the HAI 5.2a switching cost study violate fundamental TELRIC principles, and have never been reviewed – let alone approved – by the Colorado Commission. Thus, even though Qwest's new switching rates are lower than its 331T rates, those new switching rates are still substantially inflated above TELRIC levels.

1. Qwest's Colorado Recurring Switching Rates Are Inflated By The Use Of An Understated Fill Factor.

28. Qwest's switching cost studies also improperly reduce the switching "fill factor" used in the HAI 5.2a Model from 94% down to 82.5%. The end-office switch fill factor represents the amount of capacity that the cost model assumes will be used by the switch. In the HAI Model, the fill factor determines the number of spare line port interfaces the Model will equip in a given switch.[13] The difference between the fill factor and 100% represents spare capacity that can be used to serve current and future demand for switched service. Because a small amount of spare capacity is required for administrative and other purposes, the HAI Model's default administrative port fill factor is 94% for end office switches.

29. Qwest claims that it is necessary to assume more spare capacity (*i.e.*, lower the fill factor) because a 94% fill factor is insufficient to cover increases in demand. *See* Thompson Decl. ¶¶ 59-61. That argument is baseless. As noted above, today's switches are easily expandable. Therefore, a proper forward-looking cost model would not invest in more switching and line port investment than is required to have sufficient capacity to meet small unexpected

[13] The "line port" is the interface between a loop connection and the switch. One line port is required per subscriber line. A line port circuit board serves a small number of subscribers, typically four to sixteen, depending on the switch vendor.

increases in demand and any necessary administrative functions. Beyond that, as demand grows, it is a simple matter to install additional line port interface circuit boards to serve new subscribers.[14] Thus, Qwest's assertions that investment in massive amounts of spare switching and line port capacity is necessary in a forward-looking network does not withstand scrutiny.

30. In fact, the HAI Model is conservatively designed to provide a more than "reasonable" amount of growth. It includes an implicit fill factor (which is considerably lower than Qwest's 82.5%) on the end-office switch fixed investment. This leads to substantial excess common-equipment capacity that can accommodate the additional line ports required to address the reasonable growth in Qwest's network.

31. Today's modern switches can serve more than 100,000 lines (although ILECS are typically reluctant to deploy switches larger than around 100,000 lines). In Colorado, for example, Qwest operates end office switches that approach this line size: Qwest's Colorado Springs Main wire center serves more than 91,000 lines from a single 5ESS switch, according to Qwest's records.[15] The HAI Model, however, uses end office inputs that include a default maximum line size, 80,000, that is considerably smaller than the maximum value Qwest obviously applies to its embedded network. When the model encounters a wire center serving more than 75,200 business and residential lines (the product of 80,000 x .94), the model adds the investment for as many additional switches as are required and distributes demand equally

[14] Switches consist of a sizable set of "getting-started" components, often known as "common equipment," that include processors, power system, the switch matrix or fabric (required for making the physical connections between ports), and ancillary equipment. The fixed investment in the HAI and Synthesis Models represents such equipment. Beyond the common equipment, a carrier must add line and trunk port circuits to the switch to serve individual subscribers and to support connections to other switches. The variable investment in the Models represents this fact.

among the equipped switches.[16] Thus, the HAI Model contains an implicit fill factor of 72.5% on common equipment investment – it includes the fixed investment for a switch that could serve at least 100,000 lines, but limits the actual line size to 72,500. Since it is straightforward to add line cards to switches that already have sufficient common equipment, the model then appropriately applies a 94% fill factor to calculate the investment in required line cards.

32. For these reasons, Qwest's claim that a 94% fill factor is not sufficient to account for a reasonable increase in demand is baseless. Qwest's decreased fill factor inflates its recurring switching rates above forward-looking levels by providing an excessive number of extra line cards to cover an excessive amount of growth. Thus, the Colorado PUC committed a clear error when it arbitrarily lowered the fill factor in response to Qwest's claims. Qwest's 82.5% fill factor results in an 8.6% inflation of end office switching costs when it is substituted in the HAI Model for the default value of 94%.

2. Qwest's Colorado Switching Rates Reflect A Non-TELRIC-Compatible Port To Usage Cost Ratio.

33. Switch rate design has traditionally allocated a portion of switch costs to the fixed line port element and a portion to rates based on minutes of use. In accordance with TELRIC and the FCC's *Local Competition Order*, rates for unbundled network elements are to be established on a "cost causative basis" and "must recover costs in the manner that reflects the way they were incurred."[17] Under these cost causation principles, the portion of the switch costs that are non-usage-sensitive should be assigned to the flat-rated or fixed line port charge, and the

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[15] *See* ICONN Database at http://www.qwest.com/cgi-bin/iconn/iconn_centraloffice.pl.

[16] For the Colorado Springs example, the Model would "install" two switches in the wire center and compute the appropriate fixed and variable (per-line) investments for both switches.

[17] *Local Competition Order* ¶ 741.

portion of the switch costs that are usage-sensitive should be allocated to the minute-of-use rate element.

34. The Commission' Synthesis Model (which is based on an older version of the HAI Model, version 5.0(a), originally developed in 1997) used a 30/70 port/usage percentage split. The 30/70 split was based on the telecommunications data that was available at that time. As AT&T and other CLECs demonstrated in the 577T proceeding, however, the 30/70 port to usage split established several years ago is not appropriate for developing rates today, because that distribution of costs does not accurately reflect switch cost causation required by TELRIC principles.

35. The control structure of a modern end-office or tandem switch is a specialized computer or set of computers. Switching systems have benefited from the same profound improvements in processor performance that have been observed over the past decade in personal computers. As a result, the principal limit to the capacity of today's digital switches is not processing capacity, but rather the number of ports. Given the substantial increases in capacity of today's switches, increased minutes-of-use does not result in increased switching costs.

36. Indeed, a large portion of the total cost of a switch is associated with memory, processors, administrative and maintenance equipment and is incurred at the time a switch is placed in operation. These "getting started" costs do not vary with usage and accordingly should be assigned to the fixed port rate element. If a switch does exhaust its port capacity, then a wire center must incur the cost of a second switch. The exhaustion of the first switch's ports is the primary cause for incurring the "getting started" costs for the second switch, and these costs

should also be assigned to the port. Thus, the majority of the cost of today's generation of digital switches is driven by ports, not by usage, and should be recovered in the fixed port rate element.

37. The HAI Model submitted by AT&T in Colorado addressed these issues by updating the model to reflect a more realistic 60/40 port/usage split. The allocation of switch costs between fixed and minute-of-use rate elements was specifically addressed by the New York Public Service Commission in the recent UNE Decision. In that proceeding, Verizon argued for a ratio of 36% fixed/64% usage-sensitive claiming that its proposal was based on cost causation and consistent with its general practices. The Commission rejected Verizon's arguments and ruled that only 34% of switch costs were usage sensitive and that the remaining 66% should be treated as fixed.[18] The Illinois Commission also has recognized the largely fixed nature of switching costs and has established a 100% flat-rated switch rate with no minute of use element.[19]

38. The switching rates recommended by Qwest in its rehearing, reargument or reconsideration petition, and adopted by the Colorado PUC, do not reflect these TELRIC-compatible port/usage ratios. Qwest's switching rates reflect the old 30/70 port/usage ratio of costs. Qwest provides no legitimate evidence that such a split is appropriate for Colorado. As explained above, the state record shows that the appropriate port/usage split is 60/40.

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[18] Proceeding on Motion of the Commission to Examine New York Telephone Company's Rates for Unbundled Network Elements, Case No. 98-C-1357, Order on Unbundled Network Element Rates, Before the NYPSC, at 34-36 (January 28, 2002).

[19] Investigation Into Forward Looking Cost Studies and Rates of Ameritech Illinois for Interconnection, Network Elements, Transport, Termination of Traffic, Docket Nos. 96-0486 & 96-0569 (con.), 1998 Ill. PUC LEXIS 109 (Ill. Commerce Commission) (Feb. 17, 1998).

39. In fact, the *only evidence* offered by Qwest in support of that ratio is that the Commission's old Synthesis Cost Model for computing USF support uses that ratio. But as explained above, the 30/70 port-usage split is outdated and is not supported by the record. Moreover, the Colorado PUC has made no finding that Qwest's 30/70 port/usage split is appropriate for Colorado. Rather, the Colorado PUC adopted Qwest's rates on the ground that Qwest's rates – which reflect the 30/70 split – were lower than the massively overstated 331T rates.

40. Even Qwest has now candidly admits that a 30/70 split is inappropriate for setting switching rates: "Switching costs today are more line-driven than traffic-sensitive. It is not unreasonable to model switching costs now as depending entirely on the number of line-side ports and the number of trunk-side ports. Switching costs in such a model can be reasonably recovered *entirely as fixed monthly charges*." Direct Testimony of Paul R. McDaniel of Qwest Corporation, *Joint Application For Approval Of A Plan To Restructure Regulated Intrastate Switched Access Rates And Petition For A Commission Order Declaring The Plan To Be Applicable To All Local Exchange Carriers In Colorado*, Colorado PUC, October 4, 2002, at 19. Thus, Qwest now concedes that a 100/0 port-usage split is appropriate.

41. Qwest's misallocation of port to switching costs overstates Qwest's switching usage costs by 75%. This error can have a profound impact on the economic feasibility of competitive entry in a particular state, thereby creating an insurmountable barrier to local telephone entry. The misallocation causes CLECs' switching costs to increase with increased usage, while ILECs' costs increase at a much lower rate because their actual switching costs are relatively insensitive to usage, as explained above. In addition, the flat rates for residential service act as a cap on the amount that a CLEC can charge for the UNE-P service, and the inflated minute-of-use

rate element deters CLECs from serving high-use residential customers whose usage levels lead to higher costs for CLECs (without no corresponding increase in ILEC costs). High-use customers are a desired portion of the market, but the inflated minute-of-use rates undercuts their attractiveness by inappropriately reducing the margins available to CLECs using UNE-P service to serve those customers. As a result, this cost structure serves as a significant barrier to entry for CLECs seeking to serve residential customers with UNE-P by artificially reducing the attractiveness of the high-end customers due to their higher usage costs and the cap of flat residential rates.

42. An additional problem is that the inflated minute-of-use rate allows Qwest to over-recover its costs. As usage increases, Qwest receives additional revenues even though it has not incurred corresponding costs associated with that usage. Growth in usage demand will add to this cost over-recovery. As rates remain in effect for a number of years between ratemaking proceedings, increases in usage during the pendency of the rates increase Qwest's over-recovery and progressively reduce any margins for CLECs.

IV. QUEST'S WASHINGTON UNE SWITCHING RATES ARE INFLATED BY CLEAR TELRIC ERRORS.

43. The recurring switching rates adopted by the Washington Utilities and Telecommunications Commission ("WUTC") are not remotely TELRIC-compliant. The rates adopted by the WUTC are the result of two separate pricing proceedings ("Phases"). In Phase I, the WUTC purported to determine Qwest's (then US WEST's) forward-looking recurring switching costs, net of common costs.[20] In Phase II, the WUTC adopted a "common cost factor"

[20] *See* Eighth Supplemental Order, Interim Order Establishing Costs for Determining Prices in Phase II; And Notice of Prehearing Conference, *Pricing Proceeding for Interconnection,*

to increase the recurring switching costs developed in Phase I in order to account for the common costs associated with those elements. In the Phase II proceeding, the WUTC adopted recurring switching rates for Qwest equal to the Phase I costs grossed up by the common cost factor adopted in Phase II.[21]

44. The WUTC committed numerous clear errors in both Phase I and in Phase II that vastly inflated the recurring switching rates that would be produced by any reasonable application of TELRIC-principles. Even Qwest recognized that these inflated recurring rates would not pass muster at this Commission and, about a month before filing its Section 271 Application, has unilaterally lowered those rates in order to "expedite consideration of Qwest's Section 271 application." *See* Thompson Decl. ¶ 9. Qwest claims that these eleventh hour rates reductions result in TELRIC rates for two reasons: (1) the new rates are lower than the rates adopted by the WUTC and (2) the new rates pass the Commission's benchmarking analysis, using Colorado as the benchmark state. Neither of these arguments withstands scrutiny. Although the new rates are lower than the previous rates, the new rates are not based on TELRIC principles. And Qwest's Washington switching rates do not pass a valid benchmark analysis.

45. As noted above, the recurring loop rates adopted by the WUTC are the product of a two-phase proceeding. In Phase I, the WUTC adopted costs for those rate elements net of common costs. In Phase II, the WUTC made a few changes to the costs developed in Phase I, adopted common cost factors, and adopted final recurring loop rates. As demonstrated below,

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Unbundled Elements, Transport and Termination, and Resale, Docket Nos. UT-960369, -960370, -960371 (May 11, 1998) ("*Phase I Order*").

[21] *See* 17th Supplemental Order, Interim Order Determining Prices; Notice of Prehearing Conference, *Pricing Proceeding for Interconnection, Unbundled Elements, Transport and*

the methodologies used by the WUTC to develop Qwest's Washington recurring loop rates in these proceedings were not remotely TELRIC-compliant.

46. *Phase I.* The WUTC rejected all switching cost studies submitted in the Phase I proceeding. *See Phase I Order* ¶ 347. Instead, the WUTC computed switching rates using its own largely unexplained, and clearly non-TELRIC-compliant, methodology. *See Phase I Order* ¶ 320. The fact that the WUTC failed to comply TELRIC-principles to compute switching rates is plain from its own description of how those rates were developed. The switching rates adopted by the WUTC are based on pre-1997 embedded switching investments by the smaller of the two incumbents with only a time-of-purchase adjustment. Furthermore, those data are not even Qwest-specific. On the contrary, they are based on *Verizon's* Washington Network, which is considerably smaller (and hence has higher per line costs) than Qwest's network.[22]

47. The WUTC began its switching cost analysis with 1994 data. In particular, the WUTC used 1994 data provided by GTE (now Verizon) and US WEST (now Qwest) purporting to identify "embedded [1994] investment" per line. *Phase I Order* ¶ 307. The WUTC did not even attempt to convert those embedded switch investments into a forward-looking switching investment that, for instance, reflected forward-looking planning, engineering, and purchasing practices. Instead, the WUTC simply converted the 1994 embedded investment value into 1997 dollars. *See Phase I Order* ¶ 307. Simply put, the switching investment used by the WUTC to develop switching rates is the 1997 dollar value of Qwest's and Verizon's 1994 embedded switch investment. *See Phase I Order* ¶ 307.

Termination, and Resale, Docket Nos. UT-960369, -960370, -960371 (September 23, 1999) ("*Phase II Order*").

[22] Both Qwest and Verizon provide residential service to customers in Washington.

48. Clearly, the 1997 dollar value of the BOCs' 1994 switching investment is not forward-looking, and cannot reasonably be used to approximate Qwest's 2002 switching investment. In fact, there is ample evidence that the 1997 dollar value of the BOCs' 1994 switching investment does not even approximate a forward-looking 1997 switching investment. The "UNE Fact Report," sponsored by U S WEST and GTE, among others, and submitted to the Commission, explains that "on a per-line basis, [switch] prices declined over 60 percent from 1986 to 1996 and were projected to fall another 12 percent by 2000."[23] Furthermore, Northern Business Information, a McGraw-Hill subsidiary that annually canvassed ILECs for their actual switching and other network investment and reported these results in publicly-available documents, estimated that the Bell companies paid an average of $105 per line in 1994 and would pay only $96 per line in 1997. The corresponding GTE investments were $119 in 1994 and $115 in 1997.[24]

49. Based on this methodology, and in spite of the publicly-available data to the contrary, the WUTC determined that Qwest's 1994 embedded average switch investment per line, in 1997 dollars, was $213.12. *See Phase I Order* ¶ 307, n. 37. That process was clearly flawed. As the WUTC itself recognized, data provided by Qwest and Verizon showed that actual switch acquisitions made after 1994 averaged only $109.35. *See id.* To account for this discrepancy, the WUTC purported to remove "outliers" from the data sets. The WUTC never identified its criteria for identifying "outliers," however, nor did the WUTC identify which data entries it determined to be outliers. After applying its black-box methodology to remove "outliers" from

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[23] Peter W. Huber and Evan T. Leo, "UNE FACT REPORT," submitted by USTA in CC Docket No. 96-98, May 26, 1999, at I-28. The report was prepared on behalf of U S WEST, GTE, Ameritech, SBC, Bell Atlantic, and BellSouth.

the datasets, the WUTC determined that the 1994 embedded switching investment (in 1997 dollars) was $205.03. *See Phase I Order* ¶ 308.

50. As noted above, the $205.03 is based on the 1994 switch investment submitted by Qwest and Verizon. The WUTC recognized that the number of lines serviced by Qwest was higher than that served by Verizon. To account for this difference, the WUTC lowered the embedded switching investment for Qwest to $186.37. *See Phase I Order* ¶ 309. Again, the WUTC did not explain (or provide any data showing) how it made this adjustment. The WUTC also made another adjustment to its embedded switching investment for Qwest to account for the fact that not all lines are revenue producing. To account for this fact, the WUTC arbitrarily increased its estimate of Qwest's embedded switching investment by 8% to $201.28. Once again, the WUTC did not explain how it determined the amount of the adjustment.

51. The WUTC did, however, recognize that its black-box calculations of Qwest's 1994 embedded network (in 1997 dollars) appeared to be inflated compared to the 1995 embedded costs for Verizon that Verizon had computed using this Commission's data. In particular, Verizon had submitted evidence in the Phase I proceedings that, according to this Commission's data, its 1995 embedded investment would be no higher than $150. *See Phase I Order* ¶¶ 300 & 311.

52. At this point, the WUTC gave up and simply adopted, for Qwest, the 1995 embedded cost estimate for Verizon's network of $150. *See Phase I Order* ¶ 312. Thus, the Qwest Washington switching rates adopted by the WUTC are (1) based not on Qwest-specific data, but

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[24] Northern Business Information, *U.S. Central Office Equipment Market: 1995 Edition*, Exhibit 3-37. Note also that these are bundled prices that include switch software.

on Verizon's Washington switching costs and (2) equal to 1995 embedded switching investment with neither *forward-looking adjustments nor a time-of-purchase adjustment that would have at least attempted to make the number representative of the 1997 price.* On this record, it is clear that the switching rates adopted by the WUTC do not remotely comply with TELRIC principles – indeed, those rates are neither forward-looking, nor based on Qwest's network.

53. There are two other clear TELRIC errors in the $150 per line figure adopted by the WUTC. First, that figure erroneously assumes a fixed cost for all switch sizes. The WUTC attempted to justify that assumption on the basis that the vendor contracts provided by GTE and U S WEST indicate that the industry has moved to a per line charging mechanism in recent years (¶312). In reality, however, the commercially-available switch data utilized by the HAI Model, and this Commission's extensive analysis, shows that switch prices, expressed per line, do fall as a function of switch size, due to a sizable "getting started" cost that is spread over the number of lines served by the switch. This error is compounded by the fact that the WUTC used Verizon's switching investment to compute Qwest's switching costs, because, on the average, Qwest's switches are larger and serve more lines than do Verizon's in Washington. Second, the per-line amounts adopted by the HAI model and the FCC Synthesis Model are well below $150 per line (except for very small switches).

54. The HAI Model submitted by AT&T in Washington uses a switch price function derived from commercially-available data. The per-line price ranges from $139.67 for a 1,000-line switch to $75 for an 80,000 line switch; at a line size of 20,000 lines typical of a large ILEC, the switch price is approximately $95. The FCC's switch price regression analysis provides the data necessary to estimate the per-line price for a blended average of host and remote switches applicable to Washington. The FCC found that 1) the getting-started price is $486,700 for a host

or stand-alone switch and $161,800 for a remote switch; and 2) the added price per line for all types of switches is $87. Therefore, since Qwest operates 108 host and stand-alone switches and 17 remote switches in Washington,[25] the blended composite getting-started price is $442,514.[26] Adding the $87/line yields a per-line price of approximately $530 for a 1,000 line switch, $93 for an 80,000-line switch, and $109 for a 20,000 line switch. The vast majority of lines in Washington are served by large switches; according to Qwest's ICONN database, over 83% of Washington switched lines are served by switches handling more than 20,000 lines.[27] The weighted average per line investment using the numbers derived immediately above is $107.98 (or 28% less than the $150 figure).

55. The bottom line is this: The switching rates adopted by the WUTC for Qwest are not remotely TELRIC-compliant. Thus, Qwest's claims that its modest last minute rate reductions necessarily results in switching rates is baseless, and those claims therefore should be given no weight.

V. QWEST'S UTAH UNE SWITCHING RATES ARE INFLATED BY CLEAR TELRIC ERRORS.

56. Qwest effectively acknowledges that the UNE rates actually set by the Utah PSC are not remotely TELRIC-compliant. Instead of relying on those rates, Qwest has filed "new" UNE rates, based on a "benchmarking" analysis of the rates set in Utah. But Qwest's eleventh hour rate reductions should not be considered with respect to Utah. Despite filing the "new" rates that it claims are TELRIC-compliant, Qwest continues to advocate substantially higher rates in the

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[25] *See* Qwest ICONN database at http://www.qwest.com/cgi-bin/iconn/iconn_centraloffice.pl. The Washington switch listing shows 130 entries, but five are duplicate records.

[26] (17/125)x$161,800+(108/125)x$486,700 = $442,514.

[27] *See id.*

Utah PSC's ongoing UNE rate proceeding. In particular, although Qwest's 271 Application is predicated on average switching port and usage rates of $1.58 with features (or $0.92 without features) and $.001705, respectively, Qwest is advocating much higher average switching port and usage rates of $2.08 with features (or $1.33 without features) and $.002143, respectively, in the ongoing state UNE rate proceeding. Thus, it is clear that Qwest's gambit is to get its section 271 application approved on the basis of its current rates and then subsequently have those rates hiked to competition-foreclosing levels.

57. For these reasons, Qwest's application must ultimately be measured by the rates set by the Utah PSC. And there can be no doubt that the rates the PSC set for switching UNEs are well in excess of TELRIC. Qwest's switching UNE rates were set by the Utah PSC in 1999 on the basis of 1998 cost data. *See* Report and Order, Docket No. 94-999-01 (Utah PSC June 10, 1999) ("*1999 Utah UNE Pricing Order*"). Given that the costs of providing UNEs have declined considerably in since this time, these stale UNE rates cannot be considered to be representative of the forward-looking, economic costs of providing UNEs today.

58. But even judged on the basis of 1998 costs, the rates set by the *1999 Utah UNE Pricing Order* must be considered excessive. In setting loop and switching rates, the Utah PSC "split the baby," taking the average of AT&T's and US WEST's proposed rates. Although this resulted in rates that were somewhat lower than advocated by US WEST, the resulting rates were still excessive.

59. In particular, in its *1999 Utah UNE Pricing Order*, the Utah PSC found that US WEST's cost model did not satisfy the Commission's TELRIC methodology. As the Utah PSC correctly observed, the ICM "does not produce a forward-looking, economically efficient

network" but instead "mimics the embedded costs of recent network experience." *1999 Utah UNE Pricing Order* at 6-7. Thus, the Utah PSC concluded that the ICM resulted in rates that were overstated. *Id.* at 7.

60. This conclusion was well-founded. The switching cost part of ICM is handled by the Switching Cost Model ("SCM"). The arbitrator in Minnesota found the following defects in SCM:

- The SCM input processes are highly complex and extremely sensitive to U S WEST's designated inputs, which are unknown, undocumented and proprietary (¶82);
- Numerous SCM inputs require decisions regarding the type of technology and efficient engineering practices that cannot be discerned from any of the documentation or models provided (id);
- SCM deploys the same switches from the same manufacturer as are currently in place, unless the current switch is an analog switch, in which case SCM deploys a digital switch. Contrary to TELRIC principles, SCM does not consider whether switch from another vendor might be more cost effective than the switch currently used at each location (¶83); and
- SCM does not universally deploy the least-cost equipment That is because optimal network configuration has changed over time. It cannot by concluded that deploying the same digital switch from the same vendor as is currently deployed in U S WEST's network in Minnesota will meet the least cost criterion. (¶85)

61. As the Minnesota PUC's analysis shows, Qwest's SCM merely computes switching investment for the embedded network. It is not even a true model, in that it bases its outputs on every existing physical aspect of the embedded switches. It will, for example, compute investment for switch configurations that are decidedly not forward-looking, such as the collocation of a host and a remote switch in the same wire center.[28] Thus, the SCM "model" by definition does not produce forward-looking and, therefore, is incapable of producing TELRIC-

compliant switching investment estimates. Furthermore, SCM's databases containing critical investment data are password-protected, and the fundamental formulas that calculate investment cannot be viewed by the user.

62. On the other hand, the Utah PSC found that AT&T's HAI model was appropriately "forward-looking." *Id.* at 7 ("The record shows that the HAI model employs a forward-looking, economically efficient approach."). Nonetheless, the Utah PSC decided it would not rely solely on the basis of the HAI model because of concerns regarding the way in which HAI's used "proxy[s]" to determine the location of some customers. *Id.* The Utah PUC, however, did *not* find that, by using proxy locations, the HAI model understated costs; to the contrary, it specifically rejected that claim. *See id.* at 7 ("we are not convinced by USWC testimony that the HAI model necessarily builds a deficient amount of outside plant.").

63. Thus, given the Utah PSC's express recognition that the HAI model was forward-looking and did not understate the costs of outside plant – coupled with its finding that the ICM was an "embedded" cost model – the only appropriate course would have been for the Utah PSC to set rates using HAI model. The Utah PSC, however, did not follow this straightforward approach. Instead, the Utah PSC arbitrarily set rates on the basis of the simple average of those calculated by the HAI model and US WEST's embedded ICM model. *See id.* at 7. But all this served to do was reduce somewhat the bias from using US WEST's ICM. As the Utah PSC recognized, the two models produce "significant[ly]" different "cost estimates." For example, with respect to switching, HAI generated monthly costs of $0.001610 for switching usage while

[28] As an example, Qwest's Cottonwood, Utah, wire center (CTWDUTMA) contains a Nortel DMS 100 as well as a remote switch, an optically-connected 5ESS remote. There are similar examples in other states in the Qwest region, including Washington and Colorado.

the ICM generated $0.003133 for switching usage. *Id.* Thus, the resulting average of the results generated by the two models exceeds that generated by the HAI model, which, as noted, the Utah PSC itself recognized was appropriately forward-looking.

64. Even if the HAI Model's method for calculating customer locations understated the necessary amount of outside plant, a conclusion rejected by the Utah PSC, that would not provide grounds for using an average of the HAI and the ICM to set non-loop UNE rates. This is particularly true given the fact that the Commission has endorsed HAI's switching cost module. *See Platform Order* 75-78 (finding that HAI "assume[s] the least cost, most-efficient and reasonable technology" to provide switching and "generally satisf[ies] the requirement that each network function and element necessary to provide switching and interoffice transport is associated with a particular cost"). Thus, there can be no doubt that by averaging the results of the HAI with the "embedded" ICM, the Utah PSC set switching rates in excess of TELRIC. Moreover, as we explained above, the federal courts have expressly concluded that this type of crude averaging cannot result in TELRIC-based rates. *AT&T Communications of New Jersey, Inc.* v. *Bell Atlantic-New Jersey*, Civ. No. 97-5762 (KSH), slip op. (D.N.J. June 6, 2000).

65. The UNE switching rates set in the 1999 order also allow Qwest to double-recover its costs. Most notably, the Utah PSC allowed Qwest to collect a separate, fixed vertical features charge. *1999 Utah UNE Pricing Order* at 11. But in the HAI model "[v]ertical features are incorporated into the functionality provided in the local switching port, and thus are included in the port rate as derived from the HAI Model." Post-Hearing Br. of AT&T, Docket No. 94-999-01, at 22 (Utah PSC Feb. 17, 1999). And as noted, the Utah PSC used the HAI (in part) to set switching rates, including the port rate, but never addressed, or even acknowledged, AT&T's argument that HAI already includes the costs of vertical features in its port charge. Furthermore,

even Qwest now admits that the HAI Model includes vertical feature costs by stating that "Qwest has determined that it cannot refute AT&T's assertion that there is no need for the $0.38 adjustment that was incorporated into Qwest's Colorado switch port rate in order to recover the cost of applications software used to provide vertical features."[29] Thus, by assessing a separate vertical features charge, the Utah PSC is requiring new entrants to pay twice for the costs of the switching equipment used to provide those features. Given the size of this charge – $3.71 per month for the most popular Feature Group 2 package – CLECs are placed at a significant cost disadvantage when competing with Qwest. Qwest has removed its separate vertical features charge from its Colorado rates. Qwest should also remove those costs from its Utah rates.

VI. QWEST'S WYOMING UNE SWITCHING RATES ARE INFLATED BY CLEAR TELRIC ERRORS.

66. On July 31, 2001, Qwest initiated a generic rate proceeding to establish permanent UNE prices for all CLECs in Montana.[30] In the aftermath of costly and unproductive arbitration proceedings, only two CLECs intervened (AT&T and Contact Communications); AT&T subsequently withdrew without filing testimony. On June 19, 2002, Qwest settled the case by stipulation with Contact and the Consumer Advocate Staff of the PSC.[31]

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[29] Reply Declaration of Jerrold L. Thompson, WC Docket No. 02-148, ¶ 38 at 24. Thompson recognizes that the switch maintenance factor used in the HAI Model, 0.0558, is greater than the actual ARMIS-derived value of 0.04209 for Qwest in Colorado. The contrast is even greater in Utah, where the ARMIS-based value is 0.01272, which is less than one-fourth the default value (also 0.0558) used by the Model.

[30] Wyoming PSC Docket No. 700000-TA-01-700, *In the Matter of Qwest Corporation's Request to Open an Unbundled Network Elements TELRIC Cost Docket.*

[31] Wyoming PSC Docket No. 700000-TA-01-700, Stipulation and Agreement (June 19, 2002); Wyoming PSC Docket No. 70000-TA-00-599, *In the Matter of the Application of Quest Corp. Regarding Relief under Section 271 of the Federal Telecommunications Act of 1996, Wyoming's Participation in a Multi-State Section 271 Process, And Approval of Its Statement of Generally Available Terms*, Order on SGAT Compliance (July 9, 2002) at 2.

67. Qwest's Wyoming rates are now based on the same flawed SCM model that was found to be non-TELRIC compliant by the Utah commission and the Minnesota commission. The Wyoming staff stated that "the Switching Model [SCM] includes an appropriate approach in calculating the investments associated with switching."[32] But that statement plainly is unfounded. The investment calculations in SCM cannot even be viewed by the user (including the Wyoming staff), and the critical investment inputs are buried in password-protected database files. Even when Qwest provided the database password, it was discovered that the investment inputs are listed using arcane and indecipherable alphanumeric equipment codes with no explanation as to their meaning or how they are to be combined to configure a working switch, and the model does not show the fundamental calculations used to compute switching investment.

68. As we explained above, even with the limited amount of review that can be done with the SCM, it is clear that the SCM computes switching investments based on Qwest's embedded network and does not even attempt to make forward-looking adjustments.

69. Even Qwest evidently recognized that its Wyoming rates would not pass muster at this Commission. On July 1, 2002—just before filing its Section 271 Application—Qwest unilaterally reduced certain of its rates for local switching usage, local switch ports, shared transport, and tandem switching. *See* Thompson Wyoming Pricing Decl. ¶ 12. However, Qwest has made no showing that these minor reductions to substantially inflated rates result in TERLIC-compliant switching rates.

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[32] Prefiled Testimony and Exhibits of Marcy L. Norby on Behalf of the Consumer Advocate Staff, Docket No. 70000-TA-01-700 (Record No. 6768), March 15, 2002, at 12-14.

VII. QWEST'S MONTANA UNE SWITCHING RATES ARE INFLATED BY CLEAR TELRIC ERRORS.

70. On June 6, 2001—six days before the scheduled beginning of trial—CLECs (Avista, Montana Wireless, Touch America, and the Montana Consumer Counsel) agreed to a Qwest "compromise" proposal to rates for switching and other UNEs based on Qwest's cost studies. *See* Docket No. D2000.6.89, Stipulation filed June 6, 2001; *id.*, Final Order on Stipulation (served Oct. 12, 2001). There was no pretense that the stipulated rates represented any principled effort to comply with the TELRIC standard. To the contrary, the stipulation contained the express disclaimer that "[n]o party's position in this docket is accepted by the other parties by virtue of their entry into this Stipulation, nor does it indicate their acceptance, agreement or concession to any rate-making principle, cost of service determination, or pricing principle embodied, or arguably embodied, in this Stipulation." Stipulation ¶ 3.

71. The Wyoming PSC, while ratifying the stipulation, made no findings that the stipulated rates were TELRIC compliant. The PSC expressly reserved the right to argue, in its recommendation to the FCC after Qwest's anticipated 271 filing, that "elements of the Stipulation should be changed before the FCC approves Qwest's 271 petition for interLATA market entry in the State of Montana." Docket No. D2000.6.89, Final Order on Stipulation ¶ 9. The PSC elaborated (*id.*, ¶¶ 10-11):

> 10. The Commission conditions its approval because this docket is related to Docket No. D2000.5.70, the Qwest Montana section 271 proceeding. Costing and pricing issues that arise in the 271 proceeding are not necessarily resolved by this Stipulation. Qwest concurs that the Stipulation is not all-inclusive and that other costing and pricing issues will remain if the Stipulation is approved. . . . The Commission expects that these and other costing and pricing issues will be addressed in another costing and pricing docket. . . .

> 11. Prices contained in the Stipulation may be at odds with final Commission recommendations on certain issues in the 271 proceeding. The Commission cannot be more specific because its analysis and decisions in the 271 proceeding are not complete.

72. On July 3, 2002—just before filing its Section 271 Application—Qwest unilaterally lowered those rates to "expedite consideration of Qwest's Section 271 application." *See* Thompson Montana Pricing Decl. ¶ 13. Qwest claims that these eleventh hour rate reductions produce TELRIC-compliant rates because (1) the new rates are lower than the rates adopted by the Montana PSC and (2) the new rates pass the Commission's benchmarking analysis, using Colorado as the benchmark state.

73. As explained in the attached declaration of Messrs. Lieberman and Pitkin, Qwest's benchmarking analysis is unsound. Here, it is sufficient to note that the Montana PSC, in allowing the new rates to take effect, expressly disclaimed any finding they were TELRIC-compliant: "The Commission has not undertaken the review contemplated by 47 U.S.C. § 252(f)(3)(B) and consequently retains authority to continue review of the SGAT under 47 U.S.C. § 252(f)(4)." Docket No. D2000.6.80, *Review of Qwest Communications' Statement of Generally Available Terms Pursuant to Section 252(f) of the Telecommunications Act of 1996*, Order No. 6425 (served July 12, 2001).

VIII. CONCLUSION

74. For the foregoing reasons, Qwest's recurring switching rates are inflated by clear TELRIC errors.

VERIFICATION PAGE

I declare under penalty of perjury that the foregoing Declaration is true and correct.

/s/ Richard Chandler

Richard Chandler

Executed on: October 15, 2002

VERIFICATION PAGE

I declare under penalty of perjury that the foregoing Declaration is true and correct.

/s/ Robert Mercer

Robert Mercer

Executed on: October 15, 2002