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Public Utilities Commission
1580 Logan Street, OL 2
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Dear Ms. Fernandez:

The Ruby Ranch Internet Cooperative Association asks for help from the Commission regarding its actions in tripling the price for unbundled distribution subloops.

On May 16 of this year, the nonprofit Ruby Ranch Internet Cooperative ("the Coop") brought high-speed symmetrical Internet access ("SDSL") to a geographic area that was unserved by Qwest or any other provider. It was able to do so only because of the Telecommunications Act of 1996, which requires incumbent local exchange carriers ("ILECs") such as Qwest to rent otherwise unused distribution subloops to entities such as the Coop.

The Coop, located in Summit County, Colorado, is a "one-product company." The only thing the Coop does is providing Internet connectivity to its subscribers. Its chief recurring cost is the monthly rental fee for distribution subloops which permit connecting its DSLAM (located in a horse barn) to its subscribers. The Coop is a facilities-based carrier, providing its own DSLAM and other network equipment to serve its subscribers. The only elements needed from Qwest are the distribution subloops.

Three weeks after the Coop launched service, the Colorado Public Utilities Commission ("PUC") in its decision C02-636 adopted Qwest's recommendation that distribution subloops in most areas of Colorado would increase in price to $24.13 per month. Prior to this increase, the Coop was being charged $8.73 monthly for each subloop. At a stroke, the PUC tripled the Coop's chief recurring cost.

The PUC's increase guarantees that nobody else will follow in the Coop's footsteps. Those who are unserved by SDSL now will never be served by SDSL, as a result of the PUC's actions.

Exhibit A, attached, shows in red the areas of Colorado that are harmed by the PUC decision and will now likely never be served by SDSL.

Why this increase is a problem for the Coop. When the Coop signed its interconnection agreement with Qwest, the monthly price for its distribution subloops was $8.73, a price that was set in the Commission's decision no. C01-1302, mailed December 21, 2001.

To the Coop's great regret, however, the Coop failed to appreciate the risk associated with one provision inserted by Qwest into the interconnection agreement:

> It is expressly understood that this Agreement will be corrected to reflect the outcome of generic proceedings by the Commission for pricing, service standards, or other matters covered by this Agreement.

Had the Coop any appreciation of the prospect of the Commission tripling the price for the sole network element rented by the Coop, the Coop would have asked that this sentence be omitted from its interconnection agreement.

The Coop never imagined that the Commission would triple the cost of the network element that is the Coop's chief expense. The Coop imagined that the Commission, before taking such an extreme step, would consider its impact upon interconnecting entities such as the Coop.

It might be suggested that the Coop, after signing its interconnection agreement with Qwest, should have simply protected itself by intervening in any and all generic proceedings by the Commission. This is, quite simply, out of the question for the Coop. The Coop has no employees, only volunteers with demanding day jobs. The Coop has no office in Denver, but would have to send its volunteers in an hour-and-a-half automobile drive to Denver (and another hour and a half back from Denver) to attend any Commission meeting or hearing. The Coop has no room in its nonprofit budget, comprised of monthly payments from only about a dozen subscribers, to pay Denver-based lawyers to attend such meetings and hearings.

The volume of paper must also be taken into account in considering whether it is reasonably within the means of an entity as small as the Coop to participate in such proceedings. To detect this pricing issue, hidden away as it was in a set of filings on subjects unrelated to unbundled distribution loops, would have required that the Coop read tens of thousands of pages of documents having no impact at all upon the Coop. The Coop, with no employees and no room in its budget to hire lawyers to read the tens of thousands of pages of documents, was and is simply unable to participate meaningfully in such proceedings.

Stated plainly, the Coop ended up placing itself in the Commission's safekeeping. The Coop depended, and now depends, for its continued existence upon the Commission's considering the effects of its actions upon entities such as the Coop.

What are distribution subloops and how long are they? A subloop is part of a loop, and the subloop's extent is defined by the location of a Field Connection Point ("FCP"). The part of the loop between the FCP and the central office is called a "feeder subloop" and the part of the loop between the FCP and the end user is called a "distribution subloop." The usual purpose of an FCP is to connect a DSLAM (DSL access multiplexer) so as to provide DSL service to subscribers who are at end user locations.

In a simple and increasily rare case, an unbundled loop extends as continuous copper from a telephone company central office to a customer location. With such a continuous-copper loop, the interconnecting carrier gets to pick where the FCP is installed, and this means that the length of a distribution subloop might in one case be nearly the length of the entire loop, while in another case it might be a small fraction of the length of the entire loop. But few if any FCPs are installed in continuous-copper loops, for the simple reason that where the loop is continuous copper, it is usually preferable to put the DSLAM in the central office so that it can serve loops extending in all directions from the central office.

More often (about 64% of the time in Colorado) the customer is isolated from the central office by the juxtaposition of a "remote terminal," also called a DLC (digital loop carrier) box. With a DLC, most of the distance from the central office to the customer is covered by a fiber optic cable to the DLC, and only the last thousand or so feet (from the DLC to the subscriber) is copper. When a loop containing a DLC is very long, most of the length is between the DLC and the central office. Thus the copper part of the loop for a very long loop involving a DLC may well not be much longer than, and may well sometimes be shorter than, the copper part for a much shorter loop involving a DLC.

FCPs are copper connections, and so with a DLC, the CLEC or DLEC has very little discretion where to put it. The FCP can only be placed in the short length of copper between the DLC and the subscriber. The distribution subloop is thus necessarily only a small fraction of the distance from the subscriber to the central office. Stated differently, it is not possible to install an FCP in the middle of the optical fiber lying between the DLC and the central office.

The Coop has exactly one FCP, and it is located about four miles from the serving central office. The distribution subloops for the Coop's FCP, which by definition are the copper pairs between the FCP and the subscriber locations, range in length from 500 to 7000 feet, averaging about 3000 feet. As such, they represent between 2% and 33% of the loop length, averaging about 15% of the loop length.

The chief reason why any CLEC or DLEC would install an FCP is to provide DSL services to someone who is isolated from the central office by a DLC. Thus, the majority (perhaps all) of the FCPs in Colorado are located on the subscriber side of a DLC. From this it follows that the majority of (and perhaps all) distribution subloops in Colorado are short, only a few hundred or a few thousand feet.

It is also important to appreciate that there is no reason at all why the distance to the central office should play any significant part in the pricing of distribution subloops. A 1000-foot distribution subloop that is one mile from a central office is physically indistinguishable from a 1000-foot distribution subloop that is ten miles from a central office. In either case the length of the long part of the loop (the part that would be termed a "feeder subloop") is irrelevant.

The PUC's actions regarding pricing of Distribution Subloops. When the Coop signed its interconnection agreement with Qwest in early 2002, the price of distribution subloops was $8.73 per month, a price which had been set by the PUC in its decision no. C02-209 in docket no. 01B-493T, mailed March 1, 2002. In that decision, the PUC cited Decision No. C01-1302 as controlling as to the price for distribution subloops.

A few weeks later, in decision no. C02-409, mailed April 17, 2002, the PUC ordered Qwest to take certain steps to "deaverage" prices for analog loops.

Qwest's request to raise prices. Citing the April 17, 2002 decision, on May 8, 2002 Qwest filed an Application for RRR. In this application, Qwest raised questions about pricing of DS0 capable loops, High Capacity loops, and DS1 capable feeder loops. Exhibit A to this application was entitled "Supporting Information for Calculations of Qwest's Alternative Rate Group Deaveraging Proposal for DS0 Capable Loops." Exhibit B to this application was entitled "Weighted Average of Commission-Ordered Deaveraging for High Capacity Loops."

Only in passing were unbundled distribution subloops even mentioned in Qwest's application, for example in the exhibit ("Summary of Rate Groups For Qwest's Alternative Deaveraging Proposal") that proposed tripling the price charged to the Coop for distribution subloops. Even an alert reader might be forgiven for concluding that this application only affected High Capacity loops, DS0 capable loops, and DS1 capable feeder loops, and might be forgiven for missing that a tripled price for unbundled distribution subloops was tucked away in the statement of relief requested.

The Qwest application arrives at a proposed monthly rental price for 2-wire analog loops, and then *with no explanation whatsoever as to its reason for doing so*, states without support that the correct price for distribution subloops should be some fixed fraction of the price for the entire loop. For example, in rate group 3, the price proposed for the 2-wire analog loop is $32.74 monthly and the price proposed for the unbundled distribution subloop is 74% of that amount, or $24.13 monthly. Assuming for sake of discussion that $32.74 is a reasonable price (which the Coop does not concede), then the 74% fraction apparently assumes that every Field Connection Point is about one-fourth of the way from the central office to the end-user location. Qwest thus reduces the whole-loop price by one-fourth to arrive at a price for the remaining three-quarters of the loop which would lie between the FCP and the subscriber location.

It is, however, a mistake for Qwest (or for this Commission) to assume that every Field Connection Point (or indeed even the average Field Connection Point) is one-fourth of the way from the central office to the end-user location. Each FCP is where it is because the interconnecting carrier chose where it would be. And most FCPs are far from the central office, not close to it.

In the case of the sole FCP owned by the Coop, depending on the circuit involved, the Coop's FCP is actually between 67% and 98% of the way to the subscriber end of the loop. Again assuming for sake of discussion that $32.74 is a reasonable deaveraged price (which the Coop does not concede), then the price for the distribution subloops ought to be in the range of $10.80 to 65 cents per month.

As mentioned above, however, there is simply no reason why deaveraged prices for whole analog loops should be the driving factor for pricing of distribution subloops. Yes, many analog loops in DeBeque are tens of miles long while many in central Denver are only a thousand feet long. But the distribution subloops (which by definition cannot exceed the length of the copper between the DLC and the end user) in DeBeque (now priced at $24.13 per month) are probably not much longer than distribution subloops in central Denver (now priced at $3.59 per month). Stated differently, the ratio of monthly prices (rate-group-3 distribution subloops cost almost seven times as much as rate-group-1 distribution subloops) would suggest a mistaken impression that the distribution subloops in rate-group-3 areas are almost seven times as long, on average, as the ones in central Denver.

If the rental price for a distribution subloop were to be set as a specified percentage of the rental prices for a whole loop, then the fraction should be much smaller than one-half.

More equitably, however, the rental price for a distribution subloop should probably have no connection at all to the rental price for the whole loop of which it is a part. Likewise it should probably have no connection at all to the "distance to the central office." Probably all the distribution subloops in Colorado should cost about the same, since they are all about the same length. Stated differently, if one whole loop containing an FCP is substantially longer than another whole loop containing an FCP, probably the distribution subloops are roughly equal in length, and it is the feeder subloops (not the distribution subloops) that would vary in length as a function of the lengths of the whole loops.

From a rate-setting point of view, it is not at all clear that distribution subloop prices should move in lockstep with loop prices. Even if there is some good reason to charge different prices for loops based on their lengths, there is no good reason to extend this different-price approach to distribution subloops.

How the PUC ruled on Qwest's application for RRR. The Commission granted the part of Qwest's application which called for tripling the monthly price for distribution subloops, saying:

> In the Decisions, we found the interim deaveraging method consistent with how Colorado high cost support is calculated and distributed to Qwest. High cost support is portable to another eligible provider. Thus, an eligible provider who purchases a UNE from Qwest will be qualified to receive the high cost support for that customer. We determined that our interim deaveraging plan creates proper price signals because the variation in costs between wire centers is significant. Our interim method acknowledges the disparate prices associated with the various wire centers across the state. Because it more closely matches wholesale loop pricing with high cost support, it also eliminates opportunities for regulatory arbitrage that might arise under a more standard rate group deaveraging plan.

(Decision C02-636 at 13.) The Coop, composed of volunteers with no experience with state telecommunications regulatory practices, does not pretend to know exactly what this means. But the impression which the Coop gathers from the quoted language is something like this:

> - POTS telephone companies in rural areas apparently get lots of money from "high cost support."
>
> - If the POTS companies in these rural areas were charged mere state-average prices for analog loops used for POTS telephone service, they would make money through arbitrage.
>
> - It is therefore necessary to set extremely high wholesale prices in these rural areas for analog loops used for POTS telephone service.

Alternatively, perhaps the Commission means that Qwest somehow makes money due to "high cost support" payments to it. In the Decision, the Commission said:

> The [high cost support] payments to Qwest vary widely among 106 of Qwest's 166 individual wire centers receiving support. Currently, support to Qwest ranges from $0.24 per month per loop to $182.70 per month per loop.

(Decision C02-636 at 15.) The Coop does not know whether Qwest receives any "high cost support" payments relating to distribution subloops rented by the Coop. What the Coop does know is that the Coop is now being asked to pay a monthly price for distribution subloops that gives no indication that the price is reduced due to any such "high cost support".

The PUC seems to suggest that having extremely high monthly prices for analog loops is not a problem because anyone who must rent such a loop to provide service can get money from the "High Cost Fund."

> This interim deaveraging method is consistent with how the Colorado high cost support is calculated and distributed to Qwest. Qwest is currently receiving in excess of $59 million [] a year by wire center costs, not rate group. High cost support is portable to another eligible provider. Thus, the eligible provider who purchases a UNE is qualified to receive the high cost fund support for that customer. Our interim deaveraging plan creates the proper price signals because the variation in costs between wire centers is significant. For example, the Denver Main UNE Loop rate is approximately $6.00; the DeBeque UNE Loop Rate is approximately $171.

(Decision no. C02-409, mailed April 17, 2002 at 59-60.) This suggestion is repeated in Qwest's May 8, 2002 filing:

> The fund operates to bring rural rates to a comparable level with urban rates. From a

> UNE-based provider's perspective, that provider will be compensated for the difference between its cost, *i.e.* the UNE price, and the benchmark. For example, assume the benchmark is $20, the facility-based provider's costs are calculated at $30, and the price for the UNE is $25. The UNE provider would receive $5 in support and the underlying facilities-based provider would receive $5 in support. The fund compensates each provider for the difference between its "price" and its "cost" and, thereby, operates as an incentive for providers to serve supported areas. 4 CCR 723-41-8.4 and 9.4 (1999). Qwest submits that issues relating to high cost fund compatibility and the significant implementation obstacles should be explored and developed in Phase II.

(Qwest May 8, 2002 filing in docket no. 99A-577T at 5-6.)

What this seems to ignore, however, is that high cost support is apparently available only to local exchange (POTS) telephone carriers. (4 Code of Colorado Regulations (CCR) 723-41.) A pure data carrier such as the Coop is thus stuck paying an extremely high monthly price for its unbundled subloops, yet is not eligible to receive the high cost support which supposedly alleviates the objectionably high monthly rates. The Coop receives no "compensation" such as described in Qwest's filing.

To restate, there seem to be two distinct flaws in the deaveraging approach proposed by Qwest and ordered by the Commission. First, it assumes that all purchasers of unbundled loop elements are beneficiaries of the "high cost fund," which is false. Pure data (non-POTS) carriers such as the Coop simply don't get any of this "high cost fund" money. Second, it assumes that POTS-subsidy arbitrage can be carried out on any and all unbundled loop elements, and thus that it is appropriate to triple the prices for all such elements. This, too, is false. It is not possible to carry out POTS-subsidy arbitrage on a distribution subloop; the would-be arbitrageur needs an *entire* loop to provide POTS service which then supposedly permits efforts at arbitrage.

Why the Coop did not complain sooner about the tripled price of distribution subloops. The Coop's first order to Qwest for installation of distribution subloops was in May of 2002, and this order was for fifteen distribution subloops. The first hint of trouble for the Coop was a Qwest bill received about three months later, on August 10, 2002. In that bill, Qwest charged a much higher price for two new distribution subloops which were installed in July 2002. The Coop immediately asked Qwest the reason for the higher price. Five days later, Qwest explained for the first time that the higher price was due to the Commission's decision mailed June 6, 2002.

It is doubtless mere coincidence that Qwest waited until after the applicable appeal period had lapsed before informing the Coop of the price increase and the reasons for the increase.

For a time Qwest's position was that the newly tripled rate applied only to distribution subloops installed after June 6, 2002. While the new tripled rate was undeniably a problem for the Coop, it affected only two of the Coop's seventeen distribution subloops. The pre-June-6 distribution subloops were still being billed at the original rate of $8.73.

On September 19, 2002 Qwest delivered news which stunned the Coop. Qwest's new position was that the pre-June-6 distribution subloops were likewise subject to the tripled price. The subsequent Qwest bill, received October 10, 2002, contains back-billing for all of the Coop's distribution subloops at the newly tripled rate. This single monthly bill is for a dollar amount that the Coop originally expected would be an entire year's billings.

Why doesn't the Coop scrap its SDSL service and convert its lines to ADSL? It is noted that the Commission's June 6, 2002 decision left line-sharing pricing largely unchanged. Among the line-sharing prices given in the present SGAT is a price for shared loops in rate group 3, namely $4.89 per month. It might be thought that the Coop has a simple solution to its problems, namely to scrap its SDSL service and to convert its lines to line-shared lines (ADSL). It might be thought that the Coop would then pay Qwest $4.89 monthly per line rather than the crippling $24.13 per line. It might likewise be thought that would-be DSL providers in rural (rate-group-3) areas could simply install line-sharing (ADSL) equipment rather than SDSL equipment, thereby sidestepping the crippling $24.13 rate. There are several reasons why this isn't a satisfactory answer to the crippling $24.13 rate.

First, there is actually no assurance that the Coop would be able to use line-sharing to deliver ADSL. The only price in the SGAT for a "shared loop" is for a *complete* analog loop extending in continuous metallic contact from the central office to the end user. This price is thus useful only for the 36% of POTS lines in Colorado that have continuous copper from the central office to the end user. Stated differently, this price is meaningful only in the case where a DSLAM is in the central office. But as mentioned above, some 64% of all the telephone lines in Colorado (and 100% of the telephone lines in the Coop's service area) are isolated from the central office by a DLC. As such, the $4.89 price for a shared complete central-office-to-end-user loop is meaningless.

For the Coop to use line sharing, it would be necessary to share not the *whole* loop, but merely the *distribution subloop*, namely the (small) portion of the loop lying between the Coop's Field Connection Point and the end user. But there is no price in the SGAT for a shared distribution subloop. Qwest has not answered questions from the Coop about what price Qwest would charge for sharing a mere distribution subloop.

As mentioned above, the distribution subloops rented by the Coop represent between 2% and 33% of the distance from the end user to the central office. As such, it appears to the Coop that a reasonable price for a shared distribution subloop (as distinguished from a shared loop) should be between 2% and 33% of $4.89, or between ten cents and $1.61 monthly.

There are other reasons why line sharing is not a satisfactory answer to the crippling $24.13 rate.

First, for many subscriber applications ADSL is inferior to SDSL. For example, virtual private networks and videoconferencing require just as much upstream bandwidth and downstream.

Second, the Coop borrowed much money to be able to purchase its SDSL line cards and modems to launch service, and with such a proposed conversion to line sharing, most of the equipment purchased with this borrowed money would be taken out of revenue service within only a few months of having been put into service in the first place. Meanwhile the Coop would be forced to borrow still more money to purchase the new ADSL line card, ADSL modem, and central-office splitter equipment that would be required.

Third, the Coop or its subscribers would be forced to incur inside wiring work to convert over from the dedicated pairs used for SDSL to shared pairs (requiring installation of splitters) for ADSL.

Fourth, the Coop would have to pay Qwest lots of money to make this shift to line sharing. The Coop would have to pay Qwest its nonrecurring prices to install ADSL connections, mere months after having paid Qwest to install SDSL connections. This would equal about one-third of what the Coop originally expected to pay in annual operating expenses.

In addition, Qwest says the Coop would have to pay a “reclassification charge” billed on an “individual case basis” to change its records regarding the Coop’s Field Connection Point so that some of the cable pairs would be listed in Qwest’s records as pairs meant for ADSL rather than pairs meant for SDSL. This would not involve any actual physical change to the Field Connection Point, but would cost some unknown amount of money. Qwest has thus far declined to answer the Coop’s questions as to what Qwest feels it will be entitled to charge for this “reclassification.”

Fifth, the Coop’s volunteers would be required to spend the time necessary to design the ADSL system and install and configure the ADSL equipment, as well as to design routing tables to reroute traffic from the old SDSL line ports to the new ADSL line ports.

The costs described above for converting the Coop’s system from SDSL to ADSL, probably amounting to more than the Coop’s planned annual budget, would leave the Coop financially weakened. If the Commission were then to (say) triple its prices for shared loops as it recently did for distribution subloops, this would impose severe hardship upon the Coop.

What the Coop asks of the Commission. The Commission apparently had particular concerns that prompted it to set the rates in its June 6, 2002 decision, namely concerns about risks of arbitrage by POTS carriers (or by Qwest, or both) due to the interplay between the “high cost fund” and the wholesale prices for loops suitable for POTS use. Unfortunately the rough justice arrived at by Qwest and by the Commission was overbroad, and it affected prices that (a) are paid by carriers such as the Coop that are ineligible to receive “high cost fund” monies and that (b) apply to unbundled elements (distribution subloops) that cannot be used for POTS service anyway.

The Commission apparently is not satisfied with the rates that were set in its June 6, 2002

Decision:

> The Initial Decision and RRR Decision point out that the deaveraged loop rates are interim only, and subject to Phase II deaveraging proposals.

(Decision C02-636 at 12.) The Commission also said:

> All of these concerns, and others, will have to be examined in Phase II of this proceeding. On an interim basis, however, we will relent and endorse the Qwest rate group proposal. This has the strength of at least being familiar to the carriers. Nonetheless, we anticipate a critical look at deaveraging in the next phase of this proceeding.

(Decision C02-636 at 15.) The Coop, having no experience or knowledge of "Phase II," does not know the likely timetable for those proceedings, and likewise does not know the extent to which the Commission will consider the effects of these pricing issues on carriers such as the Coop. The Coop, a non-profit corporation, budgeted its finances for the three-year period of its interconnection agreement in reliance on the $8.73 monthly rate set in the Commission's December 21, 2001 Decision. If the Commission takes, say, two years to carry out its Phase II proceedings, and if it only then orders that the $24.13 price be dropped to $8.73, this will have forced the Coop to pay an extra six thousand dollars during those two years. This is six thousand dollars that the Coop does not have. The magnitude of this dollar amount can be appreciated if it is considered that the Coop's annual operating expenses (exclusive of debt service) were expected to be about two thousand dollars. Slow justice would be no justice.

The public policy consequences of the Commission's decision go far beyond the Coop's situation. As may be seen from the attached map, the Commission's decision virtually guarantees that no one will ever provide DSL by means of distribution subloops (e.g. symmetric DSL) in any of the areas shown in red. These are the very areas that Qwest has deemed unworthy of its DSL service, and that are likewise not served by cable modem Internet access. It seems that due to the Commission's actions, these areas are unlikely ever to receive high-quality Internet access.

It is hoped that the Commission will act quickly so that the Coop may know whether it is prudent to incur the substantial expense of scrapping its SDSL network and building a new ADSL network. It would be extremely helpful if the Commission could do the following:

> - immediately rule that the June 6, 2002 order was not meant to apply to non-POTS (i.e. non-arbitragable) elements, and thus that the rate set on December 21, 2001 ($8.73 per month) should apply, with an order to Qwest to refund the excess over $8.73 that it has collected from the Coop since June 6, 2002.
>
> - immediately set a price, apparently for the first time, for rental of shared distribution loops (as distinguished from shared loops), in the range of ten cents to $1.61 monthly.

- make a commitment that these rates will remain fixed for some number of years.

Alternatively, it would be extremely helpful if the Commission could now strike from the Coop's interconnection agreement the "generic proceedings" provision, ordering that all rates be rolled back to the rates set in the December 21, 2001 order (with appropriate refunds ordered paid by Qwest).

The Coop has no idea what procedural mechanism within the Commission is the right one to remedy this problem of a tripled price for unbundled distribution subloops. For example, the Coop does not know whether to suggest a proceeding under docket no. 01B-493T or under 99A-577T, or whether some quite different proceeding is appropriate to address this problem.

The Commission is charged with a duty under the 1996 Act to promote competition, yet the June 6, 2002 order worked to reduce any hope of competition in most rural parts of Colorado for high-quality Internet access. Going forward, for example during the "Phase II" proceedings, it is earnestly requested that the Commission give due consideration to the effects of its decisions upon small interconnecting entities, such as the Coop, which lack the money and employees to bird-dog issues such as are discussed here.

Sincerely,

Carl Oppedahl

cc:
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