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Third Report on Qwest Performance Measure Data Reconciliation - Nebraska

I. Introduction

The Liberty Consulting Group *(Liberty)* conducted an audit of Qwest's performance measures for the ROC, and issued the final report from that audit on September 25, 2001. As an extension to the audit, and through its Change Request process, the ROC requested that Liberty conduct a "data validation to resolve any debates concerning the accuracy of performance data emanating from particular ROC PIDs." (ROC Change Request #20.) Certain CLECs have expressed concerns about the accuracy of Qwest's reported performance results as they relate to service that they have been receiving. The ROC decided to conduct this data reconciliation work in order to test those concerns.

The data reconciliation process was designed to determine whether any of the information provided by CLECs demonstrated inaccuracy in Qwest's reported performance results as these measures were defined in the PID. The detailed process has been discussed in prior reports and has not been repeated here.

Liberty issued its first data reconciliation report, which used data from Arizona, on December 3, 2001. The second report on data from Colorado was issued on January 3, 2002. This report provides the results of Liberty's review of data from Nebraska. In addition, this report provides the status of observations and the exception issued as a result of all of the data reconciliation work.

II. Overall Summary of Findings

In the course of its initial data reconciliation work in Arizona, Liberty found that Qwest did make some errors that affected performance results. However, those errors were generally either: (a) of the kind and at levels to be expected at the front end of the performance measurement process, where people must manually enter vast amounts of information, or (b) appeared to be honest errors in judgment. The amount of these errors in relation to the total amount of information required for the performance measures did not exceed what Liberty considered to be expected levels, even under a carefully controlled set of measurement activities. Moreover, there was no evidence that Qwest purposely took steps to make its performance figures appear better than they actually were. With the exception of a programming problem associated with measure OP-15 (Exception 1046) and a failure to report a group of Firm Order Confirmations in June 2001, the errors were not systemic, nor did they apply to a significant percentage of the performance measure results**.**

Contrary to its conclusions in Arizona, Liberty found that several process errors significantly affected Qwest's reported performance results for Colorado. As documented in Observation reports 1026, 1027, 1029, and 1030, Qwest had: (a) reported retail line-sharing orders as wholesale orders, (2) repeated orders in consecutive months' measures because of different completion codes, (3) not reported orders because the CLEC designation was "unknown," and (4) excluded records because of a missing state code. Liberty also found that performance measures had been affected by human errors. For example, human errors (1) occurred in the processing of AT&T LIS trunk orders (Observation 1031), (2) caused some Covad UBL orders to not being excluded from OP-4 in cases where the requested interval was longer than the standard (Observation 1032), (3) caused line-sharing orders to be classified as UBLs causing an incorrect reporting of PO-5 (Observation 1034), and (4) occurred in determining the application dates and times on certain orders (Observation 1033).

Using data from Nebraska, Liberty found an additional process-type problem. As documented in Observation 1035, Qwest's system allowed cancelled orders to be incorrectly included in the OP-3 and OP-4 measures as completed (and on time) orders. The error occurred only for orders through the SOLAR system serving the eastern states (Iowa, Minnesota, Nebraska, North Dakota and South Dakota). Qwest has indicated that the problem was resolved as of May 12, 2001, but all results prior to June 2001 for the five states were affected.

Liberty also found that human errors affected performance measure results using the Nebraska data. Qwest had an error rate in calculating mean-time-to-repair (MTTR) for MR-6 of roughly 15 percent. This was reported in Observation 1028.

As first mentioned in Liberty's report on Arizona, Qwest had a programming anomaly that affected results for PO-5 results the month of June 2001, whereby orders for multiple loops were excluded from the measure. The same programming problem existed for Nebraska, whereby both orders for multiple loops and those orders that had a duplicate entry in Qwest's system were excluded. Qwest corrected the programming problem such that results for July 2001 and forward are no longer affected. Qwest had already reported this problem in its October 5, 2001, summary of notes to the regional results report.

III. Results of Data Reconciliation – AT&T

A. Introduction

After some discussion between the parties, it was ultimately determined that the following performance measures were to be reconciled:

- The denominator of PO-5A, B, and C combined for unbundled loops (UBL).
- The denominator of PO-5D for Local Interconnection Service (LIS) trunks.
- The numerator and denominator of OP-3D and E combined for unbundled loops and for LIS Trunks.
- The numerator and denominator of OP-4D and E combined for unbundled loops and for LIS Trunks.
- The numerator and denominator of OP-6A and OP-6B for unbundled loops and for LIS Trunks.
- The numerator and denominator of OP-13A and OP-13B for unbundled loops.
- The numerator and denominator of OP-15A and OP-15B for unbundled loops and for LIS Trunks.

For unbundled loops, the period to be reconciled is April 2001 through June 2001. The LIS Trunks reconciliation period was from January 2001 through June 2001. Qwest stated, however, that it did not report CLEC-specific state results for LIS Trunks for OP-15 for January or February; therefore, Liberty could not reconcile data for those months. In addition, Qwest was unable to provide the data necessary to reconcile OP-15 for LIS Trunks for May; therefore, data for that month could not be reconciled.

Liberty compared the unbundled loop trouble tickets provided by AT&T with the trouble tickets provided by Qwest. Where Liberty had data about a trouble ticket from both parties, Liberty compared the repair intervals reported by the two parties. Liberty also analyzed situations identified by AT&T where AT&T found one trouble ticket, but where more than one Qwest trouble ticket applied.

B. Reconciliation Results

Unbundled Loops

For the measure OP-3, Qwest and AT&T ultimately agreed on 89 percent of the orders. For the 11 percent of total orders that the companies disagreed on, Liberty found that:

- In roughly 3 percent, Qwest incorrectly included cancelled orders in its measure. These errors were the subject of Observation 1035. As noted in the Observation, Qwest made a programming change effective May 12, 2001 that now precludes cancelled orders from being included.

- In 1 percent, Qwest had counted the same order in two months; this double counting error was the subject of Observation 1027.
- In 7 percent, Qwest did not include orders in the measure that AT&T believed should be included. These were cases in which the CLEC supplemented the order and moved the due date past the original due date. This matter was discussed in the Arizona report, wherein Liberty concluded that it was appropriate for Qwest to exclude such orders. It should be noted, however, that there was an instance in which both AT&T and Qwest included such an order in the measure, and thus the parties agreed, but Qwest later clarified that it had mistakenly included the order.

For measure OP-4, the same issues arose as those presented above for OP-3. In addition, however, Qwest incorrectly excluded roughly 3 percent of the orders that should have been included in the measure because of human error in coding the order. Specifically, the orders had been coded as being longer than the standard interval, when in fact they were not. This issue concerning miscoding of the order interval was addressed in Observation 1032.

For measure OP-6, the orders the companies disagreed on were limited to those where AT&T supplemented the order and moved it beyond the original due date. These discrepancies accounted for roughly 33 percent of the total orders examined and Liberty found that Qwest handled these orders correctly. The parties had no disagreement on the OP-13 and OP-15 measures.

For PO-5, Qwest and AT&T agreed on 90 percent of the orders. All of the discrepancies were due to Qwest errors. Roughly 2 percent of the orders included Qwest's errors due to the fact that it had included orders where no FOC was issued on the initial LSR but one was issued for the cancellation. The remaining 8 percent of the orders had errors because of a programming problem that existed during the month of June. Orders that were either for multiple loops or were duplicated in the Qwest system were left out entirely. Qwest has since corrected this programming error, effective with July 2001 results. According to Qwest, the error was the result of programming changes made to move to PID 4.0.

LIS Trunks

Working together, Qwest and AT&T were able to reduce the number of Nebraska LIS trunk orders requiring reconciliation to one. For that order, Qwest stated that it was inappropriately excluded from the measures because of human error (Observation 1031). Because only one LIS trunk order required reconciliation, Liberty is not including any LIS trunk spreadsheets with this report.

C. Trouble Tickets

Liberty's work scope included a review of AT&T's and Qwest's Nebraska trouble ticket data for unbundled loop products for the April to June 2001 period. Liberty conducted this review to determine whether Qwest had correctly reported its performance measures, particularly MR-6 –

Mean Time to Repair *(MTTR)*. Liberty received summary information in spreadsheet form from both parties, as well as a hard copy of many of the AT&T and Qwest trouble tickets.[1]

Liberty identified several issues in its preliminary analysis:

- There was a large discrepancy in the population of trouble tickets provided by each party.
- In many cases, AT&T had logged more than one Qwest trouble ticket number in connection with a single AT&T repair request.
- In 50 percent of the tickets in common, the MTTR or repair duration recorded by each party did not match.

There was a significant disparity in the population of relevant Qwest trouble ticket numbers that each party provided. All but one of the Qwest trouble tickets appeared in the AT&T data (AT&T could not locate this ticket), but one-third of the tickets in the AT&T data did not appear in the Qwest data. Qwest stated that all these tickets (except for one that it could not find) were "retail"[2] tickets, and were not included in the measure.[3] Liberty found that Qwest had treated these tickets consistent with its procedures and consistent with the PID.

Roughly 15 percent of AT&T repair orders had multiple, *i.e.*, two, Qwest ticket numbers associated with them. Qwest had assigned more than one ticket number to an AT&T repair order for two reasons:

- The AT&T repair order included two or more different circuits, and Qwest assigned the circuits separate Qwest trouble ticket numbers.
- There was more than one repair performed on the given circuit, and these repairs were performed on different days or at different times. Qwest typically opened and closed the original tickets and opened new ones for the later repairs.

Liberty developed a summary chart itemizing the reason for multiple Qwest tickets, and submitted it to AT&T for comments. Liberty found that, for each of the trouble tickets in question, Qwest handled its trouble tickets consistently with its stated procedures and with the PID. AT&T accepted Liberty's analysis in all of the cases. All of these tickets were included in the MR-6 measure by both parties.

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[1] In its spreadsheets, Qwest provided data including, among other things, trouble ticket number, product code, repair duration, and received date; there were no clear dates or start/stop times provided. AT&T provided, for each of its own trouble tickets, the corresponding Qwest trouble ticket number(s), the open and restore date and time of the Qwest tickets, and a short description of the problem and treatment by Qwest.

[2] Qwest indicated that some AT&T customers' products are under the wholesale tariff and some are not; only those under the wholesale tariff are included in the wholesale measures.

[3] AT&T provided data on some tickets outside the relevant time period, which Liberty excluded from the analysis. The trouble ticket number that Qwest could not find was likely a typo, since the number was not in the same form as all of the other tickets.

For 50 percent of the individual Qwest trouble tickets that the two parties had in common, the MTTR reported by each party did not match.[4] Of these, the durations differed by more than 1 hour for 60 percent and by more than 12 hours for 40 percent. At times, Qwest had recorded a longer MTTR than did AT&T, but in the majority of cases, the time recorded by AT&T was significantly longer than that recorded by Qwest.

Liberty held discussions with AT&T and Qwest to determine the reasons for these differences in duration. During the course of the discussions, both parties revised their data or reinterpreted the information on their ticket logs. Liberty found that:

- There was a 1-hour difference between the system clock used by Qwest and that of AT&T (this difference would not affect net duration, however).
- In 70 percent of the cases, Qwest and AT&T had recorded the same (or roughly the same) open time for the ticket.
- In 30 percent of the cases, Qwest and AT&T had recorded the same (or roughly the same) open and restore time for the ticket.
- In 20 percent of the cases, there was "no access" time that AT&T did not remove from duration.

The net results of the duration reconciliation were as follows:

- In 60 percent of the cases, the parties ultimately concurred that Qwest had properly handled the ticket duration.
- In 10 percent of the cases, the discrepancies could not be explained.
- In 30 percent of the cases, Qwest had made administrative errors or did not follow its own procedures, which led to durations that were significantly different from those recorded by AT&T.
- The adjustments to MTTR for the Qwest tickets in error ranged from approximately 20 hours shorter to roughly 9 hours longer.

The population of tickets analyzed above constituted half of those used by Qwest to derive its MR-6 measure. Assuming the error rate in the other half is zero (since the parties agreed), then Qwest had significant errors in 15 percent of the total ticket durations used to calculate the measure. Although the sample analyzed by Liberty was small compared to Qwest's entire trouble ticket population, the human error rate was higher than Liberty believes is acceptable for a process of this type. Liberty issued an Observation report (#1028) on this subject.

Qwest's response to Liberty's Observation maintained that the mistakes identified by Liberty were isolated human errors and not typical, and that no corrective action was required. Qwest added that it conducted semi-annual reviews at its service centers, routinely finding error rates of 1 percent or less; Qwest center managers also reportedly conducted random checks and provided coaching to technicians whenever discrepancies were found.

[4] Liberty considered instances where the parties disagreed by 20 minutes or less to be "matches."

Liberty believes the errors it found during the AT&T trouble ticket analysis in Nebraska may be typical, rather than isolated instances, particularly when coupled with the results of Liberty's Arizona trouble ticket audit. In Arizona, Liberty found: (1) an error rate of roughly 2 percent in Qwest's MTTR, and (2) an error rate of roughly 3 percent in coding, which resulted in orders being excluded from the measure. Liberty found that Qwest's overall error rate of about 3 percent in Arizona, when viewed alone, was within the range of a reasonable human error rate. However, when Arizona and Nebraska results are combined, the MTTR error rate was 6.5 percent, which in Liberty's opinion is problematic.

Additional investigation was warranted to determine whether Qwest's proclaimed 1 percent error rate is accurate. Liberty has therefore begun an analysis of AT&T trouble tickets in Oregon to obtain additional data on the nature and frequency of errors. Liberty has also requested additional information on Qwest's compliance review and coaching programs to ascertain whether such programs have been effective; this information has not yet been provided.

IV. Status of Observations and Exceptions

The preceding discussion covered matters that explained the differences between the performance measure results obtained by AT&T and by Qwest for data from the state of Nebraska. In its prior data reconciliation work using data from Arizona and Colorado, Liberty identified several problems with Qwest's performance measures that were reported in the form of an Exception and several Observations. In addition, Covad provided some order information associated with Arizona that was received too late to incorporate in the Arizona report. The following sections provide the status of those issues.

Exception 1046

Exception 1046 stated that, during the period being covered by Liberty's data reconciliation, Qwest's systems sometimes truncated the third digit of an order's missed function code while it was being transferred from the Integrated Data Repository pending data source to the Detailed Data Set used by RRS to calculate OP-15 performance measure results. The Wholesale Regulatory Reporting program looks up the code in a miss code table to determine how the order should be handled. If it fails to find the code, it defaults the miss to Qwest. Thus, all of the LIS trunk orders showing two-digit miss codes were being reported as Qwest misses, even though not all of them were.

In its response to the exception, Qwest stated that it had already identified the problem and that the code had been corrected in the August 2001 release of performance results. Qwest also stated that the problem affected all results produced for OP-15A and OP-15B on all designed service products for the period of January through July 2001.

Liberty issued data requests (set 45) for the old and new programming code for OP-15, as well as for Qwest's documentation of how it identified the problem, developed revised business requirements, and solved the problem. Based on Qwest's responses, Liberty issued follow-on data requests (set 59), but has not yet received a response. Liberty has also not yet received a response to one of the earlier data requests (45-1). When those responses are received, Liberty will review them and determine whether the exception can be closed.

Observation 1026

Observation 1026 identified retail orders that were being included in performance reports as wholesale orders. Qwest indicated that the process of provisioning a line-sharing order involves Qwest issuing a separate retail and wholesale order. The wholesale order was being correctly included in the RRS calculations. However, because there was no retail line sharing, the second order was being defaulted into the wholesale category, resulting in a double count. Qwest implemented a code change to look for orders that contain billing USOCs with retail activity and then exclude such orders from the measure. Qwest indicated that this action prevents the reporting of retail orders as line-sharing activity. The code changes were implemented effective with the November 2001 release of performance results. Qwest indicated that the December 2001 release corrected the results for all months in 2001.

Qwest provided data files that contained the orders identified by Liberty that were affected by this observation. Liberty has reviewed these files and found that the appropriate changes had been made. Liberty conducted an interview with Qwest on this matter and recently received responses to related data requests. Liberty expects to complete its review and close this observation within the next couple of days.

Observation 1027

Observation 1027 identified various orders that were included and counted in more than one month. Qwest acknowledged the problem and indicated that it occurred when an order was completed in one month and passed through completions again in a second month. If an order was passed through with a completed status (CP) in one month and goes through a second completion as a billing post (PP) in another month then it was double counted. Qwest has implemented new code that reviews the record for the previous seven months and if the record has been previously counted then it is omitted from the current month's calculations.

AT&T filed comments on this observation noting that measures other than OP-3 and OP-4 could be affected. AT&T also questioned why this problem was apparent when earlier, in a response to the problem identified in Arizona, Qwest indicated that prior results would be re-generated with the fix in place. Qwest stated that corrected data could not be made available for the reconciliation because the problem was not yet resolved at the time Liberty was given the reconciliation data. Qwest also stated that the problem affected OP-3, OP-4, OP-5, OP-6, OP-15, PO-8 and PO-9, and all disaggregated products.

Liberty conducted an interview with Qwest on this matter and recently received responses to related data requests. Liberty is now reviewing the RSOR data files provided by Qwest to confirm that the problem has been resolved. Liberty expects to complete its review and close this observation within the next couple of days.

Observation 1028

Observation 1028 reported that there was a significant error rate in the mean-time-to-repair (MTTR), or repair durations, used by Qwest in calculating its MR-6 measure for AT&T in Nebraska. The status of this Observation is discussed above in the Nebraska-specific section of this report.

Observation 1029

Observation 1029 noted the exclusion of certain CLEC line-sharing orders because the CLEC was unknown. Qwest acknowledged that it was unable to report the majority of line-sharing orders in the months of July and going forward for certain CLECs. Qwest indicated that its order writing process did not capture the data used to identify CLECs, and thus Qwest was not able to report line-sharing results for the majority of the orders at the CLEC-specific level for this time period. Beginning with the December 2001 data and going forward, a new detail field was provided by PANS that addressed this problem. Qwest indicated for the period from July through November 2001, a "work around" solution had been implemented.

AT&T filed comments on this observation noting that measures other than OP-4 could be affected. AT&T also requested that Qwest identify the specific performance measures for which CLEC-specific reporting was not available as a result of the problem identified in this

Observation. Qwest stated that the affected measures are OP-3, OP-4, OP-5, OP-6, OP-15, PO-8 and PO-9 for line sharing only.

Liberty believes that Qwest's solutions (interim and permanent) will permit it to properly identify CLECs and related orders for the periods identified and will provide proper reporting. Liberty reviewed the changes to the field details that provide the required information. Liberty is satisfied with the interim solution but has not completed its review of the new data field used in the permanent fix.

Observation 1030

Observation 1030 noted that Qwest failed to report a number of Covad Firm Order Commitment (FOC) records because the state code was not auto-logged for those transactions. Qwest acknowledged that there was a problem. However, Qwest stated only a small percentage of the transactions were not recorded. Qwest indicated that the issue was caused by a code break in EDI 6.0 related to unbundled loop processing. Qwest indicated that customers were moved off EDI 6.0 in August and September and EDI 6.0 was retired in December 2001, so the problem for the most part had been addressed with the new technology. For those records that are not auto-logged with the new technology, Qwest will run an ad hoc report to identify them and will manually populate the state code.

AT&T commented that since PO-2, PO-3A-1, PO-3B-1, PO-3C, and PO-4C all require state codes that it was highly likely that these results were inaccurate. AT&T also expressed concern with when the "break" occurred and whether, in months prior to July, the CLECs using EDI 6.0 had inaccurate performance results for PO-5 because of this problem. Finally, AT&T requested that Qwest's process ensure that all transactions affected by the omission of the state code were recorded.

Liberty agrees with AT&T that the results of other measures may be affected by this problem. However, Liberty had no specific knowledge of such an effect. Moreover, Liberty had concerns with Qwest's *de minimus* argument because a significant percentage of Covad orders sampled were affected by having no state code. Qwest indicated that the problem affects PO-2, PO-3, PO-4, and PO-5. Qwest also said that it primarily affects UBLs, but also impacts line sharing. Qwest claims that the problem affects less than 1 percent of orders during the period from January through May 2001.

Qwest stated that it has implemented a manual process to fix the problem, and that this correction would work for all measures. Liberty needs more information on the percentage of all relevant orders submitted via EDI that had the problem, and expects to be able to close this observation after reviewing that information.

Observation 1031

Observation 1031 reported that the Service Order Miss Code *(SOMC)* in the RSOR data for some orders was incorrect, leading to errors in performance measurement reporting. Liberty noted several different types of anomalies regarding the information in WFAC, the SOMC, and how they are used in performance measure reporting.

Qwest responded to this Observation on January 24, 2002. Qwest stated that it had re-evaluated every AT&T LIS trunk and unbundled loop order for the reconciliation period from the states of Arizona and Nebraska and found that zero of the 33 LIS trunk orders evaluated by Liberty in Arizona were miscoded as customer caused misses and that 1 of 827 unbundled loop orders evaluated by Liberty in Arizona were miscoded as customer caused misses. Qwest also stated that, in evaluating the data from the three states collectively (Arizona, Colorado and Nebraska), it found that 1 of 890 (0.11 percent) unbundled loop orders, and 6 of 98 (6.12 percent) interconnection trunk orders were miscoded as customer caused misses. Qwest stated that it had clarified the MFC coding process documentation, conducted a review with the Network Organization to ensure that employees correctly complete the MFC field, and individually reviewed SOMC coding with each ISC representatives responsible for the coding errors identified.

Liberty has not completed its review of Qwest's recently received response to Observation 1031. Liberty will review the attachments Qwest provided with its observation response and evaluate the manner in which Qwest improved its procedures and retrained its ISC representatives. Liberty will also complete its own evaluation of the LIS trunk orders from Arizona to validate Qwest's statement that none of them had been miscoded.

Observation 1032

Observation 1032 noted that Qwest included some orders in OP-4 that should have been excluded because the requested provisioning interval was greater than the then current standard installation interval. Qwest's response indicated that out of a very large number of orders, Liberty found a few PONS for which this had occurred. In fact, however, Liberty performed an analysis on only a sample of the orders and found that this improper exclusion affected over 8 percent of the sample.

Liberty is now beginning its analysis of data from the state of Washington. Liberty is finding that this problem occurs in both UBL and Line Share orders. Although Liberty's analyses are preliminary, to date Liberty has found this problem in 7 percent of the UBL orders, and in 11 percent of the line-sharing orders, assessed to date.

Qwest indicated that it had improved its documentation in an effort to prevent this problem from recurring. Liberty requested a copy of the improved documentation. Liberty also requested that Qwest address what measures, products, time frames, and which CLECs, were affected by this type of error. Qwest has not yet replied to data request (set 54), which asks for a detailed explanation of Qwest's solution to the problem and support for the error rate Qwest reported as resulting from this problem.

Observation 1033

Observation 1033 stated that there were instances where Qwest personnel determined the order application date/time incorrectly for OP-4 LIS trunk performance measurement reporting purposes. In some instances, Qwest failed to change the application day to the next day, even though the ASR was received after 3:00 p.m. MT. In other cases, it appears that Qwest used the wrong application date because of uncertainty as to whether or not the application was "complete and accurate" as is required in the definition section of the PID.

In addition, Liberty determined that several Covad UBL orders in Arizona received after 7 p.m. were dated the same day, rather than the next day in accordance with the PID. This resulted from Liberty's review of the data Covad provided too late for inclusion in the Arizona report.

In its response to the observation, Qwest stated that the net effect of its errors was minimal, *i.e.*, a one day difference during the period being reconciled. Liberty believes it is pure coincidence, and irrelevant, that Qwest's errors may net out to a small number for the period. The important fact is that Qwest committed human errors in a third of the LIS trunk orders for which the parties agreed on the denominator but not the numerator.

AT&T filed comments on this observation, questioning whether other performance measures and other products could be affected by the problem, whether there could be both systems errors and human errors involved, and whether prior results could be re-stated.

Liberty is waiting for the responses to several questions (set 53) to Qwest regarding this issue and needs more information on Qwest's ability to rehabilitate historical performance data and on which performance measures have been affected by this problem.

Observation 1034

Observation 1034 reported that Qwest failed to report many Firm Order Confirmations for Covad because it incorrectly identified line-sharing orders as unbundled loops with a non-standard interval of 72 hours. Qwest does not report records in cases where the interval is non-standard. Covad currently has a special contract with Qwest that requires delivery of UBLs within 72 hours, a non-standard interval. Line-sharing orders have a standard interval of 24 hours. Line-sharing orders that are misidentified as UBLs are therefore excluded from the measure.

Liberty has submitted data requests to Qwest regarding the time period involved with this problem and the changed its processes to correct the problem.

Observation 1035

Observation 1035 reported that there were errors in the OP-3 and OP-4 measures for states in the eastern region prior to June 2001 because Qwest included cancelled orders in the measures. This Observation is discussed above in the Nebraska-specific section of this report.