

Decision 96-08-021 August 2, 1996

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Rulemaking on the Commission's)
Own Motion to Govern Open Access)
to Bottleneck Services and) R.93-04-003
Establish a Framework for Network) (Filed April 7, 1993)
Architecture Development of)
Dominant Carrier Networks.)

_____)
)
Investigation on the Commission's)
Own Motion into Open Access and) I.93-04-002
Network Architecture Development) (Filed April 7, 1993)
of Dominant Carrier Networks.)
)

**INTERIM OPINION ADOPTING IN PART AND
ORDERING MODIFICATIONS TO ROUND I AND II
COST STUDIES SUBMITTED BY
PACIFIC BELL AND GTE CALIFORNIA INCORPORATED**

In this decision, we consider whether the Total Service Long Run Incremental Cost (TSLRIC) studies submitted by Pacific Bell (Pacific) and GTE California Incorporated (GTEC) for certain basic network functions (BNFs) and services in their networks conform to the TSLRIC principles approved by this Commission in Decision (D.) 95-12-016. As discussed below, we conclude that the cost studies submitted by Pacific are, by and large, sufficiently consistent with our adopted TSLRIC principles to serve as a basis for setting prices for bundled and unbundled BNFs and services on Pacific's system. However, we also order substantial adjustments to Pacific's studies, including the potential reallocation of approximately \$145 million in operating expenses, and a change in Pacific's assumptions for its loop studies that will have the effect of reducing costs for all access line services by approximately \$2.25 per month. The changes we are ordering will affect approximately \$470 million (before any reallocation of operating expenses) of over \$8 billion in capital investment and operating expenses covered by Pacific's cost studies.

Unfortunately, we cannot conclude that GTEC's coles adopted in D.95-12-016. In general, we find the GTEC studies to be flawed in methodology and lacking in supporting data, so that they cannot reasonably be used to set prices for BNFs and services on GTEC's system. We will therefore order GTEC to use certain specified assumptions derived from Pacific's studies as proxies in the upcoming pricing hearings. GTEC will also be ordered to submit properly-conducted TSLRIC studies within one year from the date of this order.

Background

Although this proceeding began formally with the issuance of a rulemaking in April of 1993, its genesis was our discussion in the New Regulatory Framework (NRF) decision, D.89-10-031, 33 CPUC2d 43 (1989), of the pricing principles needed in a competitive market for telecommunications services. In D.89-10-031, we noted that "the need for unbundling, uniform pricing and nondiscriminatory availability of the local exchange carriers'...essential services and facilities...was raised by many competitors and

potential competitors[,] as well as DRA." (33 CPUC2d at 119.) We summarized the basic rules sought by these competitors in the terms used by MCI Telecommunications Corporation (MCI): "MCI believes an extensive unbundling of local exchange services is needed in order to control the local exchange carriers' incentives and ability to engage in price squeezes and discriminatory bundling of services. MCI proposes three requirements: (1) mandatory unbundling of bottleneck services or building blocks from nonbottleneck services or building blocks, (2) mandatory offering of all bottleneck services or building blocks at uniform prices on a nondiscriminatory basis, and (3) requiring that the rate structure of bottleneck building blocks correspond to the underlying cost structure." (*Id.*)

After noting the positions of the local exchange carriers (LECs) on unbundling issues, we concluded: "[W]e believe that MCI's proposal should be addressed in today's decision. The basic principles of unbundling, nondiscretting based on underlying cost structures are applicable to any utility service which faces competition. . . . Further, as MCI demonstrates, an unbundling requirement would provide important benefits as part of a regulatory framework structured to respond to a range of increasingly competitive conditions." (*Id.* at 120.)

However, we emphasized that our discussion of the virtues of unbundling was a decision only in principle, and that case-by-case determinations would be needed for each affected network element:

"Because of the wide variety of utility services and functions, we are not ready at this time to pass judgment on which functions are or are not monopoly building blocks, nor is the record sufficient to determine whether factors exist which would militate against application of the principles of unbundling and nondiscriminatory access to any specific monopoly building block. As a result, these principles should be applied on a case-by-case basis." (*Id.* at 121.)

In the April 7, 1993, Rulemaking that initiated this docket, we sought to develop unbundling rules that could be applied on a more generalized basis. After reiterating the basic unbundling principles adopted in D.89-10-031, we noted (at page 1) that "this Rulemaking and Investigation implements this long-held policy on a more comprehensive basis than the service-by-service approach employed to date." We set forth a series of proposed rules to govern unbundling requests, and requested comment from all affected parties on these rules. After a series of extensions of time, opening comments on the rules were filed on February 8, 1994, and reply comments on March 31, 1994.

Shortly after this docket was opened in April of 1993, we issued D.93-08-026, which dealt with expanded interconnection and local transport restructuring. We concluded that these topics should be part of our unbundling proceeding, and that -- with appropriate modifications to reflect the rules for LEC pricing flexibility set forth in D.89-10-031 connection and local transport rules in parity with those of the Federal Communications Commission (FCC). We invited all affected parties to file comments on our proposals. Pursuant to this invitation, opening comments were filed on November 18, 1993, and reply comments on December 16, 1993.

Progress in this docket during 1994 was slowed by two significant developments. The first of these was the Commission's conclusion (in D.93-10-033) that it should rescind its September 1993 decision in the Implementation Rate Design (IRD) phase of I.87-11-033, et al., due to certain procedural improprieties. The IRD issues were ultimately decided in D.94-09-065, but the effect of the Commission's decision to reconsider the entire IRD record was to tie up for much of 1994 staff who would otherwise have been available to work in this docket.

The second significant development in 1994 was the decision of the United States Court of Appeals for the District of Columbia Circuit in ***Bell Atlantic Telephone Companies, et al. v. Federal Communications Commission, et al.***, 24 F.3d 1441 (D.C. Cir. 1994). This decision held that the FCC had exceeded its statutory authority in requiring the LECs to offer "physical collocation"⁽¹⁾ to competitive access providers (CAPs) at LEC central offices. As a result of this decision, the FCC was forced to reconsider its entire record on collocation issues. After such reconsideration, the FCC concluded that virtual collocation⁽²⁾ would offer nearly all of the same competitive benefits that physical collocation

would offer, and so directed the LECs to offer it at their central offices.⁽³⁾

As a result of the substantial changes in rates and policies for collocation and local transport brought about by the IRD decision (D.94-09-065) and the FCC's reconsideration of collocation issues, the assigned Commissioner for this proceeding asked the assigned Administrative Law Judge (ALJ) to solicit an additional round of comments on the issues raised by D.93-08-026. Opening comments in response to this invitation were filed on October 13, 1994, and reply comments were filed on October 27, 1994.

Not long after the filing of these comments, we issued D.94-12-053, which set forth a "roadmap" for the proceedings that were needed in order to effectuate local competition by January 1, 1997. In the "roadmap" decision, we indicated that in this docket, we would decide expanded interconnection and local transport issues first, and then move on to the preparation of cost studies needed for unbundling: "[Our] first order [will] address expanded interconnection and local transport restructure. We intend to issue this decision early in 1995. The second order, which we would prefer to issue after [March 31, 1995,] would adopt a methodology to be used in developing long-run incremental cost (LRIC) studies. Although this order might also define the monopoly building blocks necessary for network unbundling, the Commission will consider whether to order workshops to identify those monopoly building blocks. . . [T]he Commission could then order cost studies to be performed mid-1995." (Mimeo. at 4.)

Although the timetable contemplated by D.94-12-053 has slipped somewhat, we have generally adhered to the approach set forth in it. A draft decision on expanded interconnection and local transport was mailed on February 10, 1995, which, with modifications, was issued as D.95-04-073.⁽⁴⁾ On June 22, 1995, Commissioner Henry M. Duque issued an Assigned Commissioner's Ruling setting forth a proposed TSLRIC methodology to govern the preparation of cost studies, as well as a list of BNFs for which such cost studies would be performed.⁽⁵⁾

After an 11-day workshop in June and July of 1995, the active parties in this proceeding reached agreement on a consensus set of TSLRIC principles, as well as a list of BNFs and services for which TSLRIC cost studies would be performed. The consensus principles were adopted in D.95-12-016.

Submission of the Cost Studies and Discovery Relating Thereto

In addition to adopting the agreed-upon TSLRIC principles (and adjudicating disputed issues relating to them), D.95-12-016 set forth a timetable for submission of the required cost studies. Under this timetable, Pacific and GTEC were required to submit cost studies for six BNFs and related services (which were known as Round I cost studies) on December 29, 1995. Most of the other studies (which were called Round II studies) were due on January 31, 1996.⁽⁶⁾

A prehearing conference (PHC) was scheduled for January 5, 1996, to discuss the procedural schedule laid out in D.95-12-016 and any concerns the parties might have relating to it.

At the January 5 PHC it soon became evident that a major problem for the LECs was providing work papers contemporaneously with the cost studies. All of the non-LEC parties complained that neither Pacific nor GTEC had furnished adequate workpapers with the Round I studies, which made it difficult to analyze them and begin preparing the comments due on February 21, 1996. The assigned ALJs directed Pacific and GTEC to prepare the missing workpapers forthwith, and to ensure that such delays did not occur in connection with the Round II and III cost studies.⁽⁷⁾

Unfortunately, this was easier said than done. By the time the assigned ALJs issued their ruling on February 14, 1996, setting forth a "final" schedule for the proceeding, it had become evident that delays in producing workpapers would make it impossible to prepare and submit comments on the cost studies by February 21. Accordingly, the ALJs extended the due date for

opening comments until March 20, 1996.⁽⁸⁾

Concerning the workpaper delays, the ALJs' February 14 Ruling said:

"[I]t is now apparent that it is taking longer than we had anticipated for GTEC and Pacific to complete their cost studies, and even longer for the LECs to generate and explain the necessary workpapers.

The Executive Director has already granted two extensions each to Pacific and GTEC, extensions that in a few cases stretch the due dates for cost studies into April. Moreover, while Pacific and GTEC responded promptly to the directives at the January 5 PHC that workpapers for the December 29 cost

studies be served promptly, GTEC has still not provided complete computer discs for these studies to all parties, and questions remain about Pacific's workpapers. We anticipate similar delays with respect to the workpapers backing up the cost studies submitted on January 31." (Mimeo. at pp. 4-5; emphasis supplied.)

The ALJs' predictions proved to be accurate. Additional delay in obtaining workpapers and related discovery responses caused several members of the Coalition to file, on February 29, 1996, an "Emergency Appeal" from the ALJ's February 14 scheduling ruling. The Emergency Appeal argued that because of delays by Pacific and GTEC in producing workpapers and responding to discovery requests, the schedule set forth in the ALJs' February 14 ruling could not be met. The appellants therefore urged the Commission to adopt the two-track procedural schedule described in footnote 8. In a March 25, 1996, Assigned Commissioner's Ruling (ACR),⁽⁹⁾ Commissioner Duque rejected the appellants' call for a two-track hearing schedule, but agreed that an extension of time was necessary. Accordingly, he extended by two weeks the time for filing opening comments, until April 3, 1996, and made corresponding adjustments to the rest of the schedule. He also admonished the parties to be more cooperative with one another in handling future discovery requests.

Unfortunately, Commissioner Duque's March 25 ACR did not end the discovery disputes. During the same week this ACR was issued, the assigned ALJ was required to spend a substantial effort working out a plan between Coalition members and Pacific for the completion of outstanding data requests.⁽¹⁰⁾ The discovery workplan called for Pacific to complete its data responses by April 1, only

two days before opening comments on the cost studies were due. Despite this situation, the Coalition, the Division of Ratepayer Advocates (DRA) and CCTA/TCG all filed extensive opening comments on April 3, 1996.

The Coalition soon concluded, however, that the late data responses had handicapped it in preparing comments. Accordingly, on April 12, 1996, the Coalition filed another Emergency Appeal to the Commission, this time from Commissioner Duque's March 25 ACR. The April 12 Appeal argued, in essence, that because of Pacific's tardy discovery responses, the parties should be granted an additional round of comments on the cost studies, which should be due in about 30 days. The Coalition acknowledged that the effect of granting such an extension would be to push past January 1, 1997, the date on which tariffs for unbundled BNFs and services could go into effect, but argued this was permissible under Public Utilities (PU) Code { 709.5.

Although the April 12 Appeal was accompanied by a motion urging that it be considered on an emergency basis at the Commission's April 19 business meeting, Commissioner Duque rejected this request. Instead, he issued a Ruling that set a schedule that allowed Pacific, GTEC and other interested parties to file responses to the Emergency Appeal on April 24, and the Coalition to file a reply on May 1, 1996.⁽¹¹⁾

While this Ruling was being prepared, the LECs, DRA and CCTA/TCG filed reply comments on the cost studies on April 17, and the Coalition filed what it called "Supplemental Comments" on that date.

At our May 8, 1996, business meeting, we issued D.96-05-034, which granted in part the Coalition's April 12 Emergency Appeal. After finding that both the Coalition and Pacific bore part of the blame for discovery delays (mimeo. at pp. 8-9), we concluded that the record on the LECs' cost studies would indeed benefit from an additional round of comments, for which we set a due date of May 14, 1996. Pacific and GTEC were given until May 24, 1996, to file a reply to these comments (as well as to the Coalition's "Supplemental Comments" of April 17, 1996). We accepted the Coalition's argument that if rules and regulations governing local competitors were adopted by December 31, 1996, PU Code { 709.5 would be satisfied. Finally, an amended schedule for the rest of the proceeding was adopted, which was set forth in Appendix A to D.96-05-034.

In short, the record on which we base today's decision is extensive. Not only do we have the benefit of the cost studies themselves and the supporting workpapers, but also four rounds of comments totalling over 500 pages, as well as numerous discovery responses that our staff has reviewed. Although the road to today's decision has obviously not been without bumps, we believe this extensive record allows us to render an informed decision on the principal issues raised by the parties about the LECs' cost

studies.

In the following discussion of cost study issues, we have tried in most cases to give the reader some idea of the dollar impact of our decision. This presented a problem in many cases, because much of the data in the cost studies (as well as in discovery responses) was submitted under a claim that it was confidential and proprietary, and thus subject to the nondisclosure

agreements negotiated among the parties to this proceeding.⁽¹²⁾

We have sought to honor confidentiality claims in the text of this decision by referring to data in the aggregate, so that the numbers we cite cannot be used, standing alone, to "back out" truly sensitive, proprietary matter.

We also recognize, however, that making the adjustments we are ordering to the LECs' cost studies requires that the parties have access to material that has been designated as confidential and competitively sensitive. In order to prevent this material from falling into unauthorized hands, we have prepared two documents, which we refer to as Compliance Reference Documents (CRDs), which will be made available only to parties who have signed appropriate nondisclosure agreements. One CRD contains confidential material related to Pacific, and the second contains confidential material relating to GTEC.⁽¹³⁾

Because the comments concerning Pacific's cost studies were much more extensive than those concerning GTEC's, we discuss the issues relating to Pacific first.

I. Discussion of Issues Pertaining to Pacific's Cost Studies

A. Do Pacific's Cost Studies Conform With Our Adopted TSLRIC Principles?

The overriding issues in this proceeding -- the issues that lie behind all of the discussion below -- are whether the cost studies submitted by Pacific and GTEC conform to the TSLRIC principles adopted in D.95-12-016, and whether these studies can be used as the basis for setting prices. In the comments it submitted on April 3 and in its later rounds of comments, the Coalition leaves no doubt that it believes these questions must be answered in the negative:

"After an intensive effort to sift through the huge quantity of information that relates to the LECs' cost studies, the Coalition has unearthed a mass of materials that clearly demonstrate that those studies are **not** TSLRIC studies, at least as the Consensus Document defines such studies. Both LECs have used estimates of expenses that are actually embedded, and not forward-looking. . . . Pacific adjusted some of its expenses from their historical levels, but often did so in ways that made them **less** likely to reflect forward-looking expenses, rather than more... In violation of the Consensus Principles, both LECs assigned large blocks of expenses to the 'shared common' expense category that are more properly allocated to specific services or families of services. . . . Also in violation of the Consensus Principles, Pacific has assumed certain expenses to be volume-insensitive solely on the basis of their accounting treatment. . . . Both LECs have, because of their methods of estimating expenses, double-counted large and important blocks of expense. . . . Both LECs have 'imported' some costs of services not studied into their estimates of the costs of studied services. . . ." (4/3 Coalition Comments, p. 4; emphasis in original, **see also** DRA's 4/3 Comments, pp. 4-5.)

In its April 17 and May 24 reply comments, Pacific has vigorously defended its cost studies, arguing that they were the best that could be prepared under the circumstances:

"Our cost studies were done nerally high quality, the documentation isn't perfect. Even though they weren't delivered to the parties in a shrink-wrap package with a four-color brochure, they represent quality work conducted by a quality team of cost experts. They comply with the consensus cost principles, and with the mainstream economic literature on long run incremental costing. In terms of the substance of the cost studies, we need make no apology whatsoever." (Pacific's 4/17 Comments, p. 2.)

Allowing for the rhetoric on both sides, we have concluded that Pacific has the better of the argument on this threshold issue. While we are ordering substantial downward adjustments to the cost estimates in Pacific's studies (as indicated below), our own extensive analysis of the studies -- conducted by our staff over a period of four months -- convinces us that Pacific's studies adequately conform to the TSLRIC principles we have adopted and can, therefore, be used as a basis for setting prices. We base this conclusion not only on our own analysis, but on Pacific's willingness during the cost study process to admit error where an error could be demonstrated. In addition to the adjustments we are ordering herein, Pacific has agreed to correct approximately \$235 million of errors.

B. Has Pacific Improperly Characterized as Shared or Common Costs, Expenses That are in Fact Service-Related?

One of the largest generic criticisms the Coalition has made of Pacific's cost studies is that these studies improperly treat expenses that should be considered BNF- or service-related as "shared" or "common" costs, in violation of the costing principles set forth in Appendix C of D.95-12-016. The Coalition argues that Pacific has two incentives to mis-assign expenses in this way. First, it allows Pacific to overstate the costs for BNFs and services that competitors must purchase from Pacific, relative to the costs of the retail services that Pacific offers. Second, it enables Pacific to assign services that will face little competition in the near future, such as residential local exchange service. (4/3 Coalition Comments, p. 9.)

If this general criticism of Pacific's studies is correct, it has serious implications for the overall validity of the studies, since approximately \$4 billion of the \$8 billion covered by Pacific's studies constitute expenses. Of this amount, approximately half -- or \$2 billion -- has been treated by Pacific as "shared" or "common" costs. Accordingly, we find it necessary to examine the Coalition's contentions and Pacific's rebuttals thereto in some detail.

1. Positions of the Parties

The issue of how to treat shared and common costs received considerable attention during the workshops held in June and July of 1995, and was addressed in the Consensus Document attached to D.95-12-016 as Appendix C. Principle No. 5 in the Consensus Document provides that "common costs, if any, are not part of a TSLRIC study, except for a TSLRIC study of the firm as a whole." (Appendix C, pp. 3-4.) The commentary on Principle No. 5 notes that "recognition of [overhead] costs will be treated as a pricing issue," and that "no cost shall be assumed to be a volume-insensitive common cost on the basis of its accounting treatment."⁽¹⁴⁾

In all three sets of its comments, the Coalition has argued that Pacific's cost studies depart from these principles so badly that they cannot be used for the purpose of setting prices. One of the Coalition's principal lines of attack is that Pacific erred badly in using "function codes" rather than "tracking codes" in assigning many expense categories. The Coalition explains the significance of the alleged accounting error as follows:

"Pacific's account system (ICMS) contains, in addition to the function codes Pacific used to assign expenses, a 'tracking code' field, which is used to identify expenses caused by specific products and projects. Since Pacific's task was to identify the actual cause of each expense, the tracking code data should have been central to Pacific's cost study process. Just the opposite was true. . . . [I]n every case, Pacific assigned expenses on the basis of their general accounting classification, even when the accounting system contained additional detail identifying the service that caused the expense." (4/17 Coalition Comments, pp. 8-9; emphasis in original.)

Pacific's failure to use tracking codes has had three effects, according to the Coalition. First, many millions of dollars in expenses were reported as "shared" costs (i.e., costs attributable to a family of services and recovered through pricing) rather than as service-specific costs that should properly be included in a TSLRIC study. (*Id.* at 8-14.) Second, many of the allegedly "shared" costs appear to be "volume sensitive," which under Principle No. 3 must be included in the TSLRIC for a particular service. (*Id.* at 15-16.) Third, use of the more generalized function codes allows Pacific to over-assign expenses to residential services (which are not likely to face much competition in the immediate future), while under-assigning them to business services (for which immediate competition from CLCs can be

expected).

Pacific disputes this characterization of its accounting procreation submitted on May 24, 1996 as part of Pacific's additional reply comments, Richard Scholl (Pacific's principal in-house cost analyst) disputes the significance of tracking codes:

"Pacific investigated the usefulness of using tracking codes as an aid in determining costs of the services which Pacific...studied in the OANAD proceeding. In only one instance was information provided by a tracking code found to provide any additional relevant information for determining the costs of providing services. In that instance, the tracking code information was used. Tracking codes generally provide project specificity, not product specificity as claimed by the Coalition." (5/24 Scholl Declaration, para. 7.)

Mr. Scholl also disputes the Coalition's conclusion that Pacific has excluded too many costs from TSLRICs by treating them as "shared" or "common":

"In multi-service firms such as Pacific Bell..., many of the characteristics which give rise to economies of scope are themselves the results of costs which are shared. By creating systems of providing services which are shared, the firm establishes a degree of flexibility and lower overall costs which it would not have were all costs product specific. The only way for the majority of the costs to be product specific would be if the firm established stand-alone types of operations which would clearly eliminate any possibility of economies of scope." (**Id.** at para. 31.)

Finally, Mr. Scholl defends Pacific's decision in a number of studies to assign different costs to a service depending on whether it is provided to a residential or a business customer. For example, in response to the Coalition's assertion that it makes no sense for Pacific's volume-sensitive costs for residential Remote Call Forwarding (RCF) to be greater than such costs for business RCF, Mr. Scholl states: "The reason that the monthly volume sensitive costs of residential RCF service are higher than the equivalent costs of business RCF is that residential RCF customers call Pacific's business office (i.e., sales and marketing expense) and repair center (i.e., repair expense) much more frequently than do business customers. Frequently these sting information about the service. . . . In addition, despite the Coalition's assertions that Pacific's TSLRIC studies involve 'expense allocations,' the identifications of the RCF sales and marketing expenses and repair expenses come from the company operating reporting systems." (**Id.** at para. 53.)

2. Discussion

At heart, the Coalition's attack on Pacific's expense assignment process seems rooted in a gaming theory. The Coalition reasons that if Pacific has an incentive to game (e.g., to understate BNF costs in order to keep price floors low), then it must necessarily have done so. We reject this argument for the reason stated by Pacific in its April 17 reply comments:

"The Coalition's proof of gaming consists of identifying an incentive to game, combined with a result that would be consistent with gaming. In all these cases, however, the cost study result is also consistent with gaming not having occurred." (Reply Comments, p. 9.)

As Pacific has noted, it has some important reasons **not** to overstate shared and common costs, even though such a step would theoretically make possible lower price floors for its products. Pacific states: "[M]argins in this industry are such that running up against a price floor is not a serious concern for most services. What is of real concern to us is the uncertainty around whether costs in the shared/common bucket can ever be recovered. By their definition, shared/common services cannot rationally be allocated to any particular service. How to set prices when shared/common costs exist is the big issue for the hearings this [summer]. Intervenors will argue that no shared/common costs should be included in the prices of their favorite wholesale products." (**Id.** at 8.)

After examining all of the Coalition's examples of alleged mis-assignment of operating expenses by Pacific, we have concluded that the Coalition overstates the problem, and that most of Pacific's expense assignment decisions appear reasonable. It is probable that approximately \$145 million in operating expenses have been incorrectly assigned. These expenses are covered by the function codes set forth in the Pacific CRD. As to them, we will order further analysis.

Further analysis is required because we do not believe that Pacific has furnished an adequate

justification for its treatment of the expenses represented by these codes as "shared family" costs. With respect to these expenses, Pacific has not demonstrated that the costs would be avoided if the services were not furnished, which -- as the Coalition notes -- is the basic test for a volume-sensitive cost. Moreover, it appears from our own examination of the tracking codes related to these function codes that in some cases, the tracking codes can be assigned to specific services. As to them, Mr. Scholl's argument that tracking codes provide project specificity rather than product specificity does not appear to hold true.

In view of these doubts, we will direct Pacific to review the function codes set forth in the CRD and to submit an advice letter pursuant to General Order (G.O.) 96-A concerning this review within 14 days after the effective date of this order. In addition to the function codes listed in the CRD, Pacific is directed to review all functions codes and loadings related to trouble reporting (i.e., 611 functions). In its advice letter, Pacific should either assign the function codes and loadings directly to services, or document fully why they should not be so assigned.

Finally, we deem it appropriate to address two points raised by the Coalition on the expense assignment process in its July 10, 1996, comments on the ALJ's proposed decision (PD). The Coalition asserts that by failing to order Pacific to assign costs directly to services, instead of treating them as "shared" or "common", the PD will handicap new entrants into the local exchange market:

"Given the right to engage in customer-specific contract pricing down to a TSLRIC-based floor, however, Pacific service-specific costs to the shared and common categories will significantly enhance its ability to underprice its competitors, thus inhibiting the competitors' ability to recover their legitimate costs." (7/10 Coalition Comments, p. 4.)

We think this statement assumes too much, because it is premised on the assumption that price floors will include only volume-sensitive costs. We have not yet made any such determination, because the way in which the TSLRIC studies should be used to set price floors is one of the subjects for the pricing, tariffing and unbundling hearings in this docket. These hearings are now underway. Rather than prejudge how price floors should be set, as the Coalition implicitly asks us to do, we will allow parties to litigate in the hearings the extent to which shared family costs should be included in price floors. In its July 10 comments on the PD, the Coalition also argues that the volume-sensitive (and therefore service-specific) nature of many costs Pacific has treated as shared or common is demonstrated by the results of a regression analysis that analyzed cost data for 17 other LECs. The Coalition suggests that based on this regression analysis, we would be justified in requiring Pacific to increase product-specific expenses for each of its products by a factor of 85.74%. (*Id.* at pp. 4, 7.) In its comments on the PD, CCTA makes a similar argument based on its own regression analysis. (7/10 CCTA Comments, pp. 5, 9-10.)

For two reasons, we reject the suggestion that we should use these regression analyses to re-assign to specific services, costs that Pacific has treated as "shared" or "common". First, our own review of the Coalition's regression analysis indicates that one-third of the LECs it sampled report significant shared and common costs, just like Pacific. On average, these shared and common costs exceed \$1 billion. Because the Coalition's argument ignores at least a third of its own study's data points, the study does not support a wholesale shared and common costs. Second, the Coalition's regression analysis obviously does not recognize the significant reductions in shared costs that our decision today requires Pacific to make. CCTA/TCG's regression analysis suffers from similar flaws.

More fundamentally, the use of a regression analysis to re-assign costs would be completely inconsistent with the "bottoms

up" TSLRIC approach we adopted in D.95-12-016. In our view, the Consensus Costing Principles we approved in that decision clearly disfavor the use of factors. Thus, we rejected the Coalition's argument that Pacific should be required to assign a "basic" level of maintenance to BNFs; we concluded that direct assignment of maintenance expense to the service necessitating it was preferable. (*Mimeo.* at 8-12.) The use of a regression analysis to justify the re-assignment of costs via factors would be the epitome of a "tops down" approach. Moreover, as Pacific pointed out in its July 15, 1996, reply comments on the PD, the Coalition has not presented a methodology for using its regression analysis, and across-the-board use of the suggested 85.74% factor would represent a return to the fully distributed cost methodology we rejected in D.94-09-065. (7/15 Pacific comments, pp. 2-3.) Based on our own review of Pacific's expense assignment process, we believe that the adjustments we

have ordered above will be sufficient.

C. Has Pacific Assumed Unreasonably High Amounts of Spare Capacity in its Cost Studies for Loops, Distribution, and Feeder?

A second general criticism the Coalition has made of Pacific's cost studies is that these studies reflect unreasonably large amounts of spare capacity. The Coalition maintains that the high percentage of spare capacity (which is also referred to as a "fill factor")⁽⁴⁵⁾

found in Pacific's studies reflects inefficient engineering practices and a failure to use least-cost technology. The Coalition also argues that Pacific's large amounts of spare capacity are inconsistent with the Consensus costing principles, because they reflect a network designed to meet future rather than current demand. DRA also criticizes the fill factors used in Pacific's studies. (5/14 DRA Comments, p. 3.)

As with assignment of operating expenses, the dollars at stake in the spare capacity debate require that we examine the issue in some detail, since each 1% of spare capacity in Pacific's distribution plant for basic exchange access lines amounts to approximately \$5 million per year.

1. Position of the Coalition

While the Coalition has vigorously attacked Pacific's treatment of spare capacity, it does not argue that all spare capacity is inappropriate in a TSLRIC study. The Coalition concedes, for example, that it is appropriate to recognize some "administrative spare":

"The parties all agree that administrative spare, which is the difference between the optimal or design utilization of a facility and 100% utilization, is properly included in a TSLRIC study. Administrative spare allows the LECs to perform testing and other functions and provides some margin to compensate for the small percentage of units that will be out-of-service and under repair at any given time. The exact levels of needed administrative spare vary by facility type, but are typically 15% or less of total installed capacity." (4/3 Coalition Comments, p. 28.)

Similarly, the Coalition acknowledges that a properly-done TSLRIC study is likely to include some spare capacity attributable to "modularity" or "breakage":

"Defined narrowly, breakage is what is sometimes called modularity spare and results from the indivisibility of certain types of equipment. For example, a line card for a switch may have a capacity of eight lines. Unless the total number of lines that the switch serves is divisible by eight, the 'last' line card in the switch will not be fully utilized, resulting in some 'breakage' or modularity spare." (**Id.** at 29.)

Finally, the Coalition agrees that some spare capacity will exist and can be recognized in a TSLRIC study on account of "churn":

"All carriers must keep a certain amount of 'spare' capacity to deal with variations in demand caused by the movement of customers from one location to another. The amount of unused capacity that is needed to accommodate customer movement, or churn, is, in that sense, a cost of serving current demand. The question then becomes how much spare capacity is needed to accommodate churn." (**Id.** at 33.)

Despite these concessions, the Coalition argues that Pacific has included grossly excessive amounts of spare capacity in its studies, due principally to very expansive conceptions of what constitutes breakage and churn. As to breakage, the Coalition argues that Pacific is using it to disguise the costs of serving future rather than current demand's definition of spare capacity equates breakage to optimal inventory. . . . [T]he Coalition understands Pacific's spare capacity calculations to include as 'optimal inventory' the capacity that Pacific has on hand to meet expected growth, not just the capacity that is associated with the more limited definition of breakage presented [above]."

"This broader definition of breakage is unacceptable. The issue is not whether the inventory that the LECs have on hand is 'optimal' to meet expected growth, but whether the costs of that inventory are properly included as costs of serving current demand. Phrased in that way, the answer is self-evident: costs incurred to meet expected growth are attributable to future demand, not current demand. A TSLRIC study of the costs to serve existing demand must exclude such 'optimal inventory' costs." (**Id.**

at 30-31.)

The Coalition takes a similar view of Pacific's reliance on "churn" as a justification for the percentage of spare capacity in its loop plant. Noting that Pacific claims its loop fill factor is the result of "efficient engineering decisions regarding placing plant economically, balancing costs of placing additional plant with costs of rearranging existing plant," the Coalition asserts:

"Despite this assertion . . . neither Pacific nor GTEC has provided any evidence to demonstrate that the average utilization levels of their respective loop plant represents the outcome of efficient engineering decisions. Instead, both LECs simply have presumed that their current average utilization levels will continue indefinitely (at least for distribution plant) and that these utilization levels are in fact the optimal or most efficient levels. This assumption is highly questionable and . . . significantly inflates the costs that the LECs estimate for the loop BNF." (**Id.** at 33.)

The Coalition argues that two aspects of Pacific's engineering practices are especially suspicious. First, it is wrong in the Coalition's view for Pacific to attribute about by a change in the type of service required by a customer to "demand uncertainty". For example, if a PBX customer using a handful of trunks is replaced in a commercial building by a Centrex customer using 50 lines, the Coalition argues that the additional lines should not be accounted for as churn, but rather included in the TSLRIC of the affected service. (**Id.** at 34.)

Second, the Coalition disputes Pacific's claim that it is an efficient engineering practice to "place more than two pairs per household in affluent neighborhoods to accommodate a higher maximum probable demand for access lines . . ." According to the Coalition:

"If there is greater churn in affluent areas, treating spare capacity as a BNF cost that is not differentiated across geographic areas would have the effect of transferring costs to low- and average-income customers that are actually attributable to service to high-income customers, who are the direct beneficiaries of the greater availability of spare capacity in their neighborhoods." (**Id.** at 35-36.)

In its May 14 Comments, the Coalition presented a table with supporting calculations of what it considers to be appropriate "fill factors" for various types of plant. (5/14 Coalition Comments, pp. 35-36.) As part of this showing, the Coalition argues that for copper feeder, the correct utilization is the point midway between the fill at installation (when demand is lowest) and the fill factor when capacity would have to be added. The Coalition estimates this midpoint to be 76%. (**Id.** at 31-32.)

2. Pacific's Position

Pacific disputes the Coalition's claim that its studies reflect excessive amounts of spare capacity. Pacific takes particular issue with the Coalition's contention that the costs of serving expected growth are attributable to future demand rather than current demand. Dr. Richard Emmerson, Pacific's principal cost study consultant, responds to this claim as follows:

"The Coalition argues that spare capacity efficientl . . . should be a cost attributable to **future** rather than present demand, and not included in a TSLRIC study. This is incorrect. It is easy to see why this argument can lead to logically inconsistent conclusions. For example, if the optimal utilization of a facility is 70% in a 'no growth' steady state, the optimal amount of spare would be 30%. If, on the other hand, it is most efficient to maintain an average of 40% spare capacity when the service is growing, the Coalition's arguments would have us associate the additional 10% spare capacity with future rather than current demand. Yet, if this practice were continued into the future, the cost of the extra 10% spare capacity would **never** be recognized, just as the cost for current demand would not include the cost of past spare capacity under the Coalition's proposal. That is, the current demand is not bearing the cost of past growth spare under the Coalition's proposal, nor will the cost of future demand (when the time comes) include the cost of previous spare capacity. In other words, tomorrow never arrives." (4/17 Emmerson Declaration, para. 2; emphasis in original.)

Dr. Timothy Tardiff, an economist who participated on Pacific's behalf in the Summer 1995 cost study methodology workshops, also takes issue with the Coalition's assertion that it is a violation of Principle Nos. 3 and 6 in the Consensus Document to include in a TSLRIC study spare capacity needed to meet expected growth. In response to the Coalition's claim that these principles mean that only "those costs [that] are unavoidably associated with the acquisition of sufficient capacity to meet [current] demand" may be included, Dr. Tardiff states:

"[T]he Coalition twists the meaning of two Consensus Costing Principles in an attempt to remove some spare capacity from current costs . . . First, [the Coalition] refer[s] to Consensus Principle No. 3 to claim that spare capacity brought about by efficient anticipation of future demand should be excluded. This Princithe distinction between TSLRIC (the cost of serving the entire demand) and LRIC (the cost of serving a smaller increment), not with spare capacity. [In any event,] defining TSLRIC consistent with Dr. Emmerson's [views] is entirely consistent with the intent of this Principle. **What is being measured is the cost of serving the entire demand being studied in the context in which it occurs, i.e., in anticipation of growth that is likely to occur.**

"Likewise, the Coalition's interpretation of Principle No. 6 (selection of the efficient technology) is even more problematic. **The efficient choice of technology required by this Principle clearly depends on both the current level as well as the anticipated future level of demand in order to determine the forward-looking costs of an efficient firm.**" (Id. at 5; emphasis supplied.)

In his May 24 declaration, Richard Scholl presents an example that assertedly backs up Dr. Emmerson's argument. Mr. Scholl claims that one reason it is appropriate to include spare capacity in a TSLRIC study is that removal of this capacity would not result in a corresponding diminution in capital costs:

"As all of the support structure costs are incurred with the placement of the first pair in a cable, and as cables are only available in discrete sizes, higher fill factors do not result in significant reductions in costs of services. For example, in a recent example . . . in the Universal Service proceeding, Pacific demonstrated that doubling the number of pairs in a distribution plant buried cable increased the capital cost by only 6 to 12% . . . Thus, doubling of the utilization of distribution plant . . . would reduce the capital costs an average of less than 10%. Even ignoring the increases in maintenance expenses resulting from such a radical change in utilization, a 10% reduction in the capital cost of distribution plant, would result in a decrease in the recurring cost of the Business Link service, for example, of only 2.7%, hardly t Coalition." (5/24 Scholl Declaration, para. 101.)

Mr. Scholl also denies that low- and average-income customers are bearing the costs of additional access lines for more affluent households. In his April 17 declaration attached to Pacific's reply comments, Mr. Scholl states:

"Anecdotal evidence suggests that [the Coalition is wrong]. For example, orders for additional lines are being 'held' in some high income areas where there is a high penetration of additional lines . . . because of lack of available pairs, while pairs are available for such additional lines in areas with little penetration of additional lines, such as less affluent rural areas." (4/17 Scholl Declaration, para. 91.)

3. Discussion

After careful consideration of the arguments set forth above, we are persuaded that Pacific has generally treated the spare capacity issue correctly.

First, we think that Pacific has handled its spare capacity calculations correctly in the situation where capacity costs are incurred with so-called inexhaustible resources; i.e., "where the most efficient deployment of capacity accommodates demand for the indefinite future." Dr. Tardiff gives the following justification for Pacific's decision to treat this form of spare capacity as it has:

"The most prominent example here is distribution plant, where I understand the cost to add capacity in the future (in terms of tearing up streets, sidewalks, lawns, and driveways in undergrounded areas, for example), far exceeds the cost associated with installing, at the time of initial placement of facilities, extra capacity to accommodate growth and changes in demand. The common sense engineering practice is to install enough capacity to meet the ultimate demand expected at the time the subdivision (for example) is being built. In these situations, the expected level of utilization that results from this engineering practice is entirely appropriate for use in calculating average unit capacity costs. This is so even though these utilization levels will tend to be considerably lower than either actual or design utilization levels for exhaustible resources." (4/17 Tardiff Declaration, p. 6.)

Pacific's cost study for distribution plant assumes the least-cost, most efficient method of providing an adequate number of lines for current usage, plus a relatively small additional amount for growth, breakage and administrative spare. The economic and societal consequences of having to provide

additional distribution plant to meet an increase in demand in the future would be extremely costly due to the factors identified by Dr. Tardiff. It is therefore correct to allow Pacific to include spare capacity in its cost study at virtually the incremental cost of the copper when initially deployed.

Moreover, our treatment assumes a forward-looking distribution fill factor that is five percentage points higher than the fill factor. This is consistent with engineering practices, and we anticipate that any competitor would also design its network assuming a significant amount of distribution. Our allowance of such spare is not a "blank check" for Pacific to install excessive amounts of distribution plant.

Accordingly, we conclude that Pacific's utilization factor for distribution plant is reasonable, and does not indicate that Pacific has improperly calculated distribution plant costs or interpreted standard engineering rules to overbuild its network.

We also agree with Dr. Emmerson that "spare capacity efficiently acquired to serve a growing market" is reasonably included within a TSLRIC study. The combined discussion of Drs. Emmerson and Tardiff and Mr. Scholl demonstrates that in the situation where "spare capacity costs [are] incurred with exhaustible resources," Pacific's treatment of spare capacity costs as a volume-sensitive cost, and the levels of spare capacity it has included in its studies, are reasonable with the exception of copper feeder.

As Dr. Emmerson points out, if the most efficient practice is to have an extra 10% capacity available to meet expected growth, logic and the mathematics of calculating spare capacity require that the cost of the 10% be treated as a current cost. We also agree with Mr. Scholl that before the Coalition's argument on spare capacity could be accepted, they should be required to demonstrate that capital costs are meaningfully reduced by their approach. However, the "modularity" of facilities acknowledged by the Coalition means that, as a practical matter, they cannot make such a showing. Moreover, if we were to order reductions in Pacific's spare capacity, increases in maintenance expense would likely be required.

As to spare capacity for copper feeder, we agree with the Coalition that the July 2, 1996, PD was inconsistent in its treatment of this issue for Pacific and GTEC. The PD, if left unchanged, would have allowed Pacific to use its actual utilization rather than to develop spare (i.e., volume-insensitive) costs. However, the PD would have directed GTEC to use a fill factor of 85% for copper feeder in its development of spare costs. (7/10 Coalition Comments, pp. 7-8.) The Coalition suggests that we can correct the inconsistency by ordering both Pacific and GTEC to use an 85% fill factor for copper feeder in the calculation of spare costs. We note that the Coalition's advocacy of this 85% fill factor is a change of position from its May 14, 1996, Comments, in which -- as noted above -- the Coalition argued for a "midpoint" fill factor of 76%.

We agree that it would be unreasonable if we required GTEC to use an 85% fill factor for copper feeder, while allowing Pacific to use its actual fill factor. We continue to believe that GTEC's actual fill factor for copper feeder is inappropriate, because it reflects an embedded cost approach without any forward-looking adjustments. However, the Coalition's suggestion that both LECs should be required to use an 85% fill factor is not supported by the record. The choices that remain before us are, therefore, either to adopt Pacific's actual fill factor for both companies, or to use the Coalition's original suggestion of a "midpoint" fill factor for both companies. We conclude that the Coalition's original suggestion of a 76% fill factor is the most forward-looking, because it uses the midpoint between fill at installation and fill at relief (i.e., the fill factor at which feeder capacity

would have to be added). Accordingly, we will require both Pacific and GTEC to use a fill factor of 76%. The effect of this action is to remove approximately \$50 million from the spare costs for copper feeder shown by Pacific, and \$15 million from the spare costs shown by GTEC.

Our conclusions above do not entirely end the debate.⁽¹⁶⁾

In its comments on the cost studies, the Coalition has also challenged the expenses for "rearrangement" that Pacific has included in its studies. As suggested by one of the quotations above from Mr. Scholl, spare capacity and rearrangement expenses can be seen as opposite sides of the same coin; i.e., higher percentages of spare capacity may mean that less rearrangement expense is reasonable. It is to this issue that we now turn.

D. Are Pacific's Repair and Rearrangement Expenses For Loop Plant and Switching Reasonable?

Loop plant rearrangement costs are those costs associated with moving current facilities to serve

existing demand. Pacific seeks recovery of these expenses and so has included them in its TSLRIC studies. The amounts involved are significant: the total of rearrangement expenses in Pacific's studies is about \$169 million, of which \$148 million pertains to the loop, and the balance to switching.

1. Positions of the Parties

In its opening comments on the cost studies, the Coalition has argued that all of Pacific's rearrangement expenses should be excluded, because such costs are inappropriate for a forward-looking study. The Coalition asserts:

"Pacific has not provided any evidence to indicate that the historically-incurred plant rearrangement expenses are representative of costs that it would incur on a forward-looking basis. In fact, Pacific's assumed forward-looking technology for loop plant should require far lower plant rearrangement expenses because the loop plant can be reconfigured remotely. Pacific has also not reconciled Mr. Pearson's treatment of plant rearrangement expenses as sunk costs with its proposed inclusion of these costs in the TSLRIC studies as either volume-sensitive or shared costs . . . Therefore, the Commission should not allow Pacific to incorporate the plant rearrangement costs into its BNF costs at this time." (4/3 Coalition Comments at 60.)

Mr. Scholl takes disputes these contentions in his April 17 declaration. First, he asserts the Coalition was well aware that Pacific had treated rearrangement costs as a "sunk cost" only as a placeholder; it never suggested such treatment was appropriate on a permanent basis. (Scholl Declaration, para. 117.)

Moreover, he continues:

"Because rearrangement expenses are ongoing costs of the business, and will continue indefinitely and in proportion to some characteristic of the business, we have concluded . . . that rearrangement expenses are indeed volume sensitive. Pacific has captured rearrangement expenses by account at the aggregate level and will identify the assignment of those expenses." (*Id.*)

Mr. Scholl also maintains that loop plant cannot be reconfigured remotely:

"Pacific does not know where the Coalition got the incorrect notion that Pacific's assumed forward-looking technology for loop plant can be reconfigured remotely without requiring a technician in the field. It cannot. Reconfiguration of Pacific's forward-looking technology for loop plant does require field visits by technicians." (*Id.*, para. 118.)

2. Discussion

Based on our examination of the cost studies (as supplemented by Pacific on May 10th), we have concluded that a substantial portion of the claimed rearrangement expenses should be excluded, although not for the reason given by the Coalition. The reason is { 2883 of the Public Utilities (PU) Code, which requires all LECs to equip residential telephone lines with access to "911," and prohibits the LECs from terminating that access because a customer moves or fails to pay the telephone bill. The effect of { 2883 on potential rearrangement costs is significant, because it effectively requires a large number of existing "active" residential lines to be in place at all times. In view of PU Code { 2883, rearrangement expenses are at most appropriate for nonresidential access line services (and additional residential lines).

Moreover, Pacific⁽¹⁷⁾

indicates that Pacific has the capability to determine where demand for additional distribution and feeder capability will occur. Accordingly, Pacific should be able in a forward-looking analysis to reflect demand as it is expected to occur in the long run, thereby minimizing the need for rearrangement.⁽¹⁸⁾

The presence of significant rearrangement expenses for loops is more consistent with an embedded cost study than a TSLRIC study.

In accordance with the discussion above, we will allow only a very modest recovery of rearrangement expenses. In particular, we will exclude the costs avoided by virtue of PU Code { 2883 for primary residential lines, as well as the costs shown by Pacific for loop rearrangements. As shown in the Pacific CRD, the total amount of the reduction for rearrangement costs is about \$150 million.

E. Has Pacific Overstated the Labor Costs Reflected in its Nonrecurring Costs (NRCs), and Unreasonably Attributed More Labor-Based NRCs to Wholesale Services Than to Retail Services?

Nonrecurring Costs (NRCs) are one-time expenses associated with initiating or disconnecting a service. For example, there is a one-time cost for initiating residential access line service, which is called a service order request. Labor costs make up most (though not all) of such NRCs. In its comments, the Coalition has sharply challenged how Pacific has computed these labor costs, as well as Pacific's estimates of the time it takes to complete the various tasks associated with NRCs. The Coalition argues that Pacific's approach not only inflates the cost of BNFs, but also assigns higher labor costs to wholesale services than to retail services, thus facilitating a possible price squeeze. The amount at issue in this dispute is significant, approximately \$100 million. Accordingly, we discuss the parties' positions in some detail.

1. Position of the Coalition

In its April 3 opening comments, the Coalition describes how it believes Pacific's "bottoms up" computation of NRCs allows Pacific to inflate the cost of BNFs and create price squeeze conditions: "For each broad category of work . . . which corresponds to a nonrecurring charge rate element, Pacific identifies a list of specific tasks that may be required . . . Pacific next multiplies the **task time** by the **probability of task occurrence** to yield an **average work time**. Pacific then weights the average work time by the probability that the work group will be required to participate, which results in an **activity time**. Activity time (expressed in minutes) yields the **activity cost** associated with that task . . ."

"Given this methodology, there are two primary ways in which Pacific can manipulate its NRC studies to harm competitors and retail customers with few competitive alternatives to LEC services. First and most obvious[ly], Pacific can create price squeeze conditions by reporting longer task times, higher probabilities of the tasks occurring, or higher labor rates for work associated with establishing service for a retail customer. The Coalition's analysis of Pacific's NRC studies reveals that Pacific has employed all three of these techniques . . . Second, Pacific can systematically overstate task times, probabilities of task necessity, and labor rates for all products and services, inflating the cost to a new entrant of entering the market . . . as well as the cost to an end-user customer. This also appears to have taken place . . ." (4/3 Coalition Comments, pp. 16-17; emphasis in original.)

To support its argument that such manipulation has taken place, the Coalition presents some dramatic comparisons of NRCs for comparable residential and wholesale services. Total NRCs for unbundled links, for example, are nearly 6.5 times greater than those for a "retail residence line", and about twice those of a business access line. (*Id.* at 18.) The Coalition finds a similar pattern in the NRCs attributed to Directory Number Call Forwarding (DNCF) versus Remote Call Forwarding (RCF).⁽¹⁹⁾

For many tasks, the NRCs for the wholesale service, DNCF, are about three times greater than for the comparable retail service, RCF. (*Id.* at 18-19.) These differences raise serious questions in the Coalition's mind as to whether the reported NRCs are consistent with Principle Nos. 6 and 7 in the Consensus Document, which require use of the "least-cost, most efficient technology" and require that a service be provided by "the most efficient and cost-effective means." (*Id.* at 19.)

The Coalition also takes issue with how Pacific has calculated its labor rates. First, the Coalition argues that Pacific has overstated its incremental labor rate, which it allegedly calculated by subtracting overhead and indirect expenses from an embedded labor rate. (*Id.* at 20.) Second, the Coalition argues that Pacific has reported unrealistically low "actual work times" for its employees:

". . . Pacific, like other LECs, adjusts the labor rate for actual work time. Typically, this adjustment reflects the fact that labor contracts are based on pay for a 40-hour week, but that workers usually work a somewhat shorter week (e.g., 37.5 hours) and are permitted breaks of a given duration. Most cost studies incorporate a single 'actual work time' adjustment that consists of dividing the wage rate by the percentage of a 40-hour week that workers are actually expected to be working. Pacific, however, adjusts by both 'productive hours per day' and 'actual work time hours.' One of these adjustments appears to account [properly] for the process described above. The other adjustment, however, appears to reflect Pacific's inefficiencies in hiring the right number of workers and keeping them busy and productive. An adjustment of the first type is clearly appropriate; an adjustment of the second type is inappropriate in a TSLRIC study. It inflates costs, which again both creates a barrier to competitive entry and harms Pacific's retail customers." (*Id.* at 20-21.)

According to the Coalition, adjustment of its labor rates is to inflate the labor costs shown in its TSLRIC studies by 40%. (*Id.* at 21.)

2. Pacific's Position

Pacific disputes each premise in the Coalition's attack on its NRCs. For example, in response to the Coalition's claim that NRCs for unbundled links are overstated relative to comparable residential line service, Mr. Scholl states:

"We have not overstated the non-recurring costs. Unbundled links are simply more expensive to provision, and the cost study accurately reflects that fact. For example, link service cannot be tested through Pacific's switch. Instead, a separate remote test access capability must be built into the circuit, similar to that provided with special access, and the circuit tested through it. This raises the costs for the basic link compared to residence and business access line services that do not require this additional effort." (4/17 Scholl Declaration, para. 48.)

Mr. Scholl also disputes the Coalition's claim that the discrepancy between NRCs for DNCF and RCF cannot be defended. He notes that DNCF service order costs are higher, owing to the special needs of Competitive Local Carriers (CLCs). Because DNCF service orders are processed through a special office set up to meet the CLCs' needs, Mr. Scholl concludes that "the comparison made by the Coalition to end-user products like RCF is not valid." (*Id.* at para. 50.) Mr. Scholl also disputes the Coalition's claim that Pacific did not compute its incremental labor rate through a traditional "bottoms up" methodology. (*Id.* at para. 52.)

Finally, Mr. Scholl dismisses the Coalition's contention that Pacific's "actual work time" calculation is indicative of inefficient work practices and that Pacific's labor rates must be correspondingly reduced to reflect the greater productivity that a competitive marketplace will demand:

"This charge by the Coalition is without merit. 'Actual work time' activities used in cost studies are very explicitly defined and quantified for accounting purposes as 'productive.' For example, actual work time activities typically do not include time spent by employees on paid breaks, traveling between work locations in a building, or performing various required support activities such as retrieving files. The ratio of 'actual work time' to 'productive time' for each employee position is needed to capture all of the costs associated with a day's worth of 'productive time,' when associating those costs with the identified 'actual work times' as is done in a cost study." (*Id.* at para. 56.)

3. Discussion

The points raised by the parties require us to resolve two different sets of issues with respect to NRCs. First, we must determine whether there is merit in the Coalition's argument that Pacific has generally inflated its labor rates by assuming an unrealistically short working day. Second, we must decide whether, as the Coalition alleges, the work tasks and completion times that Pacific attributes to wholesale services are excessive in relation to comparable retail services.

On the first issue, we agree that Pacific's estimate of its labor rate has resulted in a modest inflation of NRCs. However, we do not take issue with Pacific's calculation of its labor rates, because they were developed using a methodology that has been in use at least since the 1989 NRF decision, D.89-10-031. We will, however, make one adjustment to the methodology to make the result more forward-looking. We will require Pacific to multiply all its labor costs by a factor of 0.922 $((1-.05) * (1-.029))$ to adjust for productivity. This factor reflects the 5% productivity factor for 1995 established for Pacific in D.94-06-011 (55 CPUC2d 1), and the 2.9% factor (based on estimated inflation) adopted for Pacific in D.95-12-052 (mimeo. at p. 49; Conclusion of Law 18). Taken together, these adjustments will shift the embedded, historical costs forward to estimate labor costs after expected productivity gains. In addition, we need to achieve further productivity gains in order to operate in a competitive environment. The result of the adjustment we are ordering is to make Pacific's results more consistent with Consensus Costing Principle No. 7, which requires that "costs should be forward looking".

We have also concluded that there is merit in the Coalition's argument that Pacific has overstated the NRCs for some wholesale services when compared with the NRCs for comparable retail services. The first instance where NRCs for wholesale services have been overstated is in the development of unbundled links. For its own Centrex access line service, for example, Pacific assumes that an average

customer will order 5.5 lines, and it assigns a lower NRC for the additional lines than it does for the initial line.⁽²⁰⁾

For the business link that would be purchased by a CLC, however, Pacific has unrealistically assumed that only one line per customer would be ordered at any one time. The practical effect of these differing assumptions is to overstate by a significant amount the NRCs for a business customer who takes multi-line, Centrex-type service from a CLC. To ameliorate this disparity, we will require Pacific to adjust its link NRC costs to reflect the same number of lines that it assumes for its retail access line services. The assumptions that Pacific is to use in recalculating link NRCs are set forth in the Pacific CRD.

For a similar reason, we conclude that Pacific has overstated NRCs for both DNCF and Expanded Interconnection Service Cross Connects (EISCC).⁽²¹⁾

Many of the steps necessary to process a CLC service order for DNCF or EISCC will already have been taken when the CLC orders a link. Therefore, Pacific can justify only an additional service order cost (which is smaller) when DNCF or EISCC is ordered. The assumptions that Pacific is to use in recalculating NRCs for these two services are set forth in the Pacific CRD. As stated there, the NRC for DNCF is to be calculated based on the additional DNCF service order cost plus an initial DNCF channel connect cost. For EISCC, the NRC is to be calculated based on the service order cost for an additional link plus the EISCC channel connect costs.⁽²²⁾

Finally, we note that the issue of how NRCs should be recovered is an issue for the upcoming pricing hearings. The Coalition's opening comments criticized Pacific for unitizing its NRCs, but as Mr. Scholl states in his April 17 declaration, "Pacific did not state non-volume sensitive costs and NRCs as monthly recurring costs. . . The presentation of volume insensitive costs and [NRCs] as monthly averages is simply presented as a tool for parties to use in making their pricing proposals in the [upcoming hearings]." (4/17 Scholl Declaration, para. 145.)

F. Has Pacific Assumed a Reasonable Cost of Capital in Conducting its Cost Studies?

In conducting its TSLRIC studies, Pacific assumed a cost of capital of 10.0%. The Coalition argues this is too high, and that 9.46% is what should be assumed. The choice is a significant one, because a change of 50 basis points would translate into a change in Pacific's before-tax capital costs of \$120 million.

1. Pacific's Position

Pacific's cost studies simply note that in determining its cost of capital, it used an "authorized rate of return" of 10.0%. This figure appears to have been taken from D.94-06-011, the Commission's first triennial adjustment of the New Regulatory Framework (NRF) structure. In D.94-06-011, we concluded that the cost of capital had declined since 1989 and so reduced the market rate of return (ROR):

"We concur that the cost of long-term debt and customers' expected earnings from investment have decreased from the levels we noted in D.89-10-031. We also agree that the market-based ROR should be reduced under the current framework. Of the various proposals submitted, we found DRA's examination of the rate of return to most closely follow the parameters we set out in the Phase II decision and adopt its proposal of 10.0% for the market-based ROR." (55 CPUC2d at 29; footnote omitted.)

2. The Coalition's Position

The Coalition attacks the 10.0% cost of capital assumed by Pacific as non to order Pacific to use "the forward-looking overall cost of capital of 9.46% developed by Coalition witness Terry L. Murray in the franchise impact phase of the local competition proceeding (R.95-04-043/I.95-04-044)." (4/3 Coalition Comments, p. 37.) The ALJ's April 8, 1996, Proposed Decision (PD) in the franchise impacts phase describes Ms. Murray's recommendation as follows:

"Murray uses a proxy group of regional bell operating companies to calculate the cost of equity using both the [Capital Asset Pricing Model] and the [Discounted Cash Flow] methods. Murray then relies on the midpoint of these estimates, which is considerably lower than the calculated cost of equity used by [Pacific witness] Lev. Murray maintains that this is a more conservative estimate because the other

bell companies still have . . . [more] risk.

"Murray also maintains that the Commission's only accepted method of calculating capital structure involves the ratio of book equity to book capital. Using this capital structure leads to a much lower portion of equity. Each of these adjustments reduces the estimates from Lev's [11.41%] analysis by about 100 basis points." (4/8 ALJ's PD, mimeo. at pp. 102-103.)

3. Discussion

We conclude that the 10.0% cost of capital assumed by Pacific is reasonable, because this was the figure adopted by us as the "market based" rate of return (ROR) in D.94-06-011. An additional reason for using it is that the 10.0% figure was not an issue in our most recent triennial adjustment of NRF, D.95-12-052.⁽²³⁾

Because 10.0% has been adopted and used by us as

the market based ROR, it would not be appropriate to order Pacific to use the methodology urged by Coalition witness Murray.

It should also be noted that this Commission routinely examines financial markets and adjusts the cost of capital applicable to other regulated utilities. Specifically, we annually review the cost of capital for large energy utilities. An examination of the costs of capital adopted by us for large energy utilities reveals that the return on ratebase adopted for 1996 is above but comparable to that adopted for 1994, the year in which D.94-06-011 was decided. (See D.93-12-022; D.95-11-062.) Thus, our cost of capital determinations in these fully-litigated energy proceedings suggests that a full examination of financial markets here would find little rationale for movement either up or down. In particular, the observed mild increases in Commission-adopted rates of return gives us no reason to reset the cost of capital downward as recommended by Coalition witness Murray.

Finally, the Coalition's argument for a 9.46% cost of capital is based upon the claim that such a figure is more forward-looking than use of the capital costs we have most recently approved for Pacific and GTEC. We note that the Coalition's proposed rate was at least partially calculated by using historical data for other Regional Bell Operating Companies (RBOCs), and GTE Corporation (the parent corporation of GTEC), and thus is not necessarily forward-looking itself. Moreover, the Coalition's

suggested rate of 9.46% is based upon a composite of companies that operate primarily outside of California, and thus does not necessarily reflect fully the risks faced by companies that operate in the California market. The Coalition has presented no evidence in this proceeding regarding the treatment of these companies by regulators, or the nature of the competition they face. In short, the Coalition's showing does not convince us that there has been financial markets or risks for California utilities.

For this reason and for the other reasons cited above, we do not believe that we should lower the cost of capital from the 10.0% used in Pacific's cost studies.

G. Is the Loop a Shared Cost, Such That the Costs of Providing it Should be Recovered Through the Services That Use It?

1. Positions of the Parties

In separate comments it filed on April 3, Toward Utility Rate Normalization (TURN) argues that the costs of the loop should be treated as a shared cost, so that the costs of providing the loop would be recovered through the several services that use the loop. TURN bases its argument upon the definition of a "shared cost" set forth in the Consensus Document:

"Shared Costs - Costs that are attributable to a group of outputs but not specific to any one within the group, which are avoidable only if all outputs within the group are not provided." (D.95-12-016, App. C, p. 7.)

TURN then continues:

"The loop clearly meets this definition. The cost of the loop is attributable to all of the various services (e.g., local, toll, vertical services, information services) that use the loop, not just to basic exchange service. Because the loop is needed to provide a variety of services, its cost cannot be avoided unless

all of those services are not provided. If basic exchange service is not provided, the loop will still be necessary to complete and receive toll calls, to gain access to

information services, and to utilize any other service provided over the switched network. By treating the cost of the loop as a direct cost of basic service, the LECs have violated the Consensus Costing Principles and dramatically overstated the costs of the basic exchange service." (4/3 TURN Comments, p. 7.)

TURN notes that the public service commissions of Colorado, New Hampshire, Pennsylvania and Florida have all agreed that the loop is a shared cost, and that this conclusion is also supported by { . at 7-9.)

In its April 17 reply comments, Pacific has challenged TURN's position. In his paper attached to the reply comments, Dr. Timothy Tardiff argues:

"The implication of TURN's classification of the cost of the loop as shared among usage services would be to recover the costs in the prices of services that use the loop, rather than in the price of basic access service (in the case of bundled offerings) or in the prices of unbundled loops offered to competitors. Economists generally agree that basing any type of pricing policy on this view of loops is grossly uneconomic, especially now that local loops are being unbundled from the traditional arrangement of bundling the loops with local usage. While the regulators could, and typically did, set prices that recovered the cost of the loop in the usage prices, a practice that has caused enormous losses in economic efficiency, that practice is not sustainable when the loop itself becomes a separate service." (4/17 Tardiff Paper, pp. 8-9; footnote omitted.)

Dr. Tardiff also maintains that TURN's argument is inconsistent with Consensus Costing Principle No. 2, which states the basic rule of cost causation. In Dr. Tardiff's view, TURN's position violates this principle because:

"[T]he costs associated with the loop are caused by a customer gaining access to the network. This is true whether that access is gained as part of a standard bundled offering or, in the

new environment, by purchasing an unbundled loop. Once the loop is provisioned, the cost has been incurred. The way in which [it] is used (if at all) does not change that cost." (**Id.**)

2. Discussion

We agree with Pacific that it would not be appropriate to treat the loop as a shared cost. Our fundamental reason for reaching this conclusion is that we agree with Dr. Tardiff that there is a separate demand for the loop itself, so that loops cannot reasonably be viewed as a mere input to the basic exchange services that consumers "really" want. The following quotation from Professor Alfred Kahn, which Dr. Tardiff includes in his paper, captures this concept well:

"The argument we examine here is that (a) access is merely a prerequisite to placing and receiving calls, (b) the cost of providing it is therefore properly regarded as part of the cost of telephone calls, and (c) the cost should therefore be recovered partly in the charge for local calls, partly in the price of toll calls."

"The assertion that customer access is not a service, but merely a prerequisite to the provision of 'real' telephone services, is itself merely semantic. But inferences drawn from it are fallacious. The defining characteristic of a service is that it is or would be demanded in its own right. By that criterion, access is clearly a service. Even if most customers were not interested in it in order to place calls, many would want it if only to receive calls. And even if they had no specific expectation of placing or receiving calls, many would still be willing to pay for the **opportunity** to do so, when and if the occasion arose."

* * *

"Using the price of telephone calls to recover access costs that do in fact not vary as more or fewer calls are made . . . induces wasteful

choices by customers. It encourages them to order underpriced access lines that they value less than the incremental costs to society of providing the lines, and it discourages them from making overpriced

calls whose value to them would have exceeded the incremental cost to society. The same result would follow if an electric utility were to supply its customers with all the appliances they wanted at no charge and recovered the costs in the price of electricity -- wasteful overpurchasing of appliances and underconsumption of electricity." (Alfred E. Kahn and William B. Shew, "Current Issues in Telecommunications Pricing," 4 **Yale Journal on Regulation** 191, 201-202 (1987), **quoted in** Dr. Tardiff's 4/17 Paper, pp. 9-10.)

H. Has Pacific Assumed Reasonable Depreciation

Rates in 1. Positions of the Parties

In its April 3 and April 17 comments, the Coalition has criticized the depreciation schedules used by Pacific in conducting its TSLRIC studies. Pacific used what it refers to as "new lives" or "Duquesne" depreciation schedules; i.e., schedules that assume Pacific is operating in a competitive marketplace, and that therefore depreciate its physical plant more quickly. ⁽²⁴⁾

The use

of these accelerated schedules -- which Pacific also argued for in the franchise impacts phase of our Local Competition proceeding -- follows from the September 7, 1995 decision of Pacific Telesis, Pacific's corporate parent, to move off of Statement No. 71 of the Financial Accounting Standards Board (SFAS 71) and write down the value of Pacific's plant assets. ⁽²⁵⁾

Pacific Telesis justified its decision to take the write-down by stating that the advent of local exchange competition made continued adherence to SFAS 71 untenable.

In its April 3 comments, the Coalition argued that rather than use "Duquesne" depreciation schedules, Pacific should use the schedules approved for Pacific by the FCC. The Coalition asserted that the FCC schedules have the following advantages:

"FCC-approved lives are superior to those proposed by the LECs because the FCC process provides a contemporary estimate of accepted

economic lives **and** includes a thorough reasonableness review. The FCC process incorporates the LECs' recommendations, the FCC's own analysis of recent historical patterns and forecasts of service lives, and input from the CPUC. Since 1980, the FCC's analysis has also included an evaluation of each LEC's investment plans, technological developments and other future-oriented analyses." (4/3 Coalition Comments, p. 37.)

In its April 17 Supplemental Comments, the Coalition changed its position and argued that the depreciation schedules approved by this Commission -- which permit slower recovery of costs than those approved by the FCC -- should be used. ⁽²⁶⁾

In its April 17 comments, the Coalition argues that unless we order the use of "the Commission's approved lives" in Pacific's Cost Proxy Model (CPM), Pacific's investment costs will be overstated by "hundreds of millions of dollars." (4/17 Coalition Comments, pp. 49-50).

Pacific defends its use of depreciation schedules reflecting quicker write-offs. In his declaration attached to Pacific's May 24 comments, Mr. Scholl states:

"Pacific used the depreciation lives that it presented in the [Local Competition proceeding]. Those lives best represent the lives expected in a competitive environment. The existing Commission approved lives were adopted to reflect the previous paradigm of the regulated monopoly environment. The forward looking requirement of the Consensus Costing Principles requires that the forward looking depreciation lives be used, rather than the adopted lives. Again, the Coalition recommends that the TSLRIC studies be revised to not comply with the adopted principles." (5/24 Scholl Declaration, para. 89.)

2. Discussion

After examining the three types of depreciation schedules that have been suggested -- the ones adopted by us in our rescription proceedings, the ones adopted by the FCC, and the "Duquesne" schedules offered by Pacific in the franchise impacts phase of R.95-04-043/I.95-04-044 -- we have concluded that the "Duquesne" schedules should be used in Pacific's cost studies.

We agree with Pacific that the schedules formally adopted in the re prescription proceeding "reflect the previous paradigm of the regulated monopoly environment," and so are difficult to justify in a cost study that looks forward to an environment in which there is local exchange competition. We also see little merit in the Coalition's original suggestion that we use FCC schedules. These schedules also reflect "the previous paradigm"; moreover, they are based on different assumptions and applied in different ways than our own.

We realize that the "Duquesne" schedules have not been in the Commission proceeding; indeed, the ALJ's PD in the franchise impacts phase of R.95-04-043/I.95-04-044 takes no position on their validity. It also seems to be the case, however, that Pacific is now using these schedules in financial reports it is required to file, and thus that for purposes of these cost studies, the schedules may be presumed consistent with generally accepted accounting principles. The schedules also appear realistic for a firm having to operate in a competitive environment, as Pacific will soon have to do. Accordingly, we will approve their use in this proceeding. Our decision here should not be understood as prejudging any of the other proceedings (including R.95-01-020/I.95-01-021, our Universal Service docket) in which depreciation schedules may be at issue.

I. Has Pacific Used Unreasonable Proxies and Assumed Unreasonably Large Operating Expenses in Conducting its Cost Study for DNCF?

As noted above, D.96-04-052 requires Pacific and GTEC to offer residential customers appropriate forms of Interim Local Number Portability (ILNP). For Pacific there are two forms of ILNP, one based on Direct Inward Dialing (DID), and the other based on Remote Call Forwarding (RCF). Pacific refers to the service based on RCF as Directory Number Call Forwarding (DNCF). In D.96-04-052, we set interim rates for ILNP services and directed Pacific to file cost studies for both DNCF and DID-based ILNP service in this docket.

In addition to attacking how Pacific has assigned NRCs (an issue discussed in Section I.E.), the Coalition has also criticized several other aspects of Pacific's DNCF study. Even though the amounts at issue for this service will be small initially, they will grow with the development of local competition. Accordingly, we deem it appropriate to discuss these additional issues here.

1. The Coalition's Position

Aside from its attack on the assignment of NRCs, the Coalition's first criticism of Pacific's DNCF study is that it uses as a proxy for estimating the volume-sensitive and non-volume-sensitive costs of DNCF, a wholesale service. In its April 3 comments, the Coalition states:

". . . Pacific has failed to adjust its 1994 operating expenses for retail RCF in a way that reflects the cost savings associated with provision of DNCF. The level of detail that Pacific has provided is insufficient to allow the Commission and the parties to make a precise adjustment for the inappropriate retail expenses that are incorporated in the reported costs for DNCF. Therefore, the Coalition recommends that the Commission apply the same percentage disallowances to Pacific's billing, marketing and sales expenses that were recommended in the local competition proceeding [and adopted in D.96-04-052.] Unless Pacific provides an adequate rationale for the increased expenses associated with the movement to a 100% digital switching configuration, the Commission should also disallow the difference between these expenses and the recorded 1994 repair and maintenance expenses for retail RCF and, by correspondence, DNCF." (4/3 Coalition Comments, p. 96.)

The Coalition also criticizes Pacific for how it has used Feature Group B usage costs as a proxy for DNCF usage costs. The Coalition states:

"Pacific also proposed that Feature Group B usage costs be used as a proxy for the usage costs for DNCF. Although it is true that use of RCF functionality results in the regeneration of a call at the LEC's switch, it is not at all true that the costs of regenerating the call are the same as the costs of Feature Group B usage. For example, call regeneration does not require the generation of dial tone, whereas Feature Group B usage costs include the cost of dial-tone. Furthermore, the facilities over which regenerated calls will travel are the same trunks that will be used by LECs and co-carriers for interconnection, for which the LECs and CLCs will receive in-kind compensation through bill-and-keep. The Coalition therefore believes that the incorporation of Feature Group B usage costs

as costs of DDCF is inappropriate." (*Id.* at 97.)

Finally, the Coalition asserts that Pacific has failed to carry out the order in D.96-04-052 to submit a cost study for ILNP based on DID. (*Id.* See also CCTA's 4/3 Comments, p. 4.)

2. Pacific's Position

Richard Scholl responds to these criticisms of the DDCF studies. With respect to the claim that RCF costs are a bad proxy for DDCF because they have not been properly discounted to reflect "avoided costs", Mr. Scholl states:

"Pacific's TSLRIC study for DDCF initially had 'place holders' for the wholesale channel non-volume sensitive costs associated with marketing and sales. Since that original submission, Pacific has been able to estimate its forward looking marketing and sales expenses for this wholesale channel based upon the company's operational plans. Those plans were reflected in the costs of providing DDCF service which Pacific has provided to the Commission and to the Coalition. The Coalition's proposed 'disallowances' would [in effect] require that Pacific not identify those costs of providing the DDCF service which Pacific has provided to the Commission and the Coalition on May 10, 1996." (5/24 Scholl Declaration, paDDCF usage most closely align with the network equipment and cash operating expenses associated with Feature Group B type access to another carrier's network," Mr. Scholl also defends the DDCF study against the Coalition's claim that Feature Group B usage costs are not a good proxy for DDCF usage costs. (4/17 Scholl Declaration, para. 153.) Finally, he notes that Pacific did submit a TSLRIC study showing the costs of DID-based ILNP, since these costs are the same as for DID service using PBX trunks. (*Id.*, para. 143.)

3. Discussion

In D.96-04-052, we emphasized that the wholesale discounts we adopted there were approximations, and that this proceeding would be the appropriate forum for determining RCF avoided costs based on actual cost studies:

"Since no party presented any actual DEC-based cost study regarding the difference between retail and wholesale marketing and customer service costs, we are forced to use a degree of subjective judgement in arriving at an appropriate adjustment. We make these adjustments with the understanding that they will be subject to a true up once INP prices have been finalized in OANAD. . ." (Mimeo. at pp. 43-44.)

If accepted, the Coalition's proposed disallowances would stand this language on its head. In effect, the Coalition is arguing that in the ongoing pricing hearings in this docket, we should apply the approximations developed on the basis of "subjective judgment" in D.96-04-052 rather than the final TSLRIC costs for RCF marketing, sales and billing that Pacific supplied on May 10, 1996. We decline to do so because, as stated by Mr. Scholl, the figures that Pacific initially supplied (and that the Coalition wants the disallowances applied to) were "placeholders," and the final, May 10th data is preferable.

We conclude, however, that there is some merit in the Coalition's arguments concerning Feature Group B usage costs as a proxy for DDCF usage costs. We agree with the Coalition that in determining DDCF usage costs, dial tone generut it would be inappropriate to reject other Feature Group B usage costs simply because inter-carrier bill-and-keep arrangements may or may not facilitate the recovery of such costs. To reject Feature Group B costs for this reason would be inconsistent with Consensus Costing Principle No. 4, which provides in part that "any function necessary to produce an output or telecommunications service has an associated cost." Although we will not exclude Feature Group B usage costs, we will reserve judgment until completion of the pricing, tariffing and unbundling hearings in this proceeding how DDCF costs should be recovered.

Finally, although we adopt Pacific's costs for ILNP based on DID, we do so subject to a very significant limitation. D.96-04-052 required a comprehensive review of DDCF provisioning methods. (Mimeo. p. 78.) Therefore, pending the outcome of the many workshops that have been held pursuant to that decision, and the order on ILNP that we expect to issue this Fall in R.95-04-043/I.95-04-044, we may require Pacific (as well as GTEC) to resubmit more refined cost studies for DID-based ILNP.

J. Do Pacific's TSLRIC Studies Assume an Appropriate "Cross-Over Point"; i.e., The Length at Which it Becomes More

Economic to Use Fiber Rather Than Copper in Planning Local Loop Facilities?

In its April 3, April 17 and May 14 comments, the Coalition has devoted substantial attention to whether Pacific has assumed an appropriate "cross-over" point in its local loop studies; i.e., whether Pacific has made a correct choice as to the point at which it becomes more economic to use fiber instead of copper. Pacific's loop studies assume that the appropriate cross-over point is 9 kilofeet (i.e., 9,000 feet), based on engineering design criteria that are actually used in the field. The Coalition and several other parties attack this, arguing that the correct figure is either 12 kilofeet (kft.), 15 kft. or even 18 kft. The issue is a significant one. Our cross-over point from 9 kft. to 12 kft. would reduce Pacific's total loop costs by over \$100 million. Accordingly, we deem it appropriate to discuss the parties' contentions in some detail.

1. Positions of Parties Other Than Pacific

In its opening comments, the Coalitions asserts:

"Over the past seven years, Pacific has repeatedly made substantial revisions to its Company-wide guidelines governing the engineering of local loop facilities. Pacific has undertaken these changes to support its changing deployment strategies for providing advanced digital and broadband services. The resultant changed guidelines have required Pacific's loop engineers to deploy facilities based on fluctuating and conflicting parameters, resulting in chronic overbuilding of local loop facilities. Proof of this overbuilding is demonstrated by the excessively low plant utilization factors on which [Pacific's] Cost Proxy Model relied." (4/3 Coalition Comments, p. 61.)

To support its argument that Pacific has assumed a much lower cross-over point than is reasonable for a POTS network,⁽²⁷⁾ the Coalition traces Pacific's "changed guidelines" since 1989. The

1989 guidelines called for a cross-over point of 12 kft., but were explicitly intended to "economically transition the feeder portion of the loop access network to full digital transmission capability." (**Id.**) The Coalition appears to concede that the 1989 guidelines reflect the least-cost method of providing POTS, as well as narrowband digital services such as ISDN.

According to the Coalition, Pacific's 1990 and 1993 guidelines were much less defensible from the viewpoint of provisioning POTS. The 1990 guidelines called for the use of a standard called Digital Subscriber Line for distances up to 18 kft., and Digital Loop Carrier (DLC) beyond that length. Among the reasons given for this recommendation were that ISDN and other digital services experienced interference over the existing copper network. (**Id.** at 62-63.) According to the Coalition, the 1993 guidelines, which again reflected a 9 kft. cross-over point, attempted to integrate the standards for both narrowband digital **and** the new broadband networks, and assumed many more cables per serving area than were necessary for upgrading POTS service.

According to the Coalition, Pacific's current guidelines call for a 9 kft. cross-over point and assume the use of Next Generation Digital Loop Carrier (NGDLC) for lengths beyond that point. The Coalition states that these standards clearly "assume a transition to . . . the Advanced Telecommunications Network ('ATN'), which essentially refers to the deployment of hybrid fiber-coax ('HFC') local distribution facilities." (**Id.** at 64-65.)

In its Supplemental comments, the Coalition presents the results of a simulation run on the Benchmark Cost Model (BCM), an alternative cost proxy model to Pacific's. This simulation suggested that if a 15 kft. cross-over point were assumed, Pacific's recurring loop costs would be decreased by over \$1.00 per month. (4/17 Coalition Comments, pp. 52-53.)

Although their parties also attack Pacific's assumption that a 9 kft. cross-over point is most cost-effective. (**See** DRA's 5/14 Comments, pp. 4-5 (advocating a 12 kft. cross-over); CCTA's 4/17 Comments, p. 8 (endorsing Coalition position).)

2. Pacific's Position

In both its April 17 and May 24 comments, Pacific presented an extensive defense of its 9 kft. cross-over point by James Schaaf, the engineer who authored Pacific's 1994 guidelines. Mr. Schaaf's argument has two parts. First, he rejects the notion that the 9 kft. cross-over point was chosen to facilitate the deployment of broadband services and is not cost-effective for POTS:

"[The Coalition, DRA and CCTA all] commented that the 9000 foot guideline was primarily based on economics for providing broadband services. This is not true. The crossover is economical for telephony services, (including ISDN) before broadband was considered. As the provider of last resort, Pacific Bell must provide facilities for all services and our studies reflect that. However, Fiber/NGDLC at feeder lengths of 9000 feet and more is typically going to be the least cost technology to provide POTS. Due to price reductions for pair gain equipment in the 1993 TTD⁽²⁸⁾] contracts, Fiber/DLC cost per residential customer fell below an all copper loop at the 9000 foot feeder length...The results are not based on providing broadband or ISDN services." (5/24 Schaaf Declaration, para. 7, p. 6.)

Second, Mr. Schaaf criticizes the Coalition's simulation on the BCM, which suggested that a 15 kft. cross-over point was reasonable. According to Mr. Schaaf, this simulation ignored many critical factors, including the costs of additional structure needed to support large copper cables, the extreme difficulty of ensuring that the structures would be perfectly straight (since very heavy copper cable could not be bent during installation), and the high maintenance cost of copper cable, including the need to air pressurize it. (*Id.* at pp. 6-8.)

Mr. Schaaf also relies upon a 1987 study to demonstrate that at 9 kft. cross-over point, fiber is less expensive to install than copper. In the 1987 study, the installation cost for copper with a 9kft. cross-over point was \$1,137; while for fiber it was slightly higher (\$1,156). Mr. Schaaf asserts that by virtue of price reductions Pacific obtained through the TTD program on PLC plug-in cards, fiber became the less expensive option at 9 kft. Moreover, Mr. Schaaf suggests, other savings obtained through the TTD program have made fiber feeder even less expensive to install, thus justifying Pacific's choice of a 9 kft. cross-over point. (*Id.* at para. 19.)

3. Discussion

In order to resolve the dispute over the appropriate cross-over point, we asked our staff to conduct some independent research. Staff focused its attention on a Pacific discovery response (document number PBON008671), which contains a table that lists the costs of copper feeder versus fiber feeder at various lengths. The table suggests, contrary to Mr. Schaaf's conclusion, that at 9 kft., it is less costly to place copper in the feeder. The difference appears to be explained by handwritten calculations that appear in the margin of the diions reflect the purchasing savings that Mr. Schaaf refers to in his declaration.

Because we were concerned about relying on TTD "savings" supported only by handwritten calculations, we asked our staff to rerun Pacific's Cost Proxy Model (CPM) to determine whether a 9 kft. or 12 kft. cross-over point would produce lower loop costs. Our staff's analysis shows that loop costs are lower using a 12 kft crossover point. The CPM produced a loop cost that is \$0.69 lower per residential line per month when the crossover point is changed from 9 kft to 12 kft. We expect that at a 12 kft. cross-over, other loop services will show comparable cost decreases. We will, therefore, order Pacific to revise its cost studies by assuming a cross-over point of 12 kft. The dollar effect of this change of assumptions is \$0.69 per month for residential access lines, which is the difference shown by the CPM. Due to different fiber-copper ratios, we will reduce the cost for other access line services as shown in the Pacific CRD.

K. Has Pacific Made Reasonable Estimates of Its Loop Repair Costs?

In its April 3 and April 17 comments, the Coalition has challenged the estimated repair costs shown by Pacific in its TSLRIC studies. The argument on repair costs has two parts. First, the Coalition argues that repair costs should be drastically reduced because of an alleged admission by a Pacific witness before the FCC about the likely savings in repair costs from deploying a hybrid fiber-coaxial (HFC) network. Second, the Coalition argues that repair cost estimates should be reduced because Pacific has failed to carry forward into the future the reduced repair costs it showed in 1993 and 1994 as a result of moving toward an all-digital network.

The dollar value of the parties' disagreement over repair costs is about \$35 million. As explained below, while we reject the first of the Coalition's arguments, we think there is merit in the second.

1. Positions of the Parties

The mai in its opening comments was that the TSLRIC studies failed to show the downward trend in

repair expenses that Pacific witness Dr. Robert Harris had predicted before the FCC:

"[I]t was Dr. Harris who testified in Pacific's Video Dialtone Application that Pacific's capital costs and maintenance expenses would be dramatically lower with a [HFC] network. Pacific's failure to adjust its long-run maintenance (and other) expenses to reflect the impact of savings associated with the new technology which Pacific is currently deploying . . . is directly contradicted by this Harris testimony. Even more germane is the fact that Pacific's recommended treatment of maintenance costs in its OANAD studies was adopted [in D.95-12-016] partially on the strength of its assertion that forward-looking capital investments are made, in part, in order to lower maintenance expenses." (4/3 Coalition Comments, p. 43; footnote omitted.)

In its supplementary comments, the Coalition argued that the Commission should consider reducing Pacific's loop repair estimates by 78% to reflect Dr. Harris's testimony before the FCC. (4/17

Coalition Comments at 20.) Alternatively, it suggested that it should be given a further opportunity to investigate and comment on data responses which suggested that as Pacific moved toward an all-digital network, it was indeed experiencing reductions in repair costs. (**Id.** at 19.)

In its April 17 and May 24 reply comments, Pacific has disputed both of the Coalition's repair arguments. First, it argues that Pacific's HFC deployment has been so scaled back that it is not a relevant factor for evaluating the TSLRIC studies:

"It is premature to have this debate [about the implications of HFC deployment] at this point in the proceeding. As Mr. Scholl discusses in his Declaration, deployment of our HFC network has slowed. Only 2% of our access lines will be served by the HFC network for telephony by year-end. That percentage is not expected to increase dramatically in the next couple of years. No video services are being provided over the HFC network because the electronics have not yet been developed. Until that is completed, the Link will be provisioned overs where the HFC has been installed. Principle No. 6 of the Consensus Cost Principles requires 'the least-cost technology should reflect a known and proven technology that is clearly identified and is used, at least partially, today.' The HFC does not meet this criteria at present. The issues around the HFC should be abeyed until the technical issues are worked out and significant deployment has occurred." (4/17 Pacific Comments, p. 14.)

Second, Pacific argues that the Coalition has misinterpreted its data responses and erred in concluding that loop repair costs will show a downward trend in the next few years. The declaration of Scott Pearsons attached to Pacific's May 24 comments states:

"[T]he Coalition claims that trending of equipment repair expenses should be used to identify forward looking equipment repair expenses. The Coalition misrepresent[s] the data that was provided. According to their analysis, the equipment repair expense trend is an annual decrease of 7%. In analyzing this repair analysis, we find that the Coalition has included functions that are not even in the TSLRIC study (analog repair), and omits functions that should be included (e.g., digital circuit repair). I have corrected the Coalition's errors . . . in my Attachment A. When the analog repair is removed and the additional digital repair is included, the repair trend is actually **increasing** at 6% annually, not decreasing . . ." (5/24 Pearsons Declaration, para. 7; emphasis supplied.)

2. Discussion

A wholesale disallowance of repair costs to reflect Dr. Harris's testimony in the Video Dialtone proceeding would be inappropriate here. We accept Pacific's argument that because HFC deployment is proceeding slowly, it is not a relevant factor in evaluating the loop studies.

However, the parties' disagreement over the significance and even direction of the recent trend in repair costs led us to ask our staff to conduct an independent investigation of this issue. Specifically, staff made a ata on loop repair expenses during the period from 1993 through 1995. Unlike the analysis referred to in the Coalition's April 17 comments, our staff's analysis was based on an examination of all the relevant function codes, not just a limited group of them. Staff's analysis of the repair costs associated with access line facilities during this period shows an average reduction of 7% per year. However, Pacific's loop studies for future years do not reflect this downward trend.

Accordingly, we agree with the Coalition that Pacific's repair analysis does not adequately reflect a forward-looking view because it fails to project the downward trend in repair costs into the future. We reject Mr. Pearsons's argument because it appears to be based on the same limited number of function

codes reviewed by the Coalition, rather than the larger number reviewed by our staff. In accordance with our staff's analysis, we will require Pacific to make successive 7% adjustments for 1996 and 1997 to all of its access line and link services, resulting in a net 14% reduction to Pacific's repair estimates.

L. Miscellaneous Adjustments to Pacific's Advertising Expenses

In addition to the issues discussed above, we are ordering several small adjustments to Pacific's treatment of advertising expenses.

First, in response to a claim by the Coalition that certain of Pacific's "sales and marketing" expenses should be adjusted to reflect a forward-looking increase of 15% annually (4/17 Coalition Comments, p. 19), Mr. Pearsons stated that the expenses are actually for advertising and promotion, and that their annual rate of increase is approximately 8%. (5/24 Pearsons Declaration, para. 8.) Based on the trend that Mr. Pearsons suggests, we believe that a two-year update to these advertising and promotion expenses is appropriate, and we will therefore order Pacific to increase the estimates associated with the function codes at issue (0320, 0330, 0370, 0380, 0624 and 0656) by 16%.

Second, as noted that Pacific's expense allocation process consistently shifts expenses from more-competitive to less-competitive services. Although Pacific has responded to this objection at length with respect to many expense categories, it does not do so for advertising. Our own review of certain advertising expenses has convinced us that some adjustments are appropriate. Accordingly, we will order that for both RCF and Custom Calling Service/CLASS features,⁽²⁹⁾ the advertising dollars associated with these services shall be

reallocated uniformly to both the business and residential forms of these services.

M. Miscellaneous Adjustments to Pacific's "A" and "B" Costs of the PLAN Cost Deck

The Coalition's July 10 comments on the PD once again raise the issue of "A & B" costs in Pacific's PLAN "cost deck" and their usefulness as inputs into Pacific's Cost Proxy Model (CPM). The CPM calculates loop lengths, while the cost deck provides the costing information. In its April 17 comments, the Coalition asserted that Pacific's cost deck inputs into the CPM appeared to overstate the costs for access line and unbundled loop services. (4/17 Coalition Comments, pp. 53-57.) Critical inputs such as copper, conduit, and trenching were the main items of contention. For example, the Coalition's analysis of the A and B cost inputs for conduit revealed that Pacific used an average cost measure (i.e., fixed cost divided by average loop length) to capture the fixed component of trenching for conduit. Loops which require trenching greater than the "average" are thus overstated, according to the Coalition.

Pacific argued in its May 24 Supplemental Reply Comments that such a review of cost deck outputs was not necessary, and would amount to an impermissible "reasonableness" review of a NRF company. (5/24 Scholl Declaration, para. 170.)

Upon reexamination of the above-cited comments and of the Coalition's July 10 comments of the PD, we find merit in the Coalition's arguments. We also think that Pacific's contention that it would somehow be impermissible for us to consider the cost deck outputs is inconsistent with the Consensus Costing Principles adopted in D.95-12-016, which require TSLRIC studies to be based on least cost, forward-looking technology. Moreover, Pacific's own "re-runs" of its A and B cost calculations for buried copper cable resulted in dramatically reduced fixed costs per foot of copper

cable. These re-runs suggest that the PLAN cost deck figures have merit, and that Pacific's cost studies are in need of revision.

Accordingly, two adjustments should be made to Pacific's CPM inputs (which are the PLAN cost deck outputs). First, Pacific should use revised "A" and "B" costs for conduit (i.e., investment per duct foot), as detailed in the Pacific CRD. Second, Pacific should rerun the CPM with the "A" and "B" costs for copper cable as detailed in the Pacific CRD. These adjustments to Pacific's A and B costs are needed to correct a factual error that Pacific acknowledges and that is likely to be significant. We will require Pacific to submit corrected loop costs and the corresponding "A" and "B" cost inputs through an advice letter filing under G.O. 96-A. This advice letter will also deal with the re-assignment of operating expenses discussed in Section I.B.⁽³⁰⁾

II. Analysis of GTEC's Cost Studies and the Comments Thereon

In the comments they submitted on April 3, April 17 and May 14, the Coalition, DRA and CCTA devoted substantially less attention to GTEC's cost studies than to Pacific's. Moreover, while the comments on Pacific's cost studies were predominantly concerned with whether particular assumptions were consistent with the TSLRIC principles adopted in D.95-12-016, a major theme in the comments on the GTEC studies was whether these studies could be said to reflect a TSLRIC methodology at all. In this section of the decision, we consider whether this overall criticism of the GTEC studies has any merit, and if it does, what adjustments we should make to the GTEC studies so that they can be used to set prices for bundled and unbundled elements.

A. Do GTEC's Cost Studies Conform to the TSLRIC Principles Adopted in D.95-12-016?

1. Positions of the Parties

In its opening comments, the Coalition raises the question of whether GTEC's cost studies pass one of the most basic tests of a TSLRIC study; i.e., whether the studies can be considered forward looking. In addition to repeating many of the criticisms it made of Pacific's studies (a summary of which is quoted in Section I.A., *supra*), the Coalition argues that GTEC has really submitted LRIC studies, and that LRIC studies cannot be used for pricing unbundled services because they exclude volume-insensitive costs needed to detect cross-subsidization. (4/3 Coalition Comments, pp. 8-9.)

Similar claims of departure from TSLRIC principles appear in many forms throughout the Coalition's comments and those of other parties. For example, the Coalition argues at length that GTEC's development of cost factors (as well as its methods of assigning operating expenses) are inconsistent with the TSLRIC principles:

"GTEC's cost factors are entirely inappropriate for a TSLRIC study. GTEC's cost factor database is simply not designed to incorporate appropriate modifications. GTEC's cost factor database experts confirmed that GTEC did not even consider whether its cost factor system needed modification in response to the Commission's adopted costing principles. . . GTEC's experts also confirmed that Mr. Bert Steele, who negotiated the Consensus Costing Principles on behalf of GTEC, had no role in the development of the cost factor database. Among the major problems with GTEC's factors is GTEC's complete failure to consider whether it should make forward-looking adjustments to its support investments to reflect the forward-looking nature of the studies. . ." (4/3 Coalition Comments, pp. 45-46; footnotes omitted.)

In its reply comments, GTEC points out that while criticisms can always be made, the overall validity of its studies is what matters:

"There will always be some limitations in existing data, modeling capabilities, and resources (including time) in a project of this magnitude and level of detail. However, the [TSLRIC] studies submitted by GTE provide a reasonable and reliable estimate of the costs presented." (4/17 GTEC Comments, p. 3.)

However, GTEC concedes that it did not make some of the adjustments that the Coalition and other parties claim it should have made. For example, GTEC acknowledges that it did not make forward-looking adjustments to its expenses, but defends its decision not to do so:

"GTE uses current information (i.e., the most recent current expenses, not embedded historical expenses) as the basis for developing its incremental costs. The expenses used are also USOA account-specific -- e.g., the maintenance and repair expense factors reflect only those expenses which are specific to digital switching, fiber interoffice transport and other technologies relevant for determining long run incremental costs. Non-forward-looking expense categories. . . are not appropriate for determining the Company's forward-looking costs and are therefore excluded.

"This current actual cost data is a reliable forward-looking incremental cost estimates available to the Company. Current costs have been used by GTE and other companies for years to predict

forward-looking costs. . . and are widely used in the telecommunications industry. **If GTE were to adjust these expense values for anticipated future events, as the Coalition suggests, the result would be to mix estimates with empirical data.**" (Id. at 9-10; footnotes omitted, emphasis supplied.)

2. Discussion

Our own extensive review of GTEC's cost studies has persuaded us that, unfortunately, the Coalition's general criticism has merit. While Pacific's studies are generally consistent with the TSLRIC principles agreed upon during the workshops and adopted in D.95-12-016, GTEC's are not. As the above-quoted material suggests, GTEC chose not to make enough forward-looking adjustments to its models and data bases to conform its studies to the Consensus Costing Principles.

In order to deal with this shortcoming, we have decided to order specific but broad-ranging adjustments to GTEC's studies to approximate conformance with the Consensus Costing Principles. We recognize that, given sufficient time and direction, GTEC can perform new cost studies that will conform with our adopted TSLRIC principles more closely than the existing studies with the adjustments we order. In fact, we are ordering GTEC to file new cost studies conforming to TSLRIC principles within one year after the effective date of this decision. However, if tariffs for unbundled BNFs and services are to be in place during the first quarter of 1997, there will not be time for GTEC to perform completely new studies.

B. What Adjustments Should be Made to GTEC's Cost of Capital Assumptions?

1. Positions of the Parties

GTEC's cost studies assume a cost of capital of 11.51%, which GTEC took from our 1989 decision approving the New Regulatory Framework, D.89-10-031. In their comments, several parties argue this is much too high. The Coalition argues, as it did for Pacific, that GTEC should assume a 9.46% cost of capital. (4/3 Coalition Comments, p. 37.) DRA argues that the proper cost of capital is 10.5%, which the Commission approved in GTEC's settlement of the 1992 NRF review, D.93-09-038. (4/3 DRA Comments, p. 22.)

GTEC defends its use of 11.51% on the ground that this is the most recent cost of capital the Commission has approved for it. It takes sharp issue with the idea that the 10.5% figure used in D.93-09-038 is appropriate:

"D.93-09-038 did not establish a market based rate of return (ROR) for GTE. D.93-09-038 simply adopted a settlement agreement between GTE and other interested parties in the first triennial review of the New Regulatory Framework (NRF). D.93-09-038 clearly did not establish and adopt an ROR for GTE for purposes such as that sought by the DRA at this juncture. While a 10.50 percent figure is referenced in the underlying settlement behind the decision, such figure was not established as a market based ROR but rather was to be considered solely as a reference point in the future for purposes of calculating shareable earnings if reinstatement of sharing for GTE was ever explored.

"D.93-09-038 therefore did not adopt a new rate of return for GTE; there was no need to do so in light of the elimination of sharing for GTE. Thus, DRA is incorrect in stating that a market based rate of return was established for GTE in D.93-09-038." (5/24 GTEC Comments, p. 20-21.) (See also 4/17 GTEC Comments, pp. 16-19.)

2. Discussion

GTEC's use of 11.51% as its cost of capital is not appropriate. While that figure is indeed the last cost of capital we formally adopted for GTEC, it is not realistic in today's market.

This does not mean, however, that we think the Coalition's recommendation is appropriate. For the reasons stated in Section I.F. of this decision, we think the Coalition's proposal for a 9.46% cost of capital should not be adopted.

We agree with DRA that the appropriate cost of capital to assume for GTEC is 10.5%.⁽³¹⁾

This was the figure set forth in the settlement agreement approved in D.93-09-038, and -- contrary to GTEC's claims -- it appears that the parties to that agreement intended it to be used for determining a market-based cost of capital during the time the settlement agreement was in effect. We think the plain words of the settlement agreement establish that the 10.5% figure was not restricted to calculating

shareable earnings in the event reinstatement of sharing with ratepayers was proposed, but was also to be used for any purpose for which a market-based cost of capital was needed. This is clear from the final sentence of paragraph 14 of the settlement agreement, which provides as follows:

"If any party to this Settlement Agreement proposes in the future to impose a requirement that GTEC return to ratepayers any portion of earnings between a benchmark ROR and a ceiling ROR, **or the reinstatement of a market-based and/or benchmark rate of return**, it shall be assumed that the market-based rate of return under this Settlement Agreement is 10.50%." (Emphasis supplied.)

C. What Adjustments are Appropriate to GTEC's Depreciation Schedules?

In the PD mailed on July 2, 1996, we directed GTEC to use the same asset lives employed by Pacific in its cost studies, which are discussed in Section I.H. We ordered the use of these so-called "Duquesne" lives, which Pacific first presented in the "franchise impacts" phase of R.95-04-043/I.95-04-044, because we concluded that they were reasonable for forward-looking cost studies, and because GTEC's asset lives were "unreasonably short" in comparison.

In its July 10, 1996, comments on the PD, GTEC challenges the rationale for the PD's decision. First, GTEC points out that not all depreciation schedules are "Duquesne" accounts:

"[T]he only 'Duquesne' accounts are those technology accounts which are considered to be affected by competition and technological obsolescence. GTE included eight such accounts in its submission in the competition proceeding, while Pacific included those eight plus two additional accounts. No other accounts are deemed to be significantly impacted by competitive pressures, and hence are not affected by the 'Duquesne' analysis." (7/10 GTEC Comments, p. 6.)

Next, GTEC presents a chart comparing its eight "Duquesne" accounts with Pacific's comparable accounts. Noting that half of these accounts reflect slightly longer asset lives than Pacific's, while the other half are slightly shorter, GTEC asserts that "it is difficult to conclude from this comparison that GTE's lives [are] 'unreasonably short'." (**Id.**) The chart is as follows:

[HERE INSERT CHART]⁽³²⁾

Finally, GTEC notes that the depreciation schedules prescribed in the PD contain "approximately 16 additional accounts" for such things as motor vehicles and office furniture that cannot be considered "Duquesne" schedules. As to these, GTEC states:

"GTE has its own Commission-approved rates for each of these accounts, as does Pacific. The rates of the two companies differ somewhat (and historically always have) because of the individual study processes and the company-specific data. There is no reason . . . to compel GTE to use Pacific's 'non-Duquesne' depreciation rates, and GTE believes this was an inadvertent error."

GTEC concludes by asserting that "at most, GTE . . . should be directed to use the indicated numbers for the eight technology accounts listed above . . ." (**Id.** at 7-8.)

We find GTEC's arguments to be persuasive, and will therefore order GTEC to modify the depreciation rates used in the cost studies it has submitted only to the extent of the eight technology accounts listed in the table above. However, as to the TSLRIC studies that GTEC is being directed to file within one year from the effective date of this decision, we will require GTEC to use the same depreciation rates for these accounts as Pacific, since by GTEC's own admission it would now use rates "identical" to Pacific's.

D. What Adjustments Should be Made to GTEC's Computation of Volume-Insensitive Costs for The Loop?

In its loop studies, GTEC calculated volume-sensitive costs (which are defined on page 5 of Appendix C of D.95-12-016) by using a "capacity" approach. In other words, GTEC begins with its utilization factors (i.e., "design fills"), which are 85% for feeder and 50% for distribution. GTEC then assumes that volume-insensitive costs are the difference between the design fill and the "actual" fill.

Although no party raised this issue in its comments, we believe that GTEC's method of computing volume-insensitive costs is more consistent with the study. To ameliorate this problem, we will direct GTEC to use Pacific's utilization factors, as shown on Appendix B. By using these utilization factors and carrying forward the rest of GTEC's computational method, volume-sensitive costs for the loop should not change, but volume-insensitive costs will be substantially reduced. As stated in Section I.C., GTEC shall use a 76% fill factor for copper feeder.

E. What Adjustments Should be Made to GTEC's Rearrangement Costs?

Another issue not raised in the parties' comments, but of concern to us, is how GTEC has handled rearrangement costs. Unlike Pacific, GTEC did not explicitly show these costs, but included them in its costs for maintenance and repair.

As noted above in Section I.D., we have concluded that most of the rearrangement expenses shown by Pacific should be eliminated. To ensure that GTEC is treated similarly, we will calculate the percentage of Pacific's total maintenance and repair costs that are accounted for by rearrangement. Using this percentage, we will then reduce GTEC's maintenance and repair account. The details of this computation are set forth in the CRD for GTEC.⁽³³⁾

F. What Adjustments Should be Made to GTEC's Computations of Fiber in the Feeder?

As noted in Section I.J., we have concluded that 12 kft. is the "cross-over" point at which it becomes more cost effective for Pacific to install fiber rather than copper in the feeder. GTEC states that its studies assume fiber in the feeder at lengths of 12 kft. or more, but DRA argues that, in fact, this is not the case:

"DRA believes that GTEC may have overestimated the weighted BNF costs for loops with lengths over 12 kft. This disproportionately impacts low density zones [⁽³⁴⁾] where the average length of loops over 12 kft is significantly higher (i.e., 20 kft). To illustrate this point, using residential loops, GTEC calculated the weighted BNF cost for the low density zone for the greater-than-12 kft band by taking the BNF cost corresponding to 12 kft fiber loop and adding to that the BNF cost corresponding to 8 kft of copper loop (i.e., 20 kft average loop length minus 12 kft of fiber). This methodology essentially costed out loops longer than 12 kft as if they only contain 12 kft of fiber and the rest is copper. Since the per unit cost of copper facilities is higher than fiber facilities, this methodology overestimates the BNF cost of longer loops. (4/3 DRA Comments, p. 11; emphasis supplied.)

After conducting our own analysis of GTEC's loop studies, we have concluded that DRA is correct. Rather than order GTEC to prepare completely new studies, however, we will direct it to make the following type of calculation for each of GTEC's density zones. This will allow for as good a "fix" to GTEC's loop studies as time permits.

The calculation we will require is shown by the following hypothetical. Assume a 20 kft. total loop

length (which is approximately the average loop length for low-density areas). The average distribution length shown by GTEC (in this case, 2 kft.) is then subtracted to yield the feeder length (20 kft. - 2 kft. = 18 kft.). Since GTEC's studies assume 12 kft. of fiber, this is subtracted from the feeder length to determine the amount which GTEC incorrectly estimates. In this example, the calculation is 18 kft. - 12 kft. = 6 kft. This difference is then multiplied by the difference between the costs of a kft. of fiber and a kft. of copper. If, hypothetically, copper costs 40 cents per kft. and fiber costs 20 cents per kft., the difference is 20 cents, which multiplied by 6 kft. is \$1.20. This product is then subtracted from GTEC's cost for the total loop length.

The precise costs GTEC is to use are set forth in the GTEC CRD.

uld be Made

to GTEC's Costs for ILNP?

As noted above in Section I.I., D.96-04-052 required both Pacific and GTEC to file cost studies in this docket for two forms of Interim Local Number Portability (ILNP). The first form of ILNP is based upon DID, and the second is based upon RCF. GTEC refers to its RCF-based form of ILNP as Service Provider Number Portability (SPNP). It is essentially equivalent to Pacific's DNCF, and is comprised of three elements: (1) the SPNP element itself, (2) a monthly flat rate for Simultaneous Call Paths (SCPs), and (3) an NRC for SPNP.

The Coalition and other parties criticize GTEC's ILNP studies for many of the same reasons they criticized Pacific's. First, they argue that GTEC has failed to submit a study for DID-based ILNP. Second, they contend that GTEC's SPNP costs are excessive and unsupported. Third, they argue that the proposed flat monthly rate for SCPs is indefensible.

Because of the importance that ILNP will play as local exchange competition increases, we discuss these arguments here.

1. Positions of the Parties

Apart from claiming that GTEC did not submit a study for ILNP based on DID, the Coalition focuses on GTEC's alleged costs for SCPs, which it proposes to recover through a flat monthly charge. The Coalition makes two arguments. First, it claims that we disallowed such costs in D.96-04-052.

Second, the Coalition argues that a monthly charge for SCPs cannot be justified:

"When a customer orders more than one call path per RCF number, the additional call path or paths are used only when more than one call is incoming at the same time. Simple logic dictates that the first call path will have by far the heaviest usage, that the second call path will handle the most rollover calls, and that each successive call path will have diminishing usage because there are ever fewer occasions on which higher numbers of incoming calls arrive simultaneously. Thus, a constant 'per call path' usage estimate simply makes no sep. 47.)

In its supplemental reply comments, GTEC disputes both of the Coalition's assertions. First, it points out that in D.96-04-052, we simply concluded that it was unclear how often the usage costs claimed for SPNP would actually apply. D.96-04-052 stated that "GTE will have the opportunity to justify the need for a separate usage charge for CLC-RCF through its OANAD cost studies." (D.96-04-052, mimeo. at 33.) Second, GTEC argues that

the Coalition's argument is really an attempt to avoid paying usage charges altogether:

"GTE's cost study for [SPNP] identifies costs for the switch feature for each number forwarded, as well as usage costs for each simultaneous call capability. The Coalition seeks to avoid paying any such usage charge for this capability based on the specious claim that additional call paths will have diminishing usage from the first call path, and thus that a constant usage charge for each subsequent path is inappropriate.

"The Coalition's claim of 'diminishing usage' . . . on additional call paths is without merit, and its desire to avoid any usage charge for additional paths will result in network inefficiencies. Significantly, the Coalition does not deny that the LECs will incur usage costs each time that a simultaneous call path is used. Clearly, each time that the LEC handles the call, it is using switching and transport facilities that it would not otherwise use if RCF SPNP were not being employed. If GTE is not allowed to charge [CLCs] for these costs that it will incur, the CLCs will have no incentive to provision the optimal number of call paths." (5/24 GTEC Comments, p. 11.)

2. Discussion

We have concluded that the Coalition's criticism of GTEC's proposed monthly SCP charge has merit. The cost studies of the two LECs show that their methods of initiating RCF-based ILNP service are very similar, yet they propose to allocate very different costs to them. We believe this is unreasonable, and that GTEC should be required to allocate cost that Pacific does.

In D.96-04-052, we noted that Pacific was not seeking a monthly charge for SCPs because its switches can be pre-programmed at virtually no cost at all to allow up to 99 additional call paths. (Mimeo. at 36-37.) The switches through which GTEC plans to offer SCPs can also be programmed to have any number of call paths as a default. Unlike Pacific, GTEC proposes to use "1" as the default number. We have concluded, however, that GTEC should also be required to use "99" as the default number. Despite our decision about the default number for SCPs, we agree that GTEC's cost studies should reflect the costs of SPNP usage (both switching and transport). We also agree that such costing should be done on a per-minute-of-use basis. The recovery of these usage costs will be considered in the ongoing pricing hearings.

We find little merit in the Coalition's general criticism that GTEC's cost studies for the SPNP element itself are "unsupported". (4/17 Coalition Comments, p. 45.) On May 21, 1996, GTEC submitted corrections to its cost study that significantly reduce proposed SPNP costs. With the exception of net avoided costs and the adjustments ordered above to capital costs, we adopt GTEC's proposed costs for the SPNP element. We will also adopt GTEC's proposed NRC for SPNP, since no party has objected to it.

Finally, we note that GTEC has made its position clear on DID-based ILNP, although it took GTEC a long time to do so. On May 15, 1996, GTEC sent the parties a letter stating the location and discount associated with its DID avoided-cost analysis. From this letter, it seems evident that GTEC proposes to use DID as a proxy for DID-based ILNP. We will not rule on this proxy approach here; it will be considered in the avoided cost phase of the upcoming pricing hearings.

H. What Adjustments Should be Made to GTEC's Costs for an Unbundled Loop?

1. Positions of the Parties

In its July 10, 1996 comments on the PD, the Coalition criticizes GTEC's Next Generation Digital Loop Carrier (NGDLC). The Coalition argues that by not assuming the use of NGDLC, GTEC is violating the Consensus Costing Principles adopted in D.95-12-016, because GTEC's cost studies would fail to reflect cost savings brought about by using the least-cost technology. (7/10 Coalition Comments, p. 14.)

GTEC defends its cost methodology on the ground that it is necessary to prevent the subsidization of CLC customers by providing unbundled loops below GTEC's actual costs. (GTEC's 7/10 Comments, pp. 15-16.)

2. Discussion

We agree with the Coalition that GTEC's cost studies depart from the Consensus Costing Principles because, unlike Pacific's, they do not reflect deployment of NGDLC. The Coalition has convincingly demonstrated that NGDLC appears to be the least-cost technology for provisioning loops. By failing to assume deployment of NGDLC, GTEC's cost studies are not in compliance with Consensus Cost Principle No. 6, which requires the use of least-cost technology in the development of TSLRIC cost studies.

Accordingly, we will direct GTEC to modify its unbundled loop analysis in a manner consistent with the adjustments

summarized in the GTEC CRD. GTEC shall also prepare its new cost studies that are due one year from the effective date of this order to reflect the deployment of least-cost technologies, including NGDLC.

III. Comments on the Proposed Decision

As indicated above, the assigned ALJ's PD was mailed to the parties on July 2, 1996, along with a Ruling from the Chief ALJ directing that comments be filed and served no later than July 10, 1996. A

July 10, 1996 Assigned Commissioner's Ruling denied an Emergency Appeal for more comment time, but did extend the parties an opportunity to submit reply comments concerning the PD on or before July 15, 1996.

On July 10, 1996, comments on the PD were filed by Pacific, GTEC, the Coalition, TURN and CCTA. Reply comments were filed on July 15, 1996 by Pacific, GTEC, AT&T/MCI/TURN and CCTA. We have carefully considered all of these comments, and changes in response to them have been made in Sections I.B., I.C., I.H., I.M., II.C. and II.H of this decision, among other places.

On August 1, 1996, the FCC issued an order that adopted rules to implement the competition provisions of the Telecommunications Act of 1996. Ou closely linked to the national goal of opening telecommunications markets. Moreover, the attainment of this goal of opening markets will be aided by a congruence of state and federal regulations. For this reason, within 30 days of the issuance of this decision, we will establish by Administrative Law Judge ruling a comment cycle that will enable us to determine what steps, if any, the Commission should take in this proceeding to bring today's order up to date with the FCC's order.

Findings of Fact

1. In D.89-10-031, we adopted in principle the notions that unbundling, nondiscriminatory access and the setting of rate based on underlying cost structures should be applicable to LECs facing competition.
2. Comments on the unbundling principles set forth in the Rulemaking were filed on February 8 and March 31, 1994.
3. In D.93-08-026, we concluded that issues relating to expanded interconnection and local transport restructuring should be handled in this docket.
4. On June 10, 1994, the United States Court of Appeals held in **Bell Atlantic v. FCC**, 24 F.3d 1441 (D.C. Cir. 1994), that the FCC lacked statutory authority to order LECs to make physical collocation available to parties wishing to interconnect with the LECs at their central offices.
5. In response to **Bell Atlantic v. FCC** and D.94-09-065, the assigned ALJ invited parties to file supplementary comments on expanded interconnection and local transport restructuring issues on October 13 and October 27, 1994.
6. On December 21, 1994, we issued D.94-12-053, which set forth a "roadmap" for achieving local competition by January 1, 1997.
7. Consistent with D.94-12-053, we issued D.95-04-073 on April 26, 1995, setting forth our policies on expanded interconnection and local transport restructuring.
8. We have granted petitions for modification with respect to D.95-04-073 in D.95-08-037 and D.95-12-020.
9. Consistent with D.94-12-053, Commissioner Duque issued an ACR on June 22, 1995, setting forth proposed TSLRIC cost study principles, a proposed list of BNFs and a proposed schedule for this proceeding. Comments on the June 22 ACR were filed on July 13 and 14, 1995.
10. Pursuant to the June 22 ACR, an on-the-record workshop concerning the proposed TSLRIC principles and BNFs was held for 11 days in June and July of 1995.
11. The discussions at the workshop resulted in the adoption by all active parties of a Consensus Document that included consensus costing principles, which was filed in this docket on August 23, 1995.
12. The Consensus Document was ultimately approved by us in D.95-12-016, which, *inter alia*, directed Pacific and GTEC to submit TSLRIC studies for specified BNFs and services on December 29, 1995, and January 31, 1996.
13. A PHC to discuss scheduling issues for this proceeding was held on January 5, 1996.
14. At the PHC, in response to protests of the other parties, Pacific and GTEC acknowledged that they were having difficulties in serving work papers along w January 5 PHC, the assigned ALJs proposed a new schedule for the proceeding and invited the parties to file comments on it.
16. On February 14, 1996, the assigned ALJs issued a ruling adopting the procedural schedule they had discussed at the January 5 PHC. This ruling rejected an alternative schedule proposed by the Coalition on the ground that the Commission did not have adequate resources, given its other commitments, to implement it.
17. On February 29, 1996, four members of the Coalition filed an Emergency Appeal from the ALJs' February 14 Ruling, arguing that delays in obtaining workpapers and responses to discovery requests

from the LECs made the schedule set forth in the February 14 ALJ Ruling unattainable.

18. On March 25, 1996, Commissioner Duque issued an ACR that adopted a revised procedural schedule for the proceeding and admonished the parties to work out their discovery disputes. Among other things, the schedule called for the parties to submit their opening comments on the LECs' cost studies on April 3, 1996.

19. On March 25, 1996, the assigned ALJ issued a Ruling setting forth the issues to be addressed in the pricing, tariffing and unbundling hearings called for in Commissioner Duque's March 25 ACR.

20. On March 29, 1996, the assigned ALJ issued a Ruling setting forth a workplan for Pacific to follow in completing discovery responses.

21. On April 3, 1996, opening comments on the LECs' cost studies were filed by the Coalition, DRA, CCTA and TURN.

22. On April 12, 1996, the Coalition filed a second Emergency Appeal to the Commission, this time from Commissioner Duque's March 25 ACR. The appeal urged that owing to discovery delays, the nonLEC parties should be permitted to file a third round of comments on the LECs' cost studies, and that PU Code { 709.5 permitted tariffs for local exchange competition to go into effect after January 1, 1997, as long as "rules and regulations" pertaining to such competition were adopted by January 1, 1997.

23. On April 17, 1996, reply comments on the cost studies were submitted by Pacific, GTEC, DRA and CCTA. The Coalition filed what it called supplemental comments.

24. On May 8, 1996, we issued D.96-05-034, which granted, in part, the Coalition's April 12 Emergency Appeal. Specifically, we directed the filing of additional rounds of comments concerning the cost studies on May 14 and May 24, 1996, and adopted the interpretation of PU Code { 709.5 urged in the April 12 Emergency Appeal.

25. On May 14, 1996, the Coalition, DRA and CCTA filed separate supplemental comments concerning the LECs' cost studies.

26. On May 24, 1996, Pacific and GTEC each filed supplemental reply comments concerning their cost studies.

27. All of the cost studies and most of the data responses from Pacific and GTEC have been submitted under a claim that they are confidential and proprietary, and thus subject to the confidentiality agreements negotiated among the parties pursuant to the November 16, 1995, ALJs' Ruling issued in this docket.

28. Owing to the compressed schedule in this proceeding, the cost studies submitted by Pacific and GTEC on December 29, 1995, and on January 31, 1996 (as well as on subsequent dates as permitted by the Executive Director), had to be prepared on a *asis*.

29. In most instances where they have been pointed out, Pacific has acknowledged and corrected errors in its cost studies.

30. In some instances where they have been pointed out, GTEC has acknowledged and corrected errors in its cost studies.

31. Pacific has reported about \$2 billion in "shared" and "common" costs in its cost studies.

32. Under the Consensus Document adopted in D.95-12-016, the recovery of "shared" and "common" costs is a pricing issue rather than a costing issue.

33. Except in a few instances, Pacific used accounting "function codes" rather than project-specific "tracking codes" to assign expenses in its cost studies.

34. One-third of the LECs studied by the Coalition in its regression analysis reported "shared" or "common" costs in excess of \$1 billion.

35. In some instances, volume-sensitive costs for a residential service are higher than for the comparable business service.

36. Each one per cent (1%) of spare capacity in Pacific's distribution plant for basic exchange services amounts to approximately \$5 million per year in capital costs.

37. All parties acknowledge that some spare capacity is necessary in LEC distribution plant for testing and administrative purposes, on account of "modularity" of equipment, and to cover "churn" (i.e., variations in demand caused by the movement of

customers from one location to another).

38. The removal of some spare capacity from an LEC's system will not necessarily result in a

corresponding decrease to its capital costs.

39. NRCs are one-time expenses associated with initiating or disconnecting a service, and are made up principally of labor costs.

40. Many of the steps necessary to process a CLC's service order for DNCF or EISCC will already have been taken when the CLC orders a link.

41. In D.94-06-011, we reduced the market-based rate of return for Pacific to 10.0%.

42. There is a separate demand for loops; they are not a mere input to other basic exchange services.

43. Under SFAS 71, a regulated firm may amortize its investment period of time than is allowed under Generally Accepted Accounting Principles.

44. On September 7, 1995, Pacific's corporate parent, Pacific Telesis, announced that Pacific would move off of SFAS 71 in view of the imminence of local competition.

45. The asset lives adopted in this Commission's prescription proceedings assume that companies using them are regulated monopolies that are only partially subject to market forces, as set forth in D.89-10-031 and its progeny.

46. Pacific uses the depreciation schedules reflected in its TSLRIC cost studies in its financial reports.

47. Our staff's rerun of Pacific's Cost Proxy Model indicates that the cross-over point at which it becomes more cost-effective for Pacific to put fiber rather than copper in the feeder is 12 kft. rather than 9 kft.

48. Our staff's analysis of all the function codes relevant to Pacific's loop repair costs indicates that such costs decreased about 7% per year from 1993 through 1995.

49. Pacific's re-runs of its "A" and "B" calculations in the PLAN cost deck indicate that the fixed costs per foot of copper cable that Pacific originally reported were overstated.

50. In D.93-09-038, we approved a settlement agreement that provided, among other things, that 10.5% would be used as the market-based or benchmark ROR for GTEC to the extent such an ROR might be needed during the period covered by the settlement.

51. In its loop cost studies, GTEC has arbitrarily assumed that 12 kft. of fiber is used in the feeder, no matter what the length of the loop.

52. Their cost studies show that Pacific and GTEC use similar methods of initiating their RCF-based ILNP services, which are DNCF and SPNP, respectively.

53. The switches through which SCPs are offered can be programmed to have any number between "1" and "99" as the default number of call paths.

54. GTEC proposes to use DID costs as a proxy for DID-based ILNP.

Conclusions of Law

1 Because the parties need access to information that has been designated by the LECs as confidential in order to assess the adjustments we are ordering to the LECs' cost studies, the precise details of the adjustments involving such information designated as confidential and competitively-sensitive should be set forth in separate Compliance Reference Documents (CRDs) for Pacific and GTEC. These CRDs will be available only to those parties who have signed appropriate nondisclosure agreements with the LECs, and to parties who file a motion under Commission Resolution ALJ-164 and persuade the ALJ that notwithstanding the absence of such a nondisclosure agreement, the moving party should be granted access on appropriate terms and conditions.

2 Pacific's cost studies adequately conform to the TSLRIC principles adopted in D.95-12-016 so that, with the adjustments we order in this decision, such studies can be used as the basis for setting prices for bundled and unbundled BNFs and services.

3 Most of Pacific's decisions in assigning expenses through the use of function codes appear reasonable.

4 Pacific should be required to submit an advice letter pursuant to G.O. 96-A that either assigns the function codes and loadings set forth in the Pacific CRD directly to services, or documents fully why they should not be so assigned.

5 The question of whether "shared family" costs should be included in price floors is an issue to be decided in the ongoing pricing, tariffing and unbundling hearings.

6 Pacific has appropriately included spare capacity efficiently acquired to serve a growing market as a volume-sensitive cost in its TSLRIC studies for basic exchange distribution plant (except copper feeder), in the case where spare capacity costs are incurred with exhaustible resources.

7 Except for copper feeder, Pacific's treatment of spare capacity in its TSLRIC studies for basic exchange distribution plant is consistent with Consensus Cost Principle Nos. 3 and 6.

8 For copper feeder, Pacific should be required to assume that the appropriate fill factor is 76%, which represents the mid-point between fill and relief (i.e., when capacity would have to be added).

9 Pacific has appropriately included as a volume-sensitive cost in its TSLRIC studies for basic exchange distribution plant, spare capacity that is needed to meet ultimate demand and that is less expensive to install initially rather than later, when streets, driveways, and other permanent infrastructure might have to be torn up.

10 Because PU Code { 2883 requires LECs to equip all primary residential access lines with "911" service and not to disconnect it even when the resident moves or fails to pay his or her telephone bill, a substantial portion of the rearrangement expenses shown by Pacific in its loop plant cost studies should be excluded.

11 Certain other portions of the rearrangement expenses shown by Pacific in its loop plant cost studies should be excluded because Pacific has the capability to determine where demand for additional distribution and feeder will occur.

12 The labor rates in Pacific's cost studies should be multiplied by a factor of 0.922, which reflects the productivity gains attributed to Pacific for 1995 and 1996 in D.94-06-011 and D.95-12-052.

13 Pacific should be required to adjust its NRC link costs to reflect the same number of lines that it assumes for its own retail access line services, as shown in the Pacific CRD.

14 Pacific should be required to calculate the NRC for DNCF based on the additional DNCF service order cost plus the initial DNCF channel connect cost, as shown in the Pacific CRD.

15 Pacific should be required to calculate the NRC for EISCC based on the service order cost for an additional link plus the EISCC channel connect cost, as shown in the Pacific CRD.

16 Pacific should be required to re-estimate EISCC costs assuming standard cabling rather than a fiber mini-span, as shown in the Pacific CRD.

17 The question of how to recover NRCs is a pricing issue.

18 Pacific's assumption in its cost studies of a 10.0% cost of capital is reasonable, and consistent with our findings in recent energy cases.

19 Because there is a separate demand for loops, so that they are not merely inputs to basic exchange services that use loops, it would be inappropriate and contrary to the TSLRIC principles adopted in D.95-12-016 to treat the loop as a shared cost.

20 The TSLRIC principles adopted in D.95-12-016 require that cost studies implementing them be forward-looking.

21 The depreciation schedules used by Pacific in its cost studies are forward-looking in the context of this proceeding, because they reflect asset lives applicable to a firm operating in a competitive environment.

22 The depreciation schedules used by Pacific in its cost studies are reasonable.

23 In view of the ongoing pricing hearings in this docket, it would be unreasonable to reduce by the same percentages as the interim discounts adopted in D.96-04-052, the expenses shown by Pacific for sales, marketing and billing expenses in its DNCF cost study.

24 Dial tone generation should be excluded from Feature Group B usage costs to the extent we allow such costs to be used as a proxy for DNCF usage costs.

25 Pacific should be required to assume that the cross-over point at which it becomes more cost-effective to install fiber rather than copper in the feeder is 12,000 feet (12 kft).

26 Due to the change we are ordering in Pacific's cross-over point, Pacific should be required to adjust downwards its costs for access line services by the amounts shown in the Pacific CRD.

27 Pacific should be required to reduce the estimates of costs shown in its cost studies by 14%.

28 Pacific should include in its G.O. 96-A advice letter filing required by Conclusion of Law (COL) 4 corrected loop costs that reflect the revised "A" and "B" PLAN cost deck outputs for conduit and copper cable shown in the Pacific CRD.

29 In part because they do not reflect forward-looking adjustments, GTEC's cost studies do not adequately conform with the TSLRIC principles adopted in D.95-12-016.

30 If they are adjusted to use certain aspects of Pacific's cost studies as proxies, GTEC's cost studies can be used as a basis for setting prices for unbundled BNFs and services.

31 GTEC should be required to submit within one year from the effective date of this order, new cost studies that conform with our adopted TSLRIC principles.

32 Consistent with D.93-09-038, GTEC should be required to adjust its cost studies to assume that its

cost of capital is 10.51%.

33 GTEC should be required to adjust its cost studies to reflect the asset lives for the eight technology accounts set forth in the table in Section II.C. of this order. Otherwise, the depreciation schedules used by GTEC in its cost studies are reasonable.

34 GTEC should be required to adjust its composite income tax rate to reflect the changes we are ordering as to GTEC's assumed cost of capital and depreciation schedules.

35 GTEC should be required to adjust its loop cost studies by using the utilization factors set forth in the GTEC CRD. For copper feeder, GTEC should assume a utilization factor of 76%.

36 Use of the utilization factors set forth in COL 35 and in the GTEC CRD, when combined with the computational method GTEC used to compute volume-insensitive costs, will substantially reduce the volume-insensitive costs shown in GTEC's loop studies.

37 GTEC's maintenance and repair accounts should be adjusted downward by the same percentage that Pacific's rearrangement costs bear to Pacific's total maintenance and repair costs.

38 GTEC should be required to increase by 16% its estimates of marketing, sales and advertising expenses for its retail products.

39 GTEC's cost studies for distribution plant should be adjusted as described in Section II.F. of this decision to ensure that these studies reflect an assumed cross-over point of 12 kft.

40 The switches through which GTEC plans to offer its SPNP service should be programmed to have "99" as the default number of simultaneous call paths.

41 Methodologies for the recovery of switching and transport costs for SPNP and DNCF should be considered in the ongoing pricing, tariffing and unbundling hearings.

42 The costs submitted by GTEC on May 21, 1996, for the SPNP element and for the NRC relating to SPNP, are reasonable and should be adopted.

43 In the new cost studies to be submitted pursuant to COL 31, GTEC should assume the use of NGDLC in its loops.

44 GTEC's May 21, 1996 request to omit volume-insensitive costs from its cost studies for customer calling, CentraNet and other central office features should be denied.

INTERIM ORDER

IT IS ORDERED that:

1 Within 14 days after the effective date of this order, Pacific Bell (Pacific) shall submit to the Commission Advisory and Compliance Division (CACD) for its approval, and shall serve on all parties with whom Pacific has entered into a nondisclosure agreement consistent with the terms of the Novembaw Judges' Ruling in this docket (Appropriate Nondisclosure Agreement), an advice letter consistent with the terms of General Order (G.O.) 96-A that contains the adjustments to Pacific's Total Service Long Run Incremental Cost (TSLRIC) studies required by Conclusions Of Law (COL) 4 and 28 of this order and the related material set forth in the Compliance Reference Document (CRD) applicable to Pacific. Upon request of CACD, Pacific shall produce workpapers that show how it has made all of the required adjustments, and shall serve such workpapers upon all parties who have executed an Appropriate Nondisclosure Agreement with Pacific. This advice letter shall be subject to protest in accordance with G.O. 96-A.

2 Within 14 days after the effective date of this order, Pacific shall submit to CACD for its approval, and shall serve on all parties with whom Pacific has entered into an Appropriate Nondisclosure Agreement, a compliance filing that sets forth all of the adjustments to Pacific's TSLRIC studies required by this decision, as set forth above and in Appendix A and in the Pacific CRD, except for those adjustments described in Ordering Paragraph (OP) 1. The compliance filing required by this OP shall not be subject to protest. Upon request of CACD, Pacific shall produce workpapers that show how it has made all of the adjustments required by this OP, and shall serve such workpapers upon all parties who have signed an Appropriate Nondisclosure Agreement with Pacific.

3 Within 21 days after the effective date of this order, GTE California Incorporated (GTEC) shall submit to CACD for its approval, and shall serve on all parties with whom GTEC has entered into an Appropriate Nondisclosure Agreement, a new set of cost studies for all of the Basic Network Functions (BNFs) and services enumerated in Ordering Paragraphs (OPs) 4, 5, 6 and 7 of Decision (D.)

95-12-016, with two exceptions: (1) those services for which GTEC has been granted extensions of time that are still in effect, and (2) vertical servased services. Said new studies shall reflect all of the

adjustments required by this decision, as set forth above and in Appendix B hereto and in the CRD applicable to GTEC. Upon request of CACD, GTEC shall produce workpapers that show how it has made all of the required adjustments, and shall serve such workpapers upon all of the parties with whom GTEC has signed an Appropriate Nondisclosure Agreement.

4 Within one year after the effective date of this order, GTEC shall submit, consistent with the schedule set forth in Appendix C hereto, new cost studies for all of the BNFs and services enumerated in OPs 4-7 of D.95-12-016. Said new studies shall conform with the TSLRIC principles set forth in Appendix C to D.95-12-016, as explained and elucidated upon in that decision and in this one. The schedule set forth in Appendix C may be modified at any time by a ruling of the Administrative Law Judge(s) assigned to this proceeding.

5 GTEC's May 21, 1996 request to omit volume-insensitive costs from its May 1, 1996 cost studies for central office features is denied.

This order is effective today.

Dated August 2, 1996, at San Francisco, California.

P. GREGORY CONLON

President

DANIEL Wm. FESSLER

JESSIE J. KNIGHT, JR.

HENRY M. DUQUE

JOSIAH L. NEEPER

Commissioners

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APPENDIX A

APPENDIX B

APPENDIX C

See formal files for Appendixes A and B.

APPENDIX C

Schedule for Submission of New GTEC Cost Studies

On or before
the following number
of days after the
effective date of
~~Activity~~ the decision
GTEC files list of services and 60 days
methodology (including a listing
of the technologies that GTEC will
assume as "least cost technologies")
to be used in the calculation of
new TSLRICs.

Parties file comments on GTEC's 90 days
list of services and methodology.

GTEC files response to comments. 120 days

ALJ Ruling is issued deciding 180 days
upon appropriateness of GTEC's
list of services and methodology.

GTEC prepares new cost studies. 180 to 360 days

GTEC files new cost studies 360 days

(END OF APPENDIX C)

1. 0 Under the most usual form of physical collocation, an LEC makes space available in its central offices for equipment owned by competitive access providers, who then have the right of entry for maintenance and repair. (**See** D.95-04-073, mimeo. at pp. 5, 8.)
2. 0 Virtual collocation is defined as a situation in which "the LEC owns and maintains the circuit

terminating equipment, but the CAP designates the type of equipment that the LEC must use and strings its own cable to a point of interconnection close to the LEC central office." (**Bell Atlantic v. FCC**, 24 F.3d at 1444.)

3. 0 **Memorandum Opinion and Order**, 9 FCC Rcd 5154 (July 14, 1994).

4. 0 Two petitions for modification have been granted with respect to D.95-04-073. The first was in D.95-08-037, which allowed Pacific to file interconnection rates below direct embedded cost (DEC) in order to maintain parity with Pacific's interconnection rates at the FCC. The second petition was granted in D.95-12-020, which accepted a settlement arrangement under which Pacific and GTEC would use the same local transport rate structure as at the FCC, but with a network interconnection charge (NIC) substituted for the FCC's higher residual interconnection charge (RIC).

5. 0 Assigned Commissioner's Ruling Proposing Cost Study Methodology and Scheduling Workshop and Prehearing Conference Thereon.

6. 0 Because of the added conceptual problems they posed, cost studies for private line services, which were dubbed "Round III" studies, were not due until April 10, 1996. By virtue of extensions of time granted by the Executive Director, this due date was ultimately extended until June 12, 1996.

7. 0 The assigned ALJs also granted the parties until January 12, 1996, to submit comments on a revised procedural schedule that the ALJs had presented at the PHC.

8. 0 The ALJs also rejected an alternative procedural schedule proposed by the California Telecommunications Coalition (Coalition), under which evaluation of the cost studies and hearings on pricing issues would proceed on separate tracks, until being melded together late in the Summer of 1996. The ALJs rejected this alternative because, as a practical matter, it required two ALJs, and with one of the ALJs' impending leave of absence, it would not be possible to assign a second ALJ in view of the Commission's many other urgent proceedings. (Administrative Law Judges' Ruling Setting Forth Final Schedule For Review Of Cost Studies And Pricing Hearings Thereon, mimeo. at pp. 5-8.)

The members of the Coalition are MCI Telecommunications Corporation (MCI), AT&T Communications of California, Inc. (AT&T), Sprint Communications Company, L.P., California Association of Long Distance Telephone Companies, Toward Utility Rate Normalization (TURN), California Payphone Association (CPA), California Cable Television Association (CCTA), ICG Access Services, Inc., Time Warner AxS of California, L.P., MFS Intelenet, Inc. and Teleport Communications Group (TCG). As the Spring progressed, CCTA and TCG increasingly took to filing their own separate pleadings.

9. 0 Assigned Commissioner's Ruling Extending Procedural Schedule And Disposing Of February 29, 1996 Emergency Appeal By Four Members Of The California Telecommunications Coalition.

10. 0 Administrative Law Judge's Ruling Setting Forth Workplan For Completion Of Data Request Responses By Pacific Bell, issued March 29, 1996. With the departure of one of the two ALJs for a leave of absence, only one ALJ remained assigned to the case.

11. 0 11 Assigned Commissioner's Ruling Shortening Time For Responses To The April 12, 1996 Appeal By The California Telecommunications Coalition From the March 25, 1996 Assigned Commissioner's Ruling, issued April 19, 1996.

12. 0 The parameters of an appropriate nondisclosure agreement for this proceeding were set forth in the Administrative Law Judges' Ruling Concerning Proposed Protective Order Of GTE California Incorporated, issued in this docket on November 16, 1995.

13. 0 In the event a party who has not signed a nondisclosure agreement consistent with the terms of the November 16, 1995, ALJs' Ruling seeks access to one of the CRDs, that party should first attempt to negotiate an appropriate nondisclosure agreement with the affected LEC. In the event this effort is unsuccessful, the party should file a motion pursuant to Commission Resolution ALJ-164. In such a motion, the burden of proof will be on the moving party to demonstrate why access should be granted.

and what steps the party is prepared to take to ensure that the confidential data is safeguarded.

14. 0 "Common costs," "shared costs," "volume insensitive costs," and other terms crucial to this debate are defined in the Consensus Document immediately after the statement of the nine costing principles. (D.95-12-016, App. C, pp. 5-6.)

15. 0 "Spare capacity" and "fill factors" are different ways of expressing the same idea. If a network has 30% spare capacity, then the network's fill factor is 70%.

16. 0 We reserve judgment on the Coalition's contention that in Pacific's cost studies, low- and average-income households are bearing the costs of additional access lines for high-income households. In this and the ongoing pricing phase of this proceeding, we are establishing statewide average costs for the BNFs and services identified in the ALJ Ruling of March 25, 1996. The Coalition's argument is one that should more appropriately be considered in a future proceeding to determine geographically deaveraged costs.

17. 0 The Ready-To-Serve study is discussed at page 34 of the Coalition's April 3 comments, and in paragraphs 88 and 89 of Mr. Scholl's April 17 declaration.

18. 0 This expectation is also consistent with the commentary to Consensus Costing Principle No. 6, which provides in pertinent part:

"This principle assumes that a TSLRIC analysis should be based on existing or planned location of switching and outside plant facilities and assumes complete replacement of the existing facilities using the least-cost, most efficient technology." (D.95-12-016, App. C., p. 4.)

19. 0 Both DNCF and RCF are forms of interim local number portability (ILNP), which -- as we explained in D.96-04-052 -- is essential if local exchange competition is to develop:

"With the advent of competition for local exchange service, we recognized the importance of assuring that consumers could retain use of their existing telephone numbers when changing providers of local telephone service. . . In the absence of service-provider number portability, customers of the LEC would have to forfeit their existing telephone numbers as a condition of switching to a new local provider. This impediment would be an unacceptable constraint on the development of a competitive market." (Mimeo. at p. 2.)

20. 0 This NRC calculation appears in Binder 8, Tab 3 of Pacific's studies and was first submitted on January 31, 1996.

21. 0 EISCC is the cross-connect between the LEC's channel termination or interoffice channel and a collocator's point of termination within the LEC central office. EISCC was one of the "consensus BNFs" agreed upon by the parties during the July 1995 workshops. (See D.95-12-016, App. C., p. 11.)

In the CRD, we have reduced Pacific's costs for the EISCC service and BNF because we think Pacific has unreasonably assumed a fiber mini-span in developing EISCC costs. Pacific should re-estimate EISCC investment costs assuming standard cabling, as set forth in the CRD.

22. 0 We recognize that in future years, this situation may change. With the advent of facilities-based competition, facilities-based CLCs will be supplying their own links. In that situation, it may be appropriate to assign an NRC to DNCF or EISCC comparable to what Pacific now assigns for the initial service order on a link. However, until meaningful facilities-based competition develops, the method of assignment set forth in the text is the one most consistent with the Consensus Costing Principles.

23. 0 The market based ROR was not an issue because the mechanism that would trigger its reexamination had not come into play. The mechanism was triggered in 1996, however, and pursuant to it Pacific filed Application 96-02-052, which is pending.

For an explanation of the ROR triggering mechanism, see D.94-06-011 (55 CPUC2d at 25). For an explanation of the relation between the market based ROR and the "benchmark" ROR, see D.89-10-031 (33 CPUC2d at 163).

24. 0 The term "Duquesne", as used by Mr. Scholl in his May 24 declaration (at paragraph 89), comes from the U.S. Supreme Court's decision in Duquesne Light Co. v. Barasch, 488 U.S. 299 (1988). In that case, the Supreme Court reaffirmed the rule of FPC v. Hope Natural Gas, 320 U.S. 591 (1944), that as long as investors are allowed a reasonable opportunity to earn a fair return on their prudently-incurred utility investments, then there cannot be a regulatory "taking" under the Fifth Amendment to the United States Constitution. However, the Supreme Court also noted in Duquesne that decisions by state regulatory agencies that "arbitrarily switch back and forth between methodologies in a way which required investors to bear the risk of bad investments at some times while denying them the benefit of good investments at others would raise serious constitutional questions." (488 U.S. at 315.) The Duquesne Court rejected the suggestion that the "prudent investment rule" was constitutionally required, and noted that circumstances may require that regulatory agencies have latitude to develop hybrid methods of ratemaking. The Court noted that where market-based tests are used as part of such methods for electric ratemaking, "the emergent market for wholesale electric energy could provide a readily available objective basis for determining the value of utility assets." (Id. at 316, n. 10.)

25. 0 SFAS 71 prescribes how firms under regulation must prepare their financial statements, and it allows companies to account for assets and liabilities as directed by regulators. Under SFAS 71, public utilities are allowed to amortize investments over longer time periods than is allowed under Generally Accepted Accounting Principles.

26. 0 These depreciation rates are set in our so-called "represcription" proceedings. The results of the most recent such proceeding are set forth in D.95-11-009.

27. 0 "POTS" refers to "Plain Old Telephone Service."

28. 0 "TTD" stands for Transport Technology Deployment. This was a program undertaken by Pacific in the early 1990s to award contracts only to the least-cost providers of fiber, digital loop carrier and fiber optic terminals. (5/24 Schaaf Declaration, para. 19.)

29. 0 These include such features as call waiting and call forwarding. They are available to both business and residential customers.

30. 0 We note that all parties to this proceeding will have an opportunity to protest the calculations contained in this advice letter, as is customary with G.O. 96-A filings.

31. 0 Because we are ordering a change in GTEC's assumed cost of capital, GTEC will have to adjust its composite income tax factor to reflect this change. The tax adjustment should also include the changes in depreciation schedules that we are ordering in Section II.C. *infra*.

32. 0 GTEC also notes that its rates in the chart "were calculated prior to the time GTE discontinued FAS-71 accounting treatment and wrote down the value of the assets on its financial books . . . If GTE were performing these cost studies today, it would use the Pacific rates, since GTE [now] . . . uses rates identical to Pacific's for the eight listed accounts. However, it is important to note that the rates GTE used did reflect the same forward-looking nature as Pacific's." (Id. at 7.)

33. 0 We will also order the use of a Pacific proxy to make GTEC's marketing, sales and advertising expenses more forward looking. In keeping with the discussion in Section I.L. *supra*, we direct GTEC to increase by 16% the 1994 booked expenses for Accounts 6612 and 6613 that GTEC used to estimate sales and advertising expenses for its retail products.

34. 0 Unlike Pacific, GTEC conducted its loop studies by density zones. For each zone, GTEC assumed a different average distribution length. The length of the distribution (which is always copper), plus the length of the feeder, equals the total loop length.