

Section 1: CBT's Cost Studies

B. CBT's Model Assumptions and Methodology

2. CBT's Inappropriately Low Fill Factors

Q. Aside from the question of whether or not they fit the definition of a long run study, would you agree with the Company's cable fill factors?

A. No. As I said earlier, a classic long run cost study optimizes the amount of plant investment to best match the volume of output. It is not intended to be a simulation of the real-world situation, in which the carrier has installed plant over a period of many decades, and periodically comes in and overbuilds a particular route by adding additional cable, or replacing the older cable.

But even if one were to ignore this definitional problem, I believe the Company's fill factors are too low, and thus it has included an unnecessarily large amount of spare capacity in its studies. In particular, the Company used unreasonably low fill factors for distribution cable (.35). [Response to PUCO Staff Data Request No. 66.0, part 13.] The only plausible economic rationale for including so much spare distribution cable would be in anticipation of potential growth over the life cycle of the plant. However, if one is going to go beyond the current volume of demand, to consider future capacity needs, then the appropriate calculations would be quite different from those prepared by CBT in this proceeding. In such a life cycle study, it would be necessary to offset the costs of the extra capacity installed to meet future growth with the present value of the revenues which are anticipated to be generated by the future growth in demand, in order to get a proper matching of costs and benefits over the entire future time period. Properly handled, the cost of extra capacity which is installed to serve future demand would not place a substantial burden on current ratepayers, because it would be recognized that this extra capacity will be paid for by future ratepayers.

If one doesn't want to complicate the issue by considering future revenue streams, it would at least be necessary to adjust the quantities used in calculating the final cost results, to ensure a reasonable level of internal consistency. This was not done in CBT's study. As a result, there is a complete mismatch between the quantity of distribution cable that was modeled and the quantity of loops (network elements) that was used in deriving the proposed price per unbundled loop.

What CBT has done significantly overstates the cost of distribution cable per loop. It has used an existing network design with a very high fraction of unused distribution cable (presumably installed in anticipation of future growth), without giving any consideration to the larger volume of loops that will eventually be derived from that spare capacity in future years. Stated differently, CBT has priced out a relatively large system, then taken the resulting costs and spread them over a much smaller quantity of units. The effect is to inflate the estimated cost per loop. In the context of its TELRIC study, this overestimation would effectively force CBT's competitors to pay for distribution capacity that they won't be using, and which will actually be used and paid for by future customers. In effect, the potential exists for a "double dip" with the cost of this excess capacity being paid for once through higher than necessary unbundled loop rates and again through revenue increases which will occur as the spare capacity is absorbed through growth in demand which occurs over time. In the context of CBT's LRSIC studies, this overestimation of loop costs contributes to the overestimation of residence local service costs and furnishes erroneous support to CBT's subsidy argument.

Q. The rationale behind the low fill factors clearly assumes substantial growth in the Company's network. Is this a valid assumption?

A. Not necessarily. The entire thrust of the 1996 Telecom Act was to break down barriers to entry, to encourage the established local exchange carriers to enter the interLATA long distance market, to encourage the established IXCs and other NECs to enter the local exchange markets, and to generally encourage a competitive free-for-all. While it is exceedingly difficult

to predict how this will all play out, if the intent of Congress is to be achieved, it seems apparent that the incumbent LECs like CBT will have to lose market share. To the extent CBT loses market share to other facilities based carriers, some of its spare capacity may never be needed or used.

Clearly, this issue isn't adequately captured in CBT's model, which includes many more distribution cable pairs than it actually needs to serve 100% of the existing market. It isn't plausible to assume that every business and household will continue to be served by CBT. If the market is expanding rapidly, surely some facilities based entry will also occur. This will siphon off some portion of the growth, making such low fill factors even less appropriate, since they imply a level of spare capacity that may never be needed or used. In fact, the Company recognizes that possibility in its Application:

Current and future competitive networks will be fiber optic based, and additional competition will continue to develop via wireless technology as well as through other technology developments. CBT has already lost business to competitors offering access services to corporate customers, *and stands to lose residential business to competitors planning to use their own facilities for local service.* Additional companies are poised and ready to start doing business in CBT's territory and can do so within a very short time. [Application, Exhibit 3, p. 3, emphasis added.]

Q. Is it then your conclusion that CBT's assumed fill factors are in conflict with its argument that market share losses are likely to occur in the future?

A. Yes; the Company's position is not internally consistent. CBT's fill factors for loop plant are based on historical ratios that largely reflect monopoly market conditions. It simply isn't consistent for the Company to assume that facilities based competitive entry will occur, and yet to analyze the costs of CBT's network with enough spare capacity to serve the entire existing market several times over. If this combination of assumptions is accepted by the Commission, the Company's competitors will be forced to pay for large amounts of copper distribution cable which they will never use and which may never be used by anyone! By no stretch of language can this modeling approach be termed optimally efficient.

