For example, SBC argues that the Commission should remember that this is not a ratemaking proceeding"[35] while BellSouth argues that the cost information it has provided should not be considered with respect to UNEs, universal service, or for any purpose other than verifying the increase to the SLC cap.[36] These arguments are clearly intended to conceal the fact that when compared to reasonable cost-based rates the RBOCs' cost estimates are unreasonable and do not justify an increase to the SLC cap.

Verizon also attempts to cloud the issue by separating access charges from loop and port costs, and by implying that the cost review taking place in this proceeding is unnecessary. Verizon argues that even though "the per-line costs in these studies are higher in some cases that the Price Cap CMT per-line and lower in others...in neither case should they be used to change the scheduled increases in the SLC caps" because ..."the price cap system is not based on cost."[37] Verizon is essentially arguing that the FCC should ignore all of the cost data provided in this proceeding and simply authorize an increase to the SLC cap. This argument is utterly ridiculous; it fails to acknowledge that the sole purpose of this proceeding is to examine "forward-looking cost information...to address whether an increase in the SLC cap above $5.00 is warranted."[38]

Additionally, Verizon claims that the Court of Appeals has endorsed the FCC's previous "rejection of arguments that the Commission should have used forward-looking costs to restructure access charges."[39] However, Verizon fails to cite the latter portions of this decision where the Court of Appeals states, "the FCC accordingly has delayed conducting a forward-looking cost-study because of time constraints and the technical uncertainty involved in carrying out a reliable cost study" and that the Court was "further assured [in supporting this conclusion] by the FCC's promise to conduct a cost-study before the SLC cap is set to rise over five dollars."[40] Therefore, contrary to Verizon's argument, a full reading of the court's decision confirms the fact that the FCC is obligated to review forward-looking cost studies in this proceeding to determine if it is appropriate to approve the scheduled increase to the SLC cap.

Not only are Verizon's attempts to sever the ties between access charges and the underlying costs misleading, but Verizon also completely ignores the fact that the FCC and many state commissions rely on economic cost data to judge the reasonableness of rates in regulated environments. Furthermore, Verizon fails to acknowledge that the

[35] SBC, Executive Summary, Page 3.

[36] BellSouth Study, Page 1.

[37] Verizon Study, Page 6.

[38] CALLS Order at ¶83.

[39] Verizon Study, Page 6.

[40] Texas Office of Public Utility Counsel vs. FCC. US Court of Appeals, Fifth Circuit, Case No. 00-60434

courts have upheld the FCC's reliance upon forward-looking economic cost data to establish mechanisms to encourage economic efficiency.[41]

3.6 The States have Established UNE Rates that Provide a Reasonable Benchmark for Forward-Looking Cost Estimates

The UNE loop and port rates established by the states provide reasonable forward-looking cost estimates because they are the result of thorough proceedings governed by the FCC's rules. When outlining its forward-looking cost methodology the FCC noted:

> "that incumbent LECs have greater access to the cost information necessary to calculate the incremental cost of the unbundled elements of the network. Given this asymmetric access to cost data, we find that incumbent LECs must prove to the state commission the nature and magnitude of any forward-looking cost that it seeks to recover in the prices of interconnection and unbundled network elements."[42]

As a result the state commissions have conducted lengthy, often multi-phased, investigations into the forward-looking cost of providing UNEs involving "extensive workshops, hearings, and other types of discovery."[43] The veracity of these proceedings has been supported by the ILECs and verified by the FCC in a number of 271 proceedings.[44] Therefore, contrary to what the ILECs have argued, it is appropriate to

[41] The Eight Circuit Court states: "The Seventh Circuit, for example, explained '[I]t is current and anticipated cost, rather than historical cost that is relevant to business decisions to enter markets . . . historical costs associated with the plant already in place are essentially irrelevant to this decision since those costs are 'sunk' and unavoidable and are unaffected by the new production decision.'" MCI Communications v. American Telegraph & Telephone Company, 708 F.2d 1081, 1116-17 (7th Cir. 1983), cert. denied, 464 U.S. 891 (1983). Here, the FCC's use of a forward-looking cost methodology was reasonable. The FCC sought comment on the use of forward-looking costs and concluded that forward-looking costs would best ensure efficient investment decisions and competitive entry. Iowa Utilities Board vs. FCC, US Court of Appeals, Eighth Circuit, Case No. 96-3321 (and consolidated cases) (emphasis added), July 21, 2000, Page 10.

[42] Local Competition First Report and Order, CC Docket No. 96-98, August 8, 1996, Paragraph 680.

[43] In the Matter of Joint Application by SBC Communications Inc., Southwestern Bell Telephone Company, and Southwestern Bell Communications Services, Inc. d/b/a Southwestern Bell Long Distance for Provision of In-Region, InterLATA Services in Kansas and Oklahoma, CC Docket No. 00-217, released January 22, 2001, at Paragraph 49. ("Kansas 271").

[44] RBOCs in seven states have been granted permission to provide in region long distance service after showing that they have complied with the 14-point checklist outlined in Section 271 of the 1996 Telecommunications Act. By requesting approval of its 271 application in a given state an RBOC indicates that it believes appropriate cost based UNE rates have been established by the state regulatory board. In approving a 271 application the FCC confirms that the state commission has fulfilled its duty to conduct a thorough proceeding and has established cost based UNE rates.

judge the accuracy of their forward-looking cost estimates by comparing them to other reasonable cost estimates. The FCC has relied upon such comparisons in the past and it should continue to do so in this proceeding.[45]

3.7 The ILECs' Cost Estimates Overstate the Interstate Portion of Loop and Port Costs, and thus cannot be Used to Justify Increases in the Subscriber Line Charge

It is evident that the ILECs hope the FCC will base its decision to raise the SLC cap on cost studies that wholeheartedly deviate from the cost methodology espoused by the FCC and sound economic theory. These firms have also gone to great lengths to convince the FCC that it would be improper to compare the results of their models to UNE rates or to model runs from any other cost-based proceeding. Obviously, the ILECs would prefer to have their cost estimates judged in a vacuum because they are upwardly biased and do not provide accurate cost estimates by any reasonable measure.

The cost comparisons depicted in Table 1 and Appendix C provide overwhelming evidence that the cost estimates provided by the ILECs in this proceeding cannot be relied upon to verify the scheduled increase to the SLC cap.[46] On average, the ILEC cost estimates overstate the interstate portion of monthly loop and port costs by approximately $2.32 per month or more than 50% of the average cost of interstate access.[47] This suggests that the ILECs have overstated total (interstate and intrastate) UNE loop and port costs by an average of $8.40 per month.

Verizon's New Jersey numbers illustrate the disparity between the submissions in this proceeding and in other dockets. In this docket, the Company contends that the forward-looking cost of the loop and port is $29.31. Verizon Submission, Appendix D. In its 271 Application, the Company reports that the TELRIC cost of the UNE platform is $12.89. The UNE platform includes both the port and loop, as well as usage. Verizon characterizes the $12.89 value UNE platform as a "reasonable" TELRIC price for the unbundled network element. Application by Verizon New Jersey for Authorization to Provide In-Region Interlata Services in New Jersey, CC Docket No. 01-324, December 20, 2001, pp. 94, 98. In order to match the $29.31 value filed in this proceeding with the $12.89 that Verizon supports in its 271 application, the Company must believe that retail costs are approximately $17 per month higher than UNE costs.

[45] See for example, In the Matter of Joint Application by SBC Communications Inc., Southwestern Bell Telephone Company, and Southwestern Bell Communications Services, Inc. d/b/a Southwestern Bell Long Distance Pursuant to Section 271 of the Telecommunications Act of 1996 To Provide In-Region, InterLATA Services in Arkansas and Missouri, CC Docket No. 01-194, released November 16, 2001, at Paragraph 52. ("Arkansas 271").

[46] The State TELRIC SLC rates in Table 1 were derived from "A Survey of Unbundled Network Element Prices in the US," January 1, 2002, Billy Jack Gregg, Consumer Advocate, W.VA., http://www.cad.state.wv.us/Intro%20to%20Matrix%2002.htm

[47] In section 4.6, NASUCA has provided evidence indicating that the marketing costs associated with residential and single-line business exchange service are insignificant at approximately $0.09 per month. Therefore, the addition of marketing costs (assuming they are accurately measured by the ILECs) cannot

Appendix C also indicates that the current SLC cap of $5 allows for interstate access costs to be over-recovered in more than half of the 42 study areas in the comparison. As a result, consumers are charged more than $660 million dollars per year in excess of what the SLC is intended to recover. If the SLC cap is raised to $6, the inefficiency of CALLS will result in consumers being overcharged in excess of $1.5 billion dollars per year.[48]

What is particularly alarming about these conclusions is that the existing UNE loop and port rates established by the state commissions very likely overstate the actual forward-looking cost of providing voice grade residential and single-line business connection to the network. This is because UNE rates are based upon network configurations that assume more expensive materials for the provision of advanced services, such as additional fiber optic cables and universal digital line carrier systems, that are not necessary for basic voice services. Therefore, without such assumptions, the cost of providing a voice only network would result in lower UNE loop and port rates, further widening the gap between CALLS and efficient cost recovery.[49]

Table 1 -- Bell Operating Company CMT Revenue and Forward-Looking Cost Estimates

Holding Company	Study Area	Price Cap CMT Per Line	SLC from Carrier Cost Studies**	SLC based on TELRIC Costs	NASUCA Synthesis Model SLC Cost
Verizon	Washington DC	$ 3.81	$4.38-$6.05	$ 3.75	$ 3.07
Verizon	Maryland	$ 5.68	$5.58-$7.08	$ 4.74	$ 4.22
Verizon	Virginia	$ 6.53	$5.95-$7.55	$ 4.45	$ 4.37
Verizon	West Virginia	$ 8.21	$9.96-$12.39	$ 7.18	$ 7.33
Verizon	New Jersey	$ 6.21	$5.92-$7.33	$ 3.32	$ 3.97
Verizon	Pennsylvania	$ 6.00	$6.65-$8.45	$ 4.61	$ 4.28
Verizon	Delaware	$ 6.41	$4.83-$6.01	$ 4.29	$ 4.48
Verizon	New York/N. England	$ 6.41	$4.97-$6.24	$ 4.86	$ 4.37
SBC	SWBT-AR	$ 5.67	$ 7.33	$ 4.63	$ 5.97
SBC	SWBT-KS	$ 5.27	$ 8.39	$ 4.49	$ 4.92
SBC	SWBT-MO	$ 5.10	$ 6.66	$ 4.98	$ 4.95
SBC	SWBT-OK	$ 4.71	$ 7.86	$ 5.18	$ 5.26

be contemplated as a reasonable explanation for the ILEC cost estimates to be so high in light of the fact that the FCC estimate that the economic costs of marketing are $0.09 per month.

[48] This estimate includes the over-payments made by all customers, including residential, single-line business, and multi-line business customers.

[49] We note that the FCC has long-recognized that the cost of providing voice services is less than the cost of constructing a network for advanced telecommunications services. In the Matter of Federal-State Joint Board on Universal Service, CC Docket No. 96-45, FCC 98-279, October 28, 1998, Paragraph 70.

Holding Company	Study Area	Price Cap CMT Per Line	SLC from Carrier Cost Studies**	SLC based on TELRIC Costs	NASUCA Synthesis Model SLC Cost
SBC	SWBT-TX	$ 5.37	$ 7.86	$ 4.65	$ 4.26
SBC	Pacific Bell - CA	$ 4.41	$ 5.97	$ 4.04	$ 3.61
SBC	Nevada Bell- NV	$ 6.05	$ 7.15	$ 5.28	$ 4.81
SBC	SNET-CT	$ 5.71	$ 5.71	$ 4.55	$ 4.74
SBC	Ameritech-IL	$ 4.47	$ 5.96	$ 4.02	$ 4.03
SBC	Ameritech-IN	$ 5.53	$ 6.14	$ 3.54	$ 4.59
SBC	Ameritech-MI	$ 5.32	$ 6.85	$ 3.45	$ 4.67
SBC	Ameritech-OH	$ 5.37	$ 6.01	$ 3.04	$ 4.26
SBC	Ameritech-WI	$ 5.07	$ 6.23	$ 3.96	$ 4.29
BellSouth	Alabama	$ 7.84	$ 7.52	$ 5.79	$ 6.52
BellSouth	Florida	$ 7.84	$ 6.06	$ 4.73	$ 4.26
BellSouth	Georgia	$ 7.84	$ 6.42	$ 5.10	$ 4.70
BellSouth	Kentucky	$ 7.84	$ 8.25	$ 5.08	$ 6.45
BellSouth	Louisiana	$ 7.84	$ 7.64	$ 5.63	$ 5.60
BellSouth	Mississippi	$ 7.84	$ 9.88	$ 6.45	$ 8.46
BellSouth	North Carolina	$ 7.84	$ 6.82	$ 4.99	$ 4.81
BellSouth	South Carolina	$ 7.84	$ 7.51	$ 5.37	$ 5.61
BellSouth	Tennessee	$ 7.84	$ 6.83	$ 4.74	$ 5.70
Average		$ 7.84	$ 7.01	$ 5.14	$ 5.28
QWEST	Arizona	$ 7.27	$ 6.84	$ 6.54	$ 4.16
QWEST	Colorado	$ 6.64	$ 6.16	$ 6.13	$ 4.64
QWEST	Idaho-South	$ 8.48	$ 7.80	$ 7.36	$ 5.67
QWEST	Iowa	$ 7.08	$ 6.77	$ 5.96	$ 4.73
QWEST	Minnesota	$ 6.66	$ 6.36	$ 5.35	$ 4.39
QWEST	Montana	$ 10.21	$ 9.72	$ 7.77	$ 6.45
QWEST	Nebraska	$ 7.29	$ 6.93	$ 5.33	$ 5.26
QWEST	New Mexico	$ 8.24	$ 7.74	$ 6.19	$ 5.32
QWEST	North Dakota	$ 8.45	$ 7.98	$ 5.64	$ 4.69
QWEST	Oregon	$ 7.60	$ 7.17	$ 4.76	$ 4.71
QWEST	South Dakota	$ 9.00	$ 8.59	$ 6.44	$ 5.59
QWEST	Utah	$ 5.45	$ 5.04	$ 4.99	$ 3.92
QWEST	Washington	$ 5.64	$ 5.26	$ 4.96	$ 4.26
QWEST	Wyoming	$ 10.91	$ 10.29	$ 7.53	$ 7.16

** Verizon did not file SLC costs. Instead, Verizon filed forward-looking loop and port costs. These costs were translated into SLC costs. The upper limit equals 25 percent of the filed amounts. The lower limit equals the filed costs times the ratio of SLC retail cost divided by total retail cost.

4 Important Assumptions in the Studies Submitted by the ILECs are Flawed

Despite the lack of cost models and essential model inputs NASUCA was able to identify a number of significant methodological problems, unanswered questions, and inconsistencies that further undermine the value of the ILECs' cost studies. A brief sample of these issues, categorized by subject matter, follows.[50]

4.1 Capital Cost and Depreciation Estimates are not Transparently Presented in the Cost Studies Submitted by the ILECs

The capital costs assumed within a cost study have a significant impact on the cost estimates a model produces. However, none of the studies submitted by the RBOCs gives an adequate explanation of what these rates are and how they were developed. For example, SBC states "...the studies reflect the company cost of capital, taking into account the company's expected rate of return on investments and the opportunities and risks the company experiences within its industry."[51] SBC then adopts the FCC authorized 11.25 percent rate of return for determining its forward looking cost in its cost submission.[52] These two statements imply that SBC believes that 11.25 percent is its current cost of capital.

We doubt that SBC would ever sponsor testimony supporting that opinion. For example, in Connecticut SBC argued that its cost of money was 12.19%.[53] The fact that the two statements appear in the same filing shows how incomplete the filing is, and that the FCC cannot rely on it. Moreover, in many instances, SBC describes the numbers in its documentation "are illustrative only."[54] Clearly, the only conclusion that any reader of the document can come to is that the whole document is illustrative.

On the other hand, Verizon asserts that it uses its current cost of capital, but never states what that number is or how it determined the unknown number.[55] QWEST simply

[50] Section 8.5 addresses an additional flaw of the ILEC's studies -- their failure to address how digital-line carrier technology makes a portion of the loop investment traffic-sensitive.

[51] SBC Study, Attachment 1, Page 7

[52] SBC Cost Submission, Page 5 and Attachment 4, Page 2.

[53] Connecticut Department of Public Utilities, Application of the Southern New England Telephone Company for Approval of Cost Studies for Unbundled Network Elements, Docket No. 00-01-02, May 2, 2000, Transcript page 591.

[54] SBC Study at Page 4. Even though SBC claims that the figures it supplied are for illustrative purposes only, they nevertheless generate great concern because they are upwardly biased. For example at Attachment 2, Page 8 of its cost submission SBC shows a cost for a 48 pair aerial fiber cable of $9.10 installed while the FCC estimates the cost to be only $2.37 installed. See Inputs Order at Attachment A, Excel file "f99304a1" at tab "FIBRCABL".

[55] Verizon Cost Submission, Attachment D, Page 1.

states that its cost of capital is 11.7 percent without any explanation of how it arrived at that number.[56]

This same problem exists throughout the RBOCs' submissions with regard to depreciation. Depreciation lives and net salvage percentages have a significant impact on forward-looking cost estimates. NASUCA was unable to judge the reasonableness of the rates proposed by the RBOCs because these values were not provided with their cost submissions. Nor was there any documentation explaining how these enigmatic figures may have been derived. Without these inputs or adequate descriptions of their basis, the FCC cannot conclude that they are reasonable. Alternatively, as both current and previous cost submissions have shown it is very likely that these RBOC proposed values are unreasonable. For example, Verizon claims that its "cost studies utilize GAAP [Generally Accepted Accounting Practices] depreciation lives"[57] even though the FCC has already explicitly rejected this proposal in its Inputs Order, stating:

> "the projected-life values currently used by LECs for financial reporting purposes are inappropriate for use in the model. In addition, the commenters proposing these values have not explained why the values used for financial reporting purposes would also reflect economic depreciation. The depreciation values used in the LECs' financial reporting are intended to protect investors by preferring a conservative understatement of net assets, partially achieving this goal by erring on the side of over-depreciation. These preferences are not compatible with the accurate estimation of the cost of providing services that are supported by the federal high-cost mechanism."[58]

Moreover, the FCC also found that the firms supporting this proposal:

> "offer no specific evidence that this displacement [of their property] will occur at greater rates than the forward-looking Commission-authorized depreciation lives take into account. The record is particularly silent regarding the displacement of technologies associated with the provision of services supported by the federal high-cost mechanism. We do not believe that the LEC industry data survey's projected lives have been adequately supported by the record in this proceeding to justify their adoption."[59]

---

[56] QWEST Cost Submission, Page 5.

[57] Verizon Study Attachment D, Page 1.

[58] Inputs Order at ¶429.

[59] Inputs Order at ¶428.

The conclusions reached in the Inputs Order are equally applicable here. The universal service cost model is used to determine the cost of providing basic voice services, not advanced telecommunications services. In this proceeding, the Commission has set out to identify the cost of providing retail voice grade access to the public switched telephone network.[60] Therefore, for the same reasons provided by the FCC in the Inputs Order it is impossible for the FCC to conclude that any of the ILECs' inputs properly reflect the cost of providing voice grade access to the public switched network.

4.2 Shared and Common Costs are not Properly Allocated in the Cost Studies Submitted by the ILECs

According to SBC, it calculated shared and common costs including such costs as uncollectibles, call completion, and customer services.[61] What is not explained is why uncollectibles are not assigned directly to the service from which they are generated or why call completion, a traffic-sensitive cost, is included in a study that purports to identify non-traffic-sensitive costs.[62] SBC also does not explain how it accounted for the fact that the costs associated with customer services like connection and disconnection are already recovered in retail non-recurring rates. Economic efficiency is hardly enhanced by double-recovering connection and disconnection costs through the Subscriber Line Charge.

One must ask if shared and common costs were allocated to the interstate jurisdiction, and, if so, how? This question must be asked because SBC has included an assessment of state regulatory fees in its loop cost estimates.[63] This inflates loop cost estimates and is not appropriate. The FCC's rules require regulatory fees to be booked to Account 7240 – "Operating Other Taxes" and, per Sec. 36.412(c), they should then be assigned jurisdictionally based on how they are assessed. SBC has included in its cost studies an expense that is already allocated to the state jurisdiction; hence the company is attempting to use the SLC to double recover this expense.

The cost submission of Sprint also illustrates the need for the FCC to take a closer look at the development of the model inputs proposed in this proceeding. Sprint incorrectly assigned 100% of common costs to the loop. Unsurprisingly, Sprint has not explained why it feels it is appropriate to recover 100% of the firm's common costs through the Subscriber Line Charge. Nevertheless, even if Sprint had provided an explanation, this

[60] CALLS Order, Paragraph 83.

[61] SBC Study, Executive Summary, at Page 5.

[62] Verizon also lumps "all retail costs for marketing, customer service and support, and billing expenses" into its loop cost calculations. See Verizon study Attachment D, Page 1. However, Verizon does not explain why it is appropriate to consider, for example, the marketing cost associated with caller number identification, but not the revenue of this high margin service. Should the SLC cap be increased to subsidize the marketing of vertical services?

[63] SBC Study, Attachment 2, at Page 33.

practice is still improper and contrary to previous decisions of the FCC because it over-allocates common costs to loop facilities.[64]

4.3 No Information is Provided Regarding Outside Plant Assumptions in the Cost Studies Submitted by the ILECs

The ILECs did not provide any meaningful information regarding outside plant inputs in their submissions. SBC did indicate that it used proxy information because the company did not have the time necessary to gather comprehensive state specific data within the time constraints of this proceeding.[65] SBC claims that proxy information was selected from states with "similar characteristics" but there is no explanation of why, for example, it considers cost information for outside plant in Missouri to be representative of costs in Connecticut, Illinois, Michigan, Nevada, Ohio, and Wisconsin.[66]

The cursory information provided by SBC indicates that there are significant flaws in its studies that overstate the cost of providing voice access. For example, SBC claims that its loop study employs a weighted average of two possible drop cable configurations - a single pair and two pair configuration.[67] Not only does SBC fail to supply this figure or its derivation, but also the assumption that a customer premises would be connected by a drop containing only a single twisted pair is ludicrous and results in an overstatement of costs.[68]

---

[64] "We conclude that a second reasonable allocation method would allocate only a relatively small share of common costs to certain critical network elements, such as the local loop and collocation, that are most difficult for entrants to replicate promptly (i.e., bottleneck facilities). Allocation of common costs on this basis ensures that the prices of network elements that are least likely to be subject to competition are not artificially inflated by a large allocation of common costs." See: In the Matter of Implementation of the Local Competition Provisions in the Telecommunications Act of 1996, CC Docket No. 96-98 and Interconnection between Local Exchange Carriers and Commercial Mobile Radio Service Providers CC Docket No. 95-185. First Report and Order, released August 8, 1996 at ¶ 696.

[65] SBC Study, Attachment 1, Page 7.

[66] It is interesting to note that SBC attributes the use of proxy information to the abbreviated time schedule set for this proceeding. This is particularly interesting because as a sponsor of the CALLS proposal the company should have been aware that it would be required to submit a detailed forward-looking cost study in this proceeding as far back as May 31, 2000 when the CALLS Order was issued. SBC could also have requested that the FCC extend the time schedule of this proceeding and postpone the scheduled SLC cap increase so that more appropriate cost submissions could be prepared. SBC chose to do neither.

[67] SBC Study, Attachment 1, Page 9.

[68] This assumption overstates costs because most of the cost of providing drops to customers is associated with labor and cable sheath. For example, assume that the typical residence has 1.2 pairs in service, and it costs $0.80 per foot to place a drop cable and $0.01 per pair foot in materials. It follows from SBC's assumption that it costs $0.81 per pair foot to provide a given percentage of drops. Alternatively, when it is assumed that every drop contains at least two pairs of cable the cost per pair foot is only $0.68 [($0.80+2*$0.01)/1.2].

In its submission, SBC claims that its loop cost calculations include cable support structures and a mix of distribution cables that varies by geographic zone, but neither the actual percentages nor the methodology behind such values are provided.[69] SBC also estimates the distance length of distribution cables. However, neither this distance nor its derivation is provided.

SBC assumes that Universal Digital Loop Carrier ("UDLC") will be used 75% of the time while Integrated Digital Loop Carrier ("IDLC") is only used 25% of the time.[70] Although the company agrees that IDLC is more efficient,[71] and has previously used IDLC in cost submissions to the FCC,[72] SBC does not explain why forward-looking IDLC systems are not used exclusively throughout its allegedly forward-looking model as required by the FCC.[73] IDLC is the appropriate technology for the products being studied because there is no need to send the loops through an expensive UDLC channel bank.

SBC claims that fiber cable size is generally determined by the study area but limits the cable sizes to 24, 48, or 216 fibers per cable. SBC does not explain why it is efficient to limit cable sizes to these possibilities when the FCC acknowledges that an efficient solution to sizing fiber cable recognizes nine different fiber cable sizes.[74]

4.4 Information on Fill Factors is not Provided in the Cost Studies Submitted by the ILECs

Fill factors are used to increase per line costs of various facilities to recover the cost of unused network capacity that results from breakage, customer churn, and near term growth in demand. All else being accurate, if fill factors are assumed to be unreasonably low, a model will provide estimates of an inefficient network and costs will be overstated. This is because a relatively small number of lines in service will be

---

[69] SBC Study, Attachment 1, Page 10.

[70] Verizon makes this same mistake because its model assumes that electronics are necessary at both ends of a fiber loop (UDLC) rather than the fiber being terminated directly to the switch with IDLC. See Verizon Attachment D at Page 4.

[71] SBC Study, Attachment 1, Pages 10 and 16.

[72] "The DLC placements in the BCPM uses Integrated Digital Loop Carrier technology. This technology eliminates many of the costs associated with standard or "universal" systems." "Benchmark Cost Proxy Model: Model Methodology," Pacific Bell, Sprint, and U S West, January 30, 1997, Page 24.

[73] In modeling a forward-looking network the FCC required the use of GR-303 capable hardware on IDLC systems. See: In the Matter of Federal-State Joint Board on Universal Service CC Docket No. 96-45 and Forward-Looking Mechanism for High Cost Support for Non-Rural LECs CC Docket No. 97-160. Tenth Report and Order, released November 2, 1999. At footnote 593. This conclusion is also supported by the New Jersey Board of Public Utilities which stated that "that the use of 100 % IDLC is an appropriate and realistic forward-looking assumption." Docket No.TO00060356 at Page 6.

[74] See Inputs Order, Attachment A, Excel file "f99304a1" at tab "FIBRCABL".

responsible to recover the cost of an inefficient level of excess capacity. Since the RBOCs failed to provide the fill factors used in their cost studies, it is impossible to determine if the RBOCs' application of fill rates result in accurate or overstated loop cost estimates. SBC did, however, indicate that it used actual or embedded fill rates in its study.[75] This in itself presents a credible reason to reject this study because the FCC explicitly rejected SBC's use of actual fill in a recent 271 proceeding because it failed to consider forward-looking fill or that the fill factor would increase over time.[76]

4.5 Other Inconsistencies and Unstated Assumptions in the Cost Models also Call into Question the Efficacy of the Models used by the ILECs

In addition to the many fundamental problems identified in the cost submissions there are contradictions that call into question the efficacy of the models. For example, SBC claims that when feeder lengths exceed 12k feet, fiber feeder and DLC systems were modeled because they are the most efficient loop design.[77] However, SBC later claims that copper feeder is assumed for all loops whose length is less than 15k feet.[78]

Verizon does not explain why it is appropriate for its Link Cost Model to assume 100% fiber feeder, but this same assumption is inappropriate to use in the Loop Cost Analysis Model. Apparently Verizon cannot decide which network configuration is efficient and forward-looking.

There are a number of other issues that the RBOC cost submissions failed to discuss and/or provoked serious questions that must be considered.

- Loop length is a significant driver of overall loop costs. Therefore, how a model determines customer location will have a significant impact on cost estimates. While this is generally a heavily discussed issue in other cost proceedings, the RBOCs have completely ignored this topic in their submissions.[79]

---

[75] SBC Study, Attachment 2, Pages 27-28, 30-31. Verizon also claims to have used actual state specific fill factors in its studies. Verizon Study, Attachment D, Page 2.

[76] In the Matter of Joint Application by SBC Communications Inc., Southwestern Bell Telephone Company, and Southwestern Bell Communications Services, Inc. d/b/a Southwestern Bell Long Distance for Provision of In-Region, InterLATA Services in Kansas and Oklahoma, CC Docket No. 00-217, released January 22, 2001, at Paragraphs 79-81 ("Kansas 271").

[77] SBC Study, Attachment 1, Page 10.

[78] Id.

[79] See, for example, Verizon study Attachment D, at Page 9. It is interesting to note that SBC did offer a halfhearted explanation of how it estimated loop lengths in its study. However, its explanation is insufficient and faulty. SBC asserts that its model correctly estimates the length of the average loop in part because "the larger the population of loops the greater the chance that a random sample will be representative." This is incorrect. The representative quality of a random sample depends upon the size of the sample, and the variance of the underlying population, not the size of the population.

- The RBOCs have not explained how they accounted for the fact that structures like conduit and poles are shared. A portion of support structure costs must be assigned to reflect the fact that other firms, such as cable television, and electric, gas, and water utilities, often co-own these facilities.[80] Additionally, these studies must reflect the fact that a portion of "Telco assigned" support structure is also used to provide interoffice and dedicated transport. Without accounting for sharing among multiple firms and multiple services loop costs will be inflated. Absent any discussion the FCC can only conclude that 100% of structure costs were assigned to the local loop by the ILECs. This assignment is inappropriate.

- The RBOCs have failed to present any information regarding how OSS transition costs are handled. Since this discussion is conveniently absent, NASUCA is concerned that a portion of these costs are being assigned to the loop and proposed to be recovered by the SLC.

- The local loop provides telecommunications firms with the ability to provide a customer with local and long distance voice communications and advanced telecommunications services like xDSL. Conspicuously absent from the RBOCs cost submissions is any discussion of how the provision of xDSL affects the way in which the cost of the loop should be allocated. In state proceedings, SBC and Qwest have argued that 50% of the cost of a loop used for data and voice should be allocated to DSL service (See Section 7.1 for a summary of the ILECs' position that the loop is a shared cost).

4.6 Forward-Looking Marketing Expenses are Not Incorporated into the ILEC Cost Studies

Marketing expenses are incurred to promote particular product lines, retain or attract customers, and to enhance the general reputation of the carrier. It is generally acknowledged that telephone marketing expenses are incurred to promote vertical and enhanced services and to manage the special needs of business customers. Seldom, if ever, has there been an advertisement to encourage a customer to purchase your genuine telephone subscriber line service. Due to the requirement to advertise the availability of service, the Synthesis Model includes a limited marketing expense as part of the forward-looking cost of universal service.[81] Since there are no other forward-looking marketing costs associated with the SLC, this marketing expense should be the maximum expense included in a forward-looking cost study.

---

[80] Inputs Order, Paragraph 241.

[81] 47 U.S.C. Section 214(e)(1)(B), see also Inputs Order Paragraph 405.

The Synthesis Model sets the marketing expense value at $0.09 per month per line. This estimate includes marketing expenses for multi-line business customers, and thus, over estimates the forward-looking cost of residential and single-line business service. It excludes the marketing cost associated with vertical and new services, and thus, approximates the marketing cost associated with providing voice grade service.[82]

Because the ILEC forward-looking filed cost studies generally do not identify marketing expenses as a separate item, it is not clear how those studies treated this expense. The QWEST study, however, argues that marketing expense is not a forward-looking cost of access service. It notes that these "costs were not specifically associated with marketing the services in the baskets to which they had been previously allocated, but instead were a residual of the Part 32 accounting and Part 36 separations processes."[83] QWEST argues that "it would be inappropriate to compute a cap on the SLC using a forward looking estimate of marketing expenses associated with the services in the CMT basket."[84] QWEST provides the embedded cost of marketing, which averages $0.41 per line per month for its study areas.[85] Verizon also provides the embedded cost of marketing, which averages $0.54 per line per month for its Bell Operating Company study areas.[86] The Commission should rely on its own forward-looking marketing expense estimate rather than embedded cost data submitted by the ILECs.

4.7 Only Allowed Marketing Expenses should be Incorporated into SLC Rates

Marketing expenses are assigned to the interstate jurisdiction through the separation process. Marketing expenses were assigned to price cap baskets on the basis of the relative investment. Because a high percentage of interstate investment is assigned to the common line, the common line basket was responsible for the recovery of a high percentage of the marketing expenses. The FCC, however, has recognized the marketing expenses are not directly related to the provision of access services. The FCC noted that the ILECs do not advertise their access products to the IXCs. To align recovery with cost causation, the FCC removed these expenses from the traffic-sensitive baskets and transferred them into a new marketing basket. Cost recovery responsibility was primarily assigned to the multi-line business PICC, and through a cascading formula, remaining allowed revenues were recovered on a per minute basis. The SLC for primary residential customers and single-line business customers was excluded from this formula.

---

[82] Inputs Order, Paragraphs 403-407.

[83] QWEST cost filing at 7

[84] Id., at 7.

[85] Id., Attachment 1.

[86] Verizon Cost Filing, Attachment C

Next, the FCC merged marketing expenses with other common line allowed revenue when it established the CMT revenue. By so doing, all common line rate elements are required to participate in the recovery of the marketing expense. Relying on evidence that incumbent price cap LECs incurred marketing costs related to residential and single-line business customers, the FCC allowed recovery of the marketing expenses to be collected through the primary residential and single-line business SLC. The evidence to support residential and single-line business marketing expenses, however, was incomplete and sparse, relying on two *ex parte* presentations. The Ameritech *ex parte* presentation claimed that the company spent $20 million on advertising to residential and single-line business customers.[87] While not insignificant, the $20 million value pales in comparison to the entire Ameritech marketing expense of $488 million.[88] It certainly should not be used by the FCC or others to support a finding that residential customer should bear equal responsibility for the recovery of marketing expenses. The United States Telephone Association (USTA) *ex parte* asserts that it did a study and that study reports that there is advertising for residential customers.[89] USTA never filed the study, and never provided any details of the study.

Throughout this process of transferring the recovery of the marketing expenses to the common line rate elements, the FCC failed to recognize that the price cap ILECs do not advertise to their end-user for the purchase of end-user access. Thus, just as the ILECs do not advertise to IXCs and thereby should not recover marketing expense from the IXCs, neither should the end-users be required to pay for the marketing expenses. Of course, using this reasoning, the ILECs face the dilemma that there is an expense for which there is no explicit recovery mechanism.

Alternatively, the FCC could acknowledge that the marketing expenses assigned to the interstate jurisdiction are designed to attract and retain customers. Without the customers, the ILEC would not collect any switched access or end-user revenue. Therefore it is necessary to assign a portion of the marketing expense to all access baskets. In addition, because most of the marketing expense that is customer and not product specific is directed toward the retention of business customers, the overwhelming majority of the marketing expense should be recovered through multi-line business rate elements.

Finally, the marketing expenses allocated to the CMT revenues included only those expenses that were formerly assigned to the common line basket, the traffic-sensitive baskets, and the switched services within the trunking basket.[90] The FCC found that

[87] Letter from Anthony M. Alessi, Director, Federal Relations, Ameritech, to William F. Caton, Acting Secretary, Federal Communications Commission, September, 11, 1997, CC Docket No. 96-262.

[88] Armis 43-04, 1996.

[89] Letter from Frank G. Kennedy, Director, Legal and Regulatory Affairs, United States Telephone Association, to William F. Caton, Acting Secretary, Federal Communications Commission, September 29, 1997, CC Docket No. 96-262.

[90] Section 69.156.

special access and interexchange services are marketed to end-users and therefore, rates for those services should continue to recover marketing expenses.[91]

The Verizon cost filing, however, adds all interstate marketing cost to the costs that are to be recovered through SLCs. The cost filing shows the development of these costs. It sums the base factor portion (BFP) expenses less marketing expenses for the year 2000, and total interstate marketing costs.[92]

Table 2 compares the Verizon cost filing to the ARMIS 43-01 and 43-04 filings for the Verizon Bell operating company study areas for the year 2000. The difference between the ARMIS 43-01 common line expenses and the cost filing common line expenses are listed in column C. This difference is equal to the ARMIS 43-04 common line marketing expense listed in column F. The marketing expense as reported in the cost filing, listed in column D, is equal to 43-04 interstate marketing expense listed in column E.

The interstate marketing expense is equal to not only the common line and traffic-sensitive marketing expenses, but also includes the special access and interexchange marketing expenses. The special access and interexchange marketing expenses should be recovered from special access and interexchange customers and should not be assigned to CMT revenue for recovery through SLCs. At this time it is not clear if this mistake is only in the current filing or permeates Verizon's and other carriers' tariffs. We urge the FCC to investigate this issue and, if necessary, to reduce the CMT revenues and SLC charges accordingly.

[91] Access Reform Order, Paragraph 323.

[92] Verizon Cost filing, Attachment C.

Table 2 -- Comparison of Verizon Cost Filing to the ARMIS 43-01 and 43-04 Filings for the Year 2000

Verizon Study BOC Study Areas	Total Common Expenses	BFP Expenses less Market	BFP Market	Marketing Addition	Interstate Marketing	Common Line Marketing	Traffic-sensitive Marketing	Special Access Marketing	IX Marketing
	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)
Washington DC	34,744	32,865	1,879	8,288	8,288	1,879	1,945	4,464	-
Maryland	180,212	172,173	8,039	18,561	18,561	8,039	3,107	7,416	
Virginia	191,401	176,260	15,141	30,330	30,330	15,141	5,187	10,000	2
West Virginia	55,561	53,131	2,430	4,349	4,349	2,430	875	1,033	11
Delaware	33,140	31,676	1,464	2,791	2,791	1,464	379	947	2
Pennsylvania	325,970	309,776	16,194	32,225	32,225	16,194	3,516	12,504	11
New Jersey	340,858	323,578	17,280	37,599	37,599	17,280	6,024	14,273	22
New York/ New England	986,626	941,775	44,851	124,365	124,365	44,851	17,897	61,557	59
Source	Armis 43-01	Verizon Filing	Calculated	Verizon Filing	Armis 43-04	Armis 43-04	Armis 43-04	Armis 43-04	Armis 43-04

5 The Model Used for NASUCA's Analysis is a Public, Forward-Looking, Economic Cost Model which Estimates Costs Based on the Most Efficient Technology Available – It is Therefore a Useful Tool for Assessing the Proposed Increases in the Subscriber Line Charge

We have provided a number of reasons why the ILECs' cost studies should not be used to judge the economic basis for increasing the Subscriber Line Charge. In this section we provide forward-looking economic cost data that was derived from the Commission's Synthesis Model.

The Synthesis Model used by NASUCA meets the requirements that the FCC has established for reviewing any increases to residential and single-line business SLC caps. The model is a forward-looking economic cost model, and it is designed to supply the cost of voice grade access to the public switched network.[93] In addition, the model is in the public domain, is being applied uniformly to all states, and estimates cost based on the most efficient technology available.

The entire model can be downloaded from the FCC's web page,[94] and any individual can run the model. The source code for the model is also provided in a file folder as part of the package that is downloaded from the web page. The source code allows individuals and parties to examine every equation, and verified every action the model undertakes in estimating the forward-looking cost of service. Every input value has been released into the public domain.[95] It is therefore possible to discuss the reasonableness of these values without having to enter into a proprietary agreement. Only two sets of values are covered by proprietary agreements -- the customer location data set, also known as the PNR data, and the wire center line counts. Individuals and parties have been able to obtain the use of the PNR data for use in FCC proceedings for a long time.[96] Recently, the FCC has allowed parties to obtain the use of line count data for use in this cost proceeding.[97]

---

[93] The Commission has exercised caution about using the Synthesis Model for estimating the cost of unbundled network elements. It should not hesitate to use the model in the immediate proceeding because, as with the universal service proceeding, the model would be used to identify the cost of providing retail voice grade access to the public switched telephone network.

[94] http://www.fcc.gov/ccb/apd/hcpm/

[95] In the Matter of the Federal-State Joint Board, CC Docket No. 96-45, Ninth Report and Order and Eighteenth Order on Reconsideration, FCC 99-306, rel. November 2, 1999 (Inputs Order).

[96] Federal-State Joint Board, CC Docket No. 96-45, Interim Protective Order, 15 FCCRcd 10183 (Common Carrier Bureau 2000).

[97] In the Matter of the Cost Review Proceeding for Residential and Single-Line Business Subscriber Line Charge (SLC) Caps, CC Docket No. 96-262, Order, Released December 6, 2001. This order allows parties to use the line count data to produce loop cost studies and evaluate the cost studies of other parties in this proceeding. We urge the Commission to release these data into the public domain. Withholding these data reduces the possibility of having a reasonable and fair debate regarding the

The model platform and inputs have not been altered to provide an advantage for any specific state or carrier. Each carrier's cost is estimated using the same equations, formulas, and input values. For example, the cost of a 100 pair 24-gauge cable is the same for all carriers. This uniformity will allow the FCC to set SLC caps impartially and without prejudice to any carrier. Alternatively, if the FCC were to adopt the proprietary model of one carrier, it would not know if there were any particular equations or inputs in it that would bias the results in that carrier's favor.

Adopting one standard does not mean that inputs do not vary due to local conditions. The model contains variables that change given changes in population density, soil, and other terrain characteristics. Rather it implies that these variances will be the same for all carriers. The differences in cost due to different levels of population density will have the same affect on every carrier.

The model uses efficient and available equipment to provide service. Digital switching equipment is placed in the wire centers. Fiber optic systems and electronic equipment are used to connect wire centers, and, where appropriate, are placed in feeder networks. Customers are located within the census block where they live and work. Because of data limitations, customers are not located at exact geo-coded locations. Instead, their locations are spread uniformly along the roads within a census block. Once the customers are located, a minimum spanning tree algorithm connects them to the wire center. This algorithm constructs the lowest cost network configuration available.

5.1 The NASUCA Model Covers 80 Study Areas, and the Underlying Assumptions are Robust Concerning Costs and the Engineering Design of the Loop

The analysis of forward-looking cost will focus on the results generated by the Synthesis Model for 80 study areas. To be included, the study area must be a price cap carrier and a non-rural study area. An excluded study area would be, for example, Sprint Florida, which is a price cap rural study area and NorthState, which is non-price cap non-rural study area. Appendix A provides a list of study areas included in the analysis.

Cost by UNE zone can be derived for 76 of these carriers. The other four carriers develop zones on a sub-wire center basis.[98] For example, the business district of wire center A and the business district of wire center B are combined to form zone 1, and the rural area of wire center A and the rural area of wire center B are combined to form zone 2. Because the Synthesis Model is run on a wire center basis, it is not possible to

model's ability to estimate the forward-looking cost of service and hinders the ability of the Commission to make rational decisions regarding the level of SLC caps.

[98] These study areas are QWEST Wyoming, Montana, Arizona, and Colorado.

develop zone cost for these four study areas.[99] For all other carriers, the UNE zone is a combination of wire centers, and the zone cost is the weighted average cost of the wire centers within that zone.

There are 181 price cap study areas that are eligible to receive interstate access support and are governed by the SLC rules adopted in the CALLS order.[100] These study areas serve approximately 173 million switched access lines. The 80 modeled study areas serve 165 million lines or approximately 95% of the price cap regulated lines.[101]

The Synthesis Model generates total monthly forward-looking cost per line by wire center for each study area. The wire center costs can be aggregated into UNE zone costs. Zone cost results, identified by carrier, are provided in the proprietary Appendix B. Summaries of these results will be discussed within the public section of these comments.

The cost associated with the SLC includes the non-traffic-sensitive portion of the loop and switch. The loop is the facility that connects each customer to a wire center. It includes the network interface device, copper and fiber cables, poles, and conduits. The non-traffic-sensitive switch cost, or the line port, includes the main distribution and the line card. Moreover, because the SLC is an interstate rate, SLC associated costs are only the interstate jurisdictional portion of the loop and line port costs.

The Synthesis Model does not directly calculate SLC costs. Instead, the model generates unseparated costs for each wire center. The model identifies costs related to loop, line port, end office usage, signaling, transport, and billing. To transform model outputs into SLC related costs, it is first necessary to allocate per-line common costs among the various cost baskets. Second, it is necessary to separate the costs by jurisdiction.

Per line common costs are identified in the Synthesis Model as common support services expenses. They include corporate operations expenses, customer service expenses, and plant non-specific expenses. These are expenses that are reported in ARMIS accounts 6510, 6530, 6610, 6620, 6710 and 6720. The model estimate of these costs is $7.32 per line per month.[102] The model assigns all per line charges to the network interface device (NID), and through this assignment includes all per line charges in the loop basket. This practice creates biased results. The reported loop costs are too high, while the reported switch and transport costs are too low. The

[99] The Synthesis Model can also be run by density level. However, due to a lack of data, one to one mapping of density levels into UNE zones for the four study areas is not possible at this time.

[100] USAC Quarterly Administrative Filing, 2nd QTR 2001, Appendix HC 8 http://www.fcc.gov/ccb/universal_service/quarter.htm#2001

[101] Id., Appendices HC1 and HC8.

[102] For a discussion of these estimates, see the Inputs Order, Paragraphs 382-407.

existence of this bias does not affect the universal service results because the universal service program relies on the total wire center results. The too high loop result is offset by the too low switch and transport results. However, when cost of loop and port functions are reviewed separately, this bias cannot be ignored.

To correct for this bias in our analysis, per line common costs are allocated among the loop, switch, and transport baskets on the basis of relative investment in these functions. The relative investment in these baskets was determined for each study area. Multiplying the per line common cost by the relative investment determines the per line common cost for each basket. In addition, because the model assigns 30 percent of switch investment to line port and 70 percent to end office usage, we assign only 30 per cent of the switch per line costs to the line port. Allocation of these costs according to relative investment mimics the allocation of corporate operations expense in the universal service algorithm and the Part 69 allocation of marketing prior to the re-assignment of marketing expenses.[103]

The relevant separations factors are the gross allocator for loop plant and the dial equipment minutes (DEM) factor for the switch port.[104] The interstate gross allocator is 25 percent for all study areas. The interstate DEM factor varies by study area. The national average interstate DEM is approximately 15 percent and for the 80 carriers analyzed the interstate DEM factor varies from 7.57 to 27.43 percent.[105] The product of multiplying the sum of the loop plus the loop allocated per line common costs by the gross allocator is the interstate loop cost. The product of multiplying the sum of the port and the port allocated per line common costs by the DEM factor is the interstate port cost. It is this interstate wire center loop and line port cost, adjusted to properly reflect reasonable per line costs, that is the building block for determining zone and study area forward-looking economic costs that should be recovered by the SLC and will be referred to as the SLC economic cost.

---

[103] Letter from John Ricker, NECA, to Magalie Roman Salas, FCC, dated October 1, 2001, tab 3, Loop Cost and Expense Adjustment Algorithms and 47 C.F.R. Section 69.403.

[104] The rule adopted in the CALLS order applies a 25 percent factor to both loop and port to determine the Zone Average Revenue per line-(Part 61.3(zz)). It is our understanding that the 25 percent factor applied in that rule was adopted for administrative convenience, and does not affect the separation factors or the study area costs.

[105] For trends in the national average see The Universal Service Monitoring Report, CC Docket No. 98-202, Prepared by the Federal and State Staff for the Federal-State Joint Board on Universal Service in CC Docket No. 96-45, Table 8.3 Dial Equipment Minutes. The study area specific factor is available in Armis, 43-04, row 1213.

5.2 The NASUCA Model Results Indicate that Forward-Looking SLC Costs are under $5 for about Three-Quarters of Residential and Single-Line Business Customers, and Therefore that the SLC Cap Should not be Increased

The major finding of estimating SLC costs using the Synthesis Model is that 75% of residential and single-line business customers are located in UNE zones that have forward-looking SLC costs of less than $5.00 (See Table 3). This finding, along with the TELRIC cost estimates, is the foundation for NASUCA's recommendation that the SLC caps should not be increased. These customers are already paying for the economic cost of providing service to them. Increasing the caps in those zones will increase the implicit subsidy provided by residential and single-line customers. The increase in the implicit subsidy occurs when rates increase to recover the allowed CMT revenue per line by any amount that exceeds the economic cost of service.

When the allowed CMT revenue per line is above $5.00, the rate will increase to the lesser of allowed CMT revenue per line or the new cap.[106] However, the allowed CMT revenue is a legacy calculation. It does not even represent the embedded (or sometimes called actual) loop cost.[107] It is the sum of price cap allowed common line revenues plus the remaining Transport Interconnection Charge (TIC) subsidy, and interstate marketing costs.[108] Currently, an implicit subsidy is being paid in zones where the forward-looking cost is below $5.00. If the cap is increased, then in the zones where the forward-looking cost is below $5.00 and the allowed CMT revenues per line is greater than $5.00, implicit subsidy payments will increase. Because it is a goal of the Telecommunications Act of 1996, and of the FCC, to eliminate implicit subsidies as much as possible, we recommend that the FCC find it unreasonable to increase the SLC cap at this time.[109]

These findings also support NASUCA's recommendation that the SLC cap should not increase for any residential or single-line customer. The 80 study areas examined can be divided into four groups. The first group, containing 55 study areas, can be defined as carriers with UNE zones and having at least one zone with an SLC cost of less than $5.00. If the SLC in the zone with a cost greater than $5.00 is allowed to increase without simultaneously decreasing the rate in the zone(s) with a cost less than $5.00, then the FCC would be allowing carriers to garnish funds from residential and single-line business customers through an inefficient rate structure.

[106] 47 C.F.R. Section 69.152(d)(1)

[107] Verizon Cost Submission, Access Charge Reform, CC Docket No. 96-262, filed November 16, 2001, Page 4.

[108] Marketing expenses associated with special access and inter-exchange services are not included in the CMT revenue basket. Section 69.156.

[109] See the Telecommunication Act of 1996, Section 254(e). The word "should" in this section of the act has been interpreted to mean a recommended course of action rather than a mandate, United States Court of Appeals, Tenth Circuit, QWEST v. FCC, No. 99-9546, rel. July 31, 2001.

The second group of carriers, containing 14 study areas, has not established UNE zones. These carriers are thwarting the development of competition by maintaining higher than necessary UNE rates in urban areas. The increase in the SLC cap will provide revenue to decrease multi-line business presubscribed interexchange carrier charges (PICCs). The high PICC, however, provides a rate level that the competitors can match. In doing so, the competitor obtains revenue that partially offsets the high UNE rate. Reducing the PICC in the presence of high UNE rates destroys the profit margin of potential competitors. Given the goal of advancing competition, it is not reasonable to allow these carriers to increase SLC caps, unless and until they de-average their zones. Of course, at that time, they would probably have one zone with SLC costs below $5.00 and thus, it still would not be reasonable to allow this group to increase their SLC caps.

The third group of carriers, containing, seven study areas, have multiple zones and no zone cost below $5.00. These carriers generally serve low-density areas. Moreover, they all receive interstate access support. In addition, their interstate rate of returns for the year 2000 ranged from 12.2 percent to 40.03 percent. While at first blush it might appear reasonable to allow these carriers to increase their SLC caps, it is does not appear to be necessary in light of their service territories, interstate support receipts, and healthy financial positions. The final group of carriers, containing four study areas, has UNE zones that cut across wire centers boundaries. Thus, the model is not able to develop zone costs for these carriers. However, given that zone 1 for these carriers is their most urban region, it is very likely that zone 1 would have forward-looking costs of less than $5.00, and thus, it would not be reasonable to allow the SLC cap to increase rates in the rural zones of these carriers.

Finally, the model results prove that residential and single-line business customers pay more in SLC rates than the SLC cost of service. Far from being a subsidized class, these customers contribute more than their fair share to the support of the carriers' cost and profits. ***In zones where the SLC rate is greater than the SLC cost, residential and single-line business customers provide the carrier with more than $1.113 billion in excess revenue. In zones where the rate is less than cost, SLC revenue is less than cost by approximately $472 million. Combining these two values we conclude that the Subscriber Line Charge paid by residential and single-line business customers generates a net contribution of $641 million (See Section 5.3.3).*** In addition, the combination of $472 million residential and single-line business support requirement with a multi-line business support requirement of approximately $6 million implies that the current interstate access support cap of $650 million is more than sufficient to meet the needs of carriers.

5.3 The NASUCA Model Results Demonstrate that Residential and Single-Line Business Customers are Contributing to the Support of the Network, and Do not Receive a Subsidy

We have chosen to present six model runs that highlight the important assumptions that are built into the model and that have been debated by the parties in many proceedings either before the Commission or in state proceedings. First, we review the results of the default run of the model. The default run contains all of the assumptions that the FCC uses to develop the state average and wire center cost of service for the purposes of calculating the forward-looking model universal service support, but for one exception. The one exception being that we have allocated the common costs to all network facilities rather than assign the cost exclusively to the loop.

Second, we correct the model so that the structure that is shared between distribution and feeder networks is not double counted. Currently the Synthesis Model first builds a distribution network and second builds a feeder network. If the feeder and distribution cable follow the same right-of-way, the model will build two sets of poles in the right-of-way, one for the distribution cable, and a second for the feeder cable. In the feeder/distribution structure-sharing scenario, we adjust the model results to eliminate this double counting.

Third, we estimate a scenario that excludes the traffic-sensitive loop plant from the calculation of SLC costs. The feeder portion of the loop is traffic-sensitive in those areas served by fiber fed digital line carrier systems. These facilities are traffic-sensitive because the amount of installed capacity is determined by the peak-hour minutes-of-use. Customers are no longer provided with a dedicated facility or electronic path to the central office.

The last three scenarios change values of inputs that have received a good deal of attention in the discussion of models. In the fourth scenario, we raise the cost of capital to 13.18 percent. In the fifth scenario, we reduce the projected lives of major investment categories, thereby increasing depreciation expenses. In the last scenario, we reduce the maximum copper loop length from 18k ft to 12k ft.[110]

As seen in Table 3 below, the results are not overly sensitive to the choice of scenarios. The NASUCA Model results look at six alternative scenarios. The SLC costs are below $5 for at least 65% of customers in all scenarios, and nearly 2/3 of all customers have SLC costs between $3.50-$5.00. Table 4 also shows that average SLC costs do not vary dramatically across scenarios.

[110] Under Scenarios 4, 5, and 6 only one assumption is changed in each scenario – e.g., Scenarios 5 and 6 do not incorporate the assumption under Scenario 4 that the cost of capital is 13.18%.

Table 3 -- Percentage Distribution of SLC Costs per Line for Six Scenarios

SLC Cost Per Line	Default Scenario	Feeder Distribution Structure Sharing Scenario	Non-Traffic-Sensitive Loop Scenario	Cost of Capital Scenario	Depreciation Scenario	12k ft Scenario
Less than $3.50	9.3	11.4	16.8	1.8	8.4	8.4
$3.50 to $5.00	65.1	64.7	60.2	63.1	60.0	62.6
$5.00 to $6.00	9.1	7.9	11.0	12.1	14.3	11.9
$6.00 to $6.50	3.3	4.6	2.8	6.0	1.3	1.6
$6.50 to $9.20	11.1	9.4	7.6	12.2	12.5	13.3
$9.20 to $15.00	1.9	2.0	1.6	4.2	3.0	2.0
Above $15.00	0.2	0.1	0.0	0.7	0.5	0.2

Table 4 -- Average SLC Costs and Net Contributions for the Six Scenarios

Item	Default Scenario	Feeder Distribution Structure Sharing Scenario	Non-Traffic-Sensitive Loop Scenario	Cost of Capital Scenario	Depreciation Scenario	12k ft Scenario
Average SLC Cost	$4.75	$4.64	$4.40	$5.28	$5.00	$4.89
Net Contribution with a $5.00 SLC	$193 million	$335 million	$641 million	-$478 million	-$121 million	$5 million
Net Contribution with a $6.50 SLC	$1,371 million	$1,515 million	$1,813 million	$700 million	$1,057 million	$1,186 million

5.3.1 Default Scenario

The Default Scenario is the basic starting point of our analysis. This scenario incorporates the inputs used by the FCC when it determined year 2001 forward-looking model support. Accordingly, it uses the December 1999 wire center line counts that were filed with the Universal Service Administrator on July 31, 2000. The results files were generated by the Turbo-Pascal version of the model that had been previously posted on the Accounting Policy Division web page.[111] That version of the model also contained 1998 ARMIS information for minutes-of-use and general support facilities

[111] The current version of the Turbo-Pascal model posted on the Accounting Policy Division web-site contains updated ARMIS information. However, this version was not available until after we had started to analyze significant amounts of data and therefore we did not adopt it in this exercise. The web page also contains a Delphi version of the model, which the Commission has not adopted at this time.

investments.[112] FCC-approved inputs values for all inputs contained in the HCPM inputs file and the Hatfield Model Default Scenario are retained.[113]

The average SLC cost is $4.75 per residential and single-line business customer. This amount is below the current SLC cap, and is below the SLC charged by most carriers. The distribution of residential and single-line business customers by SLC is shown below. The lines were divided into groups at SLC cost levels that are relevant for this proceeding. For example, the first group shows the number of lines with cost below the previous SLC cap of $3.50. The second group shows the number of lines with cost between the old cap of $3.50 and the current cap of $5.00. The next two groups show the number of lines between the possible SLC cap increase levels of $6.00 and $6.50. The fifth group measures the number of lines that are between the proposed residential SLC cap of $6.50 and the multi-line business cap of $9.20. The final two groups separate the lines that have costs above the multi-line business cap into those lines with high SLC costs (from $9.20-$15.00 per line), and those with very high SLC costs (above $15 per line).

Table 5 and Figure 1 below highlight the fact that approximately two-thirds of the customers are within the $3.50 to $5.00 band. Another nine percent of customers are in the band below $3.50. Combining these bands means that 74 percent of the customers are located in UNE zones that have an SLC cost of service less than $5.00 per month. Increasing the SLC cap to $6.50 will reduce the support for another 12.4 percent of the customers. However, it will generate a huge windfall from the 74 percent of the residential and single-line customers with costs of less than $5.00. That is, the carriers will receive $1,790 million in implicit subsidies, while high cost areas will need $419 million in support.[114] The difference, $1,371 million, allows carriers to decrease their multi-line business rates by charging exorbitant rates to residential and single-business customers.

[112] The same version of the model will be used for all six scenarios.

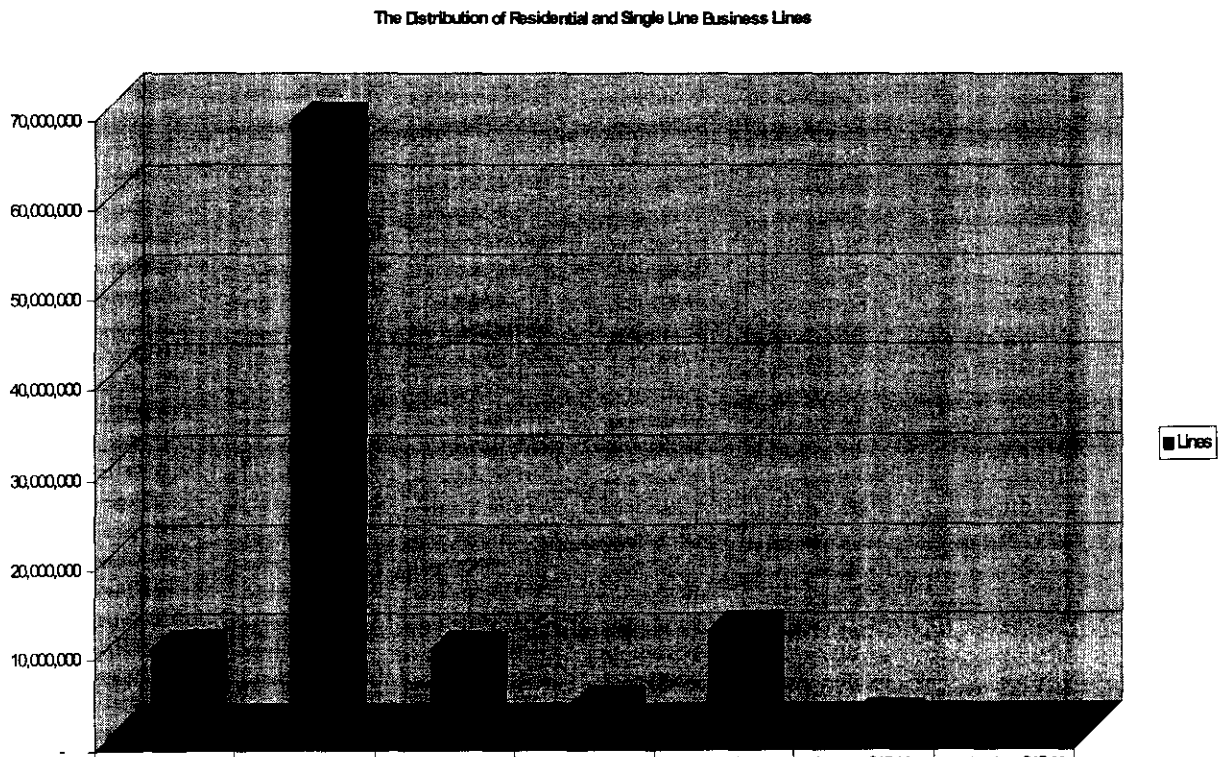
[113] See Inputs Order, Appendices A, B, C, and D.

[114] Implicit subsidies paid by residential and single-line business customers are calculated as the difference between the SLC revenue and the economic cost of service.

Table 5 -- Distribution of Residential and Single-Line Business Lines by SLC Cost for the Default Scenario

SLC Cost Per Line	Number of Lines	Percentage Share
Less than $3.50	9,807,580	9.3
$3.50 to $5.00	68,445,604	65.1
$5.00 to $6.00	9,587,457	9.1
$6.00 to $6.50	3,440,445	3.3
$6.50 to $9.20	11,673,825	11.1
$9.20 to $15.00	2,008,244	1.9
Greater than $15.00	240,196	0.2

Figure 1 – Distribution of Residential and Single-Line Business Lines



	Less than $3.50	$3.50 to $5.00	$5.00 to $6.00	$6.00 to $6.50	$6.50 to $9.20	$9.20 to $15.00	greater than $15.00
Lines	9,807,580	68,445,604	9,587,457	3,440,445	11,673,825	2,008,244	240,196