

DIRECT TESTIMONY

OF

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TELECOMMUNICATIONS DIVISION

ILLINOIS COMMERCE COMMISSION

ILLINOIS BELL TELEPHONE COMPANY

FILING TO INCREASE UNBUNDLED LOOP AND NONRECURRING RATES

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1 **I. Witness Identification**

2
3

4 **Q. What is your name, title and business address?**

5

6 A. My name is Genio Staranczak. I work for the Illinois Commerce Commission as
7 principal economist in the Telecommunications Division. My business address is
8 527 East Capitol Avenue, Springfield, Illinois 62701.

9

10 **Q. Please describe your educational background and previous job**
11 **responsibilities.**

12

13 A. I earned my Bachelor of Arts degree in economics from Lakehead University in
14 1972 and a Doctor of Philosophy degree in economics from Queen's University,
15 Kingston, Ontario, Canada in 1979. In 1977, I began a 20-year career with Bell
16 Canada as an economic forecaster first on a regional and then on a national
17 basis. During the six years I worked directly on economic forecasting, I
18 participated in a series of yearly rate cases.

19

20 In 1983, I worked on special assignment to examine economic policy issues
21 related to a forthcoming long-distance competition regulatory proceeding and
22 drafted evidence in this regard. In 1986, I became Director - Policy and
23 Performance where I continued to analyze telecom policy issues, conducted total
24 factor productivity studies, price responsiveness analyses and was responsible
25 for developing revenue forecasting methodologies. For the years 1986-1995, I

26 worked on other regulatory issues such as expanded local calling areas,
27 measured local service, costing studies as well as participating in another
28 general rate case and working on revenue forecasting issues. During this period
29 I published two articles in telecommunications journals on competition and rate
30 rebalancing. I also participated in a number of telecom industry conferences as a
31 speaker. In addition, for eight years, I was a member of Statistics Canada Price
32 Advisory Committee, which counsels the government on measurement
33 methodologies for the consumer price index.

34
35 In 1995, I became Director of Price Cap Regulation and was primarily
36 responsible for putting together the price cap formula in Bell Canada's alternative
37 regulation proceeding. I also authored the methodology used for measuring total
38 factor productivity and input prices adopted by Bell Canada and most other
39 Canadian telephone companies who participated in the price cap proceeding. In
40 addition, I advised on other alternative regulation issues including construction of
41 the baskets, pricing flexibility and rate rebalancing. From 1997 to 2000, I was
42 Director of Long-Term Forecasting for the US economy at the WEFA group, a
43 macroeconomic forecasting and consulting firm based in the Philadelphia area. I
44 joined the Staff of the Illinois Commerce Commission in September of 2000.

45
46 **Q. Have you previously testified before the Illinois Commerce Commission?**

47

48 A. Yes. I filed testimony in the alternative regulation proceeding, Docket No. 98-
49 0252/0335, in the universal service proceeding, Docket No. 00-0233/0335
50 consolidated, in the MAG order proceeding, Docket No. 01-0808 and in the 271
51 case, Docket No. 01-0662.

52

53 **II. Purpose of Testimony**

54

55 **Q. What is the purpose of your testimony?**

56

57 A. The primary purpose of my testimony is to respond to the testimony of SBC
58 Illinois (SBCI) witness Dr. Debra Aron, SBCI Exhibit 2.0. In addition, I will
59 comment on SBCI's proposed fill factors and depreciation rates. This analysis
60 will address the testimonies of SBCI witness James Smallwood, SBCI Exhibit 4.0
61 and SBCI witness Dr. Lawrence Vanston, SBCI Exhibit 13.0.

62

63 **III. Excessively Priced Unbundled Network Elements (UNEs) Harm** 64 **the Telecommunications Industry**

65

66 **Q. Dr. Aron¹ describes the harmful effects that artificially low UNE rates will**
67 **have on the telecommunications industry. What harmful effects will**
68 **excessively high UNE rates have on the telecommunications industry?**

69

¹ SBCI Ex. 2.0 at 33-39.

70 A. First, let me state that I agree with Dr. Aron that the Commission should not
71 encourage competition through artificially low UNE prices, i.e., prices lower than
72 forward looking costs for an efficient firm. This type of social engineering will
73 have many of the negative implications described by Dr. Aron in her testimony.
74 But Dr. Aron tells only half the story. The Commission should not discourage
75 competition by allowing SBCI to charge excessively high UNE rates either, i.e.,
76 rates higher than forward looking costs for an efficient firm. Overpricing UNEs
77 will lead to: (1) excess profits for SBC Illinois; (2) higher prices for consumers; (3)
78 inefficient and unnecessary duplication of facilities; (4) reduced competition and
79 (5) less consumer choice.

80

81 I will now discuss the negative implications of excessively priced UNEs in more
82 detail. If UNE rates are priced above forward looking costs this will mean that
83 SBCI will be earning excess profits for a service for which it has virtual monopoly
84 control². SBCI's UNEs could become overpriced if the cost of capital used in
85 UNE pricing is more than is required by the market. Or it can happen if the
86 assumptions for the other key inputs underlying the UNE rates are inappropriate.
87 For example, the fill factor used to derive UNE rates may be too low or the
88 depreciation rate and the shared and common factors too high. Use of an
89 inappropriate input will result in a UNE cost estimate that is too high relative to
90 the true forward looking costs.

91

92 Second, UNE rates that are too high will result in CLECs paying more than is
93 necessary for UNEs. Since CLECs will pass on the cost of these excessively
94 priced UNEs to their customers³, UNE rates that are too high will result in
95 telephone rates that are too high. Ultimately it is the subscriber that will pay for
96 excessively high UNE rates. In addition, SBC business customers will also pay
97 for excessively high UNE rates. This is because business rates in Illinois must
98 be priced above the imputed cost of the unbundled network elements used by
99 that business line (See Section 13.505-1 of the PUA and 83 Ill. Administrative
100 Code Part 792). If business rates are priced below the costs of the unbundled
101 network elements used by that business line, then by law the business rate must
102 rise to levels implied by UNE prices. Thus if UNE rates increase such that
103 business access line rates are priced below the imputed costs of the unbundled
104 network elements used in the provision of business access lines, then access
105 line rates would fail the imputation test and need to rise in order to satisfy
106 imputation requirements.

107
108 Third, excessively high UNE rates will lead to wasteful and inefficient duplication
109 of facilities. This is best illustrated by the following example. Consider the case
110 of a loop that costs \$10 a month to produce but is excessively priced at \$20 per
111 month. Further suppose that a CLEC can build the same loop, at a cost of \$14 a

² It may be possible that a few CLECs are offering some UNEs to other CLECs. However SBCI typically is the loop provider in its territory.

³ The CLECS could also respond to higher UNE rates by switching to resale. However, resale rates are higher than current UNE-P rates, and switching to resale will increase CLEC and eventually consumer costs also. The CLECs could also theoretically absorb the higher input costs themselves but there is considerable question whether this is financially possible.

112 month. Under such a circumstance the CLEC will put in its own loop and by
113 doing so will save \$6 per month. But this is inefficient from a public policy point
114 of view. Even though the CLEC is better off by putting in its own loop, society is
115 worse off because the costs to society of provisioning the loop have gone up by
116 \$4. In addition, there are now two loops where only one is necessary. This is
117 wasteful duplication.

118
119 Fourth, UNE prices that are too high will mean that there will be less competition.
120 In some markets, it is uneconomic for CLECs to build their own facilities. The
121 only way they can offer service is through UNEs or possibly resale⁴. If UNE rates
122 are too high the CLECs may not enter these markets, reducing choice for
123 consumers. The Federal Communications Commission has long understood that
124 it may be undesirable for competitors to reproduce the network. The FCC in its
125 First Report and Order noted that:

126
127 Requiring new entrants to duplicate unnecessarily even a part of the
128 incumbent's network could generate delay and higher costs for new
129 entrants, and thereby impede entry by competing local providers and
130 delay competition, contrary to the goals of the 1996 Act.⁵
131

132 This is particularly true of residential markets. Retail rates in residential markets
133 are set based on LRSIC (Long Run Service Incremental Cost) pricing rules.
134 UNE prices are based upon TELRIC (Total Element Long Run Incremental Cost)

⁴ Although CLECs build facilities today they typically rely on loops provided by SBCI.

⁵ First Report and Order, ¶283, In the Matter of implementation of the Local Competition Provisions in the Telecommunications Act of 1996; Interconnection between Local Exchange Carriers and Commercial

135 pricing. If SBCI's proposed UNE rates are implemented it may mean that UNE-P
136 (Unbundled Network Element Platform) rates for residential lines will be higher
137 than the retail price of residential lines which would effectively eliminate UNE-P
138 competition for residential customers. In other words the cost of buying UNEs
139 from SBCI for residential service may exceed the rate that SBCI charges for
140 residential lines.

141

142 **Q. Is SBC Illinois proposing to price UNEs above cost?**

143

144 A. Yes. Staff witness Peter Lazare's summary of various Staff witnesses' testimony
145 demonstrates that SBCI's proposed UNE rates are substantially above the cost
146 of providing UNEs⁶. Therefore the SBCI UNE rates proposal will unfairly enrich
147 SBC Illinois at the expense of CLECs and telephone subscribers in the state,
148 encourage wasteful and inefficient duplication of facilities and reduce consumer
149 choice. In contrast, Staff's proposed UNE rates accurately reflect forward-
150 looking costs for an efficient firm. Staff's rate proposal fairly balances the
151 interests of SBCI with those of the CLECs and consumers and consequently will
152 result in a healthy competitive telecommunications market in Illinois.

153

154 **IV. Historical Costs are Not Forward Looking Costs**

155

Mobile Radio Service Providers, CC Docket Nos. 96-98 and 95-185. FCC 96-325, 11 FCC Rcd 15499 (August 8, 1996)

⁶ See *generally*, Staff Ex.3.0.

156 **Q. Dr. Aron contends that UNE-L (Unbundled Network Element – Loop) prices**
157 **in Illinois are among the lowest in the Nation⁷? Please comment on Dr.**
158 **Aron’s analysis.**

159
160 A. Dr. Aron compares UNE-L prices across a number of states and according to her
161 figures UNE-L rates in Illinois are among the lowest in the nation. I assume Dr.
162 Aron’s rate data is correct but it is possible that UNE-L rates in Illinois are among
163 the lowest in the nation because UNE-L costs in Illinois are among the lowest in
164 the nation. I note that Illinois is relatively densely populated, is not mountainous
165 nor does it not have hard soils. The states that have high UNE-L rates according
166 to chart I of Dr. Aron’s testimony, are states like Montana, Wyoming and West
167 Virginia. These states are sparsely populated and are characterized by difficult
168 terrain. States that are comparable to Illinois in terms of population and terrain
169 such as Indiana, Ohio, New Jersey and Michigan have UNE-L rates that are
170 similar to Illinois.

171
172 **Q. But Dr. Aron alleges that UNE-L rates in Illinois are not reflective of low**
173 **costs and according to her analysis current UNE-L rates are generating**
174 **negative cash flows of \$5.11 per month while UNE-Ps are generating**
175 **negative cash flows of \$12.73 a month⁸. Please comment on Dr. Aron**
176 **analysis of UNE costs.**

177

⁷ SBCI Ex. 2.0 at 6.

178 A. According to the FCC, UNE rates should be TELRIC based and reflective of
179 forward looking costs for an efficient firm. In contrast, Dr. Aron estimates UNE
180 prices by using historical costs for a former rate of return regulated monopolist.
181 Dr. Aron concedes that her analysis is not intended to be a TELRIC study⁹ but
182 nonetheless contends that it is instructive. In particular, she alleges that there is
183 no a priori reason that forward looking costs must necessarily be lower than
184 costs computed from the actual data the company submits to the FCC in its
185 ARMIS reports.

186
187 Dr. Aron is correct in stating that forward-looking costs for a firm do not
188 necessarily have to be lower than historical costs for that same firm. But Dr.
189 Aron is incorrect in asserting that there is no a priori reason to believe that
190 SBCI's forward-looking costs will be lower than its historical costs.

191
192 SBCI is price cap regulated. SBCI's prices for non-competitive services are
193 indexed to overall inflation in the economy minus expected productivity growth for
194 SBCI. SBCI's expected productivity growth according to parameters in the price
195 cap formula is 4.3%. Inflation in the economy (as measured by the gross
196 domestic product price index) is forecast to be in the 2% range by the
197 Congressional Budget Office¹⁰ for the foreseeable future. These two figures
198 suggest that SBCI's unit costs are expected to fall by 2.0 - 2.5% a year. SBCI

⁸ Id. at 11.

⁹ Id. at 13.

199 has recently appealed some aspects of the Commission decision in Docket 98-
200 0252 (the price cap decision) but has not raised the expected productivity growth
201 factor issue on appeal. I therefore conclude that the Company believes that
202 4.3% productivity growth is achievable. In summary then, SBCI's expected
203 productivity growth (as set in the price cap formula) combined with generally
204 expected inflation rates provide strong a priori reasons for believing SBCI's
205 forward looking costs will be lower than its historical costs.

206

207 **Q. Dr. Aron uses figures provided by financial analyst Dr. Anna-Maria Kovacs**
208 **of CCM as well as figures provided by Merrill Lynch and UBS Warburg to**
209 **support her claim that UNEs are priced below costs. Please comment on**
210 **figures provided by Dr. Kovacs, Merrill Lynch and UBS Warburg.**

211

212 A. According to Dr. Aron's direct testimony, Dr. Kovacs estimates RBOC losses for
213 UNE-P to range from \$6.83 per line at Qwest to \$14.96 per line at SBC¹¹.
214 Similarly, according to Dr. Aron, Merrill Lynch's analysis suggests that SBC
215 Illinois is losing \$13.28 per line while the UBS Warburg figures indicate that SBCI
216 is losing \$7.58 per line plus capital expenditures¹².

217

218 The cost estimates supplied by Dr. Kovacs, Merrill Lynch and UBS Warburg were
219 derived from historical data and therefore suffer from the same shortcomings that

¹⁰ The Congressional Budget Office is a non-partisan government agency that provides Congress with economic forecasts. These forecasts can be accessed at <http://www.cbo.gov/> by clicking current economic projections.

¹¹ SBCI Ex. 2.0 at 18.

220 Dr. Aron's analysis does. They are not forward looking for an efficient firm. Dr.
221 Kovacs' analysis suggests that RBOCs collectively are losing a lot of money from
222 providing UNEs. This would imply if taken to its logical conclusion that state
223 regulatory Commissions as a whole are either grossly incompetent or part of
224 some sort of national conspiracy to price UNEs below costs. More likely is that
225 state Commissions have access to better, more forward looking cost data than
226 the analysts quoted by Dr. Aron and have used this informational advantage to
227 set UNE prices at levels more consistent with forward-looking costing principles
228 rather than with backward looking historical cost data.

229

230 **Q. If UNE-Ps and UNE-Ls were priced at levels suggested by SBC Illinois what**
231 **would happen to the revenues of SBC Illinois?**

232

233 A. SBCI's revenues would rise by approximately \$100 million if UNE-P rates rose to
234 levels that covered costs as alleged by Dr. Aron. Similarly, UNE-L revenues
235 would increase by about \$22 million if rates suggested by Dr. Aron were
236 implemented. As a result SBCI's after tax profit would grow by about \$75 million,
237 and its earned rate of return on common equity would increase by about 3%. I
238 estimated these impacts by multiplying the number of UNE-Ps SBC was
239 providing competitors (651,995 at the end of 2002) by the increase in UNE-P
240 rates suggested by Dr. Aron (\$12.73) and the number of loops SBCI was
241 providing (332,759 at the end of 2002) by the increase in loop rates suggested by

¹² Id. at 19-22.

242 Dr. Aron (\$5.11). I did not factor in any change in demand because of the rate
243 increases¹³. Of course, my calculation underestimates the jump in SBCI's
244 income that would occur if the Commission accepts SBCI's proposed UNE rates.
245 SBCI is proposing sharp increases in non-recurring charges, which I have not
246 factored into my income analysis. I have also not included in my estimates any
247 increase in business rates that would have to be implemented if UNE rates were
248 increased to levels suggested by Dr. Aron.

249

250 **V. Cream Skimming is Not Caused by Underpriced UNEs**

251

252 **Q. On page 39 of her testimony Dr. Aron discusses cream skimming and**
253 **seems to imply that underpriced UNE rates are responsible for cream**
254 **skimming. Is Dr. Aron's analysis of cream skimming correct?**

255

256 **A.** No. I will first define cream skimming and then explain why Dr. Aron's analysis of
257 cream skimming is wrong. Cream skimming refers to the strategy of targeting a
258 competitor's most profitable customers. Dr. Aron is correct that cream skimming
259 occurs in the local service market in Illinois. However, cream skimming also
260 occurs in the long distance market, in the automobile market and in the economy
261 generally. It is natural for a firm to go after a rival's most profitable customers¹⁴.

¹³ Of course at these price levels demand for UNE-Ps and UNE-Ls would likely be lower than is the case currently.

¹⁴ SBCI may argue that this is the problem; competitors go after the Company's most profitable customers leaving SBCI with only the least profitable customers (i.e.. customers who purchase services that barely cover their costs). But the solution to this problem is not to drive out competition by overpricing UNEs, but to reduce costs for or to move up the prices of low margin services.

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Dr. Aron seems to imply that low UNE rates are responsible for cream skimming in the local service market in Illinois. This is incorrect. Whether UNE rates are low or high, whether there is facilities based entry or not, competitors will target SBCI's most profitable customers. Cream skimming occurs because prices for certain services offered by SBCI are substantially above the cost of producing these services. Vertical options such as call forwarding and three-way calling, for example, have huge profit margins. If SBCI is interested in reducing cream skimming it should move prices of high margined retail services closer to cost. If there is no cream, there can be no cream skimming. Competition, by putting downward pressure on high margin services will move prices of these high margin services closer to cost. This will be good for customers of these high margin services. It is also desirable from a public policy point of view to have prices more closely correspond to costs. SBCI is essentially arguing that UNE based competition no longer allows the company to charge customers substantially more than cost for some services. But this is precisely what competitive markets are supposed to do, drive prices towards costs. Moreover, I am not the only person who holds this view. The Illinois General Assembly has determined that "the competitive offering of all telecommunications services may lead to reduced prices for consumers, increased investment in communications infrastructure...[.]"¹⁵.

¹⁵ 220 ILCS 5/13-102.

284 If UNE rates are raised in Illinois, there will still be cream skimming. The CLECs
285 that can afford to pay the higher UNE rates that SBCI proposes will still target
286 SBCI's most profitable customers. However, if UNE rates are increased to levels
287 proposed by SBCI, there will be fewer customers for competitors to target. There
288 will be fewer customers to target because higher UNE rates will make it
289 unprofitable for CLECs to serve some customers who under the present UNE
290 rates are profitable to serve. Higher UNE rates, as proposed by SBCI, therefore,
291 will not eliminate cream skimming but will reduce the number of customers that
292 CLECs can profitably compete for. Higher UNE prices, therefore will reduce the
293 pressures on SBCI to reduce the prices of fat margined services. Higher UNE
294 rates will mean for an increasingly larger fraction of the local service market there
295 will be neither competition nor consumer choice. As a result, higher UNE rates,
296 as proposed by SBCI mean re-monopolization of much of the local service
297 market.

298

299 **VI. Fill Factors Should not be based on Historical Experience**

300

301 **Q. On pages 48-52 of her testimony, Dr. Aron tries to justify SBCI's 45% fill**
302 **factors by stating that real world firms also carry spare capacity¹⁶. Please**
303 **comment on spare capacity in the real world.**

304

¹⁶ SBCI Ex. 2.0 at 48-52.

305 A. Dr. Aron is correct in stating that real world firms carry spare capacity. So it may
306 be instructive to examine real world capacity utilization rates to provide the
307 Commission a better perspective concerning how much unused capacity could
308 be considered normal in the real world. Figures provided by the Federal Reserve
309 Board¹⁷ indicate that the capacity utilization rate for all industries over the last 10
310 years (1992-2001) averaged about 82% and for the last thirty years (1972-2001)
311 averaged approximately 81.5%. I use the average capacity utilization rates over
312 ten-year and thirty-year periods because capacity utilization rates fluctuate from
313 year to year in response to economic conditions and consequently a capacity
314 utilization rate for one year may be unrepresentative of longer-term performance.

315

316 **Q. Why can firms in the real world operate at 82% capacity while SBCI only**
317 **operates at 45% fills?**

318

319 A. This is a good question for which Dr. Aron does not provide a satisfactory
320 answer. Dr. Aron cites four reasons why firms generally carry spare capacity
321 including (1) being able to respond to uncertainty and variability; (2) economic
322 tradeoff between inputs; (3) technological constraints or breakage; and (4)
323 service quality constraints¹⁸. I will examine each of these rationales in turn to
324 determine whether they are exclusive to, or they disproportionately impact the
325 telecommunications industry.

326

¹⁷ These figures may be accessed at <http://www.federalreserve.gov/releases/>.

327 First, it is true firms build spare capacity to accommodate changes in economic
328 or market conditions. Generally speaking, the more variability there is in demand,
329 the more spare capacity firms will build. This is because firms don't want to be
330 caught short of capacity and unable to meet orders when demand strengthens.
331 Demand for real world products such as automobiles, trucks, planes and
332 computers can and does fluctuate widely from year to year. Sales of cars for
333 example can decrease by 20% one year and increase 20% the next year. In
334 order to meet these variances in demand, firms in these real world industries will
335 build a lot of spare plant. This phenomenon is reflected in the capacity utilization
336 statistics for these industries. For example, over the thirty-year period 1972-2001
337 capacity utilization rates for the motor vehicles and parts industry (77.2%) and for
338 the aerospace industry (73.5%) are less than the average for all industries
339 (81.5%)¹⁹.

340
341 In contrast, industry demand for telephone lines is fairly stable. Households do
342 not drop phone service when the economy stumbles. Households may postpone
343 the purchase of a car, a house or delay a vacation when there is a lot of
344 economic uncertainty, but they rarely disconnect their phone. Similarly
345 businesses do not drop phone service when the economy is not performing well.
346 A business may cut back on the number of phones it uses if it reduces the
347 number of its employees but payrolls do not fluctuate as much as the economy.
348 Since there is less fluctuation in demand for lines, there is less need for spare

¹⁸ SBCI Ex. 2.0 at 50.

349 capacity in the telecommunications industry than in most real world industries.
350 That is to say, since there is less variability in demand for lines, one would
351 expect, other things being equal, greater capacity utilization in
352 telecommunications than in real world industries.²⁰

353
354 Second, Dr. Aron argues that it is more economic to install capacity in excess of
355 current demand and then let demand catch up to capacity rather than expand
356 capacity to be precisely in line with demand. This, according to Dr. Aron, is
357 because there are fixed or one time costs associated with every increase in
358 capacity that can be avoided if capacity is only expanded infrequently²¹. Dr. Aron
359 is correct, but of course these fixed or one time costs are not unique to
360 telecommunications. In order to avoid delays associated with obtaining building
361 permits, performing environmental studies and dealing with other regulatory
362 requirements for any new project, real world firms will tend to put in more
363 capacity than is currently necessary when they build plants. Firms in the real
364 world, just like their telecom counterparts, undoubtedly find it cheaper to let
365 demand catch up with capacity, rather than continually building new capacity to
366 serve demand that comes along. Yet in spite of this pre-building, capacity rates
367 for real world industries averages more than 80%.

368

¹⁹ See Federal Reserve site cited in footnote 17.

²⁰ I would note that UNE based competition in telecommunications will not typically result in lower utilization rates. SBC may be experiencing declines in lines because of competition. But this does not mean that the loops associated with these lines are now idle. Rather the loops associated with these lines are instead utilized by CLECs, which will purchase these loops from SBC as UNEs.

²¹ SBCI Ex. 2.0 at 51.

369 Third, Dr. Aron argues that telecommunications investment is “lumpy” and cites
370 the example of distribution cable, which is only available in a finite number of
371 sizes²². But investment in many real world industries is also lumpy. Long
372 distance pipelines only come in certain widths. Airplanes come in a certain
373 number of sizes. Oil refineries can only process a predetermined number of
374 barrels.

375
376 Fourth, Dr. Aron argues that excess capacity is a necessary part of the “ready to
377 serve” obligation as are costs of providing service at current quality levels²³.
378 Again telecommunications is not unique. Electric power also has an obligation to
379 serve any new business or residence that comes along. Yet capacity utilization
380 rates for electric power according to the Federal Reserve Board are much higher
381 than 45%.

382

383 **Q. Since Dr. Aron’s analysis does not adequately explain 45% fill factors can**
384 **you provide an alternative rationale for SBCI’s low fill factors?**

385

386 A. I certainly can. Traditionally telephone companies were regulated on the size of
387 their rate base. If the rate base expanded because of increased investment, the
388 telephone companies were granted rates that would allow them to earn their cost
389 of capital on this investment. Consequently, if SBCI put in a lot of spare capacity
390 it did not need, it could still earn a rate of return on this spare capacity, as long as

²² SBCI Ex. 2.0 at 51.

391 this spare capacity received regulatory approval. Under rate of return regulation,
392 therefore, there is not as strong an incentive to be as frugal with spare capacity
393 as there is in unregulated industries²⁴. In unregulated industries spare capacity
394 is not profitable, while in rate of return regulated industries it often is.

395

396 **Q. SBCI is currently price cap regulated and not rate of return regulated.**
397 **Doesn't price cap regulation discourage the type of over investment you**
398 **describe?**

399

400 A. It does, but once spare capacity is put in it does not make economic sense to
401 take it out. For example, assume SBCI under rate of return regulation put in a
402 100 pair cable when a 50 pair cable would do. Now price cap regulation comes
403 along. SBCI is not suddenly going to tear out the 100 pair cable and replace it
404 with a more appropriate 50 pair cable. From a rate-making perspective though,
405 the Company now has a very low "fill" for the 100 pair cable, and wishes to
406 recover the costs of the unused pairs by factoring the cost of unused pairs into
407 UNE rates for loops. The Company, in my example, is trying to recover the
408 costs of inappropriate past investments from competitors.

409

410 Much of the plant SBCI has currently in place was put in place when it was a rate
411 of return regulated monopolist. This plant therefore reflects practices typical of a

²³ SBCI Ex. 2.0 at 51.

²⁴ My testimony discusses fills and spare capacity from an economics point of view. Staff witness Bud Green in Staff Exhibit 10.0 discusses fills from an engineering point of view.

412 rate of return regulated monopolist and does not reflect what an efficient forward
413 looking firm would do. I should also note that it takes time to change old habits.
414 So if rate of return engineering guidelines suggested a certain amount of spare
415 capacity then these guidelines may not immediately be changed under price cap
416 regulation. Planners who were comfortable under the old spare capacity
417 guidelines would lobby to retain these guidelines. So even under price caps,
418 SBCI would not necessarily be making the most efficient investment decisions.

419

420 **Q. The FCC addressed the issue of fill factors and stated that fills should**
421 **reflect a reasonable projection of actual total usage and should also reflect**
422 **what would be expected from a forward looking efficient carrier. SBCI**
423 **witness Smallwood interprets this to mean that fill factors used in cost**
424 **studies should reflect embedded fills²⁵. Is Mr. Smallwood correct in his**
425 **interpretation?**

426

427 **A.** No. SBCI's embedded fills do not reflect fills for an efficient forward-looking firm.
428 SBCI's embedded fills in part reflect fills for a rate of return regulated monopoly.
429 Rate of return regulation can result in the type of "gold plating" I described earlier
430 where the regulated firm puts in more spare capacity than is necessary because
431 it can earn a rate of return on this spare capacity. Furthermore, former
432 monopolies are not known for their efficiency.

433

²⁵ SBCI Ex. 4.0 at 9.

434 More fundamentally, use of embedded fills in cost studies sends out the wrong
435 economic signals. If the firm supplying loops is inefficient in its utilization of
436 loops, then pricing UNE loops on the basis of embedded fills will mean that the
437 firm can pass on the cost of this inefficiency to buyers of loops. In competitive
438 markets, inefficient firms bear the cost of this inefficiency, not their customers.
439 Alternatively, assume that the firm providing loops is very efficient in its utilization
440 of loops. Then, if the price of loops reflects embedded fills, all the benefits
441 derived from being super-efficient are passed on to loop buyers. In contrast if
442 fills are based on a reasonable projection for an efficient firm, a super-efficient
443 firm will reap some benefit from being super efficient. I note that in competitive
444 markets, firms that are extremely efficient benefit from that super-efficiency, and
445 not all the benefits from that super efficiency are passed on to customers.

446

447 **Q. But if a firm historically only reaches a certain level of fill does this not**
448 **suggest that this historical rate of fill is a reasonable projection of future**
449 **rates of fill?**

450

451 A. No. Use of embedded fills reflects historical behavior and not what is possible
452 from a forward-looking efficient carrier. This is can be illustrated through use of
453 an example. One of the key ratios in retailing is the inventory to sales ratio. The
454 lower the inventory to sales ratio the better. Less inventory means less need for
455 warehouse space and lower financing charges. Now assume a hypothetical
456 retailer (which I will label K-mart) was deciding upon what inventory to sales ratio

457 could reasonably be projected in the future. If it looked at its historical results, it
458 would come up with a figure, which I will call X%. However, if it looked at what a
459 hypothetical forward looking efficient retailer (which I will label Wal-Mart) could
460 achieve it might get a much lower number which I will call Y%. Y% is less than
461 X% because the forward looking efficient firm uses more sophisticated computer
462 systems and has better inventory management methods. The X% historical value
463 does not reflect use of sophisticated computer systems and the better
464 management methods. Just as use of historical inventory to sales ratios is
465 inappropriate for hypothetical retailer K-mart it is similarly inappropriate for real
466 life local service provider SBCI to use embedded fills to project what an efficient
467 forward looking firm might do in the future.

468

469 **VII. Current Depreciation Rates are Economic Depreciation Rates**

470

471 **Q. SBCI depreciation witness Dr. Vanston urges the Commission to adopt**
472 **economic depreciation rates in this proceeding²⁶. Do you agree?**

473

474 **A.** Yes. The Commission should adopt depreciation rates that reflect the
475 economically useful lives of equipment and plant.

476

477 **Q. Does Dr. Vanston consider the lives of plant and equipment that the**
478 **Commission adopted in Docket 96-0486 to be economic lives?**

²⁶ SBCI Ex. 13.0, *generally*.

479

480 A. Dr. Vanston argues that much has happened in telecommunications since the
481 Commission in 1998 ordered that investment lives for UNE costing be based on
482 investment lives prescribed by the FCC. First, Dr. Vanston contends that the rate
483 of technical change is accelerating and because of this depreciation rates will
484 have to be accelerated²⁷. Second, Dr. Vanston maintains that competition is
485 increasing and because of this plant will need to be replaced more quickly than
486 before. As a result, Dr. Vanston proposes shorter economic lives than the
487 Commission adopted in Docket No. 96-0486.²⁸

488

489 **Q. Do you agree with Dr. Vanston's analysis of technology and competition**
490 **and their impacts on the useful lives of plant and equipment?**

491

492 A. No. I will address each of Dr. Vanston's arguments in turn. First, I agree that
493 there is technological change in the telecommunications industry today. But it is
494 also true that there has been technological change in the past. In the 1950s, for
495 example, direct long-distance dialing became commonplace. In the 1980s and
496 1990s digital technology replaced analogue technology. Depreciation rates today
497 reflect the rapid rate of technological change that has occurred in the past. The
498 question is whether the current pace of technical change is accelerating from the
499 very rapid pace of the past. More specifically has the rate of technical change
500 accelerated sufficiently since the last time depreciation rates were set to justify

²⁷ SBCI Ex. 4.0 at 4, *et seq.*

501 more rapid depreciation rates today? The answer is no. Dr. Vanston presented
502 no evidence proving rates of technical change today are more rapid than the last
503 time depreciation rates were set in Illinois, which was 1996. Dr. Vanston
504 provides examples of technical developments in telecommunications²⁹, and then
505 maintains that these new technologies will reduce the economic lives of existing
506 plant³⁰ and equipment, but his case is largely speculative and selectively
507 anecdotal rather than substantive.

508
509 The speculative nature of Dr. Vanston's case can be found in his "analysis" of
510 how quickly metallic cable will be replaced by fiber cable. Dr. Vanston starts by
511 forecasting how the number of broadband customers will grow³¹. He first
512 postulates that the fraction of households who subscribe to broadband will grow
513 from 10% in 2001 to 50% by 2007 (a 35% annual compound rate of growth) and
514 then increase to more than 90% by 2020 (a 5% compound annual growth rate –
515 long term growth projections for the economy are in the 3% range according to
516 the Congressional Budget Office³²). It is unclear how Dr. Vanston arrived at these
517 forecasts. It appears he applied some sort of "S" curve³³ to recent growth rates
518 in broadband. But his analysis leaves many questions unanswered. Why does
519 Dr. Vanston assume that 90% of households will subscribe to broadband

²⁸ *Id.*

²⁹ SBCI Ex. 13.0 at 6-8.

³⁰ *Id.* at 9.

³¹ It is unclear what Dr. Vanston means by broadband (i.e. what bandwidth constitutes broadband).

³² See latest projections from Congressional Budget Office cited in footnote 10.

³³ "S" indicates the path of sales for a new product over time. In the first few years after a new product is introduced its sales are relatively slow because the product is unfamiliar to consumers. After this initial period of relatively slow growth, sales take off as the knowledge and acceptance of the product grow.

520 services by 2020 – less than 20 years from today – when it took over 80 years for
521 90% of households to subscribe to plain old telephone (POTS) service ³⁴? Why
522 is 90% a better assumption than 35%? If 90% penetration rates for broadband
523 are to be realized, most lower income households will have to subscribe. Why
524 does Dr. Vanston believe that the vast majority of lower income, less educated
525 and less technically sophisticated households will subscribe to such an
526 expensive, discretionary service by 2020³⁵? Using recent historic growth rates to
527 predict future growth rates is not generally a reliable forecasting methodology.
528 During the technology boom from 1995-2000, for example, capital spending on
529 information processing equipment and software on average grew by about 11%
530 per year³⁶. Based on these figures one would expect that technology related
531 spending would increase in 2001 and 2002. But the opposite is true.
532 Technology spending fell by about 10% in 2001 and dropped another 1% in
533 2002³⁷. These capital spending figures demonstrate how unpredictable
534 investment in technology can be and why recent trends are rarely a good
535 predictor of future performance.

536

Following this explosive growth phase comes a slower growth period as the number of customers who might be interested in product and have not yet tried it falls.

³⁴ These figures may be obtained at <http://www.fcc.gov>; telephone penetration rates hit 90% only in 1970; in 1920 penetration rates were 35% yet Dr. Vanston believes that broadband penetration rates will hit 50% by 2007.

³⁵ Internet penetration rates rose sharply. But Dr. Vanston is assuming households will move from Chevrolet internet service to Mercedes Benz internet service.

³⁶ These figures are published by the Bureau of Economic Analysis and can be obtained at <http://www.bea.doc.gov> by clicking GDP and related data, then clicking Index to the Nipa Tables and then searching for Gross Investment among the data available.

³⁷ See footnote above for source.

537 After Dr. Vanston forecasts the number of broadband subscribers he then uses
538 bell shaped curves to “forecast” the number of households at four nominal data
539 rates. He assumes that customers will migrate from 1.5 Mb/s today to 100 Mb/s
540 by 2020³⁸. But Dr. Vanston does not provide any convincing rationale why
541 customers will need 60 times the bandwidth they use now. He seems to imply
542 that customers will want this capacity to access video and audio clips but his
543 case is based on unsupported assertions (“after 2005, customers will demand
544 the increased data rates³⁹”) rather than substantive analysis. He also selectively
545 quotes “some experts” to support his assumptions. Again, selectively quoting
546 some experts who predict band-widths “as high as” 100 Mb/s could be needed is
547 far from conclusive evidence.

548
549 Finally, based upon the preceding “analysis”, Dr. Vanston shows the percentage
550 of access lines that have to be converted to distribution fiber from metallic fiber⁴⁰.
551 This percentage starts at 1% in 2003 and reaches 100% by 2019. But according
552 to Dr. Vanston a broadband subscriber is defined as a household who subscribes
553 to all types of high-speed digital services including cable modems⁴¹. However, if
554 a household subscribes to broadband services via cable modems, then the
555 household does not need the telephone company to replace copper with fiber. I
556 can understand why an incumbent local exchange carrier (ILEC) would want to
557 do this, but those households that are satisfied with voice should not be required

³⁸ SBCI Ex. 13.0 at 41.

³⁹ SBCI Ex. 13.0 at 40.

⁴⁰ SBCI Ex. 13.0 at 40, Figure 7.

⁴¹ Id.

558 to pay higher rates for that voice just so the ILEC can also provide broadband
559 services which the telephone subscriber does not want or can get from the cable
560 company. In other words, rates for the telephone “voice” user who does not want
561 or need broadband services from the telephone company should not subsidize
562 the rates of the telephone broadband user.

563
564 In addition, some of the new technologies allow advanced services to be offered
565 over existing copper wire. For example, New Generation Digital Loop Carrier
566 (“NGDLC”) technology means that advanced telecommunications services can
567 be provided to homes and business that are still served by copper cables. New
568 technologies may mean that copper to the home does not have to be replaced by
569 fiber for homes to have access to advanced services.

570
571 The second argument Dr. Vanston makes is that competition is increasing and
572 this will cause plant to be stranded and consequently depreciation lives have to
573 be shortened to take account of this risk. The firm Dr. Vanston is associated with,
574 TFI, forecasts that by 2010 ILECs will provision one-third fewer access lines than
575 today and that by 2015, they will provision less than half as many access lines as
576 today. Competition, according to Dr. Vanston, will strand large quantities of
577 equipment significantly reducing the economic life of this equipment⁴².

578

⁴² SBCI Ex. 13.0 at 8.

579 Dr. Vanston is correct that competition is increasing. But TFI forecasts for lines
580 lost to competition appear to be aggressive. The situation with respect to
581 competition can change in ways forecasters cannot possibly imagine now. For
582 example, today many CLECs appear to be having trouble financing their
583 operations. In addition, CLECs have picked up many of the customers that were
584 dissatisfied with existing ILECs services. Getting new customers will be more
585 difficult for these CLECs in the future. Thirdly, the ILECs are likely to become
586 better competitors over time. The more they are exposed to competition the
587 better they are likely able to compete and this will tend to limit their market share
588 losses over time.

589
590 Competition may strand plant if the competition is facilities based and there is no
591 growth in underlying lines. But UNE-P based competition uses existing plant
592 provided by SBCI. UNE-P and resale competition do not typically strand plant⁴³.
593 UNE-P competition therefore will not shorten the life of plant – it merely means
594 that competitors will now use plant that was formally used by SBCI. Ironically,
595 the higher UNE-P rates proposed by SBCI, if implemented will cause more
596 stranded plant. This is because higher UNE-P rates will encourage CLECs to
597 build more of their own facilities, and these new facilities could strand existing
598 SBCI facilities.

599

⁴³ Even many facilities based CLECs use SBCI loops to provide service.

600 With respect to facilities based competition, there are according to Dr. Vanston
601 three potential threats: cable, CLECs building their own facilities and cellular. I
602 will examine with each of these alleged threats in turn. First, according to
603 sources quoted by Dr. Vanston's the number of cable telephone subscribers
604 nationwide could reach 12.5 million by 2005⁴⁴. But these forecasts appear to be
605 unrealistically high. FCC figures indicate that there were only 2.6 million cable
606 telephone subscribers as of June 2002⁴⁵ (representing less than 1.5% of all
607 switched access lines). This according to the FCC was a 16% increase over the
608 previous six months - a rapid growth rate - but even if this rapid growth rate was
609 maintained it would not result in 12.5 million subscribers by 2005. Second, it is
610 very expensive for CLECs to build their own facilities particularly to put in loops.
611 Since many if not most CLECs appear to be cash strapped this is not a viable
612 threat in the short run. It is also not particularly likely in the long run either since it
613 takes a great deal of capital and is quite risky (once the CLEC puts in the loop
614 there is no guarantee that the CLEC will retain the customer at the end of the
615 loop for any length of time). Third, cellular has been around for many years.
616 Cellular acts as a complement to the existing phone network rather than a
617 substitute for the existing phone network. This is confirmed by figures quoted by
618 Dr. Vanston, which suggest that only 2.2% of Americans have done away with
619 their regular phone to rely totally on cell phones or other wireless devices⁴⁶. So
620 even though there are over 128 million cellular users nationwide according to

⁴⁴ SBCI Ex. 13.0 at 28.

⁴⁵ See FCC Report on Local Competition, June 2002

⁴⁶ SBCI Ex. 13.0 at 31.

621 FCC statistics⁴⁷, only 2.2% of households have switched entirely to wireless. Dr.
622 Vanston, however, quotes forecasts that predict the number of customers who
623 will rely on wireless entirely will rise to 20% by 2005 and 50% by 2020. The
624 question Dr. Vanston fails to address is why? Why will the number of
625 households that rely on wireless alone jump to 50% over the next 15 years when
626 only 2% of households entirely rely on wireless today, even though there are
627 over 128 million wireless subscribers nationwide currently?

628
629 Overall, Dr. Vanston's approach to forecasting competitive market share loss
630 appears to consist of quoting a few extreme predictions in the hopes of making
631 his own projections seem reasonable. However, by citing only the least credible
632 forecasts Dr. Vanston does nothing of the sort. His own forecasts do not become
633 more credible because they are less extreme than some others.

634
635 In conclusion, Dr. Vanston provides little in the way of hard evidence to support
636 his view that depreciation rates need to be increased. He has not shown that the
637 rate of technological change is accelerating from the rapid rates experienced in
638 the past. Rather Dr. Vanston provides examples of current technical change and
639 then claims that these technical changes will cause equipment to be replaced
640 more quickly than before. His demand forecasts for broadband appear to
641 simplistic "S" curve projections that assert a certain level of penetration will occur
642 in 2020 but these assumed penetration levels are unsupported by underlying

⁴⁷ See FCC Report on Local Competition, June 2002.

643 economics. He selectively quotes experts in the field and uses anecdotes to
644 justify his projections for increasing band with rather than providing substantive
645 analysis of his own. He does not acknowledge that some technologies allow
646 advanced services to be offered over metallic cable. His analysis of competition
647 does not take into account the weakened financial conditions of competitors or
648 the increased competitive expertise of incumbents. Finally, he quotes experts
649 that assert that cable, facilities based CLEC and cellular competition will strand
650 substantial local plant. However, these so-called expert predictions are
651 inconsistent with recent developments and lack an analytical basis and therefore
652 are not credible.

653

654 **Q. Does this conclude your testimony?**

655

656 **A.** Yes it does.