

REBUTTAL TESTIMONY
OF
QIN LIU

TELECOMMUNICATIONS DIVISION
BUREAU OF PUBLIC UTILITIES
ILLINOIS COMMERCE COMMISSION

ICC DOCKET NO. 08-0569

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1 **Q. Please state your name and business address.**

2 A. My name is Qin Liu, and I am employed by Illinois Commerce Commission. My
3 business address is 160 N LaSalle, suite C-800, Illinois, Chicago, IL 60601.

4 **Q. Have you previously filed testimony in this proceeding?**

5 A. Yes, my direct testimony is ICC Staff Ex 1.0.

6 **Q. Please describe the purpose and scope of your rebuttal testimony.**

7 A. The purpose of my testimony is to respond to Attorney General (hereafter "AG")
8 witness Dr. Lee Selwyn. Dr. Selwyn offers certain suggestions regarding how to
9 better analyze market competition, and advocates the use of certain economic
10 tools to do so. I will provide an analysis of Dr. Selwyn's suggested tools and
11 methodology.

12 **Q. Do you have overall comments on Dr. Selwyn's testimony?**

13 A. Yes. It appears that Dr. Selwyn's testimony is primarily based on a study of the
14 post reclassification residential market in MSA-1, entitled: "ETI Report on the
15 Competitiveness of the Residential Telecommunications Market and Price
16 Changes in Illinois MSA-1 since Entry of 2006 Final Order" ("EFI report").¹
17 This study appears to relate exclusively to MSA-1. In addition to the EFI study,
18 Dr. Selwyn appears to be resubmitting his arguments and opinions presented in
19 the last reclassification proceeding (i.e., ICC Docket No. 06-0027). (See AG Ex
20 1.0 at 15-18, and Schedule LLS-3)

¹ This study was conducted by Economics and Technology, Inc., of which Dr. Selwyn is the president.

21 **Q. Dr. Selwyn uses the term “cross-elasticities of demand” in his direct**
22 **testimony. (AG Ex 1.0 at 13: L14-L16). Please explain the term “cross-**
23 **elasticity of demand.”**

24 A. Very generally speaking, the cross-elasticity of demand is a measure of the
25 responsiveness of demand for one product or service to the price change of
26 another product or service. Specifically, it measures the percentage change in the
27 demand for one product or service in response to a percentage change in price of
28 the other product or service. For example, if the demand for a service increases
29 by 10% in response to a 5% increase in the price of the other service, the cross
30 elasticity of demand for these two services would be 2. For services that are
31 substitutes, the cross-elasticity is expected to be greater than zero, which is to say
32 that an increase in the price of one would lead to some increase in the demand for
33 the other. However, the degree of substitutability, and the cross-elasticity of
34 demand, may vary. The higher the cross-elasticity, the more responsive the
35 demand for one service is to the change in price of the other service.

36 **Q. Dr. Selwyn states in his testimony “Merely describing a particular**
37 **telecommunications service as being functionally equivalent to, or a**
38 **substitute for, an AT&T Illinois service does not prove that it is. The type of**
39 **evidence that would support that conclusion includes studies of cross-**
40 **elasticities of demand.” (AG Ex 1.0 at 13: L14-L16) Does Dr. Selwyn**
41 **provide any usable standard to identify “functionally equivalent” or**
42 **“substitutes” based on cross-elasticity of demand?**

43 A. No. Dr. Selwyn does not in his direct testimony provide any usable or principled
44 standard to identify what constitutes a “functionally equivalent” or “substitute”
45 service based upon cross-elasticity of demand. While he indicates that an
46 assessment of what constitutes a “functionally equivalent” or “substitute” service

47 requires a study of cross-elasticity, he does not characterize how he would
48 propose to use cross-elasticity to identify “functionally equivalent” or
49 “substitutes”; more specifically, he does not suggest what level of cross elasticity
50 would confirm that a specific telecommunications service is the functional
51 equivalent for, or a substitute for, any of AT&T’s services offered in the Greater
52 Illinois LATAs.

53 Moreover, while Dr. Selwyn indicates that any assessment of whether
54 telecommunications services are “functionally equivalent” or “substitutes” for
55 one another would require a study of cross-elasticity, he reaches the conclusion
56 that wireless and VoIP services are not functionally equivalent to, or substitutes
57 for, AT&T’s services without relying on any cross-elasticity studies (AG Ex 1.0
58 at 12-13).

59 **Q. Have you conducted any study on cross-elasticity of demand for phone**
60 **services in the Greater Illinois LATAs?**

61 A. No. I have not conducted any study on cross-elasticity of demand for
62 telecommunications services in the Greater Illinois LATAs.

63 **Q. Dr. Selwyn contends that there is not sufficient competition in the Greater**
64 **Illinois LATAs to meet the standard of Section 13-502 of the PUA (AG Ex 1.0**
65 **at 11). Does Dr. Selwyn set out specific standards based on which the**
66 **Commission may assess whether AT&T has met the statutory requirements**
67 **of Section 13-502?**

68 A. No. Dr. Selwyn characterizes AT&T’s approach in analyzing market competition
69 as a “headcount” approach and “not meaningful.” (AT&T Ex 1.0 at 12-13) He,
70 however, does not propose any usable or principled standards that the

71 Commission might use to evaluate the appropriateness of AT&T's reclassification
72 in the Greater Illinois LATAs. Dr. Selwyn does advocate four "quantitative"
73 measures, which are used in the EFI study:

- 74 (1) Price movements,
- 75 (2) Profits earned,
- 76 (3) Entry and exit conditions, and
- 77 (4) Market concentration.

78 But Dr. Selwyn notably fails to describe how these four "quantitative" measures
79 of competition are to be used to evaluate the appropriateness of AT&T's
80 reclassification of residential services in the Greater Illinois LATAs.

81 **Q. Please discuss Dr. Selwyn's "price movement" standard.**

82 A. As far as I can determine, Dr. Selwyn's price movement standard is as follows:
83 First, Dr. Selwyn assumes that, if reclassification is granted, AT&T's customers
84 in the Greater Illinois LATAs will experience similar price movements as those
85 experienced by AT&T's customers in MSA-1. Second, Dr. Selwyn assumes that
86 if alternative providers do offer services viewed by consumers as "actual
87 substitutes," AT&T would be expected to reduce prices to match those of
88 substitute services provided by alternative providers. AG Ex 1.0 at 13. In other
89 words, Dr. Selwyn seems to suggest that a reduction in the price of AT&T's
90 residential service is necessary for the showing that there are substitute services
91 offered by alternative providers.

92 **Q. Please discuss the merit of Dr. Selwyn's "price movement" standard.**

93 A. While Dr. Selwyn's expectation may not be entirely unreasonable in the abstract,
94 it is unclear how Dr. Selwyn proposes to apply this standard to assess whether
95 AT&T has met the statutory requirements of Section 13-502 in this proceeding.

96 While evidence of price movement may provide useful insight into the
97 competitiveness of the markets in the Greater Illinois LATAs, Dr. Selwyn has
98 failed to prescribe how to practically apply this standard to assessing whether
99 AT&T has met the statutory requirements of Section 13-502. In short, while Dr.
100 Selwyn proposes an analytical tool that he considers useful, he gives the
101 Commission little or no insight into how the Commission might use it in this case.

102 In addition, implicit in Dr. Selwyn's argument is the notion that since
103 reclassification there were price changes in MSA-1 that were inappropriate by
104 some standard. However, Dr. Selwyn does not provide any meaningful analysis
105 of the price changes he references. Simply noting a change in price does not
106 provide insight into why the price changed, what criteria define whether the price
107 change was appropriate or not, or whether, according to those criteria, the price
108 change was appropriate or not.

109 Finally, I note that price regulation in telecommunications in the state of Illinois is
110 not symmetric. AT&T is the incumbent local exchange carrier in its serving
111 territory in the Greater Illinois LATAs. As such, it was, prior to its filing of the
112 tariffs at issue here, subject to price-cap regulation. In other words, the AT&T
113 residential services that were reclassified as competitive in its August 1 and

114 September 15, 2008 tariff filings were subject to the Commission’s price-cap
115 regulation until those dates. In contrast, services offered by other providers —
116 regardless of whether they use AT&T network facilities — are subject to neither
117 *price-cap* nor *rate-of-return* regulation, and only need to be offered at “just and
118 reasonable” prices; such price regulation is far less restrictive than that which
119 AT&T is subject to.

120 For AT&T’s prices to decrease to match the prices of “actual substitutes”
121 provided by competitors, it would be necessary for these providers of “actual
122 substitutes” to set prices below AT&T’s regulated prices (i.e., prices set in
123 accordance with price-cap regulation). It is certainly possible that some
124 alternative providers would offer “actual substitutes” at prices below AT&T’s
125 regulated prices, if these providers enjoy sufficient cost advantages over AT&T.
126 In the absence of information on these providers’ costs, however, there is no
127 basis to assume that providers of “actual substitutes” (if any) would set prices
128 below AT&T’s regulated prices. Accordingly, there is no basis to expect that
129 AT&T would reduce its prices to match those of actual substitutes if such actual
130 substitutes are offered by alternative providers.

131 **Q. Please comment on Dr. Selwyn’s “profit earned” standards.**

132 A. The EFI study, which supposedly examines the competitiveness of the residential
133 market in MSA-1, seems to be focused on AT&T’s overall intrastate services in
134 the State of Illinois, not just AT&T’s residential services in MSA-1. It is
135 therefore not clear whether Dr. Selwyn proposes to apply his “profits earned”

136 standard to AT&T's intrastate operations in the entire state of Illinois or to
137 residential services in the Greater Illinois LATAs for purposes of this proceeding.
138 While I have no information regarding this point, AT&T's earnings on its
139 residential services and other services in the Greater Illinois LATAs may be very
140 different from those in MSA-1 or from those of AT&T's intrastate services in the
141 state of Illinois. The overall intrastate earning may not, therefore, be an accurate
142 indicator of AT&T's earnings for each, or any, of its residential services in the
143 Greater Illinois LATAs. It would, accordingly, not be proper to use AT&T's
144 overall earning statistics to assess the profitability of AT&T residential services
145 that were reclassified in its August 1 and September 15, 2008 tariff filings in the
146 Greater Illinois LATAs.

147 **Q. What market concentration measure does Dr. Selwyn use in his discussion of**
148 **the market concentration standard?**

149 A. Dr. Selwyn uses the Herfindahl-Hirschman Index ("HHI") as a measure for
150 "market concentration" standard. The HHI is a commonly accepted measure of
151 market concentration,² and it increases both as the number of competitors in the
152 market decreases and as the disparity in size across those competitors increases.
153 It approaches zero when a market consists of a large number of competitors of
154 relatively equal size, and takes the value of 10,000 for a market with a monopoly
155 and the value of 2,000 for a market with five equal-sized competitors,
156 respectively.

² HHI is calculated by squaring the market share of each competitor in the market and then summing the resulting numbers. For example, in a market consisting of two competitors with shares of 40% and 60%, the HHI is $5,200 = (40^2 + 60^2)$.

157 **Q. Do you have comments on Dr. Selwyn's "market concentration" standard?**

158 A. Yes. First, it is not clear from his testimony how Dr. Selwyn calculates the
159 market concentration index HHI. In particular, it is not clear whether Dr. Selwyn
160 includes wireless or VoIP customers in his calculation of market shares. As was
161 the case with the issue of cross-elasticity, exclusion of wireless or VOIP carriers
162 from the universe of competitors without some principled reason for doing so is
163 problematic.

164 Second, Dr. Selwyn does not calculate or present a market concentration index for
165 the Greater Illinois LATAs. Rather, he calculates a market concentration index
166 for the Chicago LATA. While there might be some similarity in the market
167 concentration index (HHI) between the Chicago LATA and the Greater Illinois
168 LATAs, he offers no evidence why they are likely to be the same, and I am aware
169 of none.

170 Third, similar to his "price movement" standard, Dr. Selwyn does not define how
171 the Commission should apply the market concentration standard in practice. In
172 particular, it is not clear what measure of the HHI Dr. Selwyn would consider as
173 providing positive evidence that the statutory requirements for Section 13-502 are
174 satisfied.

175 **Q. In discussing market concentration of residential service market in MSA-1,**
176 **Dr. Selwyn describes AT&T as the dominant firm that "typically takes the**
177 **role of price leader, with the remaining, much smaller entrants taking on the**
178 **role of 'price-taker', responding to the dominant incumbent's price**
179 **movements but have little to no impact upon the incumbent's prices**
180 **themselves. (AG Ex 1.0 at 28) Has Dr. Selwyn presented any concrete**

181 **evidence that prices of substitutes offered by alternative providers have been**
182 **following the pattern of AT&T's upward price movements?**

183 A. No. Having demonstrated upward price movements for AT&T's residential
184 services since reclassification in MSA-1, Dr. Selwyn does not present any
185 evidence that prices of substitutes offered by alternative providers — regardless
186 whether they use AT&T network facilities — have been “following” the pattern
187 of AT&T's upward price movements. In other words, Dr. Selwyn does not
188 demonstrate that prices of substitutes offered by alternative providers have been
189 rising *significantly and steadily* following the reclassification in MSA-1, as price-
190 followers are expected to do.

191 **Q. Does Section 13-502 impose any requirement that the Commission enter any**
192 **specific findings with respect to market concentration?**

193 A. No. The only specific standard regarding the number of competitors or service
194 providers is contained in Section 13-502(b):

195 A service shall be classified as competitive only if, and only to the
196 extent that, for some identifiable class or group of customers in an
197 exchange, group of exchanges, or some other clearly defined
198 geographical area, such service, or its functional equivalent, or a
199 substitute service is reasonably available from more than one
200 provider, whether or not any such provider is a
201 telecommunications carrier subject to regulation under this Act.

202
203 That is, for AT&T to meet the requirements of Section 13-502, there must be at
204 least one alternative provider that offers residential local exchange services that
205 are functionally equivalent to, or substitutes for, AT&T's residential services in
206 the Greater Illinois LATAs. In other words, Section 13-502 would not preclude

207 the Commission from finding AT&T's reclassification proper in the Greater
208 Illinois LATAs simply because there is only one alternative service provider.

209

210 **Q. Do you render any opinions on what the specific standards (for price**
211 **movement, profitability and market concentration) should be?**

212 A. No. These standards are proposed by Dr. Selwyn and, as explained above, not
213 completely specified. I, however, offer no opinion regarding how the
214 Commission might apply the standards that Dr. Selwyn urges it to use.

215 **Q. Please summarize your findings.**

216 A. In urging the Commission to reject AT&T's "headcount" approach, Dr. Selwyn
217 offers several analytical tools and standards which, in his opinion, offer the
218 Commission a better ability to analyze market competition. However, it is not
219 clear to me from Dr. Selwyn's testimony how he would propose to have the
220 Commission implement these recommendations in practice.

221 To be clear, I do not contest the notion that there are several tools that could,
222 theoretically, be used to gain certain insights into the competitiveness of the
223 Greater Illinois LATAs. However, Dr. Selwyn does not identify precisely how
224 these tools should be used either in theory or in practice. Similarly, Dr. Selwyn
225 does not employ these tools himself in this case, as when he declares wireless and
226 VOIP services to not be substitutes for AT&T's wireline services, without
227 providing the cross-elasticity study he argues is vital to such an analysis.
228 Alternatively, Dr. Selwyn applies the tools and analytical constructs with

229 imprecision, as when he assumes MSA-1 is a proxy for the Greater Illinois
230 LATAs.

231 Were Dr. Selwyn to precisely state how the analytical tools and standards might
232 be utilized in this case, Staff might very well recommend the Commission take
233 them into consideration, although in my opinion it is certainly not required. To
234 the extent, however, that Dr. Selwyn urges the Commission to adopt analytical
235 tools and decisional standards that are vague, ill-defined, or extremely difficult to
236 practically apply to the proceeding before it, Staff cannot agree with Dr. Selwyn
237 that the Commission should consider them, especially where, as here, the use of
238 such analytical tools and standards is not required by law.

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

240 A. Yes.