

List of Issues and Major Conclusions

- Shows the significant impact on jobs and regional spending of ComEd's expenditures for construction and operations and maintenance.
- Describes the statistical model that was used to estimate the ripple effects that ComEd's expenditures have in other sectors of the Chicago regional economy.
- Concludes that ComEd's representative annual spending has an overall effect of \$3.2 billion in production expenditures and 20,400 associated jobs on the Chicago regional economy.

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1 **I. Introduction and Purpose**

2 **A. Identification of Witness**

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

4 A. My name is Geoffrey J.D. Hewings. I am the Director of the Regional Economics
5 Applications Laboratory of the University of Illinois (“REAL”). My business address is
6 507 South Mathews, #318, Urbana, Illinois 61801-3671.

7 **B. Purposes of Testimony**

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

9 A. The purpose of my testimony is to respond to the concerns raised by Illinois Office of the
10 Attorney General (“AG”) witness Roger Colton in his Direct Testimony. Specifically,
11 Mr. Colton repeatedly discusses that the jobs market in Commonwealth Edison
12 Company’s (“ComEd”) service territory is trending toward lower paying, lower quality
13 jobs, and that ComEd’s ratepayers are increasingly struggling to maintain self sufficiency
14 and pay their bills. Colton Dir., AG Ex. 5.0, 18:399-19:40, 21:455-25:544, 28:620-
15 29:660. Mr. Colton states that “[w]hile it is not the responsibility of ComEd to resolve
16 those problems, it is the responsibility of ComEd at least not to further contribute to those
17 problems.” *Id.* at 36:811-826. While I do not agree with Mr.Colton’s assessment of
18 ComEd’s responsibilities, my testimony will address and rebut his concerns by showing
19 the positive impact on the Chicago metropolitan economy of ComEd’s expenditures for
20 construction and operations and maintenance (“O&M”).

21 **C. Summary of Conclusions**

22 **Q. In summary, what are the conclusions of your testimony?**

23 A. Because of the significant degree of interdependence among sectors in the Chicago
24 metropolitan economy, when activity changes in one sector it generates impacts on other
25 sectors of the economy. Based on a well-established econometric model developed by
26 REAL to analyze these connections and impacts, I have concluded that ComEd's
27 expenditures in the areas of construction and O&M have a substantial ripple effect on the
28 various sectors of the Chicago metropolitan economy, which in many cases creates a
29 ripple effect that more than doubles the direct impact of the expenditure. Specifically,
30 ComEd's representative annual spending has an overall effect of \$3.2 billion in
31 production expenditures and 20,400 associated jobs on the Chicago regional economy.

32 **D. Background and Experience**

33 **Q. Dr. Hewings, what are your duties in your current position?**

34 A. As the Director of REAL, I am responsible for the overall direction of REAL, which
35 includes coordination with clients and the supervision of graduate students who work for
36 REAL on the Urbana campus of the University of Illinois. In addition to my position in
37 REAL, I am a Professor of Geography and Regional Science, of Economics, and of
38 Urban and Regional Planning.

39 **Q. Can you please describe REAL in more detail?**

40 A. REAL's mission is to provide timely, high quality analytical economic information for a
41 variety of uses such as public policy decision making by public sector agencies and for
42 strategic marketing in the private sector. REAL's capabilities revolve around

43 comprehensive state and metropolitan models that integrate econometric and input-output
44 analysis to provide for both impact and forecasting analyses.

45 **Q. Dr. Hewings, what is your educational background?**

46 A. I obtained my B.A. from the University of Birmingham (UK) and my M.A. and Ph.D.
47 from the University of Washington (Seattle). Prior to coming to Illinois in 1974, I was on
48 the faculty of the University of Kent at Canterbury (UK) and the University of Toronto
49 (Canada). I have also served as a visiting professor at the University of Queensland
50 (Australia), Bar Ilan University (Israel), Tianjin University (China), University of
51 Indonesia and Kagawa University (Japan). My complete curriculum vitae is attached to
52 my testimony as ComEd Exhibit 2.1.

53 **II. Impacts of ComEd's Expenditures on the Chicago Metropolitan Economy**

54 **Q. Please describe the REAL model used in your analysis.**

55 A. REAL's primary modeling efforts are focused on the construction and use of Regional
56 Econometric Input/Output Models ("REIMs"). Regional economic models can serve as
57 valuable tools for corporate and regional planners by providing information and forecasts
58 of economic conditions at the local level, including impact analyses. Because every
59 region is unique in its industrial makeup and general economic environment and
60 economic conditions and trends seen at the national level are often quite different from
61 the experiences of individual regions, valuable information can be gained by taking a
62 grass roots regional approach to economic analysis. As a result, each REIM is
63 constructed from the ground up, using information as detailed as plant level purchases
64 and sales. Since completion of REAL's first model in 1989 (the Chicago Region
65 Econometric Input/Output Model), REAL has continually updated and refined collection

66 and estimation techniques to maximize the informational content of each model while
67 maintaining a high degree of accessibility.

68 One of the primary uses for the models that REAL has developed is for impact
69 analysis, such as that being used for the present project, which estimates the impact of an
70 event (*e.g.*, an expenditure) on the region or community in which it is located. Here, the
71 Chicago metropolitan economy is complex and is characterized by a significant degree of
72 interdependence between sectors. When activity changes in one sector it generates
73 impacts on other sectors of the economy. In fact, in many cases the original sector
74 undergoing change and the group of sectors that are impacted often have little or no
75 direct connection. Because it would be very labor intensive and costly to capture the
76 nature and strength of these connections on a case-by-case basis, analysts prefer to create
77 models of the economies under consideration, which is what REAL has done for this
78 project.

79 REAL has designed a model specific to the Chicagoland area, which includes the
80 counties of Cook, DuPage, Will, Kane, Lake, McHenry and Kendall. As I describe in
81 more detail below, the analysis records the direct impact of any change and then enters it
82 into the model to estimate the ripple effect in other sectors.

83 **Q. Can you please explain what you mean by the “ripple effect”?**

84 **A.** Yes. The ripple effect is actually comprised of two effects – indirect effects and induced
85 income effects, which are defined as follows:

86 *Indirect Effects* are those generated by the expenditures of a company on a
87 variety of goods and services.

88 *Induced Income Effects* are those generated by consumer expenditures made by
89 employees of the company.

90 The sum of the direct effects, indirect effects and induced income effects generates the
91 total impact. When the total impact is divided by the direct effect, the result is the
92 *multiplier* or *ripple* effect. For example, assume that Company A spends \$100 on
93 construction projects (*i.e.*, the direct effect), which generates \$50 in indirect effects and
94 \$50 in induced income effects. By dividing the total impact (\$200) by the direct effect
95 (\$100), the ripple effect is 2. Put another way, the analysis shows that the expenditure
96 doubles the direct impact.

97 **Q. Does the ripple effect vary depending on the size of the economy under**
98 **consideration?**

99 A. Yes, it does. Ripple effects will generally be larger in a larger economy. The main
100 reason for this is the fact that a larger percentage of the supply chain will be sourced
101 within a larger economy, thereby creating larger indirect effects. In addition, the variety
102 of consumer goods and services will be larger, which means that the induced effects will
103 be correspondingly larger.

104 **Q. How are the results of your analysis organized?**

105 A. As I previously noted, I examined the impacts of ComEd's annual expenditures on
106 construction and O&M. For each category, I analyzed the impact on output (the value of
107 produced goods or services), income (wages and salaries), employment (job creation),
108 and State sales and income taxes, and then calculated the multiplier, or ripple, effect. The
109 complete analysis for each category is set forth in the report attached as ComEd Exhibit
110 2.2 to my direct testimony.

111 **Q. Please describe your findings.**

112 A. As shown below, in most instances our analysis found that the ripple effects of ComEd's
113 expenditures generally doubled the direct impact.

114 Construction. Assuming annual ComEd expenditures of \$725 million for
115 construction, our analysis estimates that this amount of spend would generate over \$1.7
116 billion worth of production in the Chicago region. Associated with this production would
117 be approximately \$564 million in total wages and salaries and roughly 13,240 jobs.
118 Although half of the \$1.7 billion in production is, not surprisingly, concentrated in
119 construction, the remaining half is spread across a variety of sectors. For example,
120 roughly \$59.2 million is associated with government sector wages and salaries, with
121 some 490 jobs created. In sum, for each of these categories the ripple effect is greater
122 than two. This would have a direct positive effect on the "long-term trend in jobs and
123 wages in Illinois" that Mr. Colton discusses, particularly with regard to "jobs in the
124 higher paying construction sector." *See* Colton Dir., AG Ex. 5.0, 24:520-25:544.

125 O&M. For purposes of this category, we assumed an annual ComEd spend of
126 \$850 million. Although the production ripple effect was slightly less than 2, the ripple
127 effect on employment of 3.15 was larger – an additional 2.15 jobs are created for each
128 job. And, like the construction impacts, benefits are realized across a variety of sectors.
129 Using the government sector again as an example, the O&M impacts are associated with
130 over \$46 million in wages and salaries, with some 380 jobs created.

131 These results are all summarized in Tables 1 through 4 in ComEd Exhibit 2.2. As
132 shown on those tables, ComEd's annual spending of nearly \$1.6 billion results in about
133 \$3.2 billion in production throughout the economy, with approximately 20,400 related
134 jobs and over \$1 billion in associated salaries and wages.

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

136 A. Yes.