IIEC Exhibit 7.0

STATE OF ILLINOIS

ILLINOIS COMMERCE COMMISSION

COMMONWEALTH EDISON COMPANY	:	
	:	**Docket No. 07-0566**
Proposed general increase in electric rates	:	

Rebuttal Testimony and Exhibits of

David L. Stowe

On behalf of

Illinois Industrial Energy Consumers

April 8, 2008
Project 8883

BRUBAKER & ASSOCIATES, INC.
ST. LOUIS, MO 63141-2000

STATE OF ILLINOIS

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Rebuttal Testimony of David L. Stowe

Introduction

Q PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A My name is David L. Stowe. My business address is 1215 Fern Ridge Parkway, Suite 208; St. Louis, Missouri 63141.

Q ARE YOU THE SAME DAVID L. STOWE THAT PROVIDED DIRECT TESTIMONY IN THIS CASE, IIEC EXHIBIT 3.0?

A Yes, I am.

Q ON WHOSE BEHALF ARE YOU APPEARING IN THIS PROCEEDING?

A I am appearing on behalf of the Illinois Industrial Energy Consumers ("IIEC"). The IIEC is an ad hoc group of industrial customers eligible to take power and energy or delivery service from Commonwealth Edison Company ("ComEd" or "Company").

Q PLEASE STATE THE ISSUES THAT YOU DISCUSS IN YOUR REBUTTAL TESTIMONY.

A The fundamental issue I discuss is the appropriate cost of service study ("COSS") to use in setting ComEd's rates. The Company has sponsored a COSS that

ComEd's witness, Alan Heintz, claims properly accounts for costs and accurately allocates those costs to the customer classes. However, ComEd's COSS, as originally submitted with Mr. Heintz's direct testimony and updated with Mr. Heintz's rebuttal testimony, contains uncorrected errors and omissions, and it produces intra-class and inter-class subsidies. ComEd's COSS should not be used to set rates in this proceeding.

In this rebuttal testimony, as in my direct testimony, I will show that the Company's COSS is deficient in the following ways:

1. The Company's COSS cannot separate primary and secondary distribution costs or allocate them to the appropriate customer classes, despite acknowledgement by Mr. Heintz (ComEd Ex. 33.0 at 3) that ComEd's COSS could thereby be improved.

2. The Company's COSS allocates all costs in FERC Accounts 364 through 367 as if they were incurred solely on the basis of customer demand. It is unable to allocate any portion of these costs on any other basis, even though substantial evidence indicates that other cost-causing factors are equally important. In essence, the Company's COSS does not recognize the minimum distribution system ("MDS").

3. The Company's COSS inappropriately allocates costs for distribution plant operating below 69 kV to customer classes operating above 69 kV.

In addition to these deficiencies, I will show that the Company's COSS is "locked" in that it does not allow costs to be fully investigated, or multiple scenarios to be explored. The result is that ComEd's COSS restricts any investigation of its costs by the Commission or other stakeholders, permitting only a narrow, one-sided, and flawed view of the Company's cost allocations.

Separation of Primary and Secondary Distribution Costs

Q PLEASE DISCUSS THE FIRST DEFICIENCY OF COMED'S COSS THAT YOU IDENTIFIED IN YOUR DIRECT TESTIMONY.

A ComEd's COSS allocates secondary distribution system costs to customers taking service directly from the primary distribution system. This is a significant error. Not only is ComEd's COSS *unable to prevent the subsidization* of secondary distribution costs by customers taking service at primary voltages, *it ensures that the subsidy will occur.*

Q HOW HAS COMED RESPONDED TO YOUR RECOMMENDATION THAT THE COSS BE MODIFIED TO SEPARATE PRIMARY AND SECONDARY DISTRIBUTION COSTS?

A In his rebuttal testimony, Mr. Heintz agrees that ComEd's COSS does not separate primary and secondary distribution costs, and admits the possibility that "having the data to perform a primary/secondary split of distribution lines would improve the ECOSS."[1] Yet, he then complains that, "ComEd does not record its gross plant or accumulated depreciation on its books in a manner that would facilitate changing the ECOSS to recognize this distinction."[2]

[1]Rebuttal Testimony of Alan C. Heintz, ComEd Ex. 33.0, page 3, lines 60-62.
[2]Ibid, lines 62-64.

Q DOES THIS EXPLANATION JUSTIFY COMED'S UNWILLINGNESS TO RECOGNIZE THE DISTINCT PRIMARY AND SECONDARY COSTS IN ITS COSS?

A No. Mr. Heintz does not claim that ComEd is unable to change the COSS, only that the way gross plant and accumulated depreciation records are recorded on the Company's books does not "facilitate" changing the COSS. That is to say, ComEd's chosen accounting practices do not make changing the COSS easy.

Q TO WHICH "BOOKS" DOES MR. HEINTZ REFER IN HIS TESTIMONY?

A Mr. Heintz neither elaborates upon, nor specifically identifies, the books in question. However, from the context of his statement, it is clear these are ComEd's "books of account," or cost accounting records. His reference to ComEd's "gross plant and accumulated depreciation" supports this conclusion.

Q WHAT ENTITY DICTATES THE CONTENTS OF COMED'S BOOKS OF ACCOUNT?

A The content of ComEd's books of account are mandated by the Federal Energy Regulatory Commission ("FERC") in its Code of Federal Regulations ("CFR") (i.e., Title 18, Chapter I, Part 101, Subpart 2, page 336 of the April 1, 2006 edition), and by the Illinois Commerce Commission's Administrative Code, Part 415.

The FERC's CFR states:

> "Each utility shall keep its books of account, and all other books, records, and memoranda which support the entries in such books of account so as to be able to furnish readily *full information as to any item included in any account*"[3] [Emphasis added.]

[3]FERC 18 CFR, Chapter I, Part 101, 'General Instructions,' Subpart 2.A, page 336 of the April 1, 2006 edition.

Subpart 4 of this CFR states:

> "For Major utilities, the records supporting the entries for overhead construction costs shall be so kept as to show the total amount of each overhead for each year, *the nature and amount of each overhead expenditure charged to each construction work order and to each electric plant account*, and the bases of distribution of such costs."[4] [Emphasis added.]

Q DO THE FERC REQUIREMENTS STATE THAT UTILITIES MUST KEEP A RECORD OF THE VOLTAGE LEVEL OF PLANT?

A Keeping records by voltage level is not specified in the FERC CFR. As a result, it is common that utilities will not record their gross plant and accumulated depreciation on their books in a way that makes the primary/secondary distinction obvious. However, by mandating that the "nature and amount" of each expenditure be recorded and linked to a "construction work order and to each plant account," *the FERC requires the data be kept in a manner that allows utilities to identify the costs associated with primary and secondary distribution components*. From my past experience as an employee of a public utility, I know that ample data generally exists in a utility's continuous property records ("CPR") to allow the identification and separation of primary or secondary component costs. In other words, while the task may not be easy, it is certainly feasible.

If there truly were not a method for separating primary and secondary costs, ComEd's reluctance to distinguish primary and secondary costs would not be unusual. In fact, ComEd's reluctance to separate these costs is the exception rather than the rule. For example, all of Ameren's Illinois electric companies separate primary and secondary costs, as do the majority of the investor-owned

[4]FERC 18 CFR, Chapter I, Part 101, 'Electric Plant Instructions,' Subpart 4.C, page 350 of the April 1, 2006 edition.

utilities in Missouri. The identification of primary and secondary plant is the common practice of many, if not most, utilities across the nation. Even ComEd, in its first DST case in 1999, provided an exhibit where it separately identified primary and secondary distribution costs. I have attached a ComEd exhibit from that case as IIEC Exhibit 7.1 to demonstrate ComEd's ability to produce the needed primary/secondary cost separation.

Q HOW CAN A UTILITY DETERMINE THAT A COMPONENT WAS INSTALLED AS PART OF THE PRIMARY VERSUS THE SECONDARY DISTRIBUTION SYSTEM?

A In conforming to the FERC's reporting requirements, all electric utilities must record a detailed description of each electric system component and link that component to a work order. In Table 1, I have resubmitted data from IIEC Exhibit 3.2 of my direct testimony that shows the type of detailed descriptions ComEd currently records. Table 1 shows the description of overhead and underground conductors purchased by ComEd during the last five years.

TABLE 1

Underground and Overhead Conductor Purchases

Underground		
Cable	Aluminum	600V URD 4/0
Cable	Aluminum	15kV #2 1/C
Cable	Aluminum	15kV 3/0 1/C
Cable	Aluminum	15kV 750 kCMIL
Cable	Aluminum	15kV 3/0 3/C
Cable	Aluminum	15kV #2 3/C
Overhead		
Wire	Aluminum	Svc Drop
Wire	Aluminum	Svc Drop
Wire	Aluminum	Bare 477 kCMIL
Wire	Aluminum	Bare 1/0
Wire	Aluminum	Bare 4/0
Wire	Copper	Wthr Resist

Notice that below the heading "Underground" part of the cable description includes either "600V" or "15kV," meaning "600 volts" or "15,000 volts." These voltage ratings should not be understood as the operating voltage of the cable. Instead, buried or "underground" conductors are encased in insulation to isolate them from contact with other conductors or the earth. The numbers represent the voltage at which the conductors can be operated without fear of arcing across this insulation.

Thus, the "600V" rating means that this conductor may be used for any application at or below 600 volts and, since ComEd considers secondary voltages to be less than 4 kV, the description tells us that the cable is to be used only in secondary distribution applications. The conductor described with the "15kV" specification could be installed for either secondary applications between 600 V and 4 kV, or in primary applications. However, for purposes of estimation, I assumed these conductors would be used solely for primary applications. The effect of this conservative assumption is to assign the entire amount to primary customers.

The overhead conductors are somewhat easier to separate since the term "Svc Drop" in the description clearly identifies some of the conductors as secondary level distribution service drops. However, there are other clues that one could use to determine whether an overhead conductor is part of the primary or the secondary system. For example, if the word "Bare" appears in the description, one can reasonably assume that the conductor is a primary conductor, because bare overhead conductors are used almost exclusively in primary applications. On the other hand, terms such as "insulated" or "covered" would be typical of descriptions of secondary conductors.

The data shown in Table 1 was taken from ComEd's records. In addition, ComEd provided documents in its data room in Springfield showing that the Company does, in fact, have adequate descriptive data about its distribution system. Therefore, it should be not be necessary for ComEd to revise its books to calculate primary and secondary percentages. Rather, the calculation should require little more than an engineering analysis of ComEd's existing records.

Q HAVE YOU PERFORMED ENGINEERING STUDIES TO IDENTIFY THE PRIMARY AND SECONDARY PORTIONS OF A UTILITY'S DISTRIBUTION SYSTEM?

A Yes. During my employment with Aquila, Inc. in Kansas City, I was responsible for performing this and other engineering studies on the distribution systems of Aquila's electric companies in Missouri, Kansas, and Colorado. I completed the primary and secondary studies for all four companies in approximately six months.

Q WHAT DATA DID YOU USE TO DETERMINE THE PRIMARY AND SECONDARY PERCENTAGES FOR THOSE COMPANIES?

A I used data from Aquila's CPR.

Q DID YOU PERFORM THE AQUILA STUDIES AS PART OF A TEAM?

A No. I was solely responsible for the studies and generally worked alone. However, it was sometimes necessary to visit with other employees of the company such as field engineers or members of the company's IT or purchasing departments.

Q HAVE THE RESULTS OF THE PRIMARY AND SECONDARY STUDIES YOU PERFORMED WHILE AT AQUILA BEEN REVIEWED BY A PUBLIC UTILITIES COMMISSION?

A Yes, three of the four studies have been reviewed extensively by various parties, including the Staff of either the Colorado Public Utilities Commission ("CoPUC") or the Missouri Public Service Commission ("MoPSC") during separate rate design cases.

Q HAVE ANY OF YOUR PRIMARY AND SECONDARY STUDIES BEEN REJECTED BY ANY COMMISSION BECAUSE YOUR METHODS WERE DEEMED IMPROPER OR THE DATA YOU USED WAS CONSIDERED INSUFFICIENT?

A No.

Q HAVE ANY OF YOUR PRIMARY AND SECONDARY STUDIES BEEN REJECTED BY ANY COMMISSION FOR ANY REASON?

A No.

Q HAS ANY PARTY, DURING THE COURSE OF THOSE RATE DESIGN CASES, CHALLENGED EITHER THE METHODS OR DATA YOU USED TO DETERMINE THE PRIMARY AND SECONDARY PERCENTAGES?

A No.

Q WHY IS IT IMPORTANT TO SEPARATE PRIMARY DISTRIBUTION COSTS FROM SECONDARY DISTRIBUTION COSTS IN THE COSS?

A As I explained in my direct testimony, ComEd serves customers *via* lines operating in one of three broad voltage level categories. These are the HV level operating at or above 69 kV, the primary voltage levels operating at about 4 kV to 34 kV, and the secondary voltage levels operating at less than 4 kV. Every customer class is served ***through*** the HV system, but only one class takes service ***directly from*** the HV system; i.e., the HVDS class, which has two demand level subclasses. These subclasses are the "HV <= 10 MW" subclass and the "HV > 10 MW" subclass.

Since the two HV subclasses generally take service directly from the HV system, and normally do not take service from either the primary system or the secondary system, the costs associated with their service should be separated from primary and secondary distribution costs either by direct assignment or *via* a proper allocation factor. By separating HV costs from primary and secondary costs, the cost study, if used, ensures that HV customers will not subsidize primary and secondary costs.

Each customer in the non-HV classes receives its electricity through the primary system. Only a very small percentage of ComEd's customers take service directly from the primary system. As with the HV costs, primary distribution costs should be separated to prevent the few primary customers from subsidizing secondary system costs.

Most of ComEd's customers take service directly from the secondary system, and as stated in my direct testimony:

> "*It is from this secondary system that the vast majority (over 99.8%) of the Company's customers take service*… Approximately *0.2% of*

> *customers*, however, *do not take service from the secondary system*."[5] [Emphasis added.]

If the costs associated with these three broad voltage categories are not separated in the COSS, and the faulty COSS is used to design rates, subsidies will occur. Thus, the Commission should approve my modified COSS, which accounts for the differences in cost-causation by primary and secondary customers and allocates distribution costs accordingly. A detailed engineering study would enable a more precise determination of the primary/secondary split than my reasonable approximation. However, until ComEd performs an appropriate engineering study, the Commission should reject the use of ComEd's COSS, or use my reasonably accurate effort to accomplish what ComEd's expert acknowledges would improve the COSS. An improved COSS (as I have proposed) is superior to a flawed COSS (as ComEd recommends).

Misrepresentation of Direct Testimony

Q HAS MR. HEINTZ UNFAIRLY REPRESENTED STATEMENTS MADE BY YOU IN YOUR DIRECT TESTIMONY?

A Yes. While defending the Company's inability (or unwillingness) to separate primary and secondary costs in its COSS, Mr. Heintz states:

> "As Mr. Stowe points out in his testimony, *only a tiny fraction* of ComEd's customers *do not take electric service from the primary system*..." (Heintz ComEd Ex. 33.0 at 3-4, Emphasis added).

Mr. Heintz misconstrues and mischaracterizes my testimony, claiming that I point out something I never claimed or suggested. He then uses this misrepresentation

[5]Direct Testimony of David L. Stowe, IIEC Exhibit 3.0, page 14, lines 236-240.

as the basis of an incorrect conclusion. I actually stated "Approximately 0.2% of customers, however, do not take service from the secondary system."

Q WHAT DO YOU MEAN?

A Following the above statement, Mr. Heintz draws the following conclusion:

> "Thus, the benefit of modifying the ECOSS as he [Mr. Stowe] proposes is problematic, compared to the costs involved if the Commission were to order ComEd to revise its books to accommodate the proposal" (Heintz ComEd Ex. 33.0 at 4, explanation added).

The implication seems clear. Since "only a tiny fraction" of customers would be affected (and be relieved of paying unjustified, unreasonable rates) there is little benefit in modifying its COSS, particularly when compared to the cost to ComEd if it were to "revise its books."

Mr. Heintz concludes that since most customers will not benefit from correction of its COSS, modifying the COSS is "problematic." The revenue requirement resulting from my proposed modified COSS is the same as that resulting from the Company's COSS. Thus, ComEd either should be indifferent to performing the engineering studies necessary to separate primary and secondary costs or to performing a better, more accurate COSS and more equitable rates. It is wrong for ComEd to take such a narrow view of its obligations. I believe ComEd should recognize that modifying its COSS to correct errors and to include all cost-causing factors produces benefits to customers, even if correcting those errors and including those factors does not affect ComEd's bottom line.

Q WHAT BENEFITS DOES YOUR MODIFIED COSS OFFER THAT COMED'S COSS DOES NOT?

A In the instant proceeding, ComEd has projected its total cost of service at slightly over $2 billion. Of this amount, ComEd has identified over $920 million, or 45%, as costs associated with distribution lines. While ComEd fully understands that a significant portion of the $920 million is used solely to install, operate, and maintain the secondary system, it does not attempt to quantify that portion. My estimates of the primary and secondary system percentages, however, suggest that over $360 million of this (i.e., nearly 40%) is incurred for the secondary system, and should not be allocated to customers taking service at primary voltages. My modified COSS, by separating primary and secondary costs, allocates nearly $89 million less of secondary costs to primary customers than the Company's COSS, in recognition of the lower cost to serve these customers. Contrary to Mr. Heintz's suggestion, the impact on ComEd's relatively few primary customers of such a large cost error is significant.

A benefit of my proposed COSS is that $89 million in secondary costs is no longer inappropriately allocated to customers who bear no responsibility for their incurrence. My modifications to the Company's COSS have a *de minimis* impact on the total revenue requirement of ComEd, but they significantly affect the revenues recovered from individual customer classes, in accordance with cost-causation. In the interest of fairness and equity, ComEd should use, and the Commission should adopt, a COSS that reflects all relevant cost-causation factors.

In addition, my COSS modifications are beneficial in that they enhance the Company's COSS, so that it can model ComEd's operations and costs better (i.e.,

the modified COSS recognizes and uses more of the significant cost-causing factors, and it allows the Company to consider multiple scenarios and to provide better results to stakeholders). These enhancements not only help cost analysts understand the interaction of ComEd's costs and operational practices, but they also provide decision makers a clearer view of the impact of their choices.

Even though Mr. Heintz recognizes that ComEd's COSS would be improved if the primary and secondary costs were separated, he marginalizes the benefit of doing so, based on: (a) the false premise that a small group of customers is not entitled to appropriate rates; and (b) an unnecessarily narrow view of the benefits of correcting its COSS. As a result, Mr. Heintz's suggestion that the Commission must choose either an admittedly deficient study or expensive accounting changes presents the Commission with a "false dilemma."

Q WHAT FALSE DILEMMA DOES MR. HEINTZ CREATE?

A Mr. Heintz suggests that the benefits of modifying the COSS are "problematic, compared to the costs involved if the Commission were to order ComEd to revise its books to accommodate the proposal."[6] If ComEd is currently conforming to the FERC's recordkeeping requirements, it should not be necessary for it to "revise its books" either by Commission order or otherwise to identify costs properly. I have only proposed that the Commission require ComEd to modify its embedded COSS to allocate primary and secondary distribution costs separately. This should not impose an undue burden on ComEd. It only requires that ComEd, which operates under the same FERC regulations as all other utilities, separate primary and secondary distribution costs the way it has in the past.

[6]Rebuttal Testimony of Mr. Alan C. Heintz, ComEd Ex. 33.0, page 4, lines 66-68.

Demand as the Sole Cost-Causing Factor

Q PLEASE DISCUSS THE SECOND DEFICIENCY OF THE COMPANY'S COSS.

A ComEd's COSS has been developed under the simplistic assumption that distribution costs are caused by only a single factor – demand. Substantial evidence, however, demonstrates the presence of additional consequential cost-causing factors. Among these, the requirement to conform to safety and reliability standards such as the National Electrical Safety Code ("NESC") is significant. I dedicated much of my direct testimony to explaining why these costs, which comprise the minimum distribution system ("MDS"), should be included in a proper COSS as customer-related costs, and to estimating the portion of distribution costs that would be incurred by meeting these standards.

Q AFTER READING YOUR DIRECT TESTIMONY, DOES MR. HEINTZ MAINTAIN THAT CUSTOMER DEMANDS ARE THE PRIMARY REASON DISTRIBUTION COSTS ARE INCURRED?

A Yes. Mr. Heintz states that the distribution plant in FERC Accounts 364 through 367 are allocated to classes on the "non-coincident peak ("NCP") or coincident peak ("CP") demands, *because demands are the primary factor causing cost incurrence*."[7] Yet, while customer demand is an important cost-causing factor, my testimony demonstrates clearly that demand is *not the only factor* causing ComEd to incur distribution costs. In many circumstances, as I demonstrated in my direct testimony, using facilities near customer premises as an example, demand is not even the dominant factor.

[7]Rebuttal Testimony of Alan C. Heintz, ComEd Ex. 33.0, page 4, lines 86-87.

As Mr. Heintz has submitted it, however, ComEd's COSS (contrary to Mr. Heintz's statement) calculates costs as though demand is not simply an important factor, but is, in fact, the *sole factor* causing ComEd to incur billions of dollars in distribution plant investment and O&M expenses.

In his support of the Company's COSS, Mr. Heintz relies heavily on personal opinion, supported by little more than the weight of his own conviction. He has not provided documentation, analytic studies, or other evidence that show that the other cost-causative factors need not be considered. On the other hand, I have provided substantial evidence showing that factors other than demand cause the Company to incur a significant portion of its distribution costs.

In addition to the facts I discussed in my direct testimony, additional evidence suggests that Mr. Heintz's convictions are misplaced. From December 2000 through December 2004, ComEd reported that the net investment balance (distribution plant less depreciation) in FERC Accounts 364 through 367 (distribution poles, overhead lines, and underground lines and conduit) <u>increased</u> from $2.3 billion to $3.1 billion (an increase of over $800 million). However, during this same time period, the total company NCP demand <u>decreased</u> by 1.4 million kW.

If customer demands were the primary factor causing ComEd to incur costs in these accounts, the *investment in distribution plant during this period would have <u>decreased</u> as demand <u>decreased</u>*. This clearly did not happen, so it is not reasonable to deny that other cost-causing factors are involved. During this same period of time, the number of customers on the system increased by nearly 24,000, a direct relationship with the costs at issue. Obviously, the COSS would

be made better if it were modified to recognize the presence and significance of other cost-causing factors.

Q HAS COMED EXPERIENCED SIGNIFICANT CUSTOMER GROWTH, AND THEREFORE INCURRED SIGNIFICANT CUSTOMER-RELATED COSTS IN RECENT YEARS?

A Yes. In the instant proceeding, ComEd has projected its total cost of service at slightly over $2 billion. Of this amount, ComEd has identified over $920 million, or 45%, as costs associated with distribution lines. This is $107 million more than ComEd requested for distribution lines in its last delivery services tariff (DST) case[8] and is, according to ComEd, necessary to install, operate, and maintain nearly $1 billion in recently added distribution lines.

In explaining this increase in distribution system costs, and its need for an increase in rates, ComEd witnesses have cited the unprecedented growth in the number of new customers, and its requirement to meet the electrical needs of these new customers.[9] Clearly, ComEd has incurred significant distribution line costs because it has expanded its distribution system to meet additional customers (customer-related costs). ComEd has provided no evidence that those customers will need more capacity than the minimum code compliant system will provide.

Mr. Heintz has offered no evidence to support his opinion that the COSS should not be modified to better reflect the customer-related costs incurred to expand the distribution system. Rather than taking a proactive role and presenting the evidence the Commission needs to render a proper decision, Mr.

[8]ICC Docket No. 05-0597.
[9]Direct Testimonies of Messrs. J. Barry Mitchell at 3 and George A. Williams at 2.

Heintz simply recounts the Commission's past decisions, which I believe are not dispositive of the issue, as I explained in my direct testimony at lines 482-496.

The COSS is an empirical tool that analyzes costs – one that, when valid, can and should be used as a guide in setting rates. It is the responsibility of the cost analyst to prepare the best COSS possible, and to recognize and properly account for as many cost-causing factors as possible. Without the modifications I have made to ComEd's COSS, it does not, indeed it cannot, accurately and appropriately model ComEd's costs. That being the case, ComEd's COSS, as presented, is unreliable as a guide for setting rates.

Q HAVE ANY OTHER WITNESSES CRITICIZED COMED FOR ALLOCATING COSTS SOLELY ON DEMAND?

A Yes. The witness for The City of Chicago ("City"), Mr. Edward C. Bodmer, stated this same criticism. On page 20 of Mr. Bodmer's direct testimony (City Exhibit 1.0), he states:

> "When allocating costs, ComEd assumes that all of its investment and operating decisions would be precisely the same if it had built its system to distribute electricity for only one hour of the year rather than throughout the year."[10]

Mr. Bodmer is correct that ComEd allocates distribution costs solely on the single peak demand hour, resulting in improper cost allocations. However, Mr. Bodmer also comes to an additional unsupported conclusion. He states:

> "Rather than slavishly apply ComEd's allocator, which is based on the fiction that ComEd incurs costs solely to serve peak demand, the Commission should adopt the average and peak ("A&P") allocation method. This approach takes into consideration both peak demand and energy usage (average demand)."[11]

[10]Direct Testimony of Edward C. Bodmer on behalf of the City of Chicago, page 20, lines 346-350.

[11]Id., Page 20, lines 355-359.

Q WHY DO YOU SAY THAT MR. BODMER'S CONCLUSION RESPECTING THE PROPER ROLE OF AVERAGE DEMAND IS UNSUPPORTED?

A The basis of Mr. Bodmer's criticism of ComEd's COSS is that it allocates certain distribution costs solely on a single hour of peak demand. He argues that this is incorrect because these costs are not caused solely by that peak hour of demand. However, when he concludes that these costs would be allocated more appropriately if the COSS used factors that included average demand or energy usage, he stops short of showing how costs are caused or affected by average demand and energy usage.

Q ARE DISTRIBUTION COSTS INCURRED TO MEET THE AVERAGE DEMAND OR ENERGY USAGE OF CUSTOMERS?

A No. Although the distribution system delivers electrical energy continually and serves the average demand of customers throughout the year, this capability does not influence its cost. The truth of this statement can be clearly seen by using the following simple example.

Consider a segment of the distribution system that serves 100 customers. The electricity is distributed through a network of 25 secondary circuits, connected to a single-phase primary circuit that operates at 12 kV. By using calculations I performed in my direct testimony, it can be shown that the secondary distribution system described by this example (i.e., the 25 secondary circuits), if constructed to only just conform to the NESC standards, would be capable of serving about

510 kW[12] of peak demand. Similarly, the primary line, if constructed to only conform to the NESC, would be capable of serving approximately 710 kW.[13]

With this system in mind, consider three possible scenarios:

(1) The *combined peak demand* of the 100 customers is *less than 500 kW*;

(2) The *combined peak demand* of the 100 customers is *greater than 750 kW*; and

(3) The *average demand* of the 100 customers is *equal to 750 kW*.

In the first scenario, the combined peak demand of the 100 customers is less than the capacity of the secondary and primary systems if they were constructed to only just conform to the safety and reliability standards. In this scenario, the secondary and primary systems cannot be constructed to meet the peak demand, but must be built to conform to the NESC instead. Thus, the minimum safety and reliability standards specified by the NESC cause these costs to be incurred.

In the second scenario, the combined peak demand of the 100 customers is greater than the capacity of either the secondary or the primary systems. In this case, the utility must upgrade the systems by installing larger primary conductors, and by adding more and/or larger secondary circuits. In doing so, the utility's engineers will estimate the peak demand this portion of the distribution system will experience in the foreseeable future, and design the upgrades accordingly. For the purpose of illustration, suppose the upgraded secondary system contained the same number of circuits as before (25), but that the original secondary conductors were replaced with larger conductors. Assume the capacity of the upgraded

[12]IIEC Exhibit 3.0, Direct Testimony of David L. Stowe, pages 35 and 37, lines 609-611, 650. [10.2 kW/wire x 2 wires/circuit x 25 circuits = 510 kW]

[13]Id., page 38, line 677.

secondary system is 1,250 kW, and the capacity of the upgraded primary system is 1,500 kW.

In this scenario, two factors have combined to cause the total cost of the upgraded system. First, the minimum system standards account for the minimum costs just as they did before the upgrade. Then, there are additional costs incurred to meet the projected peak demand. Stated another way, the minimum standards are responsible for the minimum system costs, and the peak demand values are responsible for the additional costs above those of the minimum system.

In the final scenario, the average demand of the 100 customers is equal to 750 kW. This demand is larger than the capacity of the minimum systems required by the NESC, but less than the capacity of the upgraded systems.

In this scenario, the utility does not need to upgrade or enhance the secondary or primary systems. Thus, no additional costs are incurred. The cost-causing factors that contributed to the cost of the system in this scenario are identical to those in the previous scenario. *It is unreasonable to conclude, then, that the average demand or energy influences distribution system costs.* It would not matter if the average demand of the customers were 750 kW, 1,000 kW or 2 kW; the facilities are the same and are installed because the customer exists (to the minimum system level) and upgraded because of the peak demand requirements above the capacity of the minimum system. As a cost-causative factor, average demand and energy usage simply do not come into play.

Q MR. HEINTZ CLAIMS THAT YOUR MODIFIED COSS PRODUCES AN ANOMALOUS RESULT. PLEASE DISCUSS THIS CRITICISM.

A Mr. Heintz refers to the "anomalous result" when he writes:

> "In addition, his modified ECOSS produces the anomalous result that the allocation to the Single Family with space heat class goes down while the allocations to all other residential classes increase."[14] [Emphasis in the original.]

Here again, Mr. Heintz is expressing an unsupported opinion. He calls this result "anomalous" because he apparently believes the true result ought to be different. He offers no evidence to support his claim, nor does he attempt to identify the precise nature of the alleged anomaly. He states his opinion as if the facts, were they presented, would support it. A careful review of the facts, however, leads to a different conclusion. There is no anomaly.

The Single Family with Space Heat class ("SFw/SH") is unique among the residential classes in that it places a relatively high demand on ComEd's distribution system compared to the number of customers in the class. This means that the NCP demand allocation factor for the SFw/SH class is greater than its customer allocation factor. The factors for the other residential classes have the opposite relationship. Given its uniqueness, the effects on the SFw/SH class of the Modified COSS are *not* "anomalous," as Mr. Heintz believes. Instead, they are logical considering the SFw/SH class's relatively high demand allocation factor and its less significant customer allocation factor.

[14] Rebuttal Testimony of Alan C. Heintz, ComEd Ex. 33.0, page 5, line 109 through page 6, line 111.

Q PLEASE FURTHER EXPLAIN WHAT YOU MEAN.

A Table 2 compares the customer and demand allocation factors for the four residential classes.

TABLE 2

Comparison of Residential Demand and Customer Allocation Factors

Line	Description	Total ICC	Single Family w/o Space Heat	Multi-Family w/o Space Heat	Single Family w/ Space Heat	Multi-Family w/ Space Heat
		(1)	(2)	(3)	(4)	(5)
1	NCP<69 KV	23,460,965 [1]	8,169,521	1,755,520	299,270	670,518
2	NCP<69 KV%		34.8%	7.5%	1.3%	2.9%
3	CUST-AVG-ACCTS	3,749,652 [2]	2,224,785	982,552	35,088	154,290
4	CUST-AVG-ACCTS%		59.3%	26.2%	0.9%	4.1%
5	Allocation Factor Difference		24.5%	18.7%	-0.3%	1.3%
6	Allocation Factor Percent Change		70.4%	250.2%	-26.6%	44.0%
7	Avg NCP/CUST-AVG-ACCTS	[3]	3.7	1.8	8.5	4.3

[1] kW
[2] Number of Customers
[3] kW/Customer

The data in Table 2 show the unique characteristics of the SFw/SH class. Of all the residential classes, only the SFw/SH class (column 4) has a lower customer allocation factor (line 4) than demand allocation factor (line 2). Also, the customer allocation factor is nearly 27% lower than the demand allocator for this class; in contrast, the customer allocation factors for the other residential classes range from 44% to 250% higher than the demand allocator.

By dividing the class NCP demand by the number of customers in the class, we can calculate the average NCP demand (in kW) one would expect from a typical customer. The results are shown on line 7, and demonstrate that the

NCP demand of the average single- or multi-family customer with space heating is nearly two and a half times that of a single- or multi-family customer without space heating. Here again, the results for the SFw/SH class are unique, being nearly 200% to 475% higher than those of the other residential classes.

These unique characteristics cause costs to be allocated to the SFw/SH class differently than to the other residential classes. Table 3 helps to explain how costs are allocated to this unique residential class in different scenarios.

Q WHAT DOES TABLE 3 SHOW?

A Table 3 shows the effect on the cost to serve the SFw/SH class as the COSS is modified to reflect different scenarios.

TABLE 3

Comparison of COSS results on Residential Classes
ComEd's Original COSS and COSS with Modifications
($/Millions)

Line	Description	Single Family w/ Space Heat
	Scenario #1 (ComEd's As Filed COSS)	
1	Total Cost of Service	$21.60
	Scenario #2 (Modified with Prim/Sec Only)	
2	Total Cost of Service	$23.46
3	Difference from As Filed COSS	$1.86
4	% Difference	8.6%
	Scenario #3 (Modified with MDS Only)	
5	Total Cost of Service	$19.71
6	Difference from As Filed COSS	($1.89)
7	% Difference	(8/8%)
	Scenario #4 (Modified with Prim/Sec & MDS)	
8	Total Cost of Service	$20.55
9	Difference from As Filed COSS	($1.05)
10	% Difference	(4.9%)

Scenario #1 is ComEd's COSS as originally filed. Scenario #2 involves ComEd's COSS modified to separate primary and secondary costs. In this scenario, primary service customers are no longer allocated secondary distribution system costs, i.e., the portion of the system operating below 4 kV. As expected, those costs are instead allocated to classes, including the residential classes that take service from the secondary system. These additional costs are distributed on the basis of demand, with the net result being that the SFw/SH class, with its unusual demand, is allocated more costs than in ComEd's original COSS. The result is shown in Table 3.

Scenario #3 involves ComEd's COSS modified to recognize the MDS, but not primary and secondary cost separation. In this scenario, secondary distribution system costs are allocated to primary customers just as they are in ComEd's original COSS. In addition, the costs of distribution plant accrued in FERC Accounts 364 through 367 are allocated to the classes on the basis of their NCP demand ***and*** customer numbers. The net result is that fewer costs will be allocated to the SFw/SH class than when they are allocated strictly on demand.

The amount of additional costs allocated to the SFw/SH class in Scenario #2 is more than offset by the reduction in costs allocated to the class in Scenario #3. If the Company's COSS were modified to reflect the combination of Scenario #2 and Scenario #3, the additional allocated cost would be more than offset by the reduction in costs due to its lower customer allocation factor.

This combination is reflected in Scenario #4, which modifies ComEd's COSS to recognize the MDS and to separate primary and secondary costs. Table 3 shows that the SFw/SH class is allocated nearly $1.05 million *less* in Scenario #4 than Scenario #1.

Notwithstanding Mr. Heintz's beliefs, these results are not anomalous, but are logical and expected, given the SFw/SH class's demand and customer allocation factors.

Q CAN THE COMPANY'S COSS BE EASILY RECONFIGURED TO MODEL THESE FOUR SCENARIOS?

A For the copy of the COSS provided in discovery, the answer is "no." The ability to run multiple scenarios and quickly observe the results is only possible using my modified COSS. By ignoring the impacts of cost-causing factors such as voltage level and safety and reliability standards, ComEd's COSS is essentially "locked" into the assumptions of the Company at the time the COSS was developed. My Modified COSS allows for ready comparisons between ComEd's Rebuttal COSS as filed and results determined under more reasonable allocation assumptions. Thus, the Modified COSS is more robust than ComEd's COSS.

Q COMED WITNESSES HAVE SUGGESTED THAT YOU SUPPORT THE USE OF MDS METHODS SIMPLY BECAUSE DOING SO BENEFITS LARGE CUSTOMERS. HOW DO YOU RESPOND TO THEIR SUPPORTING EVIDENCE?

A ComEd has not presented any evidence to support this allegation. ComEd witnesses Messrs. Heintz and Crumrine have implied that my motivation for supporting the MDS methods is that they allocate fewer costs to the customers I represent. By implication, they suggest that if I represented other clients, or perhaps represented a neutral or purely objective party, I would not support a COSS that used MDS methods. But, they offer nothing more than their opinions.

Q HAVE YOU PRESENTED A COSS THAT RECOGNIZED THE MDS PRIOR TO THIS CASE?

A Yes, I have consistently presented cost studies that incorporate MDS concepts as a witness for utilities and for customers. The MDS is a real and tangible system that causes the utility to incur significant costs, and my opinion has always been that a COSS that ignores critical cost-causing factors such as the MDS cannot possibly allocate costs fairly. Moreover, if such a deficient COSS is relied upon to set rates, the unavoidable result will be the introduction and/or exacerbation of inter- and intra-class subsidies.

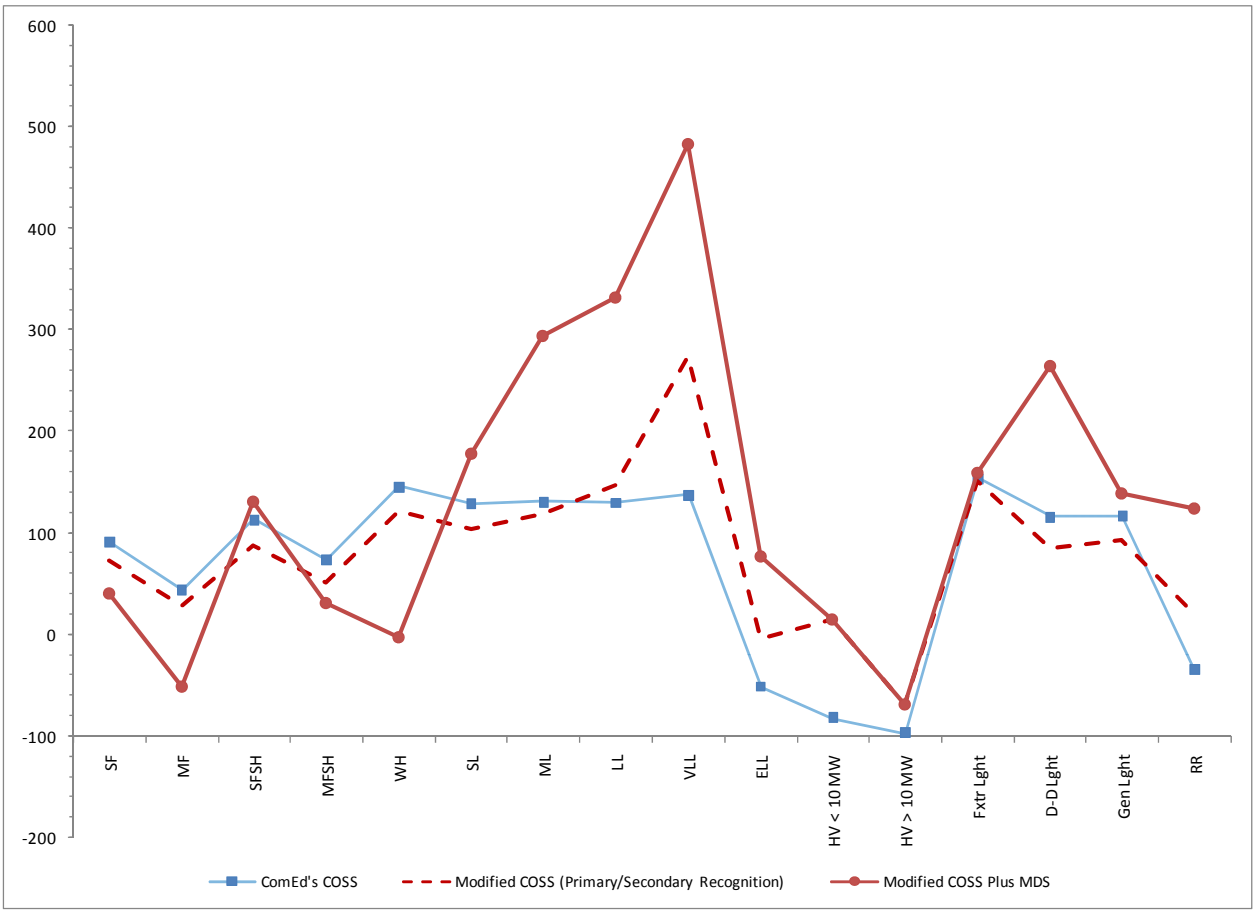
Q HAS COMED RECOGNIZED THE CONSISTENCY OF YOUR TESTIMONY REGARDING MDS AS A UTILITY REPRESENTATIVE AND THAT PRESENTED IN THE INSTANT ICC CASE AS A REPRESENTATIVE OF LARGE CUSTOMERS?

A No, they do not, though I have provided copies of relevant commission decisions on past cost studies I have presented.

Q IS THERE OTHER EVIDENCE THAT DISCREDITS THE COMED WITNESSES' ALLEGATIONS?

A Yes. The ComEd witnesses fail to recognize that the net result of my proposed modifications has a greater beneficial impact on customers I do not represent than on those I do. Figure 1 is a graph depicting the comparison of the ROR at present rates as calculated by ComEd's original COSS, the COSS modified to separate primary and secondary costs, and my proposed modified COSS.

Figure 1: Index of Return at Present Rates[15]



583 Figure 1 clearly shows that the modifications I propose be made to ComEd's
584 COSS have a significant beneficial impact on many classes of customers, and
585 that the largest beneficial impact, in comparison to the ComEd proposal (in terms
586 of the change in the indexed rate of return), is on delivery classes that contain few
587 or no IIEC members.

[15]Reprint of Figure 2, Direct Testimony of David L. Stowe, IIEC Exhibit 3.0, page 50.

Allocation of Less than 69 kV Costs to High Voltage Classes

Q HOW HAS COMED RESPONDED TO YOUR CONTENTION THAT ITS COSS IMPROPERLY ALLOCATES DISTRIBUTION LINE AND SUBSTATION COSTS, AND O&M EXPENSES TO THE HIGH VOLTAGE CLASS?

A In his rebuttal testimony, ComEd witness Mr. Heintz states:

> "ComEd's position is that there are, indeed, HV customers that take some service at voltages below 69 kV" (Heintz ComEd Ex. 33.0 at 6).

Mr. Heintz's statement, while true, is irrelevant. The crux of the issue has never been the question of whether certain HV customers take a portion of their service at voltages below 69 kV; some do.[16]

In his direct testimony, Department of Energy ("DOE") witness Dr. Dale Swan, openly acknowledges this when he states:

> "There are a number of High Voltage customers, both in the class up to 10,000 kW and in the class of customers above 10,000 kW, that also have loads that are fed by Company lines entering the customer's premises at voltages below 69 kV" (Direct Testimony of Dr. Dale E. Swan at 18).

Instead, the crux of the issue is that ComEd's COSS improperly allocates costs incurred for equipment operating below 69 kV to the HV classes.

[16] Although I understand that IIEC witness Stephens has made a rate design proposal that would effectively charge for this low voltage load as it would be if it was a standalone account. If this is adopted, it would obviate the need to include any low voltage costs in determining the cost to serve the HV class.

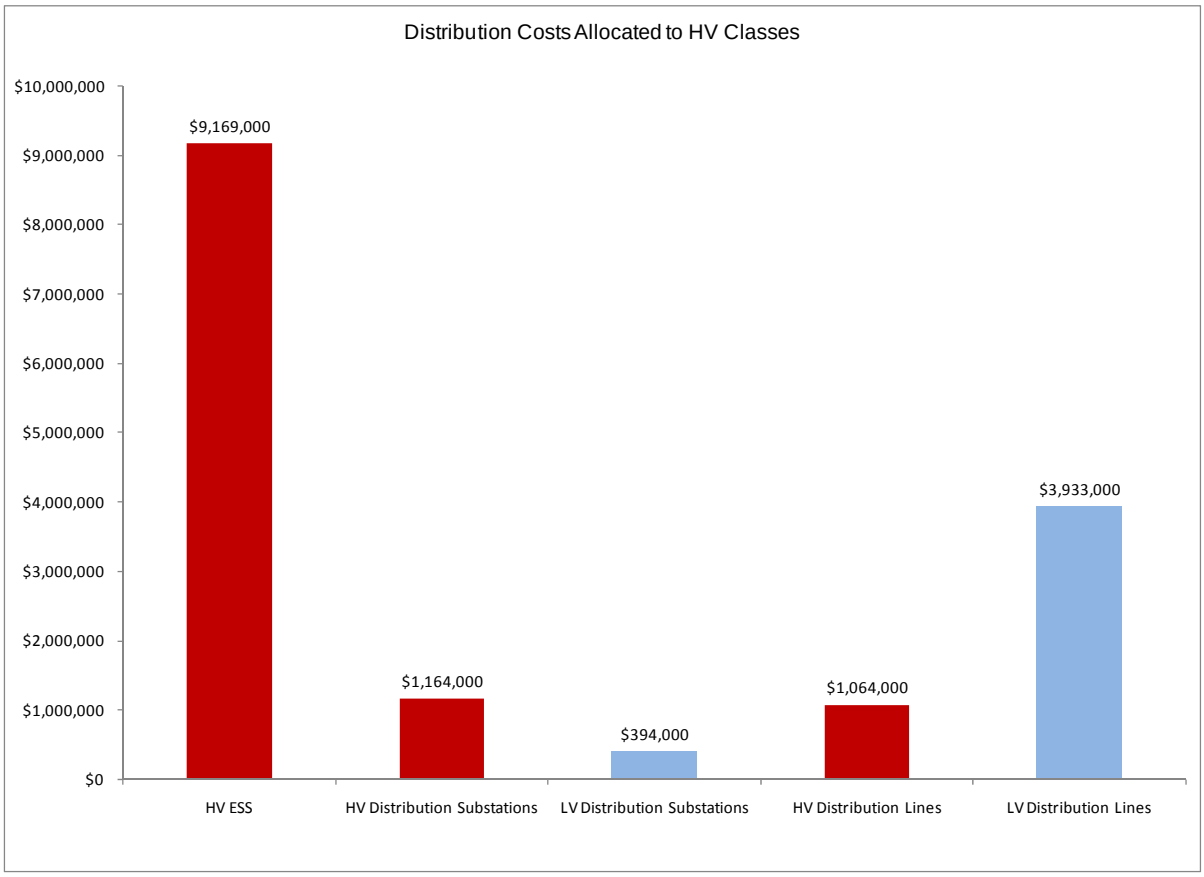
Q WHY DO YOU SAY THAT COMED'S COSS IMPROPERLY ALLOCATES THESE COSTS TO THE HIGH VOLTAGE CLASSES?

A The Company's COSS directly assigns over $9 million in plant and O&M costs associated with HV electrical service stations ("HV ESS") to the HV classes.[17] This direct assignment comports with ComEd's line loss study, which indicates that 100% of the load delivered to the HV classes passes through a HV ESS. Furthermore, ComEd's COSS also allocates nearly $1.2 million of HV distribution substation costs, and slightly over $1 million of HV distribution line costs to the HV classes. Between the direct assignment and the allocation of costs, the total cost incurred to transmit, transform and distribute the electricity to the two HV classes is enumerated.

However, ComEd's COSS also allocates nearly $400,000 in low voltage ("LV") distribution substation costs, and nearly $4 million in LV distribution line costs to the HV classes. Figure 2 shows a summary of the HV and LV costs relationships on a chart.

[17] "….Includes the land, enclosures, foundations, structures, poles, vaults, transformer, and related facilities necessary to make such transformation." Commonwealth Edison Company's *Schedule Of Rates For Electric Service*, 1st Revised Sheet No. 533

Figure 2



Thus, ComEd's COSS models and allocates costs to HV customers served via a distribution system composed of high and low voltage ("LV") substations and lines. HV costs are directly assigned to the HV classes, and LV costs are allocated. The allocated cost for LV substations is nearly one-third the directly assigned cost for HV substations, and the costs assigned to HV customers for HV distribution lines is approximately 75% less than the allocated cost for LV lines. Because ComEd cannot distinguish primary and secondary distribution costs, a portion of LV distribution line costs incurred to install secondary components operating at voltages less than 4 kV was allocated to the HV classes.

This model of the Company's distribution system is very different from the one portrayed by ComEd's line loss study, which indicates that none of the HV

subclasses' load passes through the LV distribution lines or substations whose costs are allocated to the HV classes. Rather than attempting to explain these inconsistent portrayals of ComEd's system, Mr. Heintz chooses to ignore them altogether. However, Mr. Heintz does acknowledge errors in his study, and Mr. Heintz then goes on to say:

> "ComEd has reviewed the class loads and has revised downward the less than 69 kV allocator to the HV class, thus reducing distribution costs allocated to the class" (Heintz ComEd Ex. 33.0 at 6).

Q HAS COMED'S DOWNWARD REVISION OF THE LESS THAN 69 KV DEMAND ALLOCATORS FOR THE HV CLASSES CORRECTED THE ERROR OF INAPPROPRIATE ALLOCATION OF COSTS?

A No. Table 4 shows ComEd's adjustment of the allocation factors as compared to those from ComEd's original COSS.

TABLE 4

Commonwealth Edison Company
Embedded Cost of Service Study - Schedule E-6
12-Months Ended December 2006
Allocation Factors

Line	Allocator Name	Original COSS HV < 10 MW (1)	Rebuttal COSS HV < 10 MW (2)	Difference (3)	% Diff (4)
	High Voltage <= 10 MW				
1	CP 69kV & below	29,934	16,707	13,227	(44%)
2	NCP<69 KV	45,377	16,286	29,091	(64%)
	% that CP is greater than NCP		**2.6%**		
	High Voltage > 10 MW				
3	CP 69kV & below	54,395	32,748	21,647	(40%)
4	NCP<69 KV	54,899	16,532	38,367	(70%)
	% that CP is greater than NCP		**98.1%**		

From Table 4, it is clear that ComEd has revised the CP and NCP demand allocation factors downward by 40% to 70%. It is not clear what ComEd found in its "review" that justifies the change, because Mr. Heintz never explains, discusses, or supports it with evidence.

Furthermore, Table 4 shows that in the process of revising the demand allocators, ComEd has again produced the situation where the CP demand values for the HV classes are greater than the NCP demand values. As I explained in my direct testimony, this cannot happen in a valid study.

Q WHY CAN'T CP DEMAND VALUES BE GREATER THAN NCP DEMAND VALUES?

A By definition, the CP demand is the class peak demand coincident with the system peak. Also by definition, the NCP demand is the class peak demand at anytime throughout the year. Only in the limited instance where the highest annual peak demand coincides with the system peak does the CP demand equal the NCP demand. In all other cases, where the highest annual peak demand occurs at a time other than that of the system peak, the class CP demand will be less than its NCP demand. There can never be a situation where the CP demand of a class is higher than its NCP demand.

According to ComEd's revised demand allocators, however, this is precisely the case for the HV classes. Following the downward revisions mentioned by Mr. Heintz, the CP demand is 2.6% and 98.1% ***higher*** than the NCP demand for the "HV <= 10MW" and "HV > 10 MW" classes, respectively.

Thus, ComEd's COSS still contains significant flaws, evidenced by invalid outcomes like those in its original study. Instead of resolving the issue of its

672 COSS's inappropriate allocation of LV costs to HV classes, ComEd's revisions
673 have only introduced further error to the COSS.

674 **Q MR. HEINTZ DESCRIBES A NUMBER OF CHANGES THAT HAVE BEEN**
675 **MADE TO COMED'S REBUTTAL COSS. HAVE YOU MADE THESE SAME**
676 **CHANGES TO YOUR MODIFIED COSS?**

677 A Yes, I have.

678 **Q WHAT ARE THE RESULTS OF THESE CHANGES?**

679 A The results of the Company's Rebuttal COSS and the Modified Rebuttal COSS
680 are shown in IIEC Exhibit 7.2.

681 **Q DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?**

682 A Yes, it does.

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