

**ICC Docket No. 08-0532**

**Commonwealth Edison Company's Response to  
IIEC Data Requests 2.01 – 2.07  
Dated: March 3, 2009**

**The data requests below relate to the Testimony of Mr. Alongi (ComEd Ex 1.0) pages 14-22 relating to the primary/secondary split.**

**REQUEST NO. IIEC 2.01:**

Please explain how Commonwealth Edison determined that only 10% of the poles in Dixon, Freeport, Dekalb, and Streator carried secondary wires.

**RESPONSE:**

As the direct testimony of Mr. Alongi stated, ComEd does not have the data readily available necessary to determine the exact number of poles in ComEd's entire system that have both primary and secondary facilities attached versus those that have only primary or secondary facilities attached (ComEd Ex. 1.0, 17:336-338). The majority of the area served in the Dixon, Freeport, Dekalb and Streator regions are sparsely populated rural areas where primary distribution facilities have been extended long distances between customers. These long extensions of primary do not require secondary distribution attachments to serve the vast majority of the customers located in these regions in comparison to the other regions. Based on engineering judgment, such sparsely populated rural areas were estimated to have 10% of the poles with secondary attachments (e.g., Dixon, Freeport). Conversely, based on engineering judgment, the densely populated regions with a large area of alley systems were estimated to have 90% of the poles with secondary attachments (e.g., Chicago, Maywood). Also using engineering judgment, the regions with a larger central city that has sections of alley systems and former rural areas that have been primarily converted from farmland to residential subdivisions with underground services were estimated to have 70% of the poles with secondary attachments (e.g., Aurora, Joliet); and the regions with a smaller central district with sections of alley systems and with some backyard overhead residential services along with more sporadic residential subdivisions with underground services were estimated to have 40% of the poles with secondary attachments (e.g., Glenbard, Libertyville).

**ICC Docket No. 08-0532**

**Commonwealth Edison Company's Response to  
IIEC Data Requests 3.01 – 3.05  
Dated: March 23, 2009**

**REQUEST NO. IIEC 3.01:**

In its response to data request IIEC 2.01, ComEd states:

“The majority of the area served in the Dixon, Freeport, Dekalb and Streator regions are sparsely populated rural areas where primary distribution facilities have been extended long distances between customers. These long extensions of primary do not require secondary distribution attachments to serve the vast majority of the customers located in these regions in comparison to the other regions. Based on engineering judgment, such sparsely populated rural areas were estimated to have 10% of the poles with secondary attachments (e.g., Dixon, Freeport). Conversely, based on engineering judgment, the densely populated regions with a large area of alley systems were estimated to have 90% of the poles with secondary attachments (e.g., Chicago, Maywood).”

- a. What percentage of poles 50 feet in height or less, and used to serve the Dixon, Freeport, Dekalb, and Streator regions, are used to serve customers living in or near the cities of Dixon, Freeport, Dekalb, and Streator?
- b. What percentage of poles 50 feet in height or less, and used to serve the Glenbard, Crystal Lake, University Park, Libertyville, Mount Prospect, and Crestwood regions, are used to serve customers living in or near the cities of Glenbard, Crystal Lake, University Park, Libertyville, Mount Prospect, and Crestwood?

**RESPONSE:**

ComEd objects to this data request because it is vague and ambiguous and ComEd has not performed the calculations/analysis necessary to provide the requested information. Without waving this objection, or ComEd's General Objections, ComEd responds as follows:

ComEd interprets the phrase “What percentage of poles...used to serve customers” to mean “the percentage of poles within a ComEd region that are geographically located within each of the cities or municipalities specified in this data request regardless of whether or not those poles have a secondary distribution system attachments.” ComEd is using this interpretation because ComEd has already testified that the specific number of poles with a secondary attachment in any particular area outside the City of Chicago cannot be readily identified using ComEd's CEGIS database (*i.e.*, because ComEd's CEGIS database does not contain complete secondary attachment information outside the City of Chicago).

ComEd cannot easily determine the percentage of poles 50 feet or less in height that are used to serve customers within or near a specific municipality. ComEd does have some limited historical pole height and geographical location identifiers assigned to a portion of the poles in the CEGIS system. For example, using ComEd’s CEGIS database, ComEd extracted a count of poles that are 50 feet or less by municipality and township in the Dixon region. That extraction showed 14,908 poles in the Dixon region, 383 of which are identified as being in the municipality of Dixon. The same extraction was performed to also include poles in the Dixon region that do not have a height identifier, in addition to the poles that are identified as being 50 feet or less in height, and the results showed 102,195 poles in the Dixon region, 3,861 of which are in the municipality of Dixon. The table below displays the data for the other regions and municipality identified above.

ComEd continues to update identifier information within its CEGIS system when certain facilities are modified in the field; however, at this time some of the historical pole identifier information may not be reliable enough to make assumptions regarding the number of specific types of poles located within specific communities.

Region and Municipality Name	Number of Poles Labeled as 50 ft or less		Number of Poles Labeled as 50 ft or less and also poles without any height identifier (may include poles over 50 ft)	
	Count of Poles in Region	Count of Poles in Municipality	Count of Poles in Region	Count of Poles in Municipality
Dixon	14,908	383	102,195	3,861
Freeport	6,932	512	17,859	5,016
Dekalb	11,587	476	69,172	4,810
Streator	9,648	709	60,688	4,633
Glenbard	23,202	1,307	61,723	12,587
Crystal Lake	15,871	610	41,689	5,298
University Park	19,854	906	76,032	1,120
Libertyville	38,973	142	77,893	1,754
Mt Prospect	26,702	2,205	54,970	4,590
Crestwood	4,694	290	8,419	479

Notes: The municipal pole count for ComEd’s Glenbard area includes the municipalities of Glen Ellyn and Lombard. Some poles within the region do not have any municipality or township identifier.

**ICC Docket No. 08-0532**

**Commonwealth Edison Company's Response to  
The People of the State of Illinois ("AG") Data Requests 2.00 – 2.02  
Dated: March 17, 2009**

**REQUEST NO. AG 2.00:**

Regarding ComEd Ex. 1.0, 21:418-426: Was it assumed that all multi-family accounts that do not have a 120/208 V single-phase meter were on the secondary systems? If so, please explain why this assumption was made (as opposed to, for example, assuming that the same proportion of such customers were on the primary system as are single-family accounts). If not, please explain the assumption that was made and provide a workpaper showing the primary/secondary split of such accounts.

**RESPONSE:**

Yes, it was assumed that all of the multi-family accounts that do not have a 120/208 V single-phase meter were served from the secondary distribution system. This assumption was made because the majority of the accounts in the Single-Family without Space Heat class that are served from a transformer that does not serve other customers are in rural areas and it is less likely that multi-family residences would exist in these types of rural areas. The table below shows the distribution of such Single-Family without Space Heat (SF w/o SH) accounts by region. The majority of the accounts are in areas with large rural areas that primarily consist of farms or large lots where it is not practical to serve another customer from the same transformer with a secondary distribution system. Typically a multi-family residence would not be constructed on these types of lots and they would more likely be constructed in more densely populated areas where a secondary distribution system would be utilized.

<b>Region</b>	<b>Count of SF w/o SH Accounts Served from a Transformer Not Serving other Customers</b>		<b>Region</b>	<b>Count of SF w/o SH Accounts Served from a Transformer Not Serving other Customers</b>
Dixon	7332		Elgin	1502
Joliet	5625		Aurora	1357
Rockford	5345		Crestwood	851
University Park	5156		Glenbard	700
Dekalb	4995		Bolingbrook	654
Freeport	4158		North Shore Area	560
Streator	3994		Chicago South	123
Libertyville	3112		Chicago North	110
Woodstock	2953		Des Plaines	74
North West Area	2101			

**ICC Docket No. 08-0532**

**Commonwealth Edison Company's Response to  
Illinois Commerce Commission ("STAFF") Data Requests  
PL 3.01 – 3.17  
Dated: April 6, 2009**

**REQUEST NO. PL 3.16:**

Please answer the following concerning the allocation of transformer costs between secondary and primary service:

- a. Has the Company sought to estimate the share of transformers (and associated costs) that are dedicated exclusively to customers receiving secondary service?
- b. If the answer to part a. is no, would it be possible for the Company to provide such an estimate?

**RESPONSE:**

ComEd objects to this data request because it is vague and ambiguous. Without waiving this objection, or ComEd's General Objections, ComEd responds as follows:

- a. ComEd interprets part (a) of this data request to be asking if ComEd considered taking the plant costs (booked in account 368 - Line Transformers) associated with the transformers that serve ComEd's secondary distribution system and assign the cost for those transformers to the secondary costs in the Primary/Secondary analysis discussed in the direct testimony of Lawrence S. Alongi, ComEd Ex. 1.0. No, ComEd has not sought to estimate the share of transformers (and associated costs) that are dedicated exclusively to customers receiving service from ComEd's secondary distribution system.
- b. ComEd disagrees that such a distinction between transformers should be made. ComEd used the simple guiding principle that the assignment of a transformer to primary versus secondary is determined by the voltage of the source-side of the transformer, not the load-side of the transformer. So, for example, a transformer that transforms a source-side voltage of 12,470 volts to a load-side voltage of 120/240 volts, is assigned to primary because the source-side voltage of 12,470 volts is a ComEd primary distribution voltage. Because the source-side of all ComEd distribution transformers are rated and operated at ComEd primary distribution voltages, all ComEd distribution transformers were assigned to primary. To do otherwise would require an unduly burdensome and extensive study that ComEd has not performed.

Nevertheless, to make such a distinction, ComEd would need to make a number of assumptions in order to estimate the number and cost of transformers that serve ComEd's secondary distribution systems in order to assign the cost for such transformers to the secondary costs in the Primary/Secondary analysis. In addition, if such a distinction were to be made, ComEd would have to also re-determine the allocation of secondary versus primary costs to customer classes as it relates to transformers in order to reflect such a change in ComEd's treatment of transformer costs.

To be clear, ComEd would need to make a distinction between (1) those transformers that are connected to one or more customers' electric service entrance equipment via ComEd's secondary distribution system in conjunction with service connections from ComEd's secondary distribution system versus (2) those transformers that are directly connected to one or more individual customers' electric service entrance equipment via only a service connection. To illustrate this distinction, please see Figure 1, Figure 2, and Figure 3 below.

Figure 1 displays a single-phase overhead transformer that is connected to a secondary distribution system, which is connected to two customers' electric service entrance equipment via that secondary distribution system in conjunction with service connections from that secondary distribution system to the individual customers' electric service entrance equipment. Figure 2, displays a similar transformer that is directly connected to one individual customer's electric service entrance equipment via only a service connection. Figure 3 displays a transformer that is connected to two customers' electric service entrance equipment via that secondary distribution system in conjunction with service connections from that secondary distribution system to the individual customers' electric service entrance equipment and is also directly connected to one individual customer's electric service entrance equipment via only a service connection. Figure 3 is a combination of the basic configurations shown in Figure 1 and Figure 2.

If ComEd were to consider certain transformers to be a part of ComEd's secondary distribution system rather than ComEd's primary distribution system, only the transformer in Figure 1 would be included in its entirety as secondary. The transformer in Figure 2 would continue to be included as primary and would need to be assigned to customers that are not served from transformers like those in Figure 1. Additionally, the transformer in Figure 3 would need to be allocated proportionally to primary versus secondary based on a designated parameter such as customer loads (e.g., the loads of customers connected directly to the transformer via a service connection versus the loads of customers connected to the transformer via the secondary distribution system) or by count of customers (e.g., the number of customers connected directly to the transformer via a service connection versus the number of customers connected to the transformer via the secondary distribution system). Such distinctions would add unnecessary complexity to the assignment of costs to secondary versus primary. Currently in ComEd's Primary/Secondary analysis and the resulting ECOSS, primary costs are properly assigned to all non-high voltage customer service points including those that take service from ComEd's secondary distribution system.

In order to appropriately assign the transformer costs in the manner described in this data request, ComEd would have to change its assignment of primary costs such that (1) the costs associated with the transformers that are not connected to ComEd's secondary distribution system (i.e., those transformers configured like Figure 2) are not assigned to customers that are connected to ComEd's secondary distribution system; (2) the costs associated with the transformers that are connected to one or more customers' electric service entrance equipment via ComEd's secondary distribution system in conjunction with service connections from ComEd's secondary distribution system to the customers'

electric service entrance equipment (i.e., those transformers configured like Figure 1) are assigned to such customers, and (3) appropriate allocations for transformers that are connected to one or more customers' electric service entrance equipment via that secondary distribution system in conjunction with service connections from that secondary distribution system to the customers' electric service entrance equipment and also directly connected to one or more individual customer's electric service entrance equipment via only a service connection (i.e., those transformers configured like Figure 3). ComEd does not have the data that is necessary to make these distinctions described above.

ComEd does, however, have limited information regarding the number of transformers that are connected to ComEd's secondary distribution system in its CEGIS system for transformers inside the City of Chicago. ComEd would need to make assumptions regarding the transformers outside of Chicago. Additional assumptions would be required to correlate the count of transformers connected to ComEd's secondary distribution system to the plant costs in account 368 - Line Transformers. As previously described, additional assumptions would be required to allocate transformers to primary versus secondary for those transformers configured similar to the transformer shown in Figure 3. Moreover, ComEd does not have any method to determine how many customers may be connected in such a way.

Figure 1 – Transformer Serving Secondary Distribution System

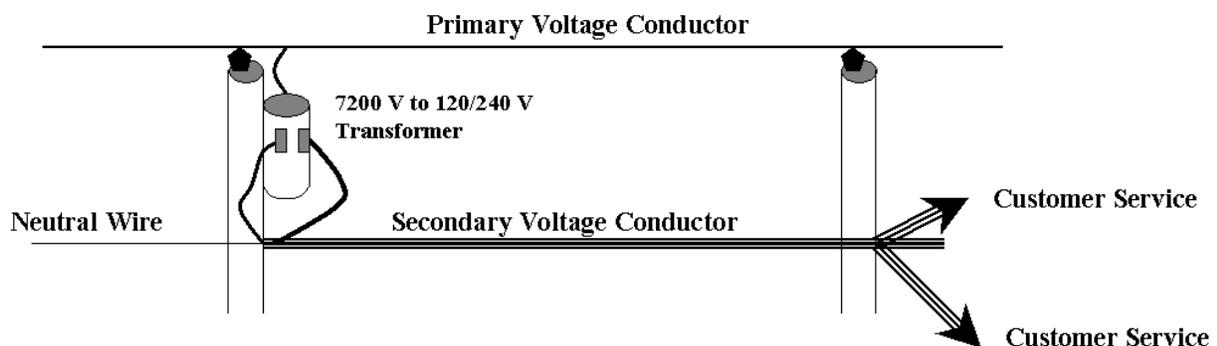


Figure 2 – Transformer Not Serving Secondary Distribution System

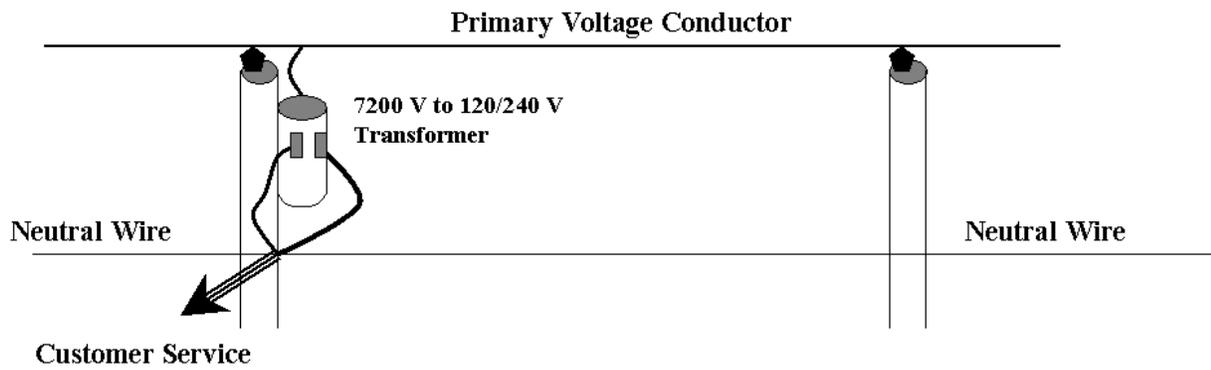
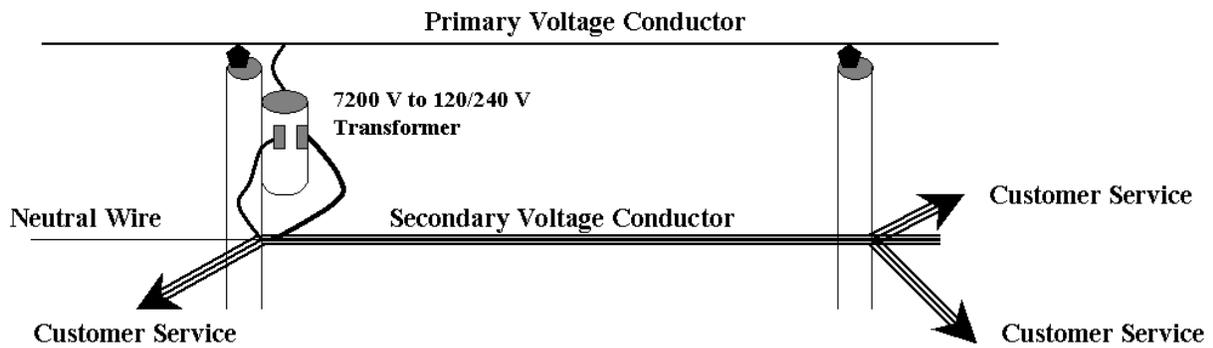


Figure 3 – Transformer Serving Secondary Distribution System and a Customer Not Connected to a Secondary Distribution System



**ICC Docket No. 08-0532**

**Commonwealth Edison Company's Response to  
Chicago Transit Authority ("CTA") Data Requests 1.01 – 1.14  
Dated: March 5, 2009**

**REQUEST NO. CTA 1.03:**

Please refer to the Alongi Direct at Page 14, lines 276-280.

1. What factors were used to determine his definition of primary and secondary voltages?
2. Please list all voltages he considers to be primary.
3. Please list all voltages he considers to be secondary.
4. Please describe and provide a copy of all studies, data and methodologies he used in determining the primary and secondary voltages.
5. If any reference sources were utilized, please list those references and provide a copy.
6. If no studies were performed in making the determination as to primary and secondary voltages, please explain in detail how the determination was made.

**RESPONSE:**

1. Mr Alongi based his definition of primary and secondary voltages for ComEd's analysis of ComEd's primary versus secondary distribution system costs on his nearly 35 years of experience with ComEd and ComEd's definition of primary distribution systems in its General Terms and Conditions. In Mr. Alongi's experience at ComEd, a primary voltage is generally used to distribute electricity along public property, road right-of-way or easements to relatively larger numbers of retail customers over longer distances with fewer electrical energy losses and less voltage drop as compared to what can be achieved with secondary voltages. Conversely, in Mr. Alongi's experience at ComEd, a secondary voltage is generally used to distribute electricity along public property, road right-of-way or easements to relatively fewer retail customers over shorter distances than can be achieved with primary voltages. Additionally, a primary voltage is typically transformed to a lower voltage for utilization by retail customers whereas a secondary voltage is typically not further transformed for utilization by retail customers.

Moreover, ComEd's General Terms and Conditions (ILL. C. C. No. 10 Original Sheet No. 159) define ComEd's Primary Distribution System as follows:

**PRIMARY DISTRIBUTION SYSTEM.**

The Company's primary distribution system utilizes electric facilities to distribute electricity at the following common nominal voltages: 4,000 volts, 12,000 volts, and/or 34,500 volts. However, in certain individual situations, the Company's primary distribution system utilizes electric facilities to distribute electricity at

69,000 volts, 138,000 volts, or 345,000 volts, if the Company determines that distribution at such nominal voltage is more economical, efficient, or reliable than distribution at a voltage listed in the first sentence of this paragraph. Not all primary distribution system nominal voltages are available in all areas of the Company's service territory.

Accordingly, Mr. Alongi's direct testimony defined primary and secondary facilities such that primary distribution facilities include the wire, cable, attachments, portions of poles, and conduit used to distribute electricity at a primary voltage (i.e., 4,000 Volts or higher phase-to-phase and less than 69,000 Volts phase-to-phase). Any high voltage primary distribution systems that operate at 69,000 volts or higher are excluded because the costs of such systems are already separately identified and allocated to the High Voltage Delivery Class. Secondary distribution facilities include the wire, cable, attachments, portions of poles, and conduit used to distribute electricity at a secondary voltage (i.e., less than 4,000 Volts phase-to-phase). (See ComEd Ex. 1.0, 14:275-15:280).

ComEd's General Terms and Conditions is part of ComEd's Schedule of Rates for Electric Service available electronically on ComEd's website:

<http://www.comed.com/customerservice/rates/rateinformation/>

2. The most common phase-to-phase voltages ComEd utilizes for its primary distribution systems are 4,160 volts, 12,470 volts and 34,500 volts.
3. The most common phase-to-phase voltages ComEd utilizes for its secondary distribution systems are 208 and 240 volts. Although much less prevalent, ComEd also utilizes 480 volts for some secondary distribution systems.
4. Mr. Alongi did not perform or rely upon any studies, data or methodologies to determine the definition of a primary and secondary voltage. Please also see response to 1 above.
5. Not applicable.
6. Please see the response to 1 above.

**ICC Docket No. 08-0532**

**Commonwealth Edison Company's Response to  
Chicago Transit Authority ("CTA") Data Requests 2.01 – 2.02  
Dated: April 10, 2009**

**REQUEST NO. CTA 2.01:**

Please refer to ComEd's response to CTA data request 1.08. Please explain in detail why ComEd did not include an appropriate portion of Accounts 360 (Land & Land Rights) and 361 (Structures and Improvements) to the secondary system costs and expenses within the revised cost of service study.

**RESPONSE:**

ComEd's review of Account 360 – Land and Land Rights determined that the costs associated with this account would not be for secondary distribution systems. The Retirement Unit descriptions in Account 360 include: "Perpetual Easements", "Land in Fee", and "Limited Term Easements". The Asset Locations associated with those units list specific areas where a primary distribution substation or easement may be required for primary distribution facilities. Secondary distribution facilities are typically installed in the road right-of-ways and not on leased or purchased property.

ComEd's review of Account 361 – Structures and Improvements determined that most of the costs associated with this account would not be for secondary distribution systems. The Major Location descriptions and Asset Location descriptions indicate that most of the costs are for structures and lot improvements related to primary distribution substations. However, in the process of reviewing the data in response to this data request, ComEd found that some of the costs are related to secondary network centers (identified as "NC" in the Major Location column of the plant data). CTA 2.01\_Attach 01 is the plant data for Account 361 with a revised assignment of the plant costs between primary and secondary. CTA 2.01\_Attach 01 reflects an assignment of 100% of the cost to secondary for any plant units identified as "NC" in the Major Location column. CTA 2.01\_Attach 01 indicates that \$4,723,630 of Account 361 can be assigned to secondary and \$23,418,963 can be assigned to primary. ComEd anticipates that CTA will submit direct testimony related to CTA 2.01\_Attach 01. ComEd anticipates that it will submit primary/secondary cost analysis information in rebuttal testimony consistent with CTA 2.01\_Attach 01, effectively superceding the primary/secondary cost analysis information provided in ComEd's direct testimony.