

**Pennsylvania Public Utility Commission**

Application of Pennsylvania Power and  
Light Company for Approval of its  
Restructuring Plan Under Section  
2806 of the Public Utility Code

Docket No. R-00973954

8/19/97

*Atty Gen*

Direct Testimony of

**Donald E. Johnstone**

On Behalf of

**Mid-Atlantic Power Supply Association**

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**Brubaker & Associates, Inc.**  
St. Louis, MO 63141-2000

1 Q PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

2 A My name is Donald E. Johnstone and my business address is 1215 Fern Ridge  
3 Parkway, Suite 208, St. Louis, MO 63141-2000.

4

5 Q BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?

6 A I am a principal with the firm of Brubaker & Associates, Inc. Brubaker & Associates, Inc.  
7 and its predecessor firms have provided a wide range of economic and regulatory  
8 consulting services for many years. More details are set forth in Appendix A to this  
9 testimony.

10

11 Q ON WHOSE BEHALF ARE YOU APPEARING IN THIS PROCEEDING?

12 A I am appearing on behalf of the Mid-Atlantic Power Supply Association.

13

14 Q WHAT IS THE PURPOSE OF YOUR TESTIMONY?

15 A The purpose is to address issues important to the development of a competitive retail  
16 market for electric generation and, more specifically, to make recommendations in  
17 regard to the proposed explicit and implicit charges for generation supply and several  
18 actions and protections that are necessary to develop a level playing field among  
19 competing generation suppliers. My testimony is in the context of the current  
20 circumstances that exist in Pennsylvania.

21

22 Q PLEASE SUMMARIZE YOUR TESTIMONY.

23 A My testimony may be summarized as follows:

24 (1) The Commission, in this proceeding, should require several important changes in

1 the Pennsylvania Power & Light Company's (PP&L) restructuring plan. These  
2 changes are necessary to foster the development of a market for retail  
3 generation supply in which competitive forces will operate for the benefit of  
4 consumers.

5  
6 (2) The PP&L default supplier proposal, in combination with its proposal for implicit  
7 generation supply rates that are too low and corresponding CTC rates that are  
8 too high, produces an unfair anti-competitive advantage for the PP&L Generation  
9 Supply Group.

10  
11 (3) Any refund obligation that may arise due to the combination of a generation  
12 supply rate that is below market price and the rate cap provisions of the  
13 Competition Act, should be funded with CTC revenue and should be applied  
14 without discrimination to the CTC of all customers.

15  
16 (4) As a product of history, PP&L begins the new competitive era with vertical and  
17 horizontal market power derived from its monopoly position in the market. There  
18 must be changes in the restructuring plan to reduce the probability of continuing  
19 market power that would thwart retail competition.

20  
21 (5) There must be explicit and implicit charges for generation higher than those  
22 proposed by PP&L to provide a reasonable opportunity for competition to flourish  
23 during the initial transition phase and during the continuing period of transition  
24 charges to consumers.

25  
26 (6) Billing and metering procedures must not provide any unfair burden or  
27 unwarranted benefits for either PP&L or new suppliers. New suppliers should  
28 have the right to install and read billing meters and should not be precluded from  
29 providing customers with a single bill for supply and delivery services.  
30

31 **INTRODUCTION**

32 **Q IS IT YOUR UNDERSTANDING THAT A COMPETITIVE RETAIL MARKET FOR**  
33 **ELECTRIC GENERATION IS THE GOAL OF THE COMMONWEALTH OF**  
34 **PENNSYLVANIA?**

35 **A Yes.**

36  
37 **Q IN ECONOMIC THEORY, WHAT ARE THE CHARACTERISTICS OF A COMPETITIVE**  
38 **MARKET?**

1 A A competitive market is characterized by multiple buyers, multiple sellers, low barriers to  
2 market entry and low transaction costs. In the absence of one or more of these  
3 conditions, a buyer or seller may have the ability to distort the performance of the  
4 market through unilateral action.

5  
6 **Q HOW SHOULD THE RESTRUCTURING BE APPROACHED BY THE COMMISSION?**

7 A There is a limited period of time during which a structure must be implemented that will  
8 allow for competitive forces to operate on all competing suppliers. In addition, the  
9 competitive retail generation market must evolve from a concept to a reality. The  
10 market powers currently enjoyed by PP&L must be mitigated and, if possible, eliminated  
11 as they relate to a competitive retail generation market.

12  
13 **Q WHAT SHARE OF THE RETAIL MARKET DOES PP&L PRESENTLY ENJOY?**

14 A By definition, PP&L has been a regulated monopoly with 100% market share.

15  
16 **Q DOES PP&L HAVE MARKET POWER?**

17 A Yes. However, historically PP&L's market power has been restrained by the regulation  
18 of the Commission.

19  
20 **Q DOES PP&L POSSESS MORE THAN ONE TYPE OF MARKET POWER?**

21 A Yes. PP&L has both what is characterized as "vertical market power" and what is  
22 characterized as "horizontal market power." Vertical market power exists if there is the  
23 ability to distort the competitive market through control of inputs to the production  
24 process or product transportation routes. PP&L's ownership of the transmission and

1 distribution system, as well as generation, results in vertical market power. Horizontal  
2 market power is characterized by the ability to distort competitive outcomes as a result  
3 of a dominant position in the market for a single end use product or service. With a  
4 100% market share, PP&L certainly has horizontal market power.

5  
6 **Q IS IT IMPORTANT TO CONSIDER BOTH VERTICAL AND HORIZONTAL MARKET**  
7 **POWER IN THE EVALUATION OF THE PP&L RESTRUCTURING PLAN?**

8 A Yes. If competitive forces are to be relied upon to control the price of electricity  
9 supplies, then it is important that both the vertical and horizontal market power of PP&L  
10 be eliminated, or at least substantially reduced during the transition period.

11  
12 **Q HOW SHOULD THE VERTICAL MARKET POWER OF PP&L BE MINIMIZED OR**  
13 **ELIMINATED IN THE RESTRUCTURING PLAN?**

14 A Simply stated, the new suppliers that will be coming to the market must have the same  
15 ability to use the monopoly services and delivery systems that PP&L has. The creation  
16 of separate, unaffiliated corporations would be ideal but, at a minimum, there will need  
17 to be significant changes to the administration and operation of the business to  
18 accomplish this goal. I will address a number of issues related to vertical market power  
19 later in my testimony.

20  
21 **HORIZONTAL MARKET POWER – DEFAULT SUPPLIER**

22 **Q HOW SHOULD THE HORIZONTAL MARKET POWER OF PP&L BE ADDRESSED IN**  
23 **THE CONTEXT OF THE RESTRUCTURING?**

1 A The Commission must assure that there are no unnecessary or inappropriate  
2 impediments to the ability of the new suppliers to enter the market and to compete. Most  
3 fundamentally, the unbundled rate structure and prices should encourage, not preclude  
4 competition. It is certainly more effective to deal with market imperfections in this  
5 restructuring proceeding rather than to engage in after the fact remediation.

6

7 **Q WHAT IS THE PP&L PROPOSAL FOR GENERATION PRICES?**

8 A PP&L proposes unbundled rates for capacity and energy that will apply to customers  
9 that do not have the option to choose among competing suppliers. The proposed  
10 unbundled generation rate for these customers are set forth in the Capacity and Energy  
11 Rider. Specifically, PP&L proposes market based prices for customers that have the  
12 option to choose, but 1) do not choose, or 2) have chosen an alternative supplier but  
13 then subsequently decide to use PP&L as a generation supplier, or 3) have chosen an  
14 alternative supplier that has not delivered the supply needed by the customer.

15

16 **Q DOES THE PROPOSED CAPACITY AND ENERGY RIDER ACCURATELY REFLECT**  
17 **THE PP&L PROPOSAL?**

18 A No. It states fixed rates for capacity and energy without reference to market price. The  
19 applicability of the fixed rates is inconsistent with PP&L testimony in this regard.

20

21 According to the provisions on proposed tariff page 19J, the Capacity and  
22 Energy Rider applies to:

23 (a) customers who do not have the opportunity to  
24 purchase electric energy from their choice of  
25 electric suppliers;

- 1 (b) customers who have the opportunity to purchase  
2 electric energy from their choice of electric  
3 generation suppliers, do not choose an alternative  
4 supplier and continue to purchase electric energy  
5 from the Company, as the electric distribution  
6 company and supplier of last resort as provided in  
7 Section 2807 (E) (3) of the Customer Choice Act;  
8 (c) customers who contract with an alternative supplier  
9 for electric energy but do not receive delivery of  
10 such electric energy; and  
11 (d) customers who choose an alternative supplier for  
12 electric energy and subsequently desire to  
13 purchase basic utility supply service from the  
14 Company, as the electric distribution company and  
15 supplier of last resort as provided in Section  
16 2807(E)(3) of the Customer Choice Act.  
17

18 Thus, the tariff purports to apply the stated fixed rates to all customers that  
19 receive PP&L generation service, even though that apparently is not the PP&L proposal.  
20

21 **Q FOR THOSE CUSTOMERS THAT HAVE CHOICE AND STILL USE PP&L**  
22 **GENERATION SERVICE, HOW WILL PP&L SET THE PRICE?**

23 **A** As stated above, PP&L proposes market based prices. However, PP&L does not have  
24 a specific pricing proposal at this time. That is to be determined at some time in the  
25 future.  
26

27 **Q IF PP&L CHARGES MARKET BASED PRICES IN LIEU OF THE RATES IN THE**  
28 **CAPACITY AND ENERGY RIDER, HOW WOULD THE RATE CAP PROVISION BE**  
29 **APPLIED?**

30 **A** According to the testimony of PP&L witness Tierney, there would be retroactive rate  
31 reductions, if the market price is higher than the stated rates. However, there is no such  
32 provision in the proposed tariff rider.

1 Q HOW CAN THE PP&L DELIVERY GROUP AFFORD TO OFFER SUCH PRICE  
2 PROTECTION?

3 A Apparently the PP&L Delivery Group intends to use the PP&L Generation Supply Group  
4 as its supplier. While the supply arrangement purportedly will be based on an "arms-  
5 length" negotiation, the refund provision betrays a different result. Only the PP&L  
6 Generation Supply Group, with its benefit of the CTC revenues, could afford to offer a  
7 refund based on an unbundled tariff rate that turns out to be below market.

8  
9 Q WHAT WOULD HAPPEN IF THE COMMISSION DETERMINED THAT ONE OR MORE  
10 SUPPLIERS OTHER THAN THE PP&L GENERATION SUPPLY GROUP SHOULD BE  
11 THE DEFAULT SUPPLIER(S)?

12 A The PP&L Delivery Group or the Commission, assuming alternative suppliers were  
13 solicited for this service would have to ask the alternative suppliers to agree to below  
14 market prices; however, it is improbable that any alternative supplier could, or would,  
15 agree to provide service at such prices. The PP&L Generation Supply Group would  
16 then be left to provide the supplies.

17 The PP&L Generation Supply Group would be in a different position than other  
18 suppliers because a shortfall created by pricing below market would automatically be  
19 guaranteed through the CTC.

20 The PP&L proposal for default suppliers, in combination with its CTC proposal, is  
21 designed specifically with an inherent, unfair competitive advantage for the PP&L  
22 Generation Supply Group. So long as PP&L is collecting transition charges, the  
23 Generation Supply Group is singular in its ability to guarantee the cap on the "arms-  
24 length" market prices for its generation services that will allow PP&L to satisfy the

1 overall price cap. The PP&L Generation Supply Group gets the money either way,  
2 either through the purported "arms-length" price for generation or through the CTC.  
3

4 **Q HOW SHOULD THE PP&L PROPOSAL BE MODIFIED?**

5 A It should be modified in two ways. First, the explicit and implicit prices for capacity and  
6 energy should be increased, and, second, to the extent that any generation price (in  
7 combination with the fixed CTC) would result in a violation of the price cap for customers  
8 with its default supplier, the refund must be from the CTC and must apply without  
9 *discrimination to all customers that pay the CTC.*  
10

11 **Q WHY SHOULD THE REFUND BE FROM THE CTC REVENUES?**

12 A The presumed basis for the CTC, the market prices, will have exceeded the price basis  
13 used in the design of the generation charges. That, in my opinion, would result in an  
14 unreasonable transition charge.  
15

16 **Q DOES YOUR REFUND APPROACH HELP LEVEL THE PLAYING FIELD?**

17 A Yes. All suppliers would thereby have the opportunity to bid and receive "market prices"  
18 and the unique ability of the PP&L Generation Supply Group to offer below market  
19 prices will be eliminated.  
20

21 **Q SHOULD THE DEFAULT GENERATION SUPPLIER HAVE A RETAIL**  
22 **RELATIONSHIP WITH CUSTOMERS ANALOGOUS TO THAT WHICH WILL EXIST**  
23 **BETWEEN OTHER CUSTOMERS AND THEIR GENERATION SUPPLIERS?**

1 A In keeping with the spirit of the Competition Act, the default supplier should be put into a  
2 retail relationship with the customers served. In effect, this would mean that all  
3 customers would receive service from suppliers under the same delivery terms and  
4 conditions. This would help ensure that all suppliers, including the PP&L Generation  
5 Supply Group, are treated comparably. With this approach the traditional vertical  
6 integration of the business will end on January 1, 2001, when all customers have choice.  
7

8 **HORIZONTAL MARKET POWER - PRICE CONSIDERTIONS**

9 **Q IN ADDITION TO THE DEFAULT SUPPLIER PROVISIONS, YOU RAISE THE ISSUE**  
10 **OF THE EXPLICIT AND IMPLICIT CAPACITY AND ENERGY PRICES. PLEASE**  
11 **EXPLAIN.**

12 A PP&L has proposed explicit and implicit generation rates that could easily limit  
13 competition. The rates are set at prices so low that alternative suppliers will be  
14 discouraged. If alternative suppliers are sufficiently discouraged, a high market share  
15 will be maintained by PP&L and PP&L would maintain near monopoly market share in  
16 the new retail generation market. The promise of competition would have been  
17 thwarted, and consumers would then face the unregulated market power of PP&L.  
18

19 **Q PLEASE SUMMARIZE THE METHOD FOLLOWED BY PP&L TO DEVELOP THE**  
20 **GENERATION RATES AND THE CTC.**

21 A PP&L has developed generation, transmission and distribution costs. The transmission  
22 and distribution functional costs were developed from a functionalized class cost of  
23 service study, but the two services remain bundled on the rate schedules. The CTC  
24 charges were developed by subtracting the PP&L proposal for a forecast market price

1 from the total generation component of the present rate. In other words, the CTC is the  
2 remainder.

3  
4 **Q IS THE TRANSMISSION RATE UNBUNDLED?**

5 A No. There is a single rate on the tariff sheets for delivery service. The rate should be  
6 unbundled on each relevant rate schedule so that customers and their suppliers will  
7 clearly have the ability to make their own transmission arrangements.

8  
9 **Q WITH THE PP&L APPROACH TO UNBUNDLING, IS THERE A TARIFFED  
10 GENERATION RATE?**

11 A Before customers have a choice of suppliers, the generation rate set forth in the  
12 Capacity and Energy Rider will apply. After all customers are eligible for choice, there  
13 are no explicit tariff rates for capacity and energy, although the forecast market prices  
14 are used to derive the CTCs. As a result, customers will have no savings and no  
15 practical way to buy power in the market if the actual prices are higher than the PP&L  
16 forecast. If the actual market prices are lower than the PP&L forecast, customer choice  
17 may be a practical reality.

18  
19 **Q WHAT IS THE BASIS FOR THE PP&L FORECAST OF MARKET PRICES?**

20 A PP&L witness Jones characterizes his forecast as representing market clearing prices  
21 for the PJM. His focus is on the short term market wherein prices move up and down to  
22 "clear" the market in response to supply and demand. There is another dimension to  
23 the market that includes contracts with extended terms. In the longer term market, there  
24 would likely be different prices. Buyers and Sellers may agree to different capacity and

1 energy price relationships than are found in the short term market. As another example,  
2 the capacity prices will be depressed in the short term capacity market when there is  
3 excess capacity, but it does not follow that a buyer could secure a long term contract at  
4 the same price. Likewise, it does not follow that all customers will choose to expose  
5 their energy budgets to the vagaries of the short term market. While I have not  
6 prepared an independent forecast, I am concerned with two aspects of the PP&L  
7 forecast and the use of it. The first is the focus on the short term wholesale market, and  
8 the second is the effect of forecast error, which is uneven.

9  
10 **Q WILL THE USE OF A SHORT TERM ORIENTED CAPACITY PRICE CAPTURE THE**  
11 **ENTIRE CAPACITY MARKET?**

12 **A** No. There are other longer term market segments.

13  
14 **Q WHAT ARE THE EFFECTS ON PP&L'S CUSTOMERS AND NEW SUPPLIERS OF**  
15 **THE FOCUS ON SHORT TERM CAPACITY PRICES?**

16 **A** PP&L, for this and other reasons, would be assured of always offering a competitive  
17 price, while receiving stranded cost recovery up to the level permitted by the rate cap. It  
18 would be insulated from the effect of the forecast depressed short term capacity prices.  
19 Only to the extent that actual market prices are less than PP&L's forecast, would PP&L  
20 feel any effect of lower revenues. To the extent that actual prices are higher, PP&L  
21 would tend to dominate the market, for it alone would have the luxury of transition  
22 charges that would maintain its revenues and its fixed cost coverage even though it has  
23 proposed to provide rebates to reduce prices to the forecast level.

1 From the customer perspective, any price benefits from a competitive market  
2 would be realized only if, and only to the extent, that service could be obtained at prices  
3 *below the forecast of market prices which is depressed in the early years.* If the market  
4 would have tended to evolve to a higher price level, PP&L under its proposal would be  
5 obliged to undercut the market to offer price protection provisions of the Competition  
6 Act. Customers could hardly expect to benefit if PP&L were the only real choice  
7 because the forecast prices turned out to be artificially low and effectively undercut the  
8 market.

9 The ability of new suppliers to compete will also rise and fall with the accuracy of  
10 the forecast. So long as the forecast price is at a level that allows them to acquire,  
11 market, and deliver (in a broad sense, also including matters such as administration and  
12 billing), there will be an opportunity for competitive market forces to evolve. It would be  
13 unreasonable to expect a robust supply market if the ceiling price is so low that it leaves  
14 no opportunity for cost recovery and no opportunity for new supplies to add capacity.  
15 Indeed, the PP&L proposal may well be a prescription for capacity shortages.

16  
17 **Q WHAT IS THE PP&L FORECAST OF MARKET PRICE FOR THE YEAR 1999?**

18 **A** PP&L developed a forecast market price for the year 1999 based on the short term PJM  
19 capacity and energy prices. With separate prices for capacity and energy, the delivered

1 cost will vary with load factor, as illustrated in Table 1.  
2

<u>Item</u>	<u>Price</u>
Capacity, per kW-year	\$ 22
Energy, per kWh	2.2¢
Price at 75% load factor per kWh	2.6¢
Price at 45% load factor per kWh	2.9¢

3  
4  
5  
6 **Q PLEASE EXPLAIN THE PROBLEM WITH THE GENERATION RATE COMPONENT  
7 PROPOSED BY PP&L.**

8 **A** Since PP&L has predicted excess capacity, its forecast of capacity price is depressed  
9 and no supplier could afford to build capacity if the forecast is wrong and the surplus  
10 capacity does not exist. Consequently, competition would develop only to the extent  
11 that delivered retail prices were at or below the PP&L forecast of the short term  
12 wholesale market prices. It would not be wise to have the service area electricity  
13 supply, and the evolution of a competitive market, hinge on the PP&L forecast of excess  
14 capacity.

15 Competition could be stifled, the competitive market could develop slowly, and  
16 PP&L could maintain a very high market share. In other words, PP&L could very likely  
17 retain horizontal market power. If this condition were allowed to persist customers, at  
18 the end of the transition period, would find that the PP&L monopoly was still largely  
19 intact.  
20

1 Q IS IT YOUR OPINION THAT PP&L MUST LOSE RETAIL GENERATION MARKET  
2 SHARE?

3 A Yes. By definition, a competitive market must have, among other things, many suppliers  
4 and any one or any few must not dominate the market. That is why there must, at a  
5 minimum, be a level playing field as to prices, costs, terms and conditions to allow new  
6 suppliers to become sufficiently established during the transition period while the price  
7 caps are in place.

8  
9 Q PLEASE PROVIDE AN EXAMPLE WHICH ILLUSTRATES THE PROBLEM.

10 A Please consider the residential rate as an example. Under the PP&L proposal, there is  
11 a fixed delivery charge of \$6.47 per month and a variable delivery rate of approximately  
12 2.0¢ per kWh. The CTC ranges from 3.9¢ per kWh for the first 200 kWh to 2.3¢ for kWh  
13 consumption over 800 kWh per month. For the purpose of this illustration, I will focus on  
14 the charges for usage in the tail block, over 800 kWh per month. (This simplification will  
15 not change the conclusion and is, therefore, appropriate for the purpose of illustration.)  
16 The sum of the delivery rate and the tail block CTC amounts to 4.3¢ per kWh. The other  
17 significant component of present rates is the cost of generation. PP&L proposes a rate

1 component of 3.0¢ for generation. Hence, the total cost is 7.3¢. The calculation may be  
2 summarized as follows:

<u>Unbundled Rate Component</u>	<u>Proposed Residential Tail Block Rate for 1999</u> ¢/kwh
Delivery (D)	2.0¢
Competitive Transition Charge (CTC)	<u>2.3¢</u>
Subtotal (D, CTC)	4.3¢
D, CTC	4.3¢
Implicit Generation Rate Component	<u>3.0¢</u>
Total	7.3¢

3  
4  
5  
6  
7 **Q ASSUMING ALL OF THE VARIOUS OTHER ISSUES WERE FAVORABLY**  
8 **RESOLVED SO THAT THERE WAS EQUAL ACCESS TO THE CUSTOMER**  
9 **THROUGH THE DISTRIBUTION SYSTEM, WOULD A NEW SUPPLIER BE ABLE TO**  
10 **COMPETE BASED ON PRICE?**

11 **A** It would be difficult. The PP&L forecast market price for 1999 used in the CTC  
12 calculation is 3.0¢ per kWh. The implicit price assumes a depressed capacity price due  
13 to surplus capacity, assumes the full benefit of PP&L system diversity, and excludes all  
14 transaction costs and all marketing, administrative and billing costs. Thus, any new  
15 supplier would be put in a difficult position. The new supplier would have to somehow  
16 obtain power at a price no higher than the forecast market and would also have to  
17 absorb all other costs of the business. Needless to say, this presents a competitive

1 problem.

2

3 **Q PLEASE SUMMARIZE THE PP&L UNBUNDLED RATE PROPOSAL AND THE**  
4 **IMPACT OF THIS PROPOSAL ON COMPETITION IN 1999.**

5 A PP&L has proposed unbundled rates for delivery and the CTC and has proposed an  
6 implicit generation rate component for those customers eligible to choose a different  
7 supplier.

8 With the price based on the PP&L forecast market price, with market priced  
9 capacity sufficient to meet customer demands reliably, and with any transaction costs,  
10 *the customer's cost would not go down, but would go up.*

11 The result of the proposed PP&L procedures is to give PP&L a distinct price  
12 advantage. The low implicit generation rate could easily result in most customers being  
13 served by this the default supplier. If PP&L is the default supplier, the stranded costs  
14 would be zero instead of the amount claimed; virtually no load would be lost.

15

16 **Q WILL THE SITUATION IMPROVE AS TIME GOES BY?**

17 A It is not likely to improve. Only in the event that the forecast prices are sufficiently high  
18 on a continuing basis would there be any improvement.

19

20 **Q PLEASE SUMMARIZE THE PROBLEMS THAT THE PP&L PROPOSAL PRODUCES.**

21 A The implicit price in the PP&L proposal would make it difficult for new suppliers to  
22 compete and would likely lead to service from the default supplier at the capped rate. In  
23 most circumstances, new suppliers would have little or no realistic opportunity to  
24 compete. The access of customers to a "competitive market" would likely be a fiction

1 since the access would likely be in name only. Consequently, throughout the period  
2 these rates remain in effect, PP&L would be collecting the proposed CTC and its market  
3 share (assuming it is the default supplier) would largely remain intact. Competition  
4 could begin in earnest only after the CTC was eliminated, and the PP&L Generation  
5 Supply Group also would have to price its power at the market price including the  
6 overheads necessary to provide the service. But, at that time, the customer would be  
7 faced with the prospect of an unregulated near monopoly.

8  
9 **Q WHEN IS THE APPROPRIATE TIME TO ADDRESS THIS PROBLEM?**

10 **A** Now is the time. The restructuring plan must provide the opportunity for a competitive  
11 retail generation supply market to evolve during the period of transition while rates are  
12 capped.

13  
14 **Q WHAT IS YOUR RECOMMENDATION?**

15 **A** There must be an appropriate implicit generation supply rate that will allow a competitive  
16 retail generation supply market to evolve while meeting the various requirements of the  
17 Competition Act. The implicit generation rate component must be higher and the CTC  
18 component of the generation supply cost must be lower so as to avoid undercutting the  
19 market and to allow new capacity to develop as needed. Also, in recognition that retail  
20 market prices are likely to vary from the PP&L forecast of PJM prices, the implicit  
21 generation rate component ought to be reviewed not less than once every two years.

22  
23 **Q WHAT CONSIDERATIONS ARE RELEVANT TO THE DEVELOPMENT OF AN**  
24 **APPROPRIATE IMPLICIT GENERATION SUPPLY RATE COMPONENT?**

1 A I believe there are several important considerations. First, the resulting rates must be  
2 just and reasonable. Second, the implicit generation rate must be high enough to  
3 provide a reasonable opportunity for the competitive market to develop. Third, the price  
4 paid by consumers should be determined by competitive forces, not any artificially low  
5 implicit rates that would undercut the market. Fourth, in the context of the stranded cost  
6 standards of the Competition Act, the utility has an obligation to mitigate stranded costs  
7 by maximizing market revenue from existing generation. An artificially low generation  
8 rate component would do just the opposite; it would minimize market revenue and  
9 maximize the transition charges.

10  
11 **Q IS IT POSSIBLE TO DEVELOP AN IMPLICIT GENERATION RATE WHICH WILL BE**  
12 **RESPONSIVE TO THE FOUR CONSIDERATIONS YOU HAVE OUTLINED?**

13 A Yes. *In the simplest terms, the implicit generation rate needs to be based on market*  
14 *considerations that will allow a competitive market to develop. It cannot be determined*  
15 *with the method PP&L has followed.*

16  
17 **Q WHAT DRIVES THE PP&L FORECAST OF MARKET PRICE UP AFTER THE FIRST**  
18 **FEW YEARS?**

19 A Among the important considerations are a forecast escalation in fuel prices and forecast  
20 increases in the price of capacity.

21  
22 **Q PLEASE EXPLAIN WHY THE FORECAST OF THE CAPACITY PRICE IS LOWER**  
23 **THAN THE COST OF NEW CAPACITY IN THE EARLY YEARS.**

1 A Due to the forecast surplus of installed capacity above that needed for reliability  
2 purposes, the price in the wholesale market has been driven downward. (Of course,  
3 without retail customer choice, there is no competitive retail market at this time).

4  
5 **Q GIVEN THE CONSIDERATIONS YOU HAVE DESCRIBED, DO YOU HAVE A**  
6 **RECOMMENDATION IN REGARD TO THE DEVELOPMENT OF THE IMPLICIT**  
7 **GENERATION COMPONENT OF RATES?**

8 A Yes. The generation rate components should be based on a forecast of market energy  
9 prices and a market-oriented forecast of the cost of new capacity. In addition, I  
10 recommend that the implicit generation rate and the CTC be reviewed not less than  
11 every two years. Progress toward a competitive retail market should be assessed at  
12 those intervals throughout the transition cost recovery period.

13  
14 **Q HOW SHOULD THE FORECAST OF MARKET ENERGY PRICES AND THE**  
15 **FORECAST OF THE MARKET COST OF NEW CAPACITY BE USED TO ESTABLISH**  
16 **THE GENERATION COMPONENT OF RATES UNDER THE VARIOUS SERVICE**  
17 **SCHEDULES?**

18 A The following procedure should be followed:

- 19 1. Develop the supply costs based on a market analysis that states the capacity  
20 cost per kW and the energy cost per kWh separately. The energy component  
21 should be based on a forecast of market energy prices. The capacity  
22 component should be based on the market cost of new capacity and should be  
23 stated to include the cost of generation reserves needed to provide for reliable  
24 service. The capacity component for non-firm service must be limited to reflect  
25 the character of service.  
26  
27 2. For each rate schedule, apply the loss adjusted energy supply cost in the  
28 maximum detail available (for example, on and off peak by season), and apply  
29 the loss adjusted capacity cost to the peak demand of each class.

1 Q PLEASE ILLUSTRATE THE DEVELOPMENT OF A GENERATION RATE  
2 COMPONENT UNDER YOUR RECOMMENDATION.

3 A I will illustrate the computation for the residential example discussed above. The rate is  
4 3.87¢, and the details are set forth in Exhibit DEJ-1.  
5

<b>Table 3</b>	
<b>Summary of Recommended Residential Generation Rate Development</b>	
	<b>Amount (per KWH)</b>
Energy Component, including losses and usage profile	2.38¢
Capacity component, including reserves and losses	1.49
Total	3.87¢

6  
7  
8  
9

10 Q PLEASE DESCRIBE EXHIBIT DEJ-1.

11 A Line 1 states the energy component as set forth in PP&L Exhibit STJ-7. Line 2 sets  
12 forth the residential energy rate as set forth in PP&L Exhibit OGK-2, the proposed tariff.

13 I understand the proposed tariff number to reflect weighting and on the residential class  
14 consumption profile, energy losses, and gross receipts tax , although I have not been  
15 able at this point to verify the same in Company-supplied workpapers. Assuming those  
16 factors have been properly treated, the energy price would be that set forth in the  
17 proposed tariff.

18 The capacity component begins with the estimated cost of new capacity. For the

1 purpose of this Exhibit, I used the forecast of PP&L of \$50 per kW for capacity cost in  
2 2002. I de-escalated the cost at the forecast inflation rate of 2.5% which results in a  
3 1999 cost of new capacity of \$46.43 per kW. For the purpose of illustration only, I used  
4 the 18% reserve requirement proposed by PP&L. This produced a subtotal of \$54.79 to  
5 which I applied an 8.67% loss factor. Thus, the capacity cost, including the PP&L  
6 proposed reserves and residential electrical losses, is \$59.54 per kW. I converted this  
7 to a kWh charge for the energy only residential rate based on a 47.4% load factor. This  
8 is the average of the residential load factor based on the class contribution to the  
9 system peak and the class maximum diversified demand. At the residential class load  
10 factor, the capacity component stated on a kWh basis is 1.43¢. To this the gross  
11 receipts tax of 4.4% is added to produce a total capacity component of 1.49¢. The sum  
12 of the energy and capacity components is 3.87¢.

13  
14 **Q IS IT YOUR INTENT TO ENDORSE THE PP&L FORECAST OF ENERGY AND**  
15 **CAPACITY?**

16 **A** No. I have used the PP&L sponsored forecast for illustrative purposes. To the extent  
17 that the Commission may find another forecast to be more appropriate, it is my  
18 recommendation that the method illustrated in Exhibit DEJ-1 be followed for the  
19 development of the capacity and energy rates set forth in the Capacity and Energy Rider  
20 and for the development of the implicit capacity and energy rates to be unbundled from  
21 current rates.

22  
23 **Q IS THERE ANY REASON WHY CUSTOMER SERVED UNDER TIME OF USE RATE**  
24 **ought to be excluded from having the choice of suppliers?**

1 A No. The capacity and energy rate components should be developed consistent with the  
2 time periods defined in the use rates. The CTC should be developed following the same  
3 procedures. The rate would then be appropriate for service from alternative suppliers.  
4

5 **Q IS THERE A RELATIONSHIP BETWEEN YOUR RECOMMENDATION AND THE**  
6 **STRANDED COST RECOVERY PROPOSED BY PP&L?**

7 A Yes. My discussion of the CTC is for the purpose of describing the implications of my  
8 recommendation for the CTC procedure proposed by PP&L. As I have explained, the  
9 implicit generation rate component is too low. A higher generation rate component  
10 consistent with my recommendations will reduce the stranded cost to a level below that  
11 calculated by PP&L, other considerations being the same.  
12

13 **Q PLEASE EXPLAIN THE IMPACT OF THE HIGHER IMPLICIT GENERATION SUPPLY**  
14 **RATE COMPONENTS THAT YOU RECOMMEND ON THE DETERMINATION OF**  
15 **STRANDED COST.**

16 A To the extent that PP&L makes the retail sales, a higher rate would decrease the  
17 stranded cost. In the event that PP&L could not make the sale by reason of the market  
18 price being lower than the generation rate component, an affiliate could make the sale at  
19 the retail market price. The stranded cost would still be reduced, but not quite to the  
20 same extent. Of course, at the same time, there would be the benefit that the price  
21 would have been set by a market in which new suppliers have a reasonable opportunity  
22 to compete for the sale. In the event that PP&L and its affiliates should lose the retail  
23 sale entirely, it would have the opportunity to sell the power at the wholesale market  
24 price. Consequently, accepting for discussion purposes only the forecast of market

1 price used by PP&L, the stranded cost in comparison would be reduced under my  
2 proposal.

3

4 **Q WOULD THE FACT THAT PP&L WAS AT RISK FOR SOME PORTION OF THE**  
5 **REVENUES DERIVED FROM THE IMPLICIT RETAIL GENERATION RATE MEAN**  
6 **THAT PP&L WOULD BE DENIED THE OPPORTUNITY TO RECOVER ITS**  
7 **STRANDED COST AND TO EARN A REASONABLE RETURN?**

8 A No. But the fact that PP&L would be at some risk would certainly increase the incentive  
9 to PP&L to engage in additional mitigation so as to achieve the maximum return  
10 possible under the conditions.

11

12 **Q ARE YOU MAKING ANY RECOMMENDATIONS AS TO THE AMOUNT OF**  
13 **MITIGATION THAT IS POSSIBLE, OR THE AMOUNT OF STRANDED COST THAT**  
14 **POTENTIALLY EXISTS AND OUGHT TO BE CHARGED TO CUSTOMERS?**

15 A No, I am not, although it is clear that a higher market price, if allowed to develop without  
16 being undercut with a low generation component set by regulation, would lower the  
17 stranded cost.

18

19 **VERTICAL MARKET POWER**

20 **Q EARLIER IN YOUR TESTIMONY, YOU RAISED THE ISSUE OF VERTICAL MARKET**  
21 **POWER. WHY IS VERTICAL MARKET POWER IMPORTANT?**

22 A Vertical market power, if retained by PP&L, will inhibit the ability of customers and new  
23 generation suppliers to get together in the market. This will tend to preserve the PP&L

1 monopoly at the expense of customers and new suppliers.

2

3 **Q WHAT ISSUES WILL YOU ADDRESS THAT RELATE TO VERTICAL MARKET**  
4 **POWER?**

5 A The issues are the lack of an unbundled transmission rate, metering, billing, the supplier  
6 tariff and the PP&L corporate structure as it may impact the standard of comparable  
7 service.

8

9 **Q WHAT IS THE STANDARD OF COMPARABLE SERVICE?**

10 A Comparable service is a very important issue because new market entrants must use  
11 the delivery system that is controlled by PP&L. Any favoritism by the PP&L delivery  
12 organization as to price, access, information or any other aspect of delivery service  
13 would inhibit the development of a competitive supply market. While PP&L has  
14 proposed a structure with standards apparently intended to result in comparable service,  
15 there is cause for concern and continuing vigilance since this matter is critical to a  
16 successful transition to a workable competitive market.

17

18 **Q HOW DOES THE PP&L DELIVERY GROUP PROPOSE TO ACQUIRE A SUPPLY OF**  
19 **ELECTRICITY TO SATISFY THE ROLE OF DEFAULT SUPPLIER?**

20 A First, the Commission may assign the responsibility to be a default supplier to a party  
21 other than PP&L, but I will assume for the purpose of this answer that PP&L has some  
22 or all of the default responsibility. PP&L states that, as the delivery entity, it will acquire  
23 supplies based on arms-length negotiations. Given the rate cap provisions, the need for  
24 an implicit generation rate that would be high enough to provide an opportunity for such

1 negotiations to produce a fair price is underscored. There must be no favoritism and no  
2 inherent price advantage for the PP&L Generation Supply Group.

3  
4 **Q IS THERE ANY PROBLEM WITH THE APPROACH THAT PP&L HAS FOLLOWED**  
5 **WITH RESPECT TO METERING OF CUSTOMER LOADS?**

6 A Yes. PP&L proposes to own, maintain and read all customer billing meters.

7  
8 **Q WHAT IS THE PP&L POSITION IN REGARD TO BILLING?**

9 A PP&L proposes to be responsible for billing customers for the unbundled regulated  
10 services and for suppliers' charges, unless otherwise requested by the customer. The  
11 only option is that the customer could receive a separate bill from the supplier and a  
12 separate bill from PP&L for the unbundled regulated delivery services and transition  
13 charges.

14  
15 **Q ARE THERE PROBLEMS WITH PP&L'S PROPOSALS WITH RESPECT TO**  
16 **METERING AND BILLING?**

17 A Yes. In essence, PP&L proposes that it maintain an absolute monopoly with respect to  
18 metering and the only exception in regard to billing is that expressly provided by the  
19 Competition Act. One problem is that there is no reason for a PP&L monopoly in  
20 metering. Other parties have the capability and could provide the service. Another  
21 problem with the PP&L approach is that it would tend to stifle innovation in the evolving  
22 retail electric supply market. This is true because more advanced forms of metering  
23 may be able to cost-effectively facilitate more efficient generation supply pricing and  
24 usage efficiencies. Under the PP&L plan, any innovative metering could easily end up

1 being needlessly redundant and costly. Instead, what is needed is a set of appropriate  
2 metering standards so that the evolving retail generation market may flourish.

3 The PP&L proposal with respect to billing also eliminates a logical alternative. It  
4 is a convenience to customers to receive one bill for all electrical services, but under the  
5 PP&L proposal, that is a convenience that can be offered only by PP&L.

6 Taken in total, the metering and billing provisions are less than what is needed to  
7 promote more efficient energy supplies and to foster the development of a more  
8 competitive retail electric supply market.

9  
10 **Q DOES THE PP&L PROPOSAL INCLUDE ANY PROVISIONS THAT WILL INCREASE**  
11 **THE COST FOR THIRD-PARTY SUPPLIERS AS COMPARED TO THE PP&L**  
12 **SUPPLY GROUP OR A PP&L AFFILIATED SUPPLIER (A PP&L SUPPLIER)?**

13 **A** Yes. PP&L proposes to charge suppliers \$1.10 per bill. It is unclear whether it is  
14 contemplated that the proposed charge also be applied to PP&L as a supplier; however,  
15 must apply to PP&L as a supplier in order to satisfy the standard of comparability.

16  
17 **Q PLEASE EXPLAIN WHY IT IS INAPPROPRIATE TO HAVE A DIFFERENT CHARGE**  
18 **FOR THE NEW SUPPLIERS.**

19 **A** PP&L is charged with the responsibility of providing comparable services to the new  
20 suppliers. In other words, the service provided to others must be equivalent to the  
21 service it provides itself. If PP&L were to propose to charge \$1.10 per bill to all new  
22 suppliers and nothing to PP&L as a supplier, there would be one of two problems. Either  
23 the rate would be discriminatory and therefore inappropriate, or the level of service  
24 being provided to the other entities would not be comparable to that being provided to

1 PP&L and, therefore, inappropriate.

2

3 **Q WOULD IT NOT BE MORE EFFICIENT FOR PP&L TO PROCESS A BILL FROM**  
4 **PP&L IN-HOUSE DATA?**

5 A In the context of a regulated monopoly, all such efficiencies ought to have been  
6 pursued. However, under a standard of comparable service, the situation is different. It  
7 is apparent that the billing system will need to be enhanced to accommodate different  
8 forms of rates. After it is enhanced, PP&L, as well as the new suppliers, will have the  
9 ability to use the options.

10 Henceforth, the PP&L Generation Supply Group should have available to it,  
11 should use, and should pay for the billing system in the same manner as the new  
12 suppliers. The costs should be shared proportionately among all suppliers, including the  
13 PP&L Generation Supply Group.

14 In addition, new suppliers should not be precluded from offering customers a  
15 single bill. Provisions should be made for new suppliers to acquire and pay for delivery  
16 services on behalf of their customers. Any other approach results in a competitive  
17 disadvantage because the customer/supplier relationship could not be established in an  
18 equivalent manner.

19

20 **Q PLEASE SUMMARIZE YOUR TESTIMONY IN REGARD TO VERTICAL MARKET**  
21 **POWER.**

22 A Under the PP&L plan, there are several proposals that will tend to promote, or at least  
23 not adequately protect from, a continuation of the existing vertical market power of  
24 PP&L. Market power, whether vertical, horizontal or some other form cannot be

1           condoned by policy, plan or procedure when there is underway a transition to reliance  
2           on forces in a market that must be workably competitive if the goals of the Competition  
3           Act are to be attained.  
4

5   **Q    HAVE YOU REVIEWED THE PP&L TARIFF FOR THE SERVICES THAT WILL BE**  
6   **PROVIDED TO NEW GENERATION SUPPLIERS?**

7   **A**PP&L has submitted the PJM open access tariff which will cover some of the services.  
8           However, it is not complete because there are aspects of the services that are not  
9           appropriately covered in that tariff. For example, it will be necessary to define the loads  
10          to be served and the reconciliation procedures. While telemetering on customer specific  
11          schedules may be workable for larger customers, other procedures will need to be  
12          developed for smaller customers. It is important that the procedures be practically  
13          workable and that the comparability standard be carefully applied. For example, the  
14          same load projections, load reconciliation procedures and imbalance charges must  
15          apply equally to PP&L to the extent that it operates as a retail supplier.  
16

17   **Q    DOES THIS CONCLUDE YOUR TESTIMONY?**

18   **A**Yes, it does.



1 the peak demand and sales forecasts. From 1977 through 1981, I was Supervisor of the  
2 Load Forecasting Group where my responsibilities included the Company's sales and  
3 peak demand forecasts and the weather normalization of sales.

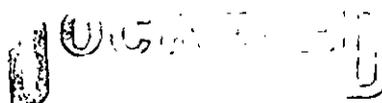
4 In November 1981, I joined Drazen-Brubaker & Associates, Inc., and in April 1995,  
5 I continued my consulting work at the firm of Brubaker & Associates, Inc. Since 1981, I  
6 have participated in the analysis of various utility rate cases, including the analysis and  
7 preparation of cost of service studies and rate analyses. In addition to rate cases, I have  
8 participated in electric fuel and gas cost reviews and planning proceedings, policy  
9 proceedings, market price surveys, generation capacity evaluations, and assorted matters  
10 related to the restructuring of the electric and gas industries.

11 I have testified before the state regulatory commissions of Delaware, Hawaii,  
12 Illinois, Iowa, Kansas, Massachusetts, Missouri, Montana, New Hampshire, Ohio,  
13 Pennsylvania, Tennessee, Virginia and West Virginia.

14 The firm of Brubaker & Associates, Inc. provides consulting services in the field  
15 of energy procurement and public utility regulation to many clients, including large  
16 industrial and institutional customers, some utilities, and on occasion, state regulatory  
17 agencies. More specifically, we provide analysis of energy procurement options based  
18 on consideration of price flexibility, and reliability as related to the needs of the client;  
19 prepare rate, feasibility, economic and cost of service studies relating to energy and utility  
20 services; prepare depreciation and feasibility studies relating to utility service; and assist  
21 in contract negotiations for utility services.

**Residential Generation Rate Design**  
Example Based on 1999 Costs

<u>Line</u>	<u>Description</u>	<u>Amount</u>
	<b><u>Energy Component</u></b>	
1	System average market energy component, per kWh	2.20¢
2	Adjusted to reflect class usage profile and class electrical	
3	delivery losses, per kWh	2.38¢
	<b><u>Capacity Component</u></b>	
4	Market cost of new capacity per kW (\$50 for 2002 less 2.5%/year inflation)	\$46.43
5	Reserve Requirement (assume 18%), per kWh	<u>8.36</u>
6	Subtotal	54.79
7	Adjustment to reflect class electrical losses (8.67%), per kWh	<u>4.75</u>
8	Sub Total	\$59.54
9	Convert to a kWh charge for energy only rates, per kWh (47.4% load factor)	1.43¢
10	Gross receipts tax (4.4%)	<u>.06¢</u>
11	Total	1.49¢
	<b><u>Summary</u></b>	
12	Energy, per kWh	2.38¢
13	Capacity, per kWh	<u>1.49¢</u>
14	Generation Rate Component, per kWh	3.87¢

  
 AUG 20 1997  
 DOCUMENT  
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