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SUBJECT: Forwards paper titled, "Nuclear Power in Changing Electric Utility Industry," per discussions during visit to plant in Dec 1993.

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SUSQUEHANNA STEAM ELECTRIC STATION  
NUCLEAR POWER IN A CHANGING ELECTRIC UTILITY INDUSTRY  
PLA-4072 FILE A48-2B

Dear Tim:

I thoroughly enjoyed our discussions during your recent visit to Susquehanna in December. It is always a pleasure to have you visit our facility, and I look forward to future opportunities to gain your perspective on the issues facing the nuclear industry.

As we discussed, the attached paper addresses how changes in the electric industry may impact the future of nuclear power.

Our staff is available to answer any questions you may have on this important issue. Our Jim Kenny at 215/774-7904 is available to you for follow-up actions.

Sincerely,

110017

W. F. Hecht

Attachment

cc: NRC Document Control Desk (original)  
Mr. G. S. Barber, NRC Sr. Resident Inspector-SSER  
Mr. R. J. Clark, NRC Sr. Project Manager-Rockville

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***NUCLEAR POWER IN A  
CHANGING ELECTRIC UTILITY  
INDUSTRY***

***NUCLEAR POWER IN A  
CHANGING ELECTRIC UTILITY  
INDUSTRY***

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## **INTRODUCTION**

The National Energy Policy Act of 1992 is bringing about significant changes in the electric utility industry. This act which stipulates mandatory wholesale access to the transmission system and makes significant changes to the Public Utility Holding Company Act (PUHCA), set the stage for future restructuring of the utility industry. To assure a safe future for nuclear generation, all stakeholders including nuclear utilities and the Nuclear Regulatory Commission (NRC) must participate in shaping the future structure of the electric utility industry.

## **KEY ISSUES**

### **LONG TERM, SAFE NUCLEAR OPERATION PROTECTS INVESTMENT**

Long-term safe, reliable operation of Susquehanna Steam Electric Station (SSES) is an essential business strategy for PP&L as it affords the only opportunity to recover invested funds and earn a return on that investment. Operating and financial decisions are being made based on this long term capital recovery strategy.

### **INDUSTRY RESTRUCTURING CAN CHANGE UTILITY FOCUS**

Competition is bringing about dramatic changes in the electric utility industry. Achieving a more competitive product price is creating substantial pressure for utilities to reduce total costs. Operating and maintenance costs, along with capital investments, will come under pressure in this market environment.

### **THE FUTURE STRUCTURE OF THE ELECTRIC UTILITY INDUSTRY MUST ENSURE A SAFE FUTURE FOR NUCLEAR GENERATION**

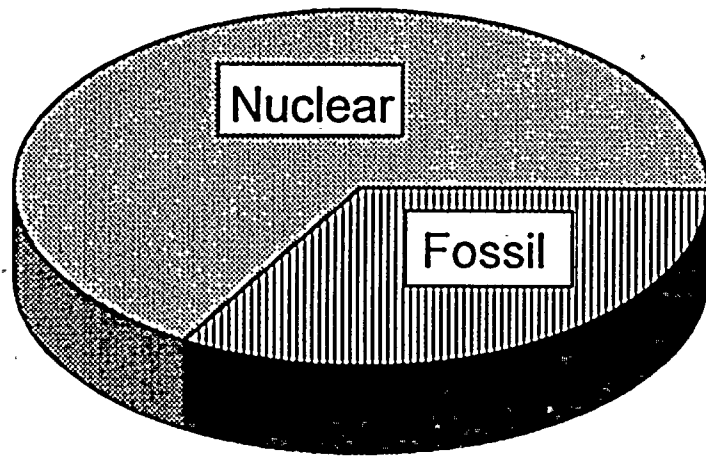
Competition in the electrical utility industry can ultimately benefit the United States through lower prices and more competitive American industries. In order for all objectives to be met, i.e. low electricity cost, safe nuclear operation, and adequate energy supply, all industry stakeholders must participate in shaping this structure.

***SAFE SSES OPERATION  
PROTECTS OUR INVESTMENT***

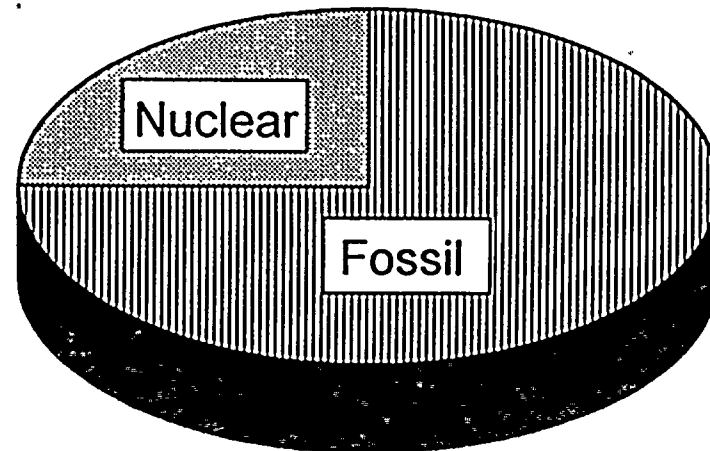


## *Safe SSES Operation Is Good Business*

### Capital Investment

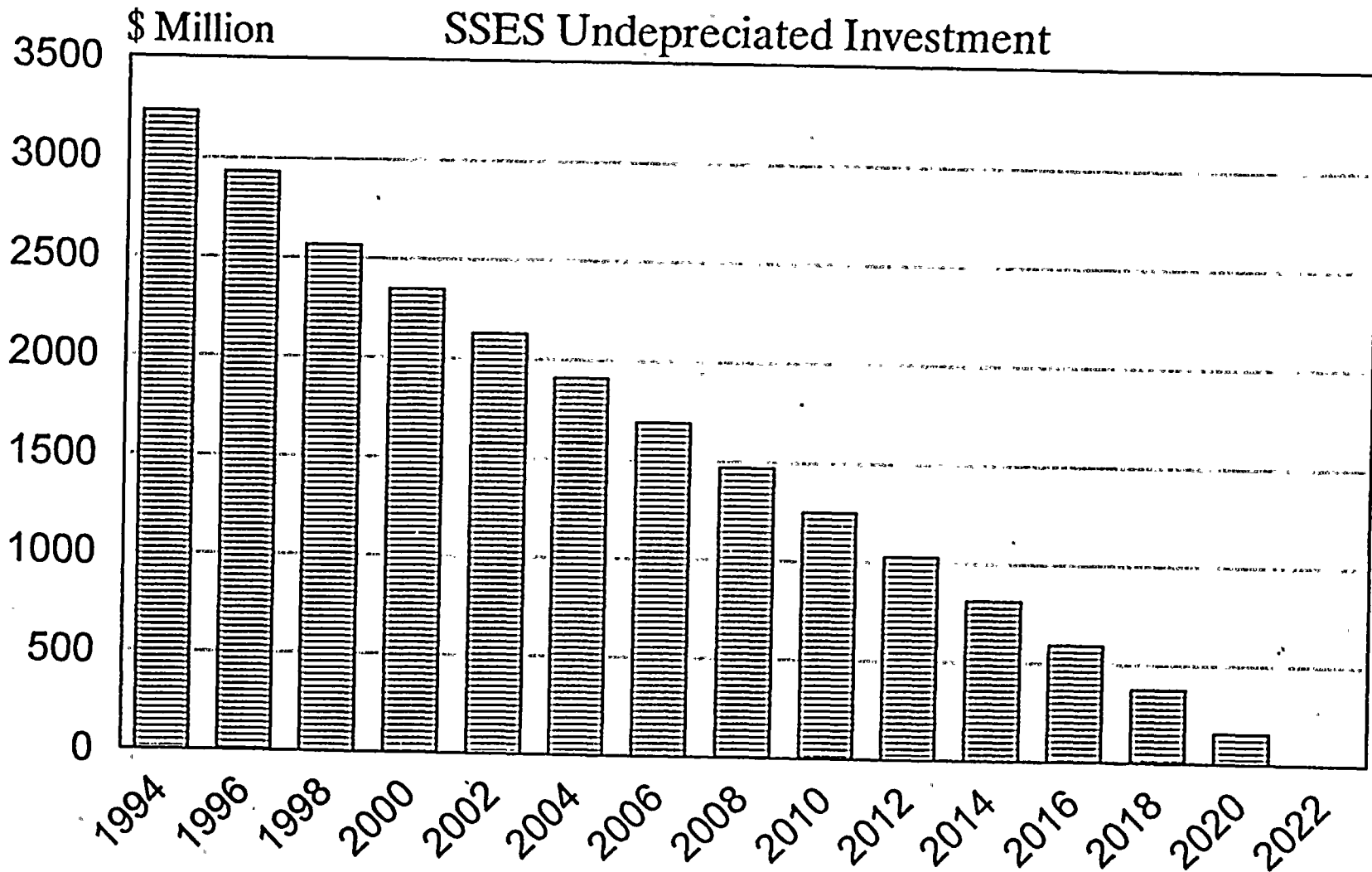


### Generation



- *Capital invested in SSES represents 2/3 of PP&L total generation assets*
- *SSES produces approximately 1/4 of electricity generated*

# *Long term operation of SSES is an essential business strategy*



*It affords the only opportunity to recover invested funds and earn a return on investment. This life cycle dictates our long term view.*



***PP&L corporate nuclear philosophy emphasizes long-term safe operation.***

- SSES represents the major capital investment in generating assets.
- The business challenge for the future is SSES capital recovery.
- Daily operating decisions at PP&L that support this safety philosophy are the same decisions that will support our corporate business strategy.
- PP&L is providing the operating and capital funds necessary to ensure long-term, safe operation.
- PP&L's long-term strategy commits to continuing this level of support.

***Long-term safe nuclear operation provides the only opportunity for PP&L to recover nuclear costs while earning a return on the investment.***

***INDUSTRY RESTRUCTURING  
CAN CHANGE UTILITY FOCUS***

## **PRICE OF ELECTRICITY IN A REGULATED ENVIRONMENT**

- Most electric users have no alternative suppliers.
- Prices are therefore set by regulation based on the costs utilities incur to provide service. These costs include:
  - Fuel
  - Operating and maintenance expenses
  - Taxes
  - Depreciation
  - Interest on debt
  - Opportunity for a return on equity invested.
- In periodic rate proceedings the prudence of these costs are examined.
- Customer rates are then determined by allocating these costs among customer classes.

***Regulation substitutes for competition.***

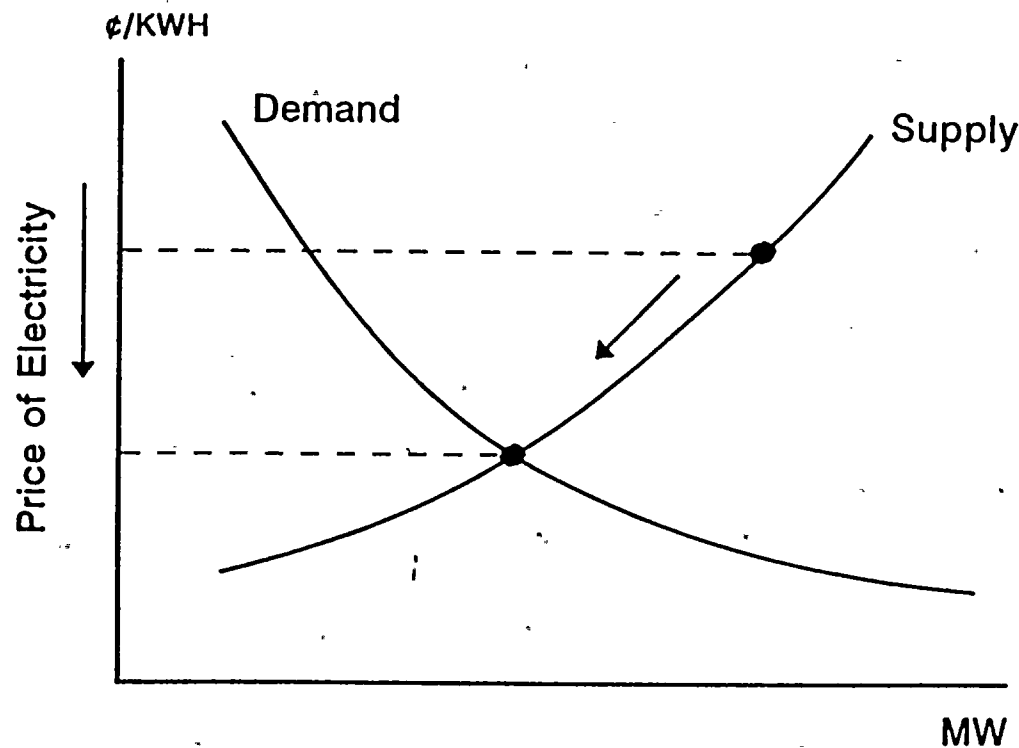
## **PRICE OF ELECTRICITY IN A COMPETITIVE MARKET**

- In market environment multiple suppliers can reach multiple buyers.
- Price is determined by the marketplace.
- In a market with excess supply the price of electricity will be lower than the regulated price.
- In a market with a shortage of supply the price of electricity may be higher than the regulated price.

*As a regional market develops regional supply and demand will determine the price of electricity.*

*Over the next decade, under marketplace pricing, the demand-supply relationship in most regions of the country is expected to lower the price of electricity.*

### Regional Generation Market



*If market pricing prevails, the reduction in price will occur over a long enough period to challenge the financial viability of certain utilities.*



***The National Energy Policy Act of 1992 is in fact promoting competition.***

- **The Act amends the Public Utility Holding Company Act to reduce barriers to market entry for independents that wish to build, own and operate generating facilities.**
- **The Act also promotes competition by giving the Federal Energy Regulatory Commission (FERC) the power to require access to the transmission system for wholesale power transactions. The legislative intent is to permit wholesale utility buyers to reach multiple sellers.**
- **While the Act prohibits FERC from ordering transmission access for retail power transactions, individual states are not prohibited from ordering such access.**

***Evidence of competitive activity is occurring.***

- Baltimore Gas & Electric and Delmarva Power & Light were required by their respective utility commissions to solicit bids for new capacity/generation requirements.
- New York has allocated lower cost New York Power Authority (NYPA) power to certain industrial customers to keep these industries and their employees in the State.
- Consolidated Edison (Con Ed), has switched a portion of its supply from NYPA to Sithe Energy, an Independent Power Producer in New York State.

***Utilities are responding to this competition.***

- Public Service Electric & Gas (PS) has reached an agreement with the Old Dominion Electric Cooperative (ODEC) to supply a portion of ODEC's electricity needs. ODEC represented 10% of the total load of the current supplier, Delmarva Power & Light (DPL).
- DPL has approached the Maryland Commission to supply the load of Conowingo Power Company (160 MW), a wholly-owned subsidiary of Philadelphia Electric (PE). PP&L and Baltimore Gas and Electric have also proposed to supply this customer.
- General Public Utilities discounted the rate charged to Butler Borough, a municipality, to avoid losing the customer to a competing utility.

***Utilities are moving to acquire new load and protect existing load by discounting prices.***

***Competition is moving the electric utility industry away from the cost based regulated environment toward an environment based on market conditions.***

- This competition coupled with regional excess capacity causes market price reductions and puts tremendous pressure on a utility to reduce costs.
- Market pressures will challenge the availability of O&M and capital funding needed for safe nuclear operation.

***ACTION IS NEEDED***

## **HISTORY OF DEREGULATION**

***The history of deregulation has shown the transition from monopolies to free markets to be a demanding time for all stakeholders as the rules are changed to promote competition. The electric utility industry will be no exception.***

- Traditionally, winners and losers emerge from the transition to an open market.
- Recent experience with the deregulation of the gas industry shows that while consumers benefited, there were wide variations in profitability of gas transmission companies. Some did not survive the transition.
- Deregulation of the airline and banking industries show a similar experience of fluctuations in profitability, consolidations, mergers, and bankruptcies.

***The future structure of the electric utility industry, and the role of nuclear generation in it, is not yet known.***

- The British recognized the need to protect their investment in nuclear generation during a similar transition period.
  
- The United Kingdom (UK) government recently sought to privatize all generation and transmission facilities previously government owned.
  
- The UK government has retained ownership of nuclear facilities for a five-year transition period.
  
- Each of the privately owned transmission companies are required to purchase an allocated share of nuclear generation during the transition period.

***While this example may not be a solution to the unique situation in the United States, it does provide evidence that simple economic principles do not totally resolve the practical issues involved in the safe operation of nuclear facilities. Structures can be designed to resolve these issues.***

**ALL STAKEHOLDERS SHOULD PARTICIPATE IN SHAPING FUTURE  
INDUSTRY STRUCTURE.**

National and regional participation is needed to assure that public policy promotes safe nuclear generation.

- Participation with Department of Energy (DOE), FERC, and Congress is necessary to assure national policy continues to promote long term nuclear safety and reliability.
- Work should continue with National Association of Regulatory Utility Commissioners (NARUC) and state public utility commission's in areas which impact utility financial performance such as retail wheeling, incentive rate regulations, and stranded investment policy. Participation is necessary to assure that the cost recovery needed to assure adequate incentives for investment in nuclear safety are maintained.
- The NRC is a key stakeholder.

***CONCLUSION***



## **CONCLUSION**

- Long term, safe nuclear operation is good business.
- Emerging competitive forces will place significant new cost pressures on electric utilities.
- Public policy participation can result in an industry structure that provides:
  - protection of public safety
  - nuclear cost recovery.