TESTIMONY - 00-62 NJ DRA GPU FIRST ENERGY MERGER - BB & DS - APR-01.DOC

NEW JERSEY BOARD OF PUBLIC UTILITIES

In the Matter of the Joint Petition of FirstEnergy Corp.
and Jersey Central Power & Light Company, doing
business as GPU Energy, for Approval of a Change
in Ownership and Acquisition of Control of a
New Jersey Public Utility and Other Relief

Docket No. EM00110870

Direct Testimony of
Bruce E. Biewald
and
David A. Schlissel

On Behalf of
The State of New Jersey
Division of the Ratepayer Advocate

April 16, 2001

Table of Contents

1. INTRODUCTION AND QUALIFICATIONS

Q. Mr. Biewald, please state your name, position and business address.

A. My name is Bruce E. Biewald. I am the President of Synapse Energy Economics, Inc, 22 Pearl Street, Cambridge, MA 02139.

Q. Mr. Schlissel, please state your name, position and business address.

A. My name is David A. Schlissel. I am a Senior Consultant at Synapse Energy Economics, Inc, 22 Pearl Street, Cambridge, MA 02139.

Q. On whose behalf are you testifying in this case?

A. We are testifying on behalf of the New Jersey Division of the Ratepayer Advocate ("NJ DRA").

Q. Please describe Synapse Energy Economics.

A. Synapse Energy Economics ("Synapse") is a research and consulting firm specializing in economic and policy analysis of electricity restructuring, particularly issues of consumer protection, market power, electricity market prices, stranded costs, efficiency, renewable energy, environmental quality, and nuclear power.

Q. Mr. Biewald, please summarize your educational background and recent work experience.

A. I graduated from the Massachusetts Institute of Technology in 1981, where I studied energy use in buildings. I was employed for 15 years at the Tellus Institute, where I was Manager of the Electricity Program, responsible for studies on a broad range of electric system regulatory and policy issues. I have testified on energy issues in more than seventy regulatory proceedings in twenty-five states, two Canadian provinces, and before the Federal Energy Regulatory Commission. I have co-authored more than one hundred reports, including studies for the Electric Power Research Institute, the U.S. Department of Energy, the U.S. Environmental Protection Agency, the Office of Technology

Assessment, the New England Governors' Conference, the New England Conference of Public Utility Commissioners, and the National Association of Regulatory Utility Commissioners. My papers have been published in the *Electricity Journal*, *Energy Journal*, *Energy Policy*, *Public Utilities Fortnightly* and numerous conference proceedings, and I have made presentations on the economic and environmental dimensions of energy throughout the U.S. and internationally. Recently I have been consulting for federal agencies, including the Department of Energy, the Department of Justice, the Environmental Protection Agency, and the Federal Trade Commission. In New England I represent the Union of Concerned Scientists on NEPOOL matters, and I am a member of the NEPOOL Participants Committee and the Environmental Planning Committee. My resume is provided here as Exhibit BEB/DAS-1.

Q. Mr. Biewald, have you testified previously before the Board of Public Utilities?

A. Yes. I have testified in BPU Docket Nos**.** EX4120585Y, EO97070460, and EO97070463.

Q. Mr. Schlissel, please summarize your educational background and recent work experience.

A. I graduated from the Massachusetts Institute of Technology in 1968 with a Bachelor of Science Degree in Engineering. In 1969, I received a Master of Science Degree in Engineering from Stanford University. In 1973, I received a Law Degree from Stanford University. In addition, I studied nuclear engineering at the Massachusetts Institute of Technology during the years 1983-1986.

Since 1983 I have been retained by governmental bodies, publicly-owned utilities, and private organizations in 24 states to prepare expert testimony and analyses on engineering and economic issues related to electric utilities. My clients have included the Staff of the California Public Utilities Commission, the Staff of the Arizona Corporation Commission, the Staff of the Kansas State Corporation Commission, the Arkansas Public Service Commission, municipal utility systems

in Massachusetts, New York, Texas, and North Carolina, and the Attorney General of the Commonwealth of Massachusetts.

I have testified before state regulatory commissions in Arizona, New Jersey, Connecticut, Kansas, Texas, New Mexico, New York, Vermont, North Carolina, South Carolina, Maine, Illinois, Indiana, Ohio, Massachusetts, Missouri, and Wisconsin and before an Atomic Safety & Licensing Board of the U.S. Nuclear Regulatory Commission.

A copy of my current resume is attached as Exhibit BEB/DAS-2.

Q. Mr. Schlissel, have you testified previously before the Board of Public Utilities?

A. Yes. I have testified in BPU Dockets Nos. ER89110912J and ER96030257.

Q. What is the purpose of your testimony.

A. Synapse was retained by the NJ DRA to examine energy supply, market power, and transmission/RTO issues related to the proposed merger between FirstEnergy Corp. ("FirstEnergy") and GPU, Inc. ("GPU").[1] This testimony presents the results of our analyses and investigations.

Q. Please explain how Synapse conducted its investigations and analyses on these issues.

A. We reviewed the Joint Petitioners November 9, 2000, Petition and supporting testimony. We also reviewed the testimony filed by Joint Petitioners at FERC and by the active parties in the Pennsylvania Public Utility Commission's review of the proposed merger. In addition, we prepared data requests that the NJ DRA submitted to the Joint Petitioners and reviewed the responses that the Joint Petitioners submitted our data requests and to those submitted by the other active parties in this proceeding. Finally, we reviewed the responses that the Joint

[1] Throughout the remainder of this testimony I will refer to FirstEnergy and GPU as the Joint Petitioners.

Petitioners provided to the data requests submitted by the active parties to the proceeding before the Pennsylvania PUC.

Q. How is your testimony organized?

A. Section 2 will provide a brief summary of our conclusions. Section 3 then will discuss energy supply issues related to the proposed merger. Finally, Section 3 will address market power and RTO issues.

2. SUMMARY OF CONCLUSIONS AND RECOMMENDATIONS

Q. Please summarize your primary conclusions.

A. My primary conclusions are as follows:

1. FirstEnergy and GPU have refused to commit that the merged company actually would provide energy to Jersey Central Power & Light Company's ("JCP&L") ratepayers at more favorable prices than JCP&L could otherwise obtain on a stand-alone basis through the open market.

2. A goal of maximizing the merged company's bottom line would be inconsistent with a claim that as a result of the merger JCP&L will be able to secure energy at prices more favorable than it would be able to obtain on a stand-alone basis.

3. JCP&L's ratepayers could be exposed to significant financial risks as a result of the merger due to FirstEnergy's ownership of significant nuclear capacity.

4. JCP&L's ratepayers could be exposed to significant financial risks as a result of the merger due to FirstEnergy's ownership of the Sammis Plant and other fossil-fired generation capacity.

5. JCP&L's ratepayers could be exposed to significant financial risks as a result of the merger due to FirstEnergy's responsibility for cleaning up polluted sites.

6. The analyses presented by the Joint Petitioners are inadequate to show that the proposed merger will have no adverse impact on competition in the supply and distribution of electrical energy in New Jersey and PJM.

7. The testimony presented by the Joint Petitioners does not adequately address the issue of vertical market power.

Q. Please summarize your recommendations.

A. My recommendations are as follows:

1. The BPU should not approve the merger as currently proposed. The Joint Petitioners have not proved that the merger will benefit competition in the New Jersey electric market or that competition will at least not be harmed by the merger. Before approving the proposed merger, the BPU should require the Joint Petitioners to present a more detailed assessment of market concentration and market power. This analysis would require the use of an energy system simulation model to look at the hourly behavior of the market under a wide variety of external conditions and bidding behaviors.

2. However, if the BPU decides to approve the merger it should attach the following conditions to its approval:

   - FirstEnergy should be required to dedicate its existing and new capacity, to the extent possible, to serving JCP&L's native load during both peak and off-peak hours.

   - No preference should be given to customers of First Energy Services in PJM over JCP&L's native load.

   - FirstEnergy should provide energy to JCP&L's native load at cost with the prices not to exceed the established shopping credit. The prices at which FirstEnergy provides energy to JCP&L's native load also should be no higher than the prices at which First Energy Services provides energy to its customers in PJM.

- Consequently, there should be no merger-related increases in the MTC/BGS deferred balance. At the same time, all merger-related energy supply savings should be flowed through to reduce the MTC/BGS deferred balance.

- If FirstEnergy is unable to resolve problems related to its ability to serve JCP&L's BGS load with its generation assets by December 31, 2001, it should immediately initiate an analysis the deliverability improvements and power-supply benefits of joining PJM West. FirstEnergy should further be required to file the completed analysis with the BPU by no later than June 30, 2002.

- JCP&L's ratepayers should not be exposed to any liabilities related to the financial risks associated with FirstEnergy's ownership of nuclear power plants other than to pay the energy cost of providing any output from FirstEnergy's nuclear units that is used to supply JCP&L's native load if that cost is at or below JCP&L's BGS rate. JCP&L's ratepayers should not be exposed to any costs resulting from First Energy's nuclear plant outages or accidents, any nuclear stranded costs, or nuclear decommissioning costs.

- JCP&L's ratepayers should not be exposed to any financial liabilities related to the Clean Air Act litigation brought against FirstEnergy by the U.S. EPA and Department of Justice or by the attorneys general of any states. JCP&L's ratepayers similarly should not be exposed to any financial liabilities related to violations of any environmental laws or regulations at any of FirstEnergy's fossil-fired power plants.

- JCP&L's ratepayers should not be exposed to any financial liabilities associated with FirstEnergy's responsibility for cleaning up polluted sites.

- FirstEnergy will be required to keep GPU within PJM for a period of at least ten years following merger approval unless continued PJM membership would result in financial distress to the merged companies

or the Joint Petitioners can show that early termination would provide significant benefits to GPU ratepayers without a material increase in market power to applicable destination markets. The Joint Petitioners will be required to file for BPU approval of such early termination. BPU will approve or deny this request after public evidentiary hearings have been held.

- FirstEnergy will be required to commit unconditionally to not asserting native-load priority on its direct interconnection with GPU so long as GPU is part of PJM.

3. ENERGY SUPPLY ISSUES

Q. Should the BPU rely upon the Joint Petitioners' claim that the proposed merger with FirstEnergy would provide JCP&L greater flexibility and additional supply options?

A. No. As explained in the Joint Petitioners' responses to data requests submitted by the NJ DRA, BPU staff, and PJM, the proposed merger theoretically would provide greater flexibility and more supply options for GPU.[2] However, the Joint Petitioners have not presented a detailed plan as to the specific resources that would be dedicated by the merged company to providing capacity and resources to serve JCP&L's native loads in New Jersey or GPU's native load elsewhere in PJM..

Moreover, the Joint Petitioners have refused to commit to the promise that the merged company actually would provide energy to JCP&L's ratepayers at more favorable prices than JCP&L could otherwise obtain on a stand-alone basis through the open market. For example, in its response to RAR-158, FirstEnergy specifically refused to make such a commitment "based on a hypothetical set of

[2] For example, see the Joint Petitioners' responses to S-ENE-9, S-ENE-10, RAR-65, RAR-158, and PJM-1(f).

post-merger facts."[3] Instead of the requested commitment, FirstEnergy merely repeated its claim that "FirstEnergy services is expected to be able to supply at least a portion of GPU Energy's power supply requirements during times when prices would be less than those that would be paid by JCP&L in the open market on a stand-alone basis."

Q. Have you seen any evidence that causes you to be concerned about FirstEnergy's willingness to provide energy to JCP&L at more favorable prices than could be secured by JCP&L on a stand-alone basis?

A. Yes. In response to questions from Wall Street analysts on whether FirstEnergy will sell power to GPU if there are opportunities for higher prices elsewhere, FirstEnergy Chairman Burg has said that the company will look at the economic trade-offs and consider what's best for its bottom line going forward.[4] Clearly, a goal of maximizing FirstEnergy's bottom line is inconsistent with a claim that as a result of the merger JCP&L will be able to secure energy at prices more favorable than it would be able to obtain on a stand-alone basis.

In fact, the Joint Petitioners have acknowledged that there may be situations where FE will not sell power to JCP&L if it can find another buyer willing to pay higher prices.[5]

Q. What conditions should the BPU attach to the proposed merger to ensure that JCP&L's ratepayers actually do realize energy supply cost benefits?

A. If the BPU decides to approve the proposed merger, it should attach the following conditions to its approval of the proposed merger:

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[3] Joint Petitioners' response to RAR-158

[4] See the Joint Petitioners' response to Data Request OCA-III-3(b), in Pennsylvania PUC Dockets Nos. A-110300F.0095 and A-110400F.0040, at page 21.

[5] See Joint Petitioners' response to RAR-64.

- FirstEnergy should be required to dedicate its existing and new capacity, to the extent possible, to serving JCP&L's native load during both peak and off-peak hours.

- No preference should be given to FirstEnergy Services customers in PJM over JCP&L's native load.

- FirstEnergy should provide energy to JCP&L's native load at cost with the prices not to exceed the established shopping credit. The prices at which FirstEnergy provides energy to JCP&L's native load also should be no higher than the prices at which FirstEnergy Services provides energy to its customers in PJM.

- Consequently, there should be no merger-related increases in the MTC/BGS deferred balance. At the same time, all merger-related energy supply savings should be flowed through to reduce the MTC/BGS deferred balance.

Q. Does FirstEnergy anticipate that its ability to serve JCP&L's BGS load with FirstEnergy generation assets will be limited by transmission constraints between ECAR[6] and PJM?

A. Yes. Specifically, FirstEnergy believes that at this time it will be limited to providing only off-peak energy from its generation assets in ECAR to serve BGS load. FirstEnergy does not believe that it can deliver significant quantities of on-peak energy to JCP&L due to the general unavailability of transfer capability during on-peak periods. In addition, it does not believe that it can use its generation assets to meet GPU's installed-capacity requirement, given the

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[6] ECAR is the East Central Area Reliability Council. It is one of the ten Regional Reliability Councils of the North American Electric Reliability Council (NERC). ECAR was established in 1967 to augment the reliability of its members' electricity supply systems through coordination of the planning and operation of its members generation and transmission facilities. ECAR is directly west of PJM. FirstEnergy's service territories are within ECAR.

unavailability of Available Transfer Capability[7] ("ATC") on the PJM system, to deliver capacity from outside PJM pursuant to PJM rules.[8]

Q. Is FirstEnergy engaged in any efforts to remove these limitations?

A. According to the response to PJM-2, FirstEnergy is involved in efforts by a PJM working group to generally increase ATC on the PJM system. In addition, FirstEnergy is negotiating with PJM to allow its assets located within or near PJM West[9] to be designated as PJM capacity resources pursuant to PJM West rules.[10] If successful, these two efforts should increase FirstEnergy's ability to deliver capacity and possibly also on-peak energy to serve GPU load.

Q. Does FirstEnergy have any other options for improving supply deliverability in the event that its current efforts fail?

A. Yes. FirstEnergy has the option to pursue membership in PJM West. As a member of PJM West, FirstEnergy's generation assets could be designated as PJM capacity resources and therefore would no longer subject to the transfer limitations imposed on external resources.[11]

Q. What do you recommend in the event that FirstEnergy's current efforts to increase deliverability fail?

A. If FirstEnergy is unable to resolve problems related to its ability to serve JCP&L's BGS load with its generation assets by December 31, 2001, it should immediately

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[7] Available Transfer Capability is a measure of the transfer capability remaining in the physical transmission network for further commercial activity over and above already committed uses.

[8] See Responses to Data Requests PJM-2, PJM-4, and PJM-7.

[9] PJM West is a proposed expansion of PJM into the service territories of Duquesne Power Company and Allegheny Power.

[10] Response to Data Request PJM-4.

[11] The Company would still be subject to any congestion charges associated with bilateral deliveries of power from its generation in PJM West to GPU's load over congested interfaces.

initiate an analysis the deliverability improvements and power-supply benefits of joining PJM West. FirstEnergy should further be required to file the completed analysis with the BPU by no later than June 30, 2002.

Q. If the BPU decides to approve the proposed merger, are there any additional energy supply related conditions that the BPU should attach to the merger?

A. Yes. The Joint Petitioners have identified the following risks for GPU shareholders from the proposed merger with FirstEnergy:

> **GPU shareholders receiving FirstEnergy common stock in the merger will be exposed to risks relating to the ownership of electric generation assets, including nuclear plants.**
>
> As a result of recent sales by the GPU Energy companies of Three Mile Island Unit-1, the Oyster Creek Station and substantially all of their fossil fuel and hydroelectric generating plants, GPU has become primarily a transmission and distribution business. FirstEnergy, on the other hand, continues to own and operate numerous electric generating facilities, including fossil and nuclear-fueled plants. Some of the risks associated with the operation and cost of operation of electric generating facilities differ from those relating to GPU's utility and non-utility businesses as currently constituted, including risks relating to unscheduled plant outages, changing environmental requirements, nuclear plant decommissioning, and disposal of spent nuclear fuel. GPU shareholders who after the merger hold FirstEnergy common stock will be exposed to risks associated with the generation portion of the electric utility industry that are not currently applicable to GPU.[12]

The BPU should ensure that GPU's customers are not exposed to any of the significant risks associated with the FirstEnergy's ownership of nuclear generation facilities, FirstEnergy's failure to install necessary pollution control equipment at its Sammis Plant, or FirstEnergy's responsibility for cleaning up polluted sites.

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[12] Joint Proxy Statement/Prospectus, at page 18.

Q. Please describe the risks associated with FirstEnergy's ownership of nuclear power plants.

A. FirstEnergy owns four nuclear power plants that represent approximately 30 percent of its total generating capacity. As explained in FirstEnergy's 1999 Form 10K filing with the U.S. Securities and Exchange Commission, the ownership of these nuclear facilities exposes the Company to certain regulatory, technical and financial uncertainties:

> The NRC has promulgated and continues to promulgate regulations related to the safe operation of nuclear power plants. The Companies cannot predict what additional regulations will be promulgated or design changes required or the effect that any such regulations or design changes, or the consideration thereof, may have upon their nuclear plants. Although the Companies have no reason to anticipate an accident at any of their nuclear plants, if such an accident did happen, it could have a material but currently undeterminable adverse effect on the Company's consolidated financial position. In addition, such an accident at any operating nuclear plant, whether or not owned by the Companies, could result in regulations or requirements that could affect the operation or licensing of plants that the Companies do own with a consequent but currently undeterminable adverse impact, and could affect the Companies' abilities to raise funds in the capital markets. [ADD PAGE NUMBER FROM 1999 FORM 10K]

In recent years, GPU has reduced its ratepayers' exposure to similar risks by divesting the TMI-1 and Oyster Creek nuclear plants. However, the proposed merger threatens to again expose GPU's ratepayers to any additional nuclear-related risks through FirstEnergy's ownership of its four nuclear units.

JCP&L's ratepayers should not be exposed to any liabilities related to the financial risks associated with FirstEnergy's ownership of nuclear power plants other than to pay the energy cost of providing any output from FirstEnergy's nuclear units that is used to supply JCP&L's native load if that cost is at or below JCP&L's BGS rate. JCP&L's ratepayers should not be exposed to any costs resulting from First Energy's nuclear plant outages or accidents, any nuclear stranded costs, or nuclear decommissioning costs.

Q. What are the financial risks that are associated with FirstEnergy's ownership of the Sammis fossil-fired plant?

A. The U.S. EPA and Department of Justice ("DOJ") sued FirstEnergy in November 1999 for violating the Clean Air Act by making major modifications to extend the operating life of its Sammis Plant without installing necessary pollution control equipment. The alleged violations of the Clean Air Act dated back to 1984. The EPA and DOJ complaint seeks permanent injunctive relief to require the installation of "best available control technology" and civil penalties of up to $27,500 per day of violation. GPU's ratepayers should not be exposed to any of the potentially significant damages and penalties related to this litigation.

At the same time, the attorneys general in several eastern states (e.g., New York, Connecticut, and Massachusetts)[WHAT ABOUT NEW JERSEY] have filed similar lawsuits against FirstEnergy regarding emissions from the Sammis Plant. GPU's ratepayers also should not be exposed to any of the potentially significant damages and penalties related to this litigation.

Q. Have other companies resolved similar Clean Air Act litigation filed by the U.S. EPA and the DOJ and Eastern States?

A. Yes. The EPA and DOJ have settled their Clean Air Act litigation against the Tampa Electric Company and have reached a tentative settlement with Cinergy Corporation. Virginia Power also reached an agreement with the EPA, DOJ, and the State of New York before litigation was initiated.

Q. What financial costs have these companies incurred as a result of these settlements?

A. As a result of its settlement, Tampa Electric will be required to spend approximately $1 billion to install emissions-control equipment, pay a $3.5 million fine, and fund between $10 million and $11 million on environmentally beneficial projects in its region designed to mitigate the impact of emissions from

its plant.[13] The settlement of the litigation against Cinergy has been valued at $1.4 billion. Under this settlement, the company will pay an $8.5 million civil penalty, perform $21.5 million in environmental projects, and significantly reduce air pollution from its coal-fired power plants.[14]

The cost of Virginia Power's agreement to reduce the emissions from its fossil-fired facilities has been projected to be $1.2 billion.[15]

Q. Should GPU's ratepayers also be protected against exposure to damages and penalties from any lawsuits filed regarding emissions from FirstEnergy's other fossil-fired plants or related to violations of the Clean Air Act or other environmental laws or regulations?

A. Yes. GPU's ratepayers should not be exposed to any damages and penalties resulting from other litigation brought against FirstEnergy related to power plant emissions or violations of the Clean Air Act or other environmental laws or regulations.

Q. What are the financial risks associated with FirstEnergy's responsibility for cleaning up polluted sites.

A. According to FirstEnergy, two of its subsidiaries, Cleveland Electric Illuminating Company and Toledo Edison Company, have been named as "potentially responsible parties" for three sites listed on the Superfund National Priorities List and are aware of their potential involvement in the cleanup of several other sites. If CEI and TE were held liable for 100% of the cleanup costs of all sites, the ultimate liability could be as high as $340 million, although FirstEnergy believes that their share of the actual cleanup costs will be substantially less.[16] GPU's

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[13] Energy Daily, March 1, 2000.

[14] Http://www.usdoj.gov/opa/pr/2000/December/707enrd.htm

[15] Electric Utility Week, November 20, 2000, at page 3.

[16] FirstEnergy 1999 Annual Report, at page 24.

ratepayers also should not be exposed to any of the potential costs of cleaning up these or any other polluted sites owned by FirstEnergy or any of its affiliated companies.

4. MARKET POWER AND RTO ISSUES

Q. Does the evidence presented by Joint Petitioner witness Frame demonstrate that the proposed merger of FirstEnergy and GPU will produce any positive benefits or at least not have an adverse effect on competition in New Jersey?

A. No. Mr. Frame's analyses are inadequate to show that the proposed merger will have no adverse impact on competition in the supply and distribution of electrical energy in New Jersey and PJM.

Q. Does the FERC's approval of the merger on March 15, 2001, elminate the need for the BPU to review market power issues?

A. No. The FERC's Order specifically left the review of the proposed merger's impact on retail competition to state regulatory commissions, including the BPU.[17] Therefore, it is clear that the FERC did not consider how the proposed merger's impact on either horizontal or vertical market power would affect retail competition in New Jersey.

Q. What is horizontal market power?

A. Horizontal market power in electricity arises from horizontal concentration in generation. A key mechanism for exploiting horizontal market power is for a large firm to raise market prices by withholding capacity from the market, raising the market price and thereby increasing profits over competitive-market levels. The withholding can be "physical," such as declaring a unit to be out of service, or "economic," such as bidding some capacity at high prices that effectively remove it from the dispatch. Sophisticated strategies can be developed, in which

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[17] FERC Order in Docket No. EC01-22-000, dated March 15, 2001, at page 8.

bidding generation into the market is done in order to maximize profits – with bids differing by hour and tailored to create and exploit transmission constraints.

Q. How is market concentration measured?

A. The two most common measures of market concentration are the Herfindahl-Hirschman Index ("HHI") and the "concentration ratio." The HHI is the sum of the squares of individual firms' market shares. The higher the index number the greater the level of concentration and the more likely that market power will be a problem.

In their merger guidelines, the FERC and the U.S. Department of Justice use the HHI as a screening tool to identify whether market power might be a problem.[18] Although the HHI are a useful measure that can serve as a starting point in analyses of market power, they are only rough illustrations of relative market concentration.

Q. Has Synapse identified any flaws or weaknesses in the analyses of horizontal market power presented by Mr. Frame?

A. Yes. We have identified the following flaws and weaknesses in Mr. Frame's analyses and conclusions.

First, the relatively small HHI increases in the PJM markets shown by Mr. Frame are due to the very small amount of FirstEnergy generation that he assumes to be available in the PJM destination markets. For example, the maximum amount of FirstEnergy capacity available in Mr. Frame's Base Case to PJM-East during the Summer period is just 216 MW which is less than 1% of the market share. There are likely to be actual circumstances, depending on the availability of FirstEnergy's existing capacity, its capacity expansion plans and the peak load

[18] U.S. Department of Justice and Federal Trade Commission Horizontal Merger Guidelines, April 2, 1992, and FERC Policy Statement Establishing Factors the Commission will Consider in Evaluating Whether a Proposed Merger is Consistent with the Public Interest, December 18, 1996.

diversity between the FirstEnergy and GPU service areas, when the actual capacity transferred from FirstEnergy exceeds this level.[19]

For example, the Joint Petitioners have shown that the diversity in customers and weather patterns leads to diversity in peak loads between FirstEnergy and GPU in the range of 200 to 700 MW, averaging 355MW.[20] At the same time, FirstEnergy has purchased 1,100 MW of annual firm transmission capacity from its control area to PJM for 2001 and has the right of first refusal for this transmission in 2002.[21] FirstEnergy also is planning to build 1,155 MW of generating capacity in 2001 and 2002.[22]

Although this capacity will be located within ECAR, the Joint Petitioners have explained how it could be used to loads within PJM:

> There are a number of ways these units could be used to help GPUE serve its customer base. The output of the units can be sold directly into PJM, dependent on PJM market prices and the availability of transmission service. In order to facilitate such transactions, FirstEnergy Services has purchased 1,100 MW of annual firm transmission from the FirstEnergy control area to PJM for 2001. In 2002, FirstEnergy will have the right of first refusal for this transmission. GPUE does not have rights to move power, on-peak from the First Energy units to GPUE service territories. As network customers under the PJM Tariff, the GPU Energy companies have the right to receive energy from designated resources within PJM and from PJM's interconnections with other control areas, including the FirstEnergy control area on a firm or non-firm basis, subject to availability.

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[19] Peak load diversity occurs because the peak loads occur at a different time in the GPU service areas than the peak loads in the FirstEnergy service area.. It simply means that FirstEnergy would not be experiencing its peak load as the same time as the peak load is occurring in GPU's service areas. This means that FirstEnergy should have more capacity to provide to serve GPU loads.

[20] Joint Petitioners' Response to Data Request S-ENE-10.

[21] Joint Petitioners' response to Data Request PJM-1(f).

[22] Joint Petitioners' response to Data Request PJM-1(a) and PJM-1(b).

> Besides direct transactions, there are other ways that these units could be used to help GPUE serve its customer base that are not dependent on transmission availability. The 440 MW Seneca plant located in PJM is normally used to serve ECAR load. The new capacity additions could be used to satisfy this ECAR load, displacing ECAR's need for Seneca and allowing that plant's generation to be redirected into PJM. These new units could also be used to sell wholesale into ECAR to offset purchases in PJM….[23]

FirstEnergy also could seek to purchase or construct new capacity inside PJM or could have its capacity in Western Pennsylvania designated as PJM capacity resources.

As a result, it is quite possible that significantly more FirstEnergy capacity will be available in PJM than Mr. Frame has assumed in his analyses. This means that Mr. Frame understates the Post-Merger HHI's and the degree of concentration that would result from the proposed merger. As we noted earlier, the HHI's are defined as the sum of the squares of each individual firm's market shares (expressed as percentages). If more FirstEnergy capacity were available in PJM destination markets, that company's market shares would be higher which in turn would lead to higher HHI's.

Second, Mr. Frame did not examine all appropriate markets. For example, one appropriate market that he did not examine was the combined FirstEnergy and PJM. This is a geographic market in which both firms currently produce and sell electricity and in which the combined company will produce and sell electricity.

As shown on Exhibit BEB/DAS-3, the Herfindahl-Hirschman Indices for the combined FirstEnergy/PJM market resulting from the merger range from 1,323 to 2,453 in the different time periods. The Department of Justice guidelines for evaluating mergers indicate that a market with an HHI between 1000 and 1800 should be viewed as moderately concentrated.[24] A market with an HHI above

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[23] Joint Petitioners' response to Data Request PJM-1(f).

[24] April 2, 1992, U.S. Department of Justice and Federal Trade Commission Horizontal Merger Guidelines, at pages 28 and 29.

1800 should be considered highly concentrated, and adverse market power effects can be presumed. Under these guidelines, the combined FirstEnergy/PJM market will be moderately concentrated during most time periods as a result of the proposed merger and highly concentrated during the Winter and Spring Off-Peak periods.[25]

Our analysis also shows that the HHI increases resulting from the proposed merger are above 100 for all periods.[26] In fact, the HHI's for some periods increase by 250 or more due to the merger. The Department of Justice guidelines indicate that mergers producing an increase in the HHI of more than 100 points in moderately concentrated markets post-merger potentially raise significant competitive concerns.[27] Mergers producing an increase in the HHI of more than 50 points in highly concentrated markets post-merger also potentially raise significant concerns. Where the post-merger HHI exceeds 1800, "it will be presumed that mergers producing an increase in the HHI or more than 100 points are likely to create or enhance market power or facilitate its exercise."[28]

Because the Post-Merger HHI's for the shown on Exhibit BEB/DAS-3 are Consequently,

Third, Mr. Frame's analyses show that FirstEnergy totally dominates its own market area with market shares for some of the periods being modeled exceeding 70%. Such a significant control of its own market area gives FirstEnergy the potential power to determine the cost of energy exports to other markets including PJM.

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[25] See Exhibit DAS-2.

[26] See Exhibit DAS-2.

[27] April 2, 1992, U.S. Department of Justice and Federal Trade Commission Horizontal Merger Guidelines, at page 30.

[28] April 2, 1992, U.S. Department of Justice and Federal Trade Commission Horizontal Merger Guidelines, at pages 30 and 31.

Fourth, Mr. Frame's model produces a number of anomalous results. For example, in Mr. Frame's analyses, the HHI increases for the FirstEnergy destination market are the highest in the off-peak periods when the most GPU capacity available to the FirstEnergy market. However, the opposite happens in his analyses of the PJM market when the amount of available FirstEnergy capacity is the highest during peak load periods. The fact that Mr. Frame's model appears to behave one way for one market and in the opposite way for another market is troubling.

At the same time, comparison of Mr. Frame's 650 MW Sale Case with the Base Case in the PJM market, shows the Merged Capacity (Spring/Fall Off-Peak) increasing from 1979 MW to 2489 MW and the Merged Market Share increasing from 11.8% to 14.3% but the Post-Merger HHI decreases from 1320 to 1302. Mr. Frame's model also shows a Post-Merger HHI decrease for the FirstEnergy destination in the same time period.[29]

Q. Should Mr. Frame be required to rerun his model to correct for these flaws and weaknesses?

A. No. Instead, the BPU should require the Joint Petitioners to present a more detailed assessment of market concentration and market power than has been presented by the Joint Petitioners. HHI figures are just a rough approximation of market concentration. They do not by themselves prove or disprove market power.

At the same time, HHI calculations are based on a limited set of snapshots of the markets examined in terms of loads, resources, and transmission capacities. There may be situations during a typical year when loads and transmission capacities differ from those studied and actual post-merger market shares may be higher. For example, there could be a hot summer high demand day along the east coast while temperatures were more moderate in FirstEnergy's service area. In such a

[29] Joint Petitioners' Exhibits APP-306 and APP-313.

situation, the energy available and transferred to PJM from FirstEnergy could be much greater tan any of the values presented in Mr. Frame's HHI calculations.

A proper analysis of the market power implications of the proposed merger would require an energy system simulation model to look at the hourly behavior of the market under a wide variety of external conditions and bidding behaviors. Such a more realistic model would provide better insight into potential market power concerns than just a formalistic HHI calculation.

Q. Does Mr. Frame adequately address the issue of vertical market power?

A. No. Mr. Frame briefly discusses the issue and quickly dismisses the possibility that the merged company could exercise vertical market power.

Q. Does the proposed merger raise significant vertical market power concerns?

A. Yes. The vertically integrated company that would emerge from the proposed merger would own significant generation and transmission assets that it could potentially use to thwart the development of effective competition by favoring its marketing affiliates in PJM through providing preferential access to FirstEnergy generation facilities.

Q. Has FirstEnergy been an energy marketer in GPU's service territory?

A. Yes. [BEGIN HIGHLY CONFIDENTIAL] **FirstEnergy's affiliate, FES, has solicited customers in PJM and GPU. In fact, as of February 1, 2001, FES had 3,396 customers and 180 MW of load in the GPU service territory**.[30] [END HIGHLY CONFIDENTIAL] The proposed merger will eliminate this competitor to GPU although other competitors will remain.

[30] Joint Petitioners' response to Data Request RAR-247(g).

Q. Do you have any additional recommendations with regard to market-power issues?

A. Yes. Mr. Frame's analyses of, and conclusions regarding, horizontal and vertical market power are premised on two critical assumptions. First, Mr. Frame assumes that GPU's transmission assets will continue to be under the operational control of PJM following consummation of the merger. Second, Mr. Frame assumes that First Energy will have no preferential rights to the limited import capability into PJM. Based on these assumptions, Mr. Frame concludes in his FERC testimony that the merger raises little concern with regard to horizontal market power:

> Given that the import capability into PJM is limited in comparison to total market size, that FirstEnergy would be allocated only a limited proportion of that import capability using any reasonable allocation procedure, and that each Applicant's pre-merger presence in PJM is relatively small, it is intuitive that the proposed merger will not present realistic horizontal market power concerns in geographic markets in PJM….[31]

Similarly, Mr. Frame concludes that vertical market power is not a concern based on GPU's membership in PJM:

> GPU has already turned over operational control of its transmission assets to the PJM ISO, so there should be no concern that GPU could use its transmission assets in anticompetitive fashion.[32]

Given the importance of these assumptions to Mr. Frame's findings, I recommend two conditions in the event that the BPU approves the proposed merger. First, FirstEnergy should be required to keep GPU within PJM for a period of ten years following merger approval, unless continued PJM membership would result in financial distress to the merged companies or the Joint Petitioners can show that early termination provides significant benefits to GPU ratepayers without a material increase in market power to applicable destination markets. In the event

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[31] Attachment 1 to the Direct Testimony of Rodney Frame, at page 9.

[32] Attachment 1 to the Direct Testimony of Rodney Frame, at page 14.

that early termination is warranted, the Joint Petitioners should be required to file for approval of early termination by the BPU.

Second, FirstEnergy should be required to commit unconditionally to not asserting native-load priority on its direct interconnection with GPU so long as GPU is part of PJM.

Q. Has FirstEnergy made any commitments with regard to GPU's membership in PJM following the merger?

A. No. Instead of making any sort of firm commitment, FirstEnergy, in various filings and in response to discovery, has merely stated that GPU will remain in PJM after the merger and that "there is no plan at this time to transfer the operational control of the GPU transmission facilities from the PJM ISO…."[33]

Q. Has FirstEnergy made any commitments with regard to invoking native-load priority on the transmission interconnection between FirstEnergy and GPU?

A. In its FERC application for approval of the merger, FirstEnergy committed that it will not assert native-load preference either for transmission over the FirstEnergy-GPU interface or for network service within PJM.[34] However, in response to RAR-224, FirstEnergy states that:

> The duration and conditionality of the commitment is dependent upon the nature of any inter-RTO cooperation agreement entered into by the Alliance and PJM, and the extent to which that agreement changes the manner in which transmission service is reserved and scheduled over interfaces between the Alliance and PJM.

In other words, FirstEnergy has reserved the right to unilaterally alter or retract its commitment at any time depending on its assessment of unspecified changes in transmission service over the FirstEnergy-GPU interface.

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[33] See the Joint Petitioners' response to RAR-167(b).

[34] See the Joint Application for Approval of Merger, at page 10.

Q. Does this conclude your testimony?

A. Yes.