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July 14, 2014

Ms. Carlotta Stauffer, Director
Commission Clerk and Administrative Services
Florida Public Service Commission
2540 Shumard Oak Blvd.
Tallahassee, Florida, 32399-0850

Via Web-Based Electronic Filing

Re: Docket No. 140110-EI, Petition for Determination of Need for Citrus County Combined Cycle Plant, and
Docket No. 140110-EI, Petition for Determination of Cost-Effective Generation Alternative to Meet Need Prior to 2018 for Duke Energy Florida, Inc.

Dear Ms. Stauffer:

On July 14, 2014, NRG Florida LP filed the testimony and exhibits of Dr. John Morris. Due to the press of time, it appears that Dr. Morris's exhibits were not correctly formatted. NRG hereby files and substitutes Dr. Morris's testimony and revised exhibits. Other than re-formatting the exhibits, this filing is identical to the testimony and exhibits filed earlier today.

Thank you for your assistance with this filing. Please do not hesitate to contact me if you have any questions or concerns.

Sincerely,

/S/ Marsha E. Rule

Marsha E. Rule

Cc: All parties of record

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Petition for Determination of Cost Effective Generation Alternative to Meet Need Prior to 2018, by Duke Energy Florida, Inc.	**DOCKET NO. 140111-EI**
In re: Petition for Determination of Need for Citrus County Combined Cycle Power Plant, by Duke Energy Florida, Inc.	**DOCKET No. 140110-EI** **Filed: July 14, 2014**

TESTIMONY

DR. JOHN R. MORRIS

ON BEHALF OF

NRG FLORIDA L.P.

TESTIMONY OF DR. JOHN R. MORRIS

1. Introduction

Q. Please state your name and business address.

A. My name is John R. Morris. I am a Principal at Economists Incorporated, an economic consulting firm located at 2121 K Street, NW, Washington, DC 20037.

Q. Please summarize your background and experience.

A. I have a bachelor's degree in economics from Georgetown University and a master's degree and a Ph.D. in economics from the University of Washington. I have been studying energy industries and market power in energy markets since joining the Federal Trade Commission ("FTC") in 1985. While at the FTC I participated in the evaluation of the effects of mergers on market power. Since joining Economists Incorporated in 1992, I have consulted on the effects on competition and market power of many mergers and acquisitions involving electric and gas companies and studied market power issues in state electric power restructuring proceedings. I have published articles on competition and energy matters, and I have spoken on numerous occasions to professional audiences about competition in natural gas, electric power and other industries. I have previously been accepted as an expert witness on energy matters before the Federal Energy Regulatory

Commission ("FERC"), before state commissions, and in federal court. I have submitted Delivered Price Tests, also known as Competitive Analysis Screens, before FERC to assess market power for clients such as Dominion Resources, Integrys, NRG Energy, Tampa Electric, and TransCanada. A complete listing of my experience, publications, and testimony is contained in my resume, presented in Exhibit No. ___ (JRM-1).

Q. What is the purpose of your testimony?

A. My testimony evaluates and responds to direct testimony by Ms. Julie R. Solomon regarding the effect of an acquisition of a generating plant on market power in wholesale markets for electric power and on FERC's evaluation of whether to permit such an acquisition.

Q. Do you agree with the Ms. Solomon's conclusion that FERC may reject Duke's purchase of the Osceola facility?

A. No. Ms. Solomon inappropriately concludes that Duke would not be able to obtain FERC regulatory approval due to market power concerns. As I will explain in more detail below, Ms. Solomon's conclusion follows from the erroneous assumption that the status quo would continue. That is, she assumes that if Duke did not purchase the Osceola facility, Duke would not otherwise acquire capacity, nor would NRG would move or contract out the facility's generation. These assumptions do not reflect reality and lead to incorrect results. Further, Duke in fact could acquire control of the capacity in a manner that would facilitate FERC approval of an acquisition. When properly analyzed, Duke's acquisition of the NRG facility would pass FERC's competitive analysis screen.

Q. Which issues are you addressing in your testimony?

A. My testimony provides information related to issues 13 and 14. Issue 13 is: "Are the proposed Suwannee Simple Cycle Project in 2016 and Hines Chillers Power Uprate Project in 2017 the most cost-effective alternatives available to meet the needs of Duke Energy Florida, Inc. and its customers?" Issue 14 is: "Did Duke Energy Florida, Inc. reasonably evaluate all alternative scenarios for cost effectively meeting the needs of its customers over the relevant planning horizon?"

Q. Are you sponsoring any exhibits?

A. Yes. I am sponsoring the following exhibits.

Exhibit No. ___ (JRM-1) is a copy of my resume;

Exhibit No. ___ (JRM-2) provides three tables with Herfindahl-Hirschman Index ("HHI") levels and changes for a transaction in which Duke has previously contracted for the Osceola facility; and

Exhibit No. ___ (JRM-3) provides three tables with HHI levels and changes for a transaction with a base case in which Duke has obtained comparable capacity from another source and NRG moves the Osceola capacity outside Duke's Florida Balancing Authority Area ("BAA").

Q. How is the remainder of your testimony organized?

A. Section 2 provides a brief description of NRG. Section 3 then gives an overview of FERC's methodology for evaluating the potential competitive effects of acquisitions. Section 4 demonstrates how Duke's acquisition of the NRG Osceola facility would easily pass the FERC competitive screens if Duke and NRG sign a long-term contact so that Duke would have operational control of the facility. Section 5 then demonstrates that even without such a contract, a Duke acquisition may still pass the FERC screens. Section 6 discusses that even if FERC were to find that the acquisition fails the FERC screens, mitigation may be possible to complete the acquisition. Section 7 provides a conclusion.

2. Description of NRG

Q. Please describe NRG.

A. NRG Energy is a Fortune 250 and S&P 500 Index company that through various subsidiaries owns and operates wholesale power generation and retail electricity providers in a number of regions of the United States**.** NRG is now the largest independent power producer in the United States, with over 53,000 MW of generation capacity. It has in over 70 separate locations for its traditional generation units, not including wind and solar facilities. It has locations in places with competitive wholesale markets including, ISO New England, New York ISO, PJM, MISO, Electric Reliability Council of Texas ("ERCOT"), and the California ISO. Many of these locations have the space to add generation units.

NRG's affiliates trade energy, capacity, and related products and also procure and trade fuel and transportation services. NRG's retail electricity companies—Reliant Energy, Green Mountain Energy, Energy Plus, and Cirro—sell electricity and energy services to retail customers in deregulated markets, and NRG recently acquired a demand response provider, Energy Curtailment Specialists. NRG offers alternative energy technologies, such as electric vehicle charging infrastructure, distributed solar solutions, and large-scale and commercial rooftop solar systems through eVgo, Roof Diagnostics Solar, NRG Residential Solar Solutions, and NRG Solar.

Unlike Duke Energy, which mainly has rate-based generation assets, NRG is an independent power producer that must compete in wholesale and retail markets in order to achieve a return on its assets. As a merchant company, NRG evaluates the value of its generation locations and assets, and where possible will redeploy assets. For example, based upon economic drivers, NRG moved two combustion turbines to its Cos Cob facility in Connecticut. NRG is also in the process of moving combustion turbines from New Albany, Mississippi to Houston, Texas.

NRG's Osceola peaking facility in Duke's Florida BAA is a prime candidate for sale or redeployment at another NRG location. NRG has no other assets in the region, and the Florida region lacks retail competition. Without a contract with one of the Florida integrated load serving utilities that requires the assets to remain in Florida, NRG would likely find another more profitable location, such as ERCOT, to redeploy the combustion turbines. Selling the assets to a utility, such as Duke, would also allow the facilities to remain in Florida.

3. FERC Analysis of Plant Acquisitions

Q. Briefly describe FERC's competition review of plant acquisitions.

A. The FERC's current competition review for merger and acquisitions in the electric utility industry was first articulated in Order No. 592 in 1996, which is known as FERC's *Merger Policy Statement*. It lays out a five step analysis for mergers and acquisition. Step one is to define the relevant markets and measure market concentration. Step two evaluates that market concentration. Step three examines whether entry would prevent any anticompetitive effects. Step four examines whether there are efficiencies that cannot be achieved but for the transaction. Step five considers whether either the acquiring or acquired assets would exit the market but for the transaction. These steps are set forth at FERC *Stat*. *& Reg*. ¶31,044 (1996), at 30,118. Most merger applications concentrate on the first two steps that involve defining the relevant markets, calculating concentration, and evaluating concentration.

Q. In considering Duke acquiring NRG's Osceola plant, what would be the relevant markets?

A. Relevant markets have both product and geographic dimensions. The relevant products are short-term capacity and energy, which in Florida is best measured by available economic capacity ("AEC"). This is the capacity that is economic at a representative price level less the energy committed to serve native load customers, which are retail customers plus wholesale requirements customers served under long-term contracts. For the case of a utility acquiring a plant in its service territory, the most important default geographic market is the BAA where the generation is located. Hence, the Duke BAA is the default geographic market analyzed in my testimony.

Q. You mentioned market concentration. What is market concentration and how is it measured?

A. Market concentration refers to the relative size and number of owners of productive capacity. FERC uses the HHI measure of market concentration.

The HHI is equal to the sum of the squares of the market shares. So a market with four companies having market shares of 40, 30, 20, and 10 percent would have an HHI of 3,000. This is calculated at 40-squared plus 30-squared plus 20-squared plus 10-square, or 1,600 plus 900 plus 400 plus 100, which totals 3,000. Hence, the metric that FERC would use for Florida is the HHI based upon on the shares of AEC in the Duke BAA.

Q. What time period does FERC consider when assessing an acquisition?

A. FERC merger and acquisition analyses are forward looking. That is, FERC seeks to see what will be the competitive situation at some future time both with and without the transaction. The typical "future time" for examination, analogous to a test year in a rate case, is the first full year after the transaction is completed. When known changes are occurring in the market, for example new environmental regulations will lead to plant retirements, it may also consider a time further in the future if those retirements would have a material effect on the results.

Q. How does FERC use the HHI to evaluate the effect of a plant acquisition?

A. In essence, FERC compares two states of what generation ownership and structure would be like with and without the transaction in the future. That is, it first considers the HHI without the transaction. This could be considered as a base case for the analysis. It then considers a case with the transaction, and it then compares the two cases. When the post-transaction HHI is below 1,000 or the HHI increases are sufficiently small, then the transaction is presumed to present no competitive issues and further analyses; that is, steps three to five discussed above are not needed.

Q. Please describe the base case that Ms. Solomon utilizes for her HHI calculation.

A. The base case utilized by Ms. Solomon assumes that Duke takes no actions to obtain capacity and that NRG leaves the capacity in Florida without a contact to support it. In other words, she assumes that the market structure in the future will be identical to today.

Q. Do you believe that assuming that the market structure in the future will be the same as today is a realistic assumption?

A. No. As FERC has stated on many occasions, the acquisition analysis is to be forward looking. Hence, the base case should consider the market structure that would exist in the future if there were no acquisition.

Q. Have you done such a forward looking analysis?

A. I have done two forward looking analyses. In Section 4, I discuss the situation where Duke signs a long-term contract with NRG and then purchases the Osceola facility. In Section 5, I discuss the situation in which

Duke does not sign a contact, and the Osceola is removed from the Duke BAA, either physically or by contract to another Florida utility BAA.

Q. Did Ms. Solomon consider a case in which Duke first signed a long-term contract for the Osceola facility and at a later date decided to purchase the facility?

A. No.

Q. Did Ms. Solomon consider a case in which Duke would acquire the Osceola facility instead of building its own generation and NRG exiting the Duke BAA?

A. No.

4. HHI Results if Duke Signs a Contract with NRG

Q. Why did you consider Duke signing a contact with NRG?

A. It is my understanding that this proceeding deals with the most cost effective way to provide additional capacity to serve Duke's native load customers. Duke has proffered building a new facility with approximately the size and characteristics of NRG's Osceola facility to serve those needs. One does not need a Ph.D. in economics to understand that utilizing the existing capacity in the market is likely to have lower total costs than building new capacity. Signing a long-term contract for the existing capacity does not need FERC approval and only has to have a price low enough to be lower cost than the new capacity for it to benefit Duke's ratepayers in Florida. Hence, signing a long-term contract is a reasonable alternative to consider.

Q. In terms of a base case for calculating HHI's, is this a reasonable alternative?

A. Yes. The situation is an actual potential outcome. That is, if Duke and NRG sign a long-term contact, then Duke will have operational control of the Osceola facility and that would be the base case for any applications for plant acquisitions submitted to FERC. If Duke and NRG at a later date finalize an acquisition and submit that application to FERC, then Duke having operational control of the facility would be the natural base case for analyzing the change of ownership.

Q. Duke may claim that such a contract could raise Duke's cost of capital because it creates a future payment obligation without a corresponding increase in assets. Would such an argument be correct?

A. No. Duke is currently the largest electric utility holding company in the country. Despite efforts at ring fencing, the debt ratings of utility subsidiaries are still closely tied to the debt ratings of the parent entities. A long-term power purchase agreement ("PPA") for a 465 MW facility in Florida is too small to substantially change the cost of capital for Duke or its utility subsidiaries.

Q. What would be the form a contract between Duke and NRG?

A. Although the contract might take one of many forms, two come to mind.

First, the contract could be a unit contingent PPA that would give Duke the right to dispatch and call for energy from the unit based upon specific price terms related to dispatch costs. Such contracts often have monthly fees for the right to the capacity and the ability to call upon the energy. Second, the contract could be in the form of a tolling agreement. Under such agreements Duke would typically pay monthly fees for the rights to the capacity and the ability to dispatch the unit. In the tolling agreement, however, the buyer (Duke) would supply the fuel for the dispatch and direct the dispatch instructions. Under either form, the buyer, in this case Duke, often also has an option to purchase the facility at some date under some set of terms.

Q. What is the change in the HHI for Duke acquiring the Osceola facility if Duke first signs a long-term contact?

A. If Duke already has a long-term contract for the Osceola facility at the time it executes a commitment to purchase the facility, then there would be no change in the HHI from the acquisition. The reason is that in the base case HHI calculation, Duke would have operational control of the facility and it would be counted as part of Duke's generation fleet. This is how Ms. Solomon handled the purchase contracts that Duke entered into with Orange Cogeneration, Orlando Cogeneration, Mulberry Cogeneration, and Vandolah Power Station, and other contracts. In the post-transaction case, Duke also has control of the capacity in the HHI calculation, just as in the base case.

Hence, there is no change in the HHI from the transaction. FERC has accepted this treatment of capacity when utilities have acquired generation assets that were already under contract to the buying utility. See, for example, Riverside Energy Ctr., LLC found at 139 FERC ¶ 62,233 (2012) and San Diego Gas & Elec. Co. found at 118 FERC ¶ 62,055 (2007). At the time of the acquisition, Duke would need several years remaining on the purchase or tolling agreement for FERC to accept that Duke has control of the facility in the base case HHI calculation.

Q. Do you have an exhibit showing these results?

A. Yes. Exhibit No. ____ (JRM-2) shows the change in HHI when the base case accounts for Duke controlling the Osceola facility via long-term contract. As the exhibit shows, the HHI levels are the same both with and without the transaction. Hence, the FERC competitive screen would indicate no competitive effects from the transaction.

5. HHI Results if Duke Does Not Sign a Contract

Q. Suppose that Duke and NRG did not work out a long-term contract for the Osceola facility. Would that negate Duke being able to purchase the Osceola facility as suggested by Ms. Solomon?

A. No. For a base case one would still need to calculate the HHI under the most likely state of competition without Duke acquiring the NRG Osceola facility. In this proceeding Duke seeks to acquire additional generation capacity. Given Duke's position, it is reasonable to conclude that Duke would acquire control—either by contract, acquisition, or construction—of a comparable amount of capacity. So the equivalent amount of capacity under Duke's control seems a natural position in the base case HHI calculation. NRG's position is that it is likely to move the capacity out of Florida if it does not sell it to Duke. In the alternative, it is conceivable that NRG would find another utility in Florida to acquire the Osceola facility either by contract or asset purchase. Under Ms. Solomon's HHI methodology, "third-party generation resources located in the DEF BAA, but under long-term PPAs with other entities outside DEF's BAA, were considered 'moved out' of the DEF BAA and assigned to the buyer under the PPA." In other words, if NRG sells the Osceola facility to a utility outside of the Duke BAA or contracts with a utility outside of the Duke BAA, then it would no longer be considered inside the BAA even though the physical location has not changed.

Q. Under these conditions, what would be the change in the HHI?

A. Once again, the HHI would not change as a result of the acquisition. In the base case Duke has additional capacity, albeit not the Osceola capacity. Similarly, in the base case NRG would have no capacity because the combustion turbines have been physically moved to another location or because the Osceola capacity has been "moved out" to another BAA via contract or asset acquisition by another utility. In the with-transaction case, Duke would have the Osceola capacity instead of some alternative capacity and NRG would no longer have the Osceola facility because it has been sold to Duke. Hence, the HHI change would be zero.

Q. Do you have an exhibit showing these results?

A. Yes. Exhibit No. ____ (JRM-3) shows the change in HHI when the base case accounts for Duke controlling some other comparable capacity and NRG moving out the Osceola capacity either physically or via come contractual arrangement. As the exhibit shows, the HHI levels are the same both with and without the transaction. Hence, the FERC competitive screen would indicate no competitive effects from the transaction.

Q. Is it likely that NRG would move the combustion turbines if it does not either sell the Osceola facility to Duke or contract the capacity to Duke or another utility in Florida?

A. If NRG does not sell the Osceola facility to a utility in Florida or sign a long-term contract with a utility in Florida, then it appears likely that NRG would move the combustion turbines to another location. During the period of Ms. Solomon's pricing analysis in Florida, 2011 to 2012, the combustion turbines could have earned millions more income in ERCOT than in Florida. As a merchant energy company seeking to deploy capital and assets to the most profitable locations, moving the combustion turbines out of Florida appears to be an economic alternative for NRG.

6. Mitigation

Q. Suppose, hypothetically, that Duke and NRG do not sign a long-term contract. Also suppose hypothetically that it would take several years for Duke to build alternative generation and for NRG to physically move the combustion turbines. It is possible that FERC would find that Duke acquiring the Osceola facility would have HHI changes above screening thresholds for some period?

A. Under the hypothetical, one would also need to know when Duke intended to complete the acquisition of the NRG Osceola facility. Some asset purchase agreements have long lead times because of the time it might take to secure regulatory approvals. If the lead time on the acquisition was also several years, there would be no interim issue. On the other hand, if the acquisition was structured to close by the end of 2014, then under the hypothetical there may be an issue if NRG's best option was to continue to operate the Osceola facility pending moving the assets elsewhere. One of the many potential advantages that a long-term contract between Duke and NRG is that it would immediately change operational control to Duke, so there is no issue about the operation of the NRG Osceola facility pending an asset purchase transaction.

Q. Suppose hypothetically that FERC decided some interim mitigation was necessary. Would such mitigation be feasible?

A. Yes. In decisions and orders on acquisitions and market-based rate filings, FERC has given substantial flexibility on crafting mitigation. Here, if short-term mitigation were required, mitigation could be narrowly crafted because the acquisition involves a single generation facility. The mitigation could be limited to operations of the Osceola facility, and not the currently existing Duke utility operations. Various forms of cost-based offers or temporarily transferring operational cost would be effective mitigation without impinging on Duke's general utility operations. Under the conditions of the hypothetical, that Duke would not control comparable capacity with the acquisition for some period, such mitigation would not adversely affect Duke.

7. Conclusion

Q. Based upon the information that you discussed above, do you agree with the conclusion that FERC would reject Duke's purchase of the Osceola facility?

A. No. If Duke and NRG signed a long-term contract that gave Duke operational control of the Osceola facility and then at some later date they definitively entered into a transaction for Duke to acquire the facility, then the acquisition transaction would pass the FERC competitive screens and it would likely be approved. Under a 5 to 10 year tolling arrangement or similar duration unit-contingent PPA, Duke would control the output of the Osceola facility during the forward-looking test period utilized by FERC in its HHI calculations. It is common for such tolling arrangements to give the buyer the option to purchase the tolled facility by some specified date. Once a contract is in place, a sale of the facility is a non-event from a horizontal market power perspective because the buyer already has operational control of the facility. Hence, in the post-transaction case Duke also have control of the facility, so there would be no change in the HHI from the transaction and it would pass FERC's competitive screens.

Q. If Duke and NRG did not work out a long-term contract for the facility, would a transaction still be possible?

A. Yes. Although Duke having a long-term tolling agreement or a long-term purchase agreement for the output of the Osceola facility appears the cleanest fact situation to present to FERC for a plant acquisition, even without such agreements one could legitimately present evidence and HHI calculations such that the transaction would easily pass FERC's HHI screens. The important facts in a forward looking transaction analysis is that Duke plans on obtaining comparable capacity regardless of the transaction and NRG plans on having the capacity exit the Duke BAA if it is not sold to Duke. Given these facts, the change in the HHI is zero for the Duke acquisition of the Osceola facility, which easily passes the FERC screens.

Q. Suppose, *arguendo*, that FERC did conclude that there were some competitive impact for some period. Would expanding transmission be the only recourse for mitigation?

A. No. On many occasions FERC has stated that it would consider many types of mitigation to address competitive issues. FERC has accepted many different forms of mitigation both in the context of acquisitions and in the context of wholesale sales where the seller needed to mitigate market power. Types of mitigation have included cost-based sales under a wide variety of terms, temporary "virtual" divestitures, temporary asset oversight, as well as transmission expansion. The only limits that I have found is that the mitigation must be workable, must solve the competitive issue for the duration that the issue would exist, and all the details must be presented to FERC before FERC would accept it. Once again, given that the transaction involves only a single facility with three simple-cycle combustion turbines, entry is feasible in several years, and Duke will soon need the additional capacity regardless of the acquisition, many forms of interim mitigation—if FERC deemed it necessary—appear possible.

Q. Does this conclude our testimony at this time?

A. Yes.

EXPERIENCE AND QUALIFICATIONS OF

Dr. John R. Morris

OVERVIEW	Dr. Morris, a recognized expert in studying competition in energy industries, currently is a Principal at Economists Incorporated. He began his research of competition in energy industries in 1985 while working for the Federal Trade Commission. Since joining Economists Incorporated in 1992, he has consulted on many mergers and acquisitions involving energy companies, examined competitive issues relating to rates, and studied issues in state restructuring proceedings. He has published articles on competition and energy matters, and he has spoken on numerous occasions concerning competition in natural gas, electric power and other industries. He has been accepted as an expert witness on energy matters before the Federal Energy Regulatory Commission, state regulatory commissions, and in federal court.
EDUCATION	Ph.D., University of Washington, August 1985 Dissertation: *Intellectual Property: Creating, Pricing, Copying* • M.A., University of Washington, December 1983 • A.B., Georgetown University, May 1981
PRESENT POSITION	Dr. Morris is a *Principal* at Economists Incorporated, an economic consulting firm located at 2121 K Street, NW, Suite 1100, Washington, DC 20037. (202-223-4700) Economists Incorporated studies competition and regulation in many industries in the United States and in other countries. It is a leading firm in studying the competitive effects of mergers and acquisitions.
PREVIOUS EXPERIENCE	*Senior Vice President*, Economists Incorporated, December 2001 – December 2002 • *Vice President*, Economists Incorporated, December 1995 – December 2001 • *Senior Economist*, Economists Incorporated, June 1992 – December 1995 • *Economic Tutorial Leader*, Stanford University (Stanford in Washington), April 1993 – June 1995 • *Visiting Assistant Professor,* Department of Business Economics and Public Policy, School of Business, Indiana University, September 1991 – May 1992 • *Assistant to the Director for Antitrust,* Bureau of Economics, Federal Trade Commission, November 1989 – August 1991 • *Economic Advisor,* Office of Commissioner Machol, Federal Trade Commission, December 1988 – October 1989 • *Economist,* Division of Antitrust, Bureau of Economics, Federal Trade Commission, October 1985 – December 1988
MEMBERSHIPS	Member, International Association of Energy Economics • Associate, Energy Bar Association • Member, American Economic Association • Member, Western Economic Association International • Associate, American Bar Association

AWARDS & HONORS

Award for Excellence in Law Enforcement, Federal Trade Commission, 1988 • Graduate School Scholarship, University of Washington, 1984 • Graduated Cum Laude Georgetown University, 1981 • Senior Comprehensive Passed with Distinction, Georgetown University, 1981

TESTIMONY BEFORE THE FEDERAL ENERGY REGULATORY COMMISSION

Affidavit, NRG Yield, Inc., *et al*., EC14-101-000 (2014) • Affidavit, Community Wind Farm 1 et al., ER14-1668-000 (2014) • Affidavit, Public Service Electric and Gas Company *et al.*, ER10-1789-003 (2013) • Affidavits, NRG Energy Holdings, Inc., Edison Mission Energy, EC14-14-00 (2013) • Affidavit, Silver Merger Sub, Inc., *et al.*, EC13-128-000 (2013) • Prepared Answering Testimony, Deposition, and Hearing, Puget Sound Energy, Inc., *et al.*, EL01-10-085 (2012) • Affidavit, Wisconsin Public Service Corporation, *et al.*, ER10-1894-004 (2012) • Affidavit, PSEG New Haven LLC, ER12-1250-000 (2012) • Affidavit, Enterprise Product Partners L.P. and Enbridge, Inc., OR12-4-000 (2012) • Affidavit, Southern Indiana Gas and Electric Co., ER10-1338-001 (2011) • Affidavit, TransCanada Power Marketing Ltd. *et al.*, ER10-2780-001 (2011) • Affidavit, Tampa Electric Company, ER10-1476-001 (2011) • Affidavit, Cedar Creek Wind Energy, LLC, ER11-2577-000 (2010) • Affidavit, Public Service Electric and Gas Company *et al.*, ER97-837-014 (2010) • Affidavit, Morris Energy Group, LLC v. PSEG Energy Resources & Trade LLC; PSEG Fossil LLC; and PSEG Power LLC, EL10-79-000 (2010) • Affidavit, UGI Storage Company and UGI Central Penn Gas, Inc., CP10-23-000 (2010) • Prepared Answering Testimony, People of the State of California, *ex rel*; Bill Lockyer, Attorney General of the State of California v. Powerex Corp., *et al.*, EL02-71-000 (2009) • Affidavit, Integrys Energy Services, Inc. v. New Brunswick Power Generation Corporation, EL09-32-002 (2009) • Affidavit, People of the State of California, *ex rel*; Edmund G. Brown Jr. Attorney General of the State of California v. Powerex Corp., *et al.*, EL09-56-000 (2009) • Affidavit, San Diego Gas & Electric Company v. Sellers of Energy and Ancillary Services, EL00-95-000 (2009) • Affidavit, Troy Energy, LLC, *et al.*, ER02-25-010 (2009) • Affidavit, Combined Locks Energy Center, LLC, *et al.*, ER01-2659-015 (2009) • Prepared Direct Testimony and Deposition, Energy Transfer Partners, *et al.*, IN06-3-003 (2009) • Prepared Direct Testimony and Hearing, Mobil Pipe Line Company, OR07-21-000 (2009) • Idaho Power Company, ER06-787-002 (2009) • Affidavit, Southern Indiana Gas and Electric Co. d/b/a Vectren Energy Delivery of Indiana, Inc. ER96-2734-007 (2008) • Affidavit, Choctaw Gas Generation, LLC, *et al.* ER08-1332-002 • Affidavit, TransCanada Energy Sales Ltd., ER09-328-001 (2008) • Prepared Direct Testimony and Deposition, Oasis Pipeline L.P., *et al.*, IN06-3-004 (2008) • Affidavit, Tampa Electric Company, ER99-2342-012 (2008) • Affidavit, ANP Bellingham Energy Company, LLC, *et al.*, ER00-2117-005 (2008) • Affidavit, SUEZ Energy Marketing, NA, *et al.*, ER06-169-003 (2008) • Affidavit, TransCanada Energy Marketing ULC, *et al.*, ER07-1274-001 (2008) • Affidavit, Georgia-Pacific Brewton LLC, *et al.*, ER08-

1126-000 (2008) • Affidavit, Montgomery L'Energia Power Partners LP, ER08-864-000 (2008) • Affidavit (with Joseph P. Kalt), Energy Transfer Partners, *et al*., IN06-3-002 (2008) • Affidavit, Energy Transfer Partners, *et al*., IN06-3-002 (2008) • Affidavit, TransCanada Maine Wind Development Inc., ER08-685-000 (2008) • Affidavit (with Joseph P. Kalt), Energy Transfer Partners, *et al*., IN06-3-000 (2007) • Affidavit, Energy Transfer Partners, *et al*., IN06-3-000 (2007) • Affidavit, The People of the State of Illinois, *ex rel.* Illinois Attorney General Lisa Madigan v. Exelon Generation Co., LLC, *et al.*, EL07-47-000 (2007) • Affidavit, Baltimore Gas and Electric Company, ER07-576-000 (2007) • Affidavit, Trans-Allegheny Interstate Line Company, ER07-562-000 (2007) • Affidavit, TransCanada Energy Marketing Ltd., *et al.*, ER07-331-000 (2006) • Affidavit, Tampa Electric Company, ER99-2342-000, ER07-173-000 (2006) • Affidavit, Koch Supply & Trading, LP, ER07-100-000 (2006) • WPS Resources Corporation and Peoples Energy Corporation, EC06-152-000 (2006) • Affidavit, Sabine Cogen, LP, ER06-744-000 (2006) • Affidavit, Air Liquide Large Industries U.S. LP, ER06-743-000 (2006) • Affidavit, ANP Bellingham Energy Company, LLC., *et al.*, ER00-2117-000 (2005) • Affidavit, Duke Energy Corporation and Cinergy Corp., EC05-103-000 (2005) • Affidavit, El Paso Marketing, L.P., *et al.*, ER95-428-000 (2005) • Affidavit, TransCanada Energy Ltd., *et al.*, ER95-692-000 (2005) • Affidavit, Granite Ridge Energy, LLC, ER00-1147-000, ER05-287-001 (2005) • Affidavit, TransCanada Power (Castleton) LLC, ER05-743-000 (2005) • Affidavit, Tampa Electric Company, *et al*., ER99-2342-003 (2005) • Affidavit, Wisconsin Public Service Corporation, WPS Energy Services, Inc., and WPS Power Development, Inc., ER96-1088-035 and Wisconsin Public Service Corporation, ER95-1528-010 (2005) • Affidavit, Wisconsin River Power Company, ER05-453-000 (2005) • Affidavit, Upper Peninsula Power Company, ER05-89-001 (2005) • Affidavit, Southern Indiana Gas and Electric Company, ER96-2734-003 (2004) • Affidavit, Tampa Electric Company, *et al*., ER99-2342-003 (2004) • Affidavits, TransCanada Hydro Northeast, Inc., *et al*., EC05-12-000, ER05-111-000 (2004) • Affidavits, Dominion Energy New England, Inc., *et al*., EC05-4-000, ER05-34-000 (2004) • Affidavit, Wisconsin Public Service Corporation, WPS Energy Services, Inc., and WPS Power Development, Inc., ER96-1088-033 and Wisconsin Public Service Corporation, ER95-1528-008 (2004) • Affidavit, NorthPoint Energy Solutions Inc. ER04-1244-000 (2004) • Affidavit, Union Power Partners, L.P., ER01-930-004 (2004) • Affidavit, Panda Gila River, L.P., ER01-931-004 (2004) • Affidavit, Dominion Energy Kewaunee, Inc., ER04-318-000 (2003) • Affidavit, TPS GP, Inc., TPG LP, Inc., Panda GS V, LLC & Panda GS VI, LLC, EC03-90-000 (2003) • Affidavit, Berkshire Power Company, L.L.C. *et al.*, ER99-3502-001 (2002) • Affidavit, El Paso Merchant Energy, L.P., ER95-428-024 (2002) • Affidavit, Tampa Electric Company, ER99-2342-001 (2002) • Affidavit, Hardee Power Partners Limited, ER99-2341-001 (2002) • Affidavit, TECO-PANDA Generating Company, L.P., ER02-1000-000

(2002) • Affidavit, Commonwealth Chesapeake Company, LLC, ER99-415-004 (2002) • Affidavit, Wisconsin Public Service Corporation, WPS Energy Services, Inc., and WPS Power Development, Inc., ER96-1088-031 and Wisconsin Public Service Corporation, ER95-1528-006 (2001) • Affidavit, TPS McAdams, LLC and TPS Dell, LLC, ER02-507-000 and ER02-510-000 (2001) • Affidavits, Prepared Direct Testimony, and Hearing, CPUC v. El Paso Natural Gas Company, et al., RP00-241-000 (2000-2001), Affidavit, El Paso Energy Corporation and The Coastal Corporation, EC00-73-000, (2000) • Affidavit, El Paso Energy Corporation and Sonat Inc., EC99-73-000 (1999) • Prepared Testimony, San Diego Gas & Electric Company and Enova Energy, Inc., EC97-12-000 (1997) • Prepared Testimony and Hearing, Wisconsin Electric Power Co., Northern States Power Co. (Minnesota), Northern States Power Co. (Wisconsin), and Cenerprise, Inc., EC95-16-000 (1996)

TESTIMONY BEFORE STATE REGULATORY COMMISSIONS

Affidavit and Prepared Testimony, In The Matter of the Petition of Public Service Electric and Gas Company for Approval of an Increase in Electric and Gas Rates and for Changes in the Tariffs for Electric and Gas Service, B.P.U.N.J. No. 14 Electric and B.P.U.N.J. No. 14 Gas Pursuant to N.J.S.A. 48:2-21 and N.J.S.A. 48:2-21.1 and for Approval of a Gas Weather Normalization Clause; A Pension Expense Tracker; and for Other Appropriate Relief, BPU Docket No. GR09050422, New Jersey Board of Public Utilities (2010) • Prepared Direct Testimony, Application of Wisconsin Power and Light Company for Issuance of a Certificate of Public Convenience and Necessity for Construction and Placement in Operation of an Approximately 300 MW Coal-Fired Baseload Facility and an Application for Approval of Fixed Financial Parameters and Capital Cost Rate-Making Principles for the Baseload Facility, Docket No. 6680-CE-170, Public Service Commission of Wisconsin (2008) • Prepared Rebuttal Testimony and Hearing, In the Matter of the Joint Petition of Public Service Electric and Gas Company and Exelon Corporation for Approval of a Change in Control of Public Service Electric and Gas Company, and Related Authorizations, BPU Docket No. EM05020106, OAL Docket No. PUC-01874-05, New Jersey Board of Public Utilities (2005, 2006) • Affidavit, Application of Duke Energy Corporation for Authorization to Enter Into a Business Combination Transaction with Cinergy Corp., Docket No. 2005-210-E, Public Service Commission Of South Carolina (2005) • Prepared Rebuttal Testimony and Hearing, Joint Application of PECO Energy Company and Public Service Electric and Gas Company for Approval of the Merger of Public Service Enterprise Group Incorporated with and into Exelon Corporation, Docket No. A-110550F0160, Pennsylvania Public Utility Commission (2005) • Prepared Direct Testimony and Hearing, Application of Washington Gas Light Company for amendments to Rate Schedule No. 9, Firm Delivery Gas Supplier Agreement of its Gas Tariff, Docket No. PUE-2004-00085 (2005) • Prepared Direct Testimony, Application of Wisconsin Public Service Corporation for a Certificate of Public Convenience and

Necessity for Construction of A Large Electric Generating Plant with Associated Facilities, known as Weston 4, at Its Existing Weston Generating Station Located in Marathon County, Docket No. 6690-CE-187, Public Service Commission of Wisconsin (2004) • Prepared Direct Testimony, Metromedia Energy, Inc. - Regarding Washington Gas Light Company's Plan to Return Customers to Sales Service Effective December 1, 2003, Docket No. PUE-2003-00536 (2004) • Report (with Mark Frankena) and Testimony, Analysis of Competitive Implications: An investigations into whether electric industry restructuring and competition in the provision of retail electric service is in the public interest, Louisiana Public Service Commission Docket No. U-21453, U-20925 (SC), U-22092 (SC) (Subdocket A) (2000) • Report and Hearing, Atlantic City Electric Company: Audit of Restructuring, New Jersey Board of Public Utilities, Docket No. EA97060395 (1998) • Prepared Testimony and Hearing, Proceeding on Motion of the Commission to Redesign Niagara Mohawk Power Corporation's Current SC-7 Service Classification and Implement a New SC-7-A Service Classification, Case 94-E-0172, New York Public Service Commission (1995)

TESTIMONY BEFORE FEDERAL COURTS

Report, Deposition, and Bench Trial, FTC v. Arch Coal, Inc., et al., Civil Action 04-0534 (JDB), U.S. Dist. Court, Dist. of Columbia (2004) • Report, Deposition and Jury Trial, Trigen v. OG&E, CIV-96-1595L, U.S. Dist. Court, Western Dist. of Oklahoma (1998)

TESTIMONY BEFORE STATE COURTS

Affidavit, City Public Service Board of San Antonio vs. Public Utility Commission of Texas, et al., No. 97-02917, District Court of Travis County, Texas, 200th Judicial District (1997)

OTHER TESTIMONY

Report, Metromedia Energy, Inc. v. Mirant Americas Energy Marketing, RE: 18 198 Y 18484 03 (2005) • Report and Deposition, King Provision Corporation v. Burger King Corporation and Grand Metropolitan PLC, 90-05718-CA, 4th Cir., Duval Co., Florida (1992) • Deposition, West Texas Transmission L.P. v. Enron Corp. et al., SA 88 CA 0638, W.D. Texas, San Antonio Division (1988)

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"Geographic Market Delineation in LMP Electric Power Markets," *Electricity Journal* 23(3) (April 2010): 49-60 • "The Likely Effect of the Proposed Exelon-PSEG Merger on Wholesale Electricity Prices," *Electricity Journal* 21(1) (Jan./Feb. 2008): 45-54 • "FERC MBR Screens: The Good, the Bad, and the Ugly," *Public Utilities Fortnightly* 143(7) (July 2005): 37-42 • "Finding Market Power in Power Markets," *International Journal of the Economics of Business*, 7(2) (July 2000): 167-178 • "Why Applicants Should Use Computer Simulation Models to Comply with the FERC's New Merger Policy," with Mark Frankena, *Public Utilities Fortnightly*, 135(3) (February 1, 1997): 22-26 • *Electric Utility Mergers,* with Mark Frankena and Bruce Owen, Chapters 1, 4, & 5, 1994 • "International Trade and Antitrust:

Comments," *University of Cincinnati Law Review*, 61(3) (1993): 945-953 • "Upstream Vertical Integration with Automatic Price Adjustments," *Journal of Regulatory Economics* 4 (1992): 279-287 • "Should the U.S. Department of Justice deviate from the 5% price test for market definition on a case-by-case basis?" with Gale Mosteller, *International Merger Law*, April 1992 • "Defining Markets for Merger Analysis," with Gale Mosteller, *Antitrust Bulletin* 36 (Fall 1991): 599-640 • "Analyzing Agreements Among Competitors: What Does the Future Hold?" with Jim Langenfeld, *Antitrust Bulletin* 36 (Fall 1991): 651-679 • "In Defense of Antitrust," with Jim Langenfeld, *Regulation* 14(2) (Spring 1991): (Letters) 2-4 • "Enforcement of Property Rights and the Provision of Public Good Attributes," *Information Economics and Policy* 3 (1988): 91-108

WORKING PAPERS

"Advertising Restrictions as Rent Increasing Costs," FTC Bureau of Economics Working Paper No. 196, May 1992 • "Rent Increasing Costs: The Antitrust Implications from a Paradox in Value Theory," FTC Bureau of Economics Working Paper No. 182, November 1990 • "The Relationship Between Industrial Sales Prices and Concentration of Natural Gas Pipelines," FTC Bureau of Economics Working Paper No. 168, November 1988 • "Deregulation by Vertical Integration?" FTC Bureau of Economics Working Paper No. 166, November 1988

PRESENTATIONS & PROFESSIONAL ACTIVITIES

Comments, Notice of Inquiry: Analysis of Horizontal Market Power under the Federal Power Act, Docket No. RM11-14-000, Federal Energy Regulatory Commission, May 23, 2011 • Comments, Position Limits for Derivatives, RIN 3038–AD15 and 3038–AD16, Commodity Futures Trading Commission, March 28, 2011 • Comments, Guidance on Simultaneous Transmission Import Limit Studies, AD10-2-000, Federal Energy Regulatory Commission, February 12, 2010 • "Geographic Market Delineation in LMP Electric Power Markets," presentation before representatives of the Federal Energy Regulatory Commission, U.S. Department of Justice, and U.S. Federal Trade Commission, January 27, 2010 • Comments, Notices of Intent to determine that 15 natural gas financial basis contracts traded on the Intercontinental Exchange, Inc. are Significant Price Discovery Contracts, Commodity Futures Trading Commission, October 26, 2009 • "Efficacy of Vertical Integration in Energy Industries with Applications to Proposed Standards of Conduct for Transmission Providers," submitted to FERC by Santee Cooper in Docket No. RM07-1-000 (2007) • Chair, Antitrust Committee, Energy Bar Association, 2004–2005 • "Competition in the Natural Gas Industry: An Antitrust Perspective, presentation to staff of the Federal Energy Regulatory Commission," March 28, 2005 • Vice Chair, Antitrust Committee, Energy Bar Association, 2003–2004 • "Weston 4 Effect on Wholesale Competition in WUMS," submitted to the Public Service Commission of Wisconsin by Wisconsin Public Service Corporation in Docket No. 6690-CE-187, September 26, 2003 • "Computer Models In The Electric Power Industry," presented to staff of the Federal Trade

Commission, Washington, DC, June 11, 2002 • "TECO EnergySource Market Share Analysis," submitted to FERC by TECO EnergySource, Inc. in Docket No. ER96-1563-017, September 10, 2001 • "Finding Market Power in Power Markets," presented to staff of the Federal Trade Commission, Washington, DC, June 20, 2001 • "A Study of Marketing Affiliate and Other Affiliate Holdings of Firm Capacity on Interstate Natural Gas Pipelines and the Effects on Natural Gas Markets," April 30, 2001, submitted to FERC by the Interstate Natural Gas Association of America in Docket No. PL00-1-003 • "Why We Should Use Computer Models to Unveil Market Power," presented at the Sixth DOE–NARUC National Electricity Forum, Brown Convention Center, Houston, TX, September 16, 1998 • Comments, *Agency Information Collection and Dissemination Activities: Comment Request*, U.S. Department of Energy, Energy Information Administration, August 28, 1998 • Comments, *Revised filing Requirements Under Part 33 of the Commission's Regulations*, Federal Energy Regulatory Commission Docket No. RM98-4-000, August 21, 1998 • "Use of Computer Simulation Models to Unveil Market Power," presented to staff of the Federal Trade Commission, Federal Energy Regulatory Commission and U.S. Department of Justice, Federal Trade Commission, Washington, DC, April 10, 1998 • "Use of Computer Simulation Models to Unveil Market Power: The Primergy Case," presented to the Bureau of Economics, Federal Trade Commission, Washington, DC , December 8, 1997 • "Use of Computer Simulation Models to Unveil Market Power," presented at the 29th Annual Conference of the Institute of Public Utilities, Williamsburg, Virginia, December 3, 1997 • "Mergers and Market Power," presented at the National Association of State Utility Consumer Advocates Mid-Year Meeting, Charleston, South Carolina, June 9, 1997 • "Market Power Analysis: An Economic Perspective," (with Mark Frankena), presented at the Strategic Research Institute Conference on The Legal Challenges of Restructuring, Arlington, Virginia, April 16, 1997 • "Mergers and Market Power," presented at the Edison Electric Institute Workshop on FERC Merger Policy Guidelines, Arlington, Virginia, April 1, 1997 • "New Approaches to Controlling Distribution Company Market Power," presented at the New York Energy Efficiency Council Conference on Innovative Solutions to a Changing Energy Market, New York Athletic Club, February 7, 1997 • Description of the Western Power Model, with Mark Frankena, Exhibit 8 to Prepared Testimony Before the Nevada Public Service Commission, January 31, 1997 • Reviewer, American Bar Association, Section of Antitrust Law, *Manual on the Economics of Antitrust Law, 14th Supplement*, 1995 • Referee, *Quarterly Journal of Business and Economics*, 1994—1995 • Reviewer, American Bar Association, Section of Antitrust Law, *Manual on the Economics of Antitrust Law, 10th Supplement*, 1993 • Expert Witness, Federal American Inn of Court, Washington, DC, Winter 1993 • "Advertising Restrictions as Rent Increasing Costs," presented at a *Contemporary Policy Issues* Session of the Western Economics Association's 67th

Annual Conference, July 1992 • "Let's Make Merger Policy 'Fully Consonant With Economic Theory,'" presented at a *Contemporary Policy Issues* Session of the Western Economics Association's 67th Annual Conference, July 1992 • "Advertising Restrictions as Rent Increasing Costs," Seminar, Department of Business Economics, Indiana University, October 1991 • "International Trade and Antitrust: Comments," presented at a *Contemporary Policy Issues* Session of the Western Economics Association's 66th Annual Conference, July 1991 • Discussant, Western Economics Association's 66th Annual Conference, July 1991 • Horizontal Restraints Cases at the Federal Trade Commission: From *American Medical Association* through the Present," with Jim Langenfeld, presented at the 60th Annual Conference of the Southern Economics Association, November 1990 • "Defining Markets for Merger Analysis," with Gale Mosteller, presented at a *Contemporary Policy Issues* Session of the Western Economics Association's 65th Annual Conference, cosponsored by the *Antitrust Bulletin* and the Antitrust and Trade Regulation Section of the Federal Bar Association, July 1990 • "Analyzing Agreements Among Competitors: What Does the Future Hold?" with Jim Langenfeld, presented at a *Contemporary Policy Issues* Session of the Western Economics Association's 65th Annual Conference, cosponsored by the *Antitrust Bulletin* and the Antitrust and Trade Regulation Section of the Federal Bar Association, July 1990 • "The Relationship Between Industrial Sales Prices and Concentration of Natural Gas Pipelines," Seminar, Office of Economic Policy, Federal Energy Regulatory Commission, Summer 1989 • "The Relationship Between Industrial Sales Prices and Concentration of Natural Gas Pipelines," Seminar, Economic Analysis Group, Antitrust Division, U.S. Department of Justice, February 1989 • "Deregulation by Vertical Integration?" Seminar, Department of Business Economics, Indiana University, January 1989 • Discussant, Industrial Organization Society Session, Annual Meeting of the American Economics Association, December 1988 • "Concentration and Price in the Natural Gas Industry," Seminar, Federal Trade Commission, July 1988 • "Relevant Measures of Concentration for Antitrust Policy," presented at an Industrial Organization Society Session of the 57th Annual Conference of the Southern Economics Association, November 1987

Revised DPT Results

Base Case

		Duke Contracts with NRG						Duke Purchases NRG				
		DEF		NRG				DEF				
Period	Price	MW	Market Share	MW	Market Share	Market Size	HHI	MW	Market Share	Market Size	HHI	HHI Change
S_SP1	$200	368	14.7%		0.0%	2,501	1,125	368	14.7%	2,501	1,125	0
S_SP2	$63	285	11.8%		0.0%	2,418	1,111	285	11.8%	2,418	1,111	0
S_P	$47	-	0.0%		0.0%	2,130	1,268		0.0%	2,130	1,268	0
S_OP	$43	-	0.0%		0.0%	2,130	1,268		0.0%	2,130	1,268	0
W_SP	$70	3,476	77.5%		0.0%	4,486	6,098	3,476	77.5%	4,486	6,098	0
W_P	$43	554	39.0%		0.0%	1,419	2,369	554	39.0%	1,419	2,369	0
W_OP	$38	-	0.0%		0.0%	712	3,034		0.0%	712	3,034	0
SH_SP	$51	-	0.0%		0.0%	2,392	1,830		0.0%	2,392	1,830	0
SH_P	$39	-	0.0%		0.0%	2,121	2,258		0.0%	2,121	2,258	0
SH_OP	$37	-	0.0%		0.0%	2,121	2,484		0.0%	2,121	2,484	0

+10% Case

		Duke Contracts with NRG						Duke Purchases NRG				
		DEF		NRG				DEF				
Period	Price	MW	Market Share	MW	Market Share	Market Size	HHI	MW	Market Share	Market Size	HHI	HHI Change
S_SP1	$220	368	14.7%		0.0%	2,501	1,125	368	14.7%	2,501	1,125	0
S_SP2	$69	1,080	33.6%		0.0%	3,214	1,681	1,080	33.6%	3,214	1,681	0
S_P	$52		0.0%		0.0%	2,133	1,264		0.0%	2,133	1,264	0
S_OP	$47	1,044	32.9%		0.0%	3,174	1,652	1,044	32.9%	3,174	1,652	0
W_SP	$77	3,476	77.5%		0.0%	4,486	6,098	3,476	77.5%	4,486	6,098	0
W_P	$47	1,546	60.6%		0.0%	2,553	3,959	1,546	60.6%	2,553	3,959	0
W_OP	$42	1,269	59.5%		0.0%	2,134	3,910	1,269	59.5%	2,134	3,910	0
SH_SP	$56	282	10.5%		0.0%	2,677	1,572	282	10.5%	2,677	1,572	0
SH_P	$43		0.0%		0.0%	2,392	1,830		0.0%	2,392	1,830	0
SH_OP	$41	452	17.6%		0.0%	2,573	1,843	452	17.6%	2,573	1,843	0

-10% Case

		Duke Contracts with NRG						Duke Purchases NRG				
		DEF		NRG				DEF				
Period	Price	MW	Market Share	MW	Market Share	Market Size	HHI	MW	Market Share	Market Size	HHI	HHI Change
S_SP1	$180	368	14.7%		0.0%	2,501	1,125	368	14.7%	2,501	1,125	0
S_SP2	$57	127	5.6%		0.0%	2,260	1,158	127	5.6%	2,260	1,158	0
S_P	$42		0.0%		0.0%	2,130	1,268		0.0%	2,130	1,268	0
S_OP	$39	-	0.0%		0.0%	1,822	1,612		0.0%	1,822	1,612	0
W_SP	$63	2,495	71.2%		0.0%	3,505	5,222	2,495	71.2%	3,505	5,222	0
W_P	$39	-	0.0%		0.0%	712	3,034		0.0%	712	3,034	0
W_OP	$34	-	0.0%		0.0%	699	3,142		0.0%	699	3,142	0
SH_SP	$46	-	0.0%		0.0%	2,392	1,830		0.0%	2,392	1,830	0
SH_P	$35		0.0%		0.0%	2,121	2,484		0.0%	2,121	2,484	0
SH_OP	$33	-	0.0%		0.0%	2,109	2,512		0.0%	2,109	2,512	0

Source: Exhibit No. ____ (JS-9), Exhibit No. ____ (JS-11)

Revised DPT Results

Base Case

		Duke Builds, NRG Exits						Duke Purchases NRG				
		DEF		NRG				DEF				
Period	Price	MW	Market Share	MW	Market Share	Market Size	HHI	MW	Market Share	Market Size	HHI	HHI Change
S_SP1	$200	368	14.7%		0.0%	2,501	1,125	368	14.7%	2,501	1,125	0
S_SP2	$63	285	11.8%		0.0%	2,418	1,111	285	11.8%	2,418	1,111	0
S_P	$47	-	0.0%		0.0%	2,130	1,268		0.0%	2,130	1,268	0
S_OP	$43	-	0.0%		0.0%	2,130	1,268		0.0%	2,130	1,268	0
W_SP	$70	3,476	77.5%		0.0%	4,486	6,098	3,476	77.5%	4,486	6,098	0
W_P	$43	554	39.0%		0.0%	1,419	2,369	554	39.0%	1,419	2,369	0
W_OP	$38	-	0.0%		0.0%	712	3,034		0.0%	712	3,034	0
SH_SP	$51	-	0.0%		0.0%	2,392	1,830		0.0%	2,392	1,830	0
SH_P	$39	-	0.0%		0.0%	2,121	2,258		0.0%	2,121	2,258	0
SH_OP	$37	-	0.0%		0.0%	2,121	2,484		0.0%	2,121	2,484	0

+10% Case

		Duke Builds, NRG Exits						Duke Purchases NRG				
		DEF		NRG				DEF				
Period	Price	MW	Market Share	MW	Market Share	Market Size	HHI	MW	Market Share	Market Size	HHI	HHI Change
S_SP1	$220	368	14.7%		0.0%	2,501	1,125	368	14.7%	2,501	1,125	0
S_SP2	$69	1,080	33.6%		0.0%	3,214	1,681	1,080	33.6%	3,214	1,681	0
S_P	$52	-	0.0%		0.0%	2,133	1,264		0.0%	2,133	1,264	0
S_OP	$47	1,044	32.9%		0.0%	3,174	1,652	1,044	32.9%	3,174	1,652	0
W_SP	$77	3,476	77.5%		0.0%	4,486	6,098	3,476	77.5%	4,486	6,098	0
W_P	$47	1,546	60.6%		0.0%	2,553	3,959	1,546	60.6%	2,553	3,959	0
W_OP	$42	1,269	59.5%		0.0%	2,134	3,910	1,269	59.5%	2,134	3,910	0
SH_SP	$56	282	10.5%		0.0%	2,677	1,572	282	10.5%	2,677	1,572	0
SH_P	$43	-	0.0%		0.0%	2,392	1,830		0.0%	2,392	1,830	0
SH_OP	$41	452	17.6%		0.0%	2,573	1,843	452	17.6%	2,573	1,843	0

-10% Case

		Duke Builds, NRG Exits						Duke Purchases NRG				
		DEF		NRG				DEF				
Period	Price	MW	Market Share	MW	Market Share	Market Size	HHI	MW	Market Share	Market Size	HHI	HHI Change
S_SP1	$180	368	14.7%		0.0%	2,501	1,125	368	14.7%	2,501	1,125	0
S_SP2	$57	127	5.6%		0.0%	2,260	1,158	127	5.6%	2,260	1,158	0
S_P	$42	-	0.0%		0.0%	2,130	1,268		0.0%	2,130	1,268	0
S_OP	$39	-	0.0%		0.0%	1,822	1,612		0.0%	1,822	1,612	0
W_SP	$63	2,495	71.2%		0.0%	3,505	5,222	2,495	71.2%	3,505	5,222	0
W_P	$39	-	0.0%		0.0%	712	3,034		0.0%	712	3,034	0
W_OP	$34	-	0.0%		0.0%	699	3,142		0.0%	699	3,142	0
SH_SP	$46	-	0.0%		0.0%	2,392	1,830		0.0%	2,392	1,830	0
SH_P	$35	-	0.0%		0.0%	2,121	2,484		0.0%	2,121	2,484	0
SH_OP	$33	-	0.0%		0.0%	2,109	2,512		0.0%	2,109	2,512	0

Source: Exhibit No. ____ (JS-9), Exhibit No. ____ (JS-11)