STATE OF FLORIDA
OFFICE OF THE PUBLIC COUNSEL

c/o The Florida Legislature
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JACK SHREVE
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March 29, 2000

Ms. Blanca S. Bayo, Director
Division of Records and Reporting
Florida Public Service Commission
2540 Shumard Oak Blvd.
Tallahassee, FL 32399-0850

RE: Docket No. 991779-EI

Dear Ms. Bayo:

Enclosed for filing in the above-captioned proceeding on behalf of the Citizens of the State of Florida are the original and 15 copies of the Direct Testimony of David E. Dismukes, Ph.D.

Please indicate the time and date of receipt on the enclosed duplicate of this letter and return it to our office.

Sincerely,

Stephen C. Burgess
Deputy Public Counsel

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CERTIFICATE OF SERVICE
DOCKET NO. 991779-EI

I HEREBY CERTIFY that a true and exact copy of the above and foregoing CITIZENS' DIRECT TESTIMONY OF DAVID E. DISMUKES, PH.D. has been furnished by hand-delivery* or U.S. Mail to the following parties of record this 29th day of March, 2000.

Florida Industrial Power Users Group
c/o John McWhirter, Jr.
McWhirter Reeves
P.O. Box 3350
Tampa, FL 33601-1859

Mr. James A. McGee, Esquire
Florida Power Corporation
P.O. Box 14042 (BT15)
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Stephen C. Burgess
Deputy Public Counsel

ORIGINAL

BEFORE THE FLORIDA
PUBLIC SERVICE COMMISSION

DOCKET NO. 991779-EI

REVIEW OF THE APPROPRIATE APPLICATION OF WHOLESALE POWER SALES BY INVESTOR-OWNED UTILITIES

MARCH 29, 2000

DIRECT TESTIMONY OF DAVID E. DISMUKES, PH.D.

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

DOCKET NUMBER 991779-EI

DIRECT TESTIMONY OF DAVID E. DISMUKES, PH.D.

ON BEHALF OF THE CITIZENS OF THE STATE OF FLORIDA

Q. State your name and business address.

A. My name is David E. Dismukes. My business address is 6455 Overton Street, Baton, Rouge, Louisiana 70808.

Q. What is your current occupation?

A. I am a Consulting Economist and Principal in the Acadian Consulting Group.

Q. Have you prepared an appendix outlining your professional qualifications?

A. Yes, Appendix I was prepared for this purpose.

Q. What is the purpose of your testimony?

A. I have been retained by the Office of Public Counsel (OPC), on behalf of the Citizens of the State of Florida (the Citizens), to address the incentive treatment of gains on economy sales by Florida's investor-owned utilities.

Q. Would you please summarize your recommendations?

A. Yes. The Citizens have a primary and secondary recommendation in this proceeding. Our primary recommendation is to remove the current incentive treatment on gains from economy sales. Should the Commission decide to continue incentive returns on broker system sales, the Citizens would offer the alternative recommendation that the Commission establish an increasing scale incentive sharing mechanism that reflects a symmetrical treatment of both risks and rewards for participating in Florida Energy Broker Network (FEBN).

Primary Recommendation

Q Why should the Commission remove the 20 percent incentive return?

A. Over the past several years, the electric power industry has been faced with an increasing degree of competition at both the retail and wholesale level. This competition has forced utilities to reduce costs and to become more active in new and emerging markets. No utility today can afford to not participate aggressively in wholesale markets. The competitive nature of these markets, and the signals they send to market participants, provide Florida's utilities with numerous incentives to take full advantage of all available market opportunities.

Q. Do you think that incentives are unimportant in regulation?

A. No . Incentive-based regulation can be an effective tool for regulators. However, incentive-based regulatory mechanisms should be placed upon decisions that can be both influenced and measured. Any incentive mechanism that is tied to a decision that is beyond a utility's control, and a regulator's ability to measure, is unproductive. Economy sales are clearly one area where a utility has little ability to influence decisions, especially in the very short run. Mr. Howell, a witness for Gulf Power Company, noted in the fuel adjustment proceedings that has precipitated the current investigation that:

> ...whatever the market price is, it varies each hour and ***nothing that Gulf or Southern or any Commission or any utility can do to change that.*** It has to do with the relationship of whatever the loads and demands on the system are, which are mostly weather related, and how much generation the company may have, and what's happened with forced outages, that type of thing. So nobody can control the market. It is what it is. [Docket Number 990001-EI, Tr. 363-364: 18-25, 1, *emphasis added.*]

In that same proceeding, Mr. Hernandez, a witness for Tampa Electric Company, also noted

the inability of utilities to influence economy transactions in his discussion on the potential for utilities to leverage their vertically integrated relationships between fuel supply and wholesale transactions:

> The scenario you're setting up is related to other additional incentives for moving more fuel or burning more fuel, that really from a business planning perspective opportunity sales are just that. They're not a firm commitment to make the transaction. We're not obligated to continue those transactions if we enter into them. They are simply opportunity or as available sales. So for any one of our operating companies to plan on that as a firm transaction, that's not what we do. We do not assume that we're going to be able to make these opportunity sales. We make an estimate related to business planning purposes but there is no guarantee. It's subject to our retail load. It's subject to our unit or resource availability. And also a willing market; a market that would enter into a wholesale transaction. So it's difficult to say if that really truly is an incentive for us from a corporate point of view. [*Ibid.* Tr. 441:8-25; 442:1-2.]

Thus, placing an incentive on behavior that is beyond a utility's control would not appear to be a mechanism that would genuinely encourage exceptional performance, except by chance.

Q. Won't the removal of these incentives discourage utilities from participating in competitive wholesale markets at all?

A. No. As I mentioned earlier, economy energy sales are opportunistic in nature and it is a questionable proposition as to whether utilities can strategically (and consistently) manipulate their economy sales for profit. In fact, it is important to keep in mind that the whole issue of the uncertainty associated with forecasting these gains was one of the main reasons for moving their ratemaking treatment from base rate setting to fuel adjustment proceedings.

However, even if you assume that utilities have a reasonable amount of control over the level

of their economy sales, there are still a number of incentives to participate in these competitive wholesale markets including the Florida broker system. Indeed, the competitive nature of the industry gives Florida's utilities a number of incentives to participate in these markets without an additional incentive adder. These incentives include:

(1) Opportunities to reduce rates through credits to the fuel adjustment clause;

(2) The opportunity to enhance bulk power system efficiencies; and

(3) Increased experience and recognition as a reliable competitive player in bulk power markets.

Q. How will rates be reduced through increased economy energy sales, and if so, what incentives do utilities have to reduce rates when retail competition is currently not allowed in Florida?

A. Gains from economy energy sales are used to reduce fuel expenses within the fuel adjustment clause. If 100 percent of the gains from these sales were passed through to customers, average retail rates would be lowered via reductions in the fuel adjustment clause (other things being equal). Utilities should be in a position in the current environment to take full advantage of every opportunity to reduce rates. Two forms of competition, existing and anticipated, provide utilities with strong incentives to make rates as competitive as possible.

Existing competitive threats, while limited, typically take the form of self-generation and cogeneration opportunities. These opportunities have traditionally been restricted to large electricity users and particularly those that have combined heat and power applications. However, technological innovations, and the advent and rapid promotion of small scale generation capabilities at the 1 MW level and less, are providing utilities with a greater number of threats at the distribution level as well. Failure to address rate competitiveness with commercial customers and potentially residential customers could lead to a loss of these customers through self-generation opportunities available with distributed energy resources (DER).

The threat of future competition gives utilities additional incentives to reduce their rates. Rate

comparisons between utilities within and between various regions are being made on an almost daily basis. In some states, these comparisons have been used to sound the clarion call for retail restructuring. Utilities must be cognizant of this fact, particularly those that have rates that may be greater than state, regional, and national averages.

Other competitive threats include the potential siting of competitive merchant facilities. The power industry trade press report regularly on the legal battles in Florida over the siting of competitive merchant facilities. In most all cases, Florida's investor-owned utilities (IOUs) have protested these applications. I believe that it is unreasonable for Florida's IOUs to, on the one hand, protest these competitive wholesale merchant facilities, and on the other hand, ask for incentives to participate in wholesale power markets. It would appear from recent events that if Florida's IOUs are unwilling to participate in these markets without an incentive, there are plenty of other competitors that will do so without a regulatory entitlement.

Q. How would enhanced operating efficiencies serve as an incentive to utilities to make economy wholesale transactions?

A. The possibilities of increasing economy sales, over time, will have the effect of providing utilities with a number of incentives to continue to increase system operating efficiencies. No sales can be made in a vacuum. If utilities want to become sellers in wholesale markets then, other things being equal, their operations will have to become more efficient. This efficiency gain, in addition to allowing utilities to make a greater number of sales, will also result in added benefits to utility shareholders. In the absence of a base rate case proceeding, regulatory lag would have the effect of allowing utilities, within certain boundaries, to flow through these gains to shareholders. Thus, utilities that make additional economy sales have the potential to offer their retail customers additional rate decreases through reduced fuel adjustments and their shareholder higher earnings through increased profits. If utilities are serious about getting ready for competition, then they should need no additional incentives to take advantage of this "win-win" opportunity.

Q. Why would gaining experience in wholesale markets be important to a utility?

A. Wholesale and retail markets are becoming more and more competitive on a daily basis. New entrants enter and old participants are merging into new players. More and more we see electric utility companies advertising and coming up with creative tag lines to define themselves as competitive and full service energy providers, even in wholesale operations. Actively participating in wholesale markets, whether it is through sales in the Florida broker system, other spot transactions, forward market, or other long term wholesale contracts, establishes Florida's utilities as experienced, flexible, and reliable providers of wholesale electricity. Utilities in Florida can point to their expertise and historic participation in the Florida broker system as evidence of their credibility as a wholesale power provider. This name recognition can be used as a signal of experience. This experience and reputation is an "intangible" asset in many respects, but clearly participation in a wholesale market like the broker system at the least helps to maintain this solid reputation, and at best, only serves to enhance it. For instance, in a recent press release issued by Southern Company announcing its decision to construct a 500 MW plant, Charles McCrary, president of Southern Company Generation, the business unit responsible for developing and operating all non-nuclear Southern Company generating plants in the southeast, noted:

> ...Southern Company's experience in power production and demonstrated skills in wholesale marketing offer unique capabilities in pursing these growth opportunities. [PMA Online Power Report, November 15, 1999.]

Alternative Recommendation

Q. Would you please discuss your alternative recommendation?

A. Yes. Should the Commission decide to continue incentive returns on broker system sales, the Citizens support a two-way (symmetrical) sliding scale incentive mechanism, rather than the current on-sided (asymmetrical) 80/20 split. Rather than defining the scale in dollar terms, we would propose to benchmark performance on energy sales. Our specific recommendation would be to

establish an incentive mechanism based upon a five year moving average of sales made on the Florida Energy Broker Network. Our proposed benchmark would be based upon the following scale:

(1) There would be a "dead band" ranging from 75 percent of the benchmark to 125 percent of the benchmark, wherein both the utility and its customers would be held harmless. This dead band simply reflects the fact that sales can increase or fall as the result of a certain level of exogenous changes in the market. All gains from sales in this range would be credited back to ratepayers.

(2) (a) Utilities would credit to ratepayers 90 percent of the gains on all sales between 125 to 130 percent of the benchmark. Utilities would be allowed to keep 10 percent of these gains as an incentive.

(b) Utilities would incur a 10 percent penalty for all sales between 70 to 75 percent of the benchmark.

(3) (a) Utilities would credit to ratepayers 85 percent of the gains on all sales between 130 to 135 percent of the benchmark. Utilities would be allowed to keep 15 percent of these gains as an incentive.

(b) Utilities would incur a 15 percent penalty for all sales between 65 to 70 percent of the benchmark.

(4) (a) Utilities would credit to ratepayers 80 percent of the gains on all sales greater than 135 percent of the benchmark. Utilities would be allowed to keep 20 percent of these gains as an incentive.

(b) Utilities would incur a 20 percent penalty for all sales less than 65 percent of the benchmark.

Q. What is the basis for this recommendation?

A. We believe that this method offers three advantages over the existing sharing mechanism. First, the mechanism is symmetric: if offers proportional risks and rewards to both ratepayers and

shareholders alike. Second, by basing the benchmark on a five year moving average, utilities are not penalized in any given year by exceptional performance. In other words, excellent performance in any given year does not drastically shift the bar for utilities. Third, the scale is set on an increasing basis and gives utilities the opportunity to increase their returns for better performance.

Q. Has the Commission facilitated any similar sharing mechanisms in the past?

A. Yes. In Order 20162 the Commission authorized a "rate of return incentive sharing plan" for Southern Bell Telephone Company. During this period, the telecommunications business was undergoing dramatic changes and restructuring itself into a more competitive industry, much like the electric power industry is today. The Commission noted:

> We thus believe that the incentive aspects of this plan will assist in this transition process. We hope it will result in a wider array of services at the lowest possible cost to ratepayers. [88 FPSC 10:316]

Thus the incentive regulation plan facilitated by the Commission was a method of both improving regulatory oversight and helping utilities transition themselves for a more competitive environment. The Commission authorized an increasing sharing scale during these proceedings for a reason. It noted that an increasing scale would:

> ...give the company a reason to reduce costs and introduce new services in order to reach the sharing threshold. Upon reaching the threshold, fresh incentives occur because the company shares in the earnings after that point. We seek to improve incentives for economic behavior to encourage the company to make decisions which are consistent with the best overall interests of the ratepayers. [Ibid.]

The Citizens believe that similar tools could be used for the electric power industry and a sharing mechanism for gains on economy sales in the energy broker system is one such way

this incentive regulation tool could be used.

Q. Aren't the benchmarks and sharing levels in these types of plans somewhat arbitrary and difficult to set?

A. Yes. But this was not an issue that prevented the Commission from establishing a similar mechanism for Southern Bell. The Commission noted in this proceeding that setting benchmarks would be difficult because of the difficulty in identifying gains that may result from industry productivity versus those that were the result of exogenous changes in the industry. With regards to the sharing ranges, the Commission noted:

> ...the percentage amount that is split between the company and its ratepayers is necessarily a judgment call infused with policy considerations. Southern Bell proposed a 50/50 split, but conceded that the percentages were arbitrary. Other parties argued for an initial 80/20 split in the ratepayers' favor, to be phased to a 50/50 split as the percentages of overall earnings on equity increased. We have deliberately tilted the balance in favor of ratepayers because of our inability to precisely identify earnings that result exclusively from productivity improvements generated by Southern Bell. [Ibid]

Q. Are the Citizen's taking the position that a move towards incentive-based regulation would be appropriate for Florida's utilities?

'A. No. I have simply presented the Southern Bell example to highlight the point that the Commission has dealt with both establishing relatively arbitrary benchmarks and sharing mechanisms in the past. These sharing mechanisms were established in a manner that gave utilities, in this case Southern Bell, incentives to operate in an exceptional, rather than average, manner.

Q. Would you be willing to consider alternative benchmarks, sharing ranges, and percentages?

A. Yes, provided that some general principles in establishing these ranges and percentages are followed. First, benchmarks should be set in a manner that is fair, but challenging, to Florida's

utilities. Averaging past performance is one simple method of smoothing year-to-year variations in sales that should not overly penalize utilities for one-time changes.

Second, risks and rewards should be symmetrical. Today, Florida's utilities get an incentive return on all gains on economy energy sales, but do not incur any risks for sub-optimal performance. The Citizens would like to see this practice discontinued.

Third, sharing mechanisms should be set on an increasing basis with some "dead-band" that recognizes that some sales just happen due to exogenous changes in the market and utilities should not be rewarded for market changes that are outside of their control. Increasing the sharing mechanism beyond this dead-band gives utilities additional incentives to reach new levels of sales. Today, Florida's utilities are getting a fixed level of rewards on all of the gains they make in economy energy sales. While this gives utilities the incentive to make economy energy sales, it doesn't necessarily send the best signals for them to maximize those economy energy sales.

Q. Should these incentives be extended to all economy sales outside of the broker system?

A. No. The Florida Energy Broker System was developed to encourage mutually beneficial trades between Florida's utilities with the gains of these trades being ultimately shared with Florida's ratepayers. Despite the fact that over the years new players have entered this system, it has continued to have a relatively strong Florida orientation. Thus, policy mechanisms that encourage this increased interaction, and are directed at benefitting the state of Florida, and not wholesale activities in general, are not completely unreasonable. However, extending the policy of incentive returns to sales outside the broker system (to all wholesale economy energy transactions) has a number of very serious policy and jurisdictional issues that the Citizens would recommend the Commission seek to avoid.

Q. Would you please summarize your testimony?

A. Yes. The Citizens are recommending that the Commission discontinue the incentive returns on gains from economy sales in the Florida broker system. We believe that the industry is

increasingly more competitive than it was in 1984, and there are a number of market signals that will encourage utilities to participate actively and aggressively in these markets. Should the Commission decide that the policy of incentives should be continued, we have provided the alternative recommendation that a sharing mechanism be instituted that offers utilities rewards for enhanced performance, and balances the risk and rewards for participating in the Florida broker system between ratepayers and shareholders. I have proposed a general range for sharing in my pre-filed testimony, but recognize that alternative ranges, as well as benchmarks, could be considered provided that these general principles are followed.

A. Does this conclude your testimony pre-filed on March 29, 2000?

A. Yes.

APPENDIX 1

QUALIFICATIONS OF DAVID E. DISMUKES, PH.D.

EDUCATION

Ph.D., Economics, Florida State University, 1995.
M.S., Economics, Florida State University, 1992.
M.S., International Affairs, Florida State University, 1988.
B.A., History, University of West Florida, 1987.
A.A., Liberal Arts, Pensacola Junior College, 1985.

Master's Thesis: *Nuclear Power Project Disallowances: A Discrete Choice Model of Regulatory Decisions*

Ph.D. Dissertation: *An Empirical Examination of Environmental Externalities and the Least-Cost Selection of Electric Generation Facilities*

PROFESSIONAL EXPERIENCE

Econ One Research, Inc., Houston, Texas and Baton Rouge, Louisiana

2000-	Senior Economist

Acadian Consulting Group, Baton Rouge, Louisiana

1995-	Consulting Economist/Principal

Florida Public Service Commission, Tallahassee, Florida
Division of Communications, Policy Analysis Section

1995	Planning & Research Economist

Division of Auditing & Financial Analysis, Forecasting Section

1993	Planning & Research Economist
1992-1993	Economist

Project for an Energy Efficient Florida &
Florida Solar Energy Industries Association, Tallahassee, Florida

1994	Energy Economist

Ben Johnson Associates, Inc., Tallahassee, Florida

1991-1992	Research Associate
1989-1991	Senior Research Analyst
1987-1989	Research Analyst

ACADEMIC APPOINTMENTS

Louisiana State University, Baton Rouge, Louisiana
Center for Energy Studies

2000-	Senior Research Fellow/Adjunct Assistant Professor
1999-2000	Managing Director, Distributed Energy Resources Initiative
1995-2000	Assistant Professor

E.J. Ourso College of Business Administration
Department of Economics

1999-2000	Adjunct Assistant Professor

Florida State University, Tallahassee, Florida
Department of Economics

1995	Instructor

PUBLICATIONS: PEER REVIEWED ACADEMIC JOURNALS

"The Demand for Long Distance Telephone Communication: A Route-Specific Analysis of Short-Haul Service." (1996). *Studies in Economics and Finance* 17:33-45.

"A Comment on Cost Savings from Nuclear Regulatory Reform" (1997). *Southern Economic Journal.* 63:1108-1112.

"Oil Spills, Workplace Safety, and Firm Size: Evidence from the U.S. Gulf of Mexico OCS." (1997). With O. O. Iledare, A. G. Pulsipher, and Dmitry Mesyanzhinov. *Energy Journal* 4: 73-90.

"Capacity and Economies of Scale in Electric Power Transmission" (1999). With Robert F. Cope and Dmitry Mesyanzhinov. *Utilities Policy* 7: 155-162.

"Cogeneration and Electric Power Industry Restructuring" (1999). With Andrew N. Kleit. *Resource and Energy Economics.* 21:153-166.

"Modeling Regional Power Markets and Market Power." (1999). With Robert F. Cope. *Managerial and Decision Economics. (Under Review)*

"Efficiency Opportunities in Restructured Electric Power Generation." (1999). With Williams O. Olatubi. *Energy Journal (Under Review)*

"A Data Envelopment Analysis of Levels and Sources of Coal Fired Electric Power Generation Inefficiency." (1999). With Williams O. Olatubi. *Utilities Policy. (Under Review)*

PUBLICATIONS: PEER REVIEWED PROCEEDINGS

"Comparing the Safety and Environmental Records of Firms Operating Offshore Platforms in the Gulf of Mexico." (1996). With Allan Pulsipher, Omowumi Iledare, Dmitry Mesyanzhinov, William Daniel, and Bob Baumann. *Proceedings of the American Society of Mechanical Engineers: Offshore and Arctic Operations 1996*, January.

"Safety Regulations, Firm Size, and the Risk of Accidents in E&P Operations on the Gulf of Mexico Outer Continental Shelf" (1996). With Allan Pulsipher, Omowumi Iledare, and Bob Baumann. *Proceedings of the American Society of Petroleum Engineers: Third International Conference on Health, Safety, and the Environment in Oil and Gas Exploration and Production*, June.

"New Paradigms for Power Engineering Education." (1997). With Fred I. Denny. *Proceedings of the International Association of Science and Technology for Development.* October: 499-504.

"Power System Operations, Control, and Environmental Protection in a Restructured Electric Power Industry" (1998). With Fred I. Denny. *IEEE Proceedings: Large Engineering Systems Conference on Power Engineering.* June: 294-298.

PUBLICATIONS: OTHER PROCEEDINGS

"Comparing the Safety and Environmental Performance of Offshore Oil and Gas Operators." (1995). With Allan Pulsipher, Omowumi Iledare, Dmitry Mesyanzhinov, William Daniel, and Bob Baumann. *Proceedings of the 15th Annual Information Transfer Meeting.* U.S. Department of Interior, Minerals Management Service: New Orleans, Louisiana.

"Assessing Environmental and Safety Risks of the Expanding Role of Independents in E&P Operations on the Gulf of Mexico OCS." (1996). With Allan Pulsipher, Omowumi Iledare, Bob Baumann, and Dmitry Mesyanzhinov. *Proceedings of the 16th Annual Information Transfer Meeting.* U.S. Department of Interior, Minerals Management Service: New Orleans, Louisiana: 162-166.

"Modeling Electric Power Markets in a Restructured Environment" (1998). With Robert F. Cope and Dan Rinks. *Proceedings of the International Association for Energy Economics: Technology's Critical Role in Energy and Environmental Markets.* October: 48-56.

"Asymmetric Choice and Customer Benefits: Lessons from the Natural Gas Industry." (1999). With Rachelle F. Cope and Dmitry Mesyanzhinov. *Proceedings of the International Association for Energy Economics: The Only Constant is Change* August: 444-452.

PUBLICATIONS: BOOKS AND MONOGRAPHS

Distributed Energy Resources. (2000) With Ritchie Priddy. London: Financial Times Energy. (*forthcoming*)

Power System Operations and Planning in a Competitive Market. (2000) With Fred I. Denny. New York: CRC Press. *(In Progress, Anticipated Completion December 2000)*

PUBLICATIONS: BOOK CHAPTERS

"Electric Power Generation." (1999). In the *Macmillan Encyclopedia of Energy.* Edited by John Zumerchik. New York: Macmillan Reference. (*forthcoming*)

"The Hydropower Industry of the United States." (2000). With Dmitry Mesyanzhinov. In *Renewable Energy: Trends and Prospects.* Edited by E.W. Miller and A.I. Panah. Lafayette, PN: The Pennsylvania Academy of Science. (*forthcoming*)

PUBLICATIONS: BOOK REVIEWS

Review of ***Electric Cooperatives on the Threshold of a New Era*** by Public Utilities Reports. (Vienna, Virginia: Public Utilities Reports, 1996) pp. 232. ISBN 0-910325-63-4. *Energy Journal* 17 (1996): 161-62.

Review of ***Electricity Transmission Pricing and Technology***, edited by Michael Einhorn and Riaz Siddiqi. (Boston: Kluwer Academic Publishers, 1996) pp. 282. ISBN 0-7923-9643-X. *Energy Journal* 18 (1997): 146-148.

PUBLICATIONS: TRADE AND PROFESSIONAL JOURNALS

"Electric Utility Mergers and Acquisitions: A Regulator's Guide." (1996). With Kimberly H. Dismukes. *Public Utilities Fortnightly.* January 1.

"Reliability or Profit? Why Entergy Quit the Southwest Power Pool." (1998). With Fred I. Denny. *Public Utilities Fortnightly.* February 1: 30-33.

"Stranded Investment and Non-Utility Generation." (1999). With Michael T. Maloney. *Electricity Journal* 12: 50-61.

"Slow as Molasses: The Political Economy of Electric Restructuring in the South." (1999). With K.E. Hughes II. *Oil, Gas, and Energy Quarterly.* 48: 163-183.

"Coming to a Neighborhood Near You: The Merchant Electric Power Plant." (1999). With K.E. Hughes II. *Oil, Gas, and Energy Quarterly.* 48:433-441.

"Distributed Energy Resources: The Next Paradigm Shift in the Electric Power Industry." (2000). With K.E. Hughes II *Oil, Gas and Energy Quarterly.* (forthcoming, March).

"Issues and Opportunities for Small Scale Electricity Production in the Oil Patch." (2000). With Ritchie D. Priddy. *American Oil and Gas Reporter.* (forthcoming).

"The Post-Restructuring Consolidation of Nuclear-Power Generation in the Electric Power Industry." (2000) With K.E. Hughes II. *Oil, Gas and Energy Quarterly.* (forthcoming, June).

PUBLICATIONS: REPORTS AND OTHER PUBLICATIONS

Restructuring the Electric Utility Industry: Implications for Louisiana. (1996). With Allan Pulsipher and Kimberly H. Dismukes. Baton Rouge, LA: Louisiana State University, Center for Energy Studies.

Assessing the Environmental and Safety Risks of the Expanded Role of Independents in Oil and Gas E&P Operations on the U.S. Gulf of Mexico OCS. (1996). With Allan Pulsipher, Omowumi Iledare, Dmitry Mesyanzhinov, William Daniel, and Bob Baumann. Baton Rouge, LA: Louisiana State University, Center for Energy Studies.

Energy Conservation and Electric Restructuring In Louisiana. (2000). With Dmitry Mesyanzhinov, Ritchie D. Priddy, Robert F. Cope III, and Vera Tabakova. Baton Rouge, LA: Louisiana State University, Center for Energy Studies.

PUBLICATIONS: INTERNET HOMEPAGES

Electric Restructuring In Louisiana. Louisiana State University, Center for Energy Studies. HTTP://WWW.ENRG.LSU.EDU

GRANT RESEARCH

Co-Principal Investigator. "Assessing the Environmental and Safety Risks of the Expanded Role of Independents in Oil and Gas E&P Operations on the U.S. Gulf of Mexico OCS." (1996). With Allan Pulsipher, Omowumi Iledare, Dmitry Mesyanzhinov, William Daniel, and Bob Baumann. U.S. Department of Interior, Minerals Management Service, Grant Number 95-0056. Total Project Funding: $109,361. Status: Completed.

Principal Investigator. "The Industrial Supply of Electricity: Commercial Generation, Self-Generation, and Industry Restructuring" (1996). With Andrew Kleit. Louisiana Energy Enhancement Program, LSU Office of Research and Development. Total Project Funding: $19,948. Status: Completed.

Principal Investigator. "Energy Conservation and Electric Restructuring in Louisiana." (1997). Louisiana Department of Natural Resources. Petroleum Violation Escrow Program Funds. Total Project Funding: $43,169. Status: Completed.

Principal Investigator. "An Economic Impact Analysis of OCS Activities on Coastal Louisiana." (1998). With Dmitry Mesyanzhinov and David Hughes. U.S. Department of Interior, Minerals Management Service. Total Project Funding: $190,166. Status: Awarded, In Progress.

Principal Investigator. "Cost Profiles and Cost Functions for Gulf of Mexico Oil and Gas Development Phases for Input Output Modeling." (1998). With Dmitry Mesyanzhinov and Allan G. Pulsipher. U.S. Department of Interior, Minerals Management Service. Total Project Funding: $244,956. Status: Awarded, In Progress.

Co-Principal Investigator. "Deepwater OCS-Related Infrastructure in the Gulf of Mexico." (1999). With Allan G. Pulsipher, Omowumi Iledare, and Dmitry Mesyanzhinov. U.S. Department of Interior, Minerals Management Service. Total Project Funding: $474,582/CES Award level $62,875. Status: Awarded, In Progress.

ACADEMIC CONFERENCE PRESENTATIONS

"A Cross-Sectional Model of IntraLATA MTS Demand." (1995). Southern Economic Association, Sixty-Fifth Annual Conference. New Orleans, Louisiana.

"Empirical Determinants of Nuclear Power Plant Disallowances." (1995). Southern Economic Association, Sixty-Fifth Annual Conference. New Orleans, Louisiana.

"Comparing the Safety and Environmental Performance of Offshore Oil and Gas Operators." (1995). With Allan Pulsipher, Omowumi Iledare, Dmitry Mesyanzhinov, William Daniel, and Bob Baumann. U.S. Department of Interior, Minerals Management Service, 15th Annual Information Transfer Meeting. New Orleans, Louisiana.

"Spatial Perspectives on the Forthcoming Deregulation of the U.S. Electric Utility Industry." (1996) With Dmitry Mesyanzhinov. Southwest Association of American Geographers Annual Meeting. Norman, Oklahoma.

"Recovery of Stranded Investments: Comparing the Electric Utility Industry to Other Recently Deregulated Industries" (1996). With Farhad Niami and Dmitry Mesyanzhinov. Southern Economic Association, Sixty-Sixth Annual Conference. Washington, D.C.

"Input Price Fluctuations, Total Factor Productivity, and Price Cap Regulation in the Telecommunications Industry" (1996). With Farhad Niami. Southern Economic Association, Sixty-Sixth Annual Conference. Washington, D.C.

"Empirical Modeling of the Risk of a Petroleum Spill During E&P Operations: A Case Study of the Gulf of Mexico OCS." (1996). With Omowumi Iledare, Allan Pulsipher, and Dmitry Mesyanzhinov. Southern Economic Association, Sixty-Sixth Annual Conference. Washington, D.C.

"Assessing Environmental and Safety Risks of the Expanding Role of Independents in E&P Operations on the Gulf of Mexico OCS." (1996). With Allan Pulsipher, Omowumi Iledare, Dmitry Mesyanzhinov, and Bob Baumann. U.S. Department of Interior, Minerals Management Service, 16th Annual Information Transfer Meeting. New Orleans, Louisiana.

"The Unintended Consequences of the Public Utilities Regulatory Policies Act of 1978." (1997). National Policy History Conference on the Unintended Consequences of Policy Decisions. Bowling Green State University. Bowling Green, Ohio. June 5-7.

"Cogeneration and Electric Power Industry Restructuring." (1997). With Andrew N. Kleit. Western Economic Association, Seventy-fifth Annual Conference. Seattle, Washington. July 9-13.

"New Paradigms for Power Engineering Education." (1997). With Fred I. Denny. International Association of Science and Technology for Development, High Technology in the Power Industry Conference. Orlando, Florida. October 27-30

"A Non-Linear Programming Model to Estimate Stranded Generation Investments in a Deregulated Electric Utility Industry." (1997). With Robert F. Cope and Dan Rinks. Institute for Operations Research and Management Science Annual Conference. Dallas Texas. October 26-29.

"Benchmarking Electric Utility Transmission Performance." (1997). With Robert F. Cope and Dmitry Mesyanzhinov. Southern Economic Association, Sixty-seventh Annual Conference. Atlanta, Georgia. November 21-24.

"Power System Operations, Control, and Environmental Protection in a Restructured Electric Power Industry." (1998). With Fred I. Denny. IEEE Large Engineering Systems Conference on Power Engineering. Nova Scotia, Canada. June.

"Benchmarking Electric Utility Distribution Performance." (1998) With Robert F. Cope and Dmitry Mesyanzhinov. Western Economic Association, Seventy-sixth Annual Conference. Lake Tahoe, Nevada. June.

"Modeling Electric Power Markets in a Restructured Environment." (1998). With Robert F. Cope and Dan Rinks. International Association for Energy Economics Annual Conference. Albuquerque, New Mexico. October.

"Empirical Issues in Electric Power Transmission and Distribution Cost Modeling." (1998). With Robert F. Cope and Dmitry Mesyanzhinov. Southern Economic Association. Sixty-Eighth Annual Conference. Baltimore, Maryland. November.

"Economic Impact of Offshore Oil and Gas Activities on Coastal Louisiana" (1999). With Dmitry Mesyanzhinov. Annual Meeting of the Association of American Geographers. Honolulu, Hawaii. March.

"Modeling Regional Power Markets and Market Power." (1999). With Robert F. Cope. Western Economic Association Annual Conference. San Diego, California. July.

"Asymmetric Choice and Customer Benefits: Lessons from the Natural Gas Industry." (1999). With Rachelle F. Cope and Dmitry Mesyanzhinov. International Association of Energy Economics Annual Conference. Orlando, Florida. August.

"Parametric and Non-Parametric Approaches to Measuring Efficiency Potentials in Electric Power Generation." (1999). With Williams O. Olatubi. International Atlantic Economic Society Annual Conference, Montreal, October.

"Applied Approaches to Modeling Regional Power Markets." (1999.) With Robert F. Cope. Southern Economic Association Sixty-ninth Annual Conference. New Orleans, November 1999.

"Estimating Efficiency Opportunities for Coal Fired Electric Power Generation: A DEA Approach." (1999). With Williams O. Olatubi. Southern Economic Association Sixty-ninth Annual Conference. New Orleans, November.

"Distributed Energy Resources, Energy Efficiency, and Electric Power Industry Restructuring." (1999). American Society of Environmental Science Fourth Annual Conference. Baton Rouge, Louisiana. December.

ACADEMIC SEMINARS AND PRESENTATIONS

"The Empirical Determinants of Cogenerated Electricity: Implications for Electric Power Industry Restructuring." (1997). With Andrew N. Kleit. Florida State University. Department of Economics: Applied Microeconomics Workshop Series. October 17, Tallahassee, Florida.

"Electric Restructuring and Nuclear Power." (1997). Louisiana State University. Department of Nuclear Science. November 7, Baton Rouge, Louisiana.

"Electric Restructuring and the Environment." (1998). Environment 98: Science, Law, and Public Policy. Tulane University. Tulane Environmental Law Clinic. March 7, New Orleans, Louisiana.

PROFESSIONAL AND CIVIC PRESENTATIONS

Panelist, "Deregulation and Competition." American Nuclear Society: Second Annual Joint Louisiana and Mississippi Section Meetings, Baton Rouge, Louisiana, April 20, 1996.

Roundtable Moderator, "Stakeholder Perspectives on Electric Utility Stranded Costs." Louisiana State University, Center for Energy Studies Seminar on Electric Utility Restructuring in Louisiana, Baton Rouge, May 29, 1996.

"Electric Utility Restructuring." Sunshine Rotary Club Meetings, Baton Rouge, Louisiana, August 8, 1996.

"Electric Utility Restructuring -- Background and Overview." Louisiana Public Service Commission, Baton Rouge, Louisiana, August 14, 1996.

"Electric Utility Restructuring" Louisiana Electric Cooperative Association, Baton Rouge, Louisiana, August 27, 1996.

"Electric Utility Restructuring in Louisiana." Entergy Services, Transmission and Distribution Division, Energy Centre, New Orleans, Louisiana, September 12, 1996

"Electric Utility Restructuring in Louisiana." Jennings Rotary Club, Jennings, Louisiana, November 19, 1996.

"Deregulating the Electric Utility Industry." Eighth Annual Economic Development Summit, Baton Rouge, Louisiana, November 21, 1996.

"Restructuring the Electric Utility Industry." Louisiana Propane Gas Association Annual Meeting, Alexandria, Louisiana, December 12, 1996.

"Electric Restructuring: Louisiana Issues and Outlook for 1997." Louisiana State University, Center for Energy Studies Industry Associates Meeting, Baton Rouge, Louisiana, January 15, 1997.

"The Electric Utility Restructuring Debate In Louisiana: An Overview of the Issues." Annual Conference of the Public Affairs Research Council of Louisiana. Baton Rouge, Louisiana. March 25, 1997.

"Electric Utility Restructuring: Issues and Trends for Louisiana." Opelousas Chamber of Commerce, Opelousas, Louisiana. June 24, 1997.

"Electric Utility Restructuring." Louisiana Association of Energy Engineers. Baton Rouge, Louisiana. September 11, 1997.

"Electric Utility Restructuring in Louisiana." Hammond Chamber of Commerce, Hammond, Louisiana. October 30, 1997.

"Reflections and Predictions on Electric Utility Restructuring in Louisiana." With Fred I. Denny. Louisiana State University, Center for Energy Studies Industry Associates Meeting. November 20, 1997.

"How Will Utility Deregulation Affect Tourism." Louisiana Travel Promotion Association Annual Meeting, Alexandria, Louisiana. January 15, 1998.

"The Implications of Electric Restructuring on Independent Oil and Gas Operations." Petroleum Technology Transfer Council Workshop: Electrical Power Cost Reduction Methods in Oil and Gas Field Operations. Shreveport, Louisiana, October 13, 1998.

"A Short Course on Electric Restructuring." Central Louisiana Electric Company. Sales and Marketing Division. Mandeville, Louisiana, October 22, 1998.

"What's Happened to Electricity Restructuring in Louisiana?" Louisiana State University, Center for Energy Studies Industry Associates Meeting. March 22, 1999.

"The Implications of Electric Restructuring on Independent Oil and Gas Operations." Petroleum Technology Transfer Council Workshop: Electrical Power Cost Reduction Methods in Oil and Gas Field Operations. Lafayette, Louisiana, March 24, 1999.

"The Dynamics of Electric Restructuring in Louisiana." Joint Meeting of the American Association of Energy Engineers and the International Association of Facilities Managers. Metairie, Louisiana. April 29, 1999.

"The Political Economy of Electric Restructuring In the South" Southeastern Electric Exchange, Rate Section Annual Conference. New Orleans, Louisiana. May 7, 1999.

Roundtable Discussant. "Environmental Regulation in a Restructured Market" The Big E: How to Successfully Manage the Environment in the Era of Competitive Energy. PUR Conference. New Orleans, Louisiana. May 24, 1999.

"Merchant Power Opportunities in Louisiana." Louisiana Mid-Continent Oil and Gas Association (LMOGA) Power Generation Committee Meetings. Baton Rouge, Louisiana. November 10, 1999.

"Distributed Energy Resources Initiatives." Louisiana State University, Center for Energy Studies Industry Associates Meeting. Baton Rouge, Louisiana. December 15, 1999.

"LSU/CES Distributed Energy Resources Initiatives." Los Alamos National Laboratories. Office of Energy and Sustainable Systems." Los Alamos, New Mexico. February 16, 2000.

"Electricity 101: Definitions, Precedents, and Issues." Energy Council's 2000 Federal Energy and Environmental Matters Conference. Loews L'Enfant Plaza Hotel, Washington, D.C. March 11-13, 2000

EXPERT WITNESS AND LEGISLATIVE TESTIMONY

Docket 920188-TL, (1992). Before the Florida Public Service Commission. On the Behalf of the Florida Public Service Commission Staff. Company analyzed: GTE-Florida. Issues: Telephone Demand Forecasts and Empirical Estimates of the Price Elasticity of Demand for Telecommunication Services.

Docket 920260-TL, (1993). Before the Florida Public Service Commission. On the Behalf of the Florida Public Service Commission Staff. Company analyzed: BellSouth Communications, Inc. Issues: Telephone Demand Forecasts and Empirical Estimates of the Price Elasticity of Demand for Telecommunication Services.

Docket 940448-EG -- 940551-EG, (1994). Before the Florida Public Service Commission. On the Behalf of the Legal Environmental Assistance Foundation. Companies analyzed: Florida Power & Light Company; Florida Power Corporation; Tampa Electric Company; and Gulf Power Company. Issues: Comparison of Forecasted Cost-Effective Conservation Potentials for Florida.

Docket 950495-WS (1996). Before the Florida Public Service Commission. On the Behalf of the Citizens of the State of Florida. Company analyzed: Southern States Utilities, Inc. Issues: Revenue Repression Adjustment, Residential and Commercial Demand for Water Service.

Louisiana House of Representatives, Special Subcommittee on Utility Deregulation. (1997). On Behalf of the Louisiana Public Service Commission Staff. Issue: Electric Restructuring.

Docket 990001-EI (1999). Before the Florida Public Service Commission. On the Behalf of the Citizens of the State of Florida. Companies analyzed: Florida Power & Light Company; Florida Power Corporation; Tampa Electric Company; and Gulf Power Company. Issues: Regulatory Treatment of Incentive Returns on Gains from Economic Energy Sales.

EDITORIAL APPOINTMENTS

Referee, *Energy Journal*
Contributing Editor, *Oil, Gas and Energy Quarterly*

PROPOSAL TECHNICAL REVIEWER

California Energy Commission, Public Interest Energy Research (PIER) Program

PROFESSIONAL ASSOCIATIONS

American Economic Association, American Statistical Association, Econometric Society, Southern Economic Association, Western Economic Association, and the International Association of Energy Economists.

HONORS AND AWARDS

Omicron Delta Epsilon
1995, Staff Achievement Award, Florida Public Service Commission

TEACHING EXPERIENCE

Principles of Microeconomic Theory
Principles of Macroeconomic Theory

Lecturer, Electric Power Industry Environmental Issues, Field Course on Energy and the Environment. (Dept of Environmental Studies).
Lecturer, Electric Power Industry Trends, Principles Course in Power Engineering (Dept of Electric Engineering).

Continuing Education. Electric Power Industry Restructuring for Energy Professionals.

THESIS/DISSERATIONS COMMITTEES

3 Thesis Committee Memberships (Environmental Studies)
1 Doctoral Committee Memberships (Information Systems & Decision Sciences).