AN
OVERVIEW OF THE
ELECTRIC INDUSTRY

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Prepared by staff of the
Florida House Of Representatives
Committee on Utilities and Communications
January 2000

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EXECUTIVE SUMMARY

The Speaker of the House of Representatives directed the staff of the Utilities and Communications Committee to conduct a review of the establishment of electric services, development of regulatory schemes, and historical events which shaped the electric industry, to provide the foundation upon which discussions of the future of Florida's utility industry should begin.

BACKGROUND

As the embroyic system of Thomas Alva Edison blossomed into an enterprise, the electric industry emerged as a major entity among big businesses. Some of the early federal legislation served as general application for all big businesses while other legislation specifically addressed the electric utility industry. This legislation included:

1) The 1890 Sherman Antitrust Act
2) The 1914 Clayton Antitrust Act
3) The 1933 Securities Act
4) The 1935 Federal Power Act
5) The 1935 Public Utility Holding Company Act (PUHCA)

With the evolution of the privately owned or investor owned electric industry, federal power projects began to prosper and contribute to the country's generation mix. Through the efforts of President Franklin D. Roosevelt, the federal government began to sell hydroelectric power.

Through the Rural Electrification Act of 1936, the Rural Electrification Administration was created to provided low interest funds to rural areas to foster economic development and establish electric utility cooperatives.

A series of events in recent decades produced historical changes in the industry.

In the 1960s, with decades of meeting increasing demand at decreasing prices, the industry began to encounter increasing unit costs and slower customer growth.

In 1965, history's largest blackout occurred in the northeastern United States and Canada. Thirty million people were without electricity for as long as 13 hours. In response, the Northeast Power Coordinating Council was created, later renamed the North America Electric Reliability Council or NERC.

In 1973, the Organization of the Petroleum Exporting Countries (OPEC) oil embargo was the first significant oil supply disruption. At the time, this had a significant affect on Florida since a substantial amount of electric generation was fueled by oil and gas.

The 1979 nuclear accident at Three Mile Island, PA, resulted in added cost for nuclear safety systems at existing nuclear power plants.

Through the early 1980s, high inflation and increasing fuel costs resulted in a sluggish economy throughout the U.S.

Also during the 1970s and 1980s, several federal acts were passed that greatly affected the electric industry.

1) 1970 Clean Air Act (and its amendments in 1977) required utilities to reduce air and water pollutant emissions.

2) 1977 the Federal Energy Regulatory Commission (FERC) was created. It was given federal regulatory oversight, in interstate commerce, of the natural gas industry, electric utilities, hydroelectric projects, and oil pipeline transportation systems.

3) 1978 Public Utility Regulatory Policy Act (PURPA) reduced the dependence on foreign oil by advocating renewable and alternative energy sources. It also established a special class of power generators, qualifying facilities or QFs, and the requirement that utilities buy, at avoided cost, all the electricity that the QFs which to sell.

4) 1978 Natural Gas Policy Act caused natural gas prices to increase.

5) 1978 Power Plant and Industrial Fuel Use Act limited the use of natural gas in electric generation.

6) 1981 the Omnibus Budget Reconciliation Act of 1981 decontrolled petroleum prices, and the worldwide oil surpluses resulted in lower utility costs and that began to provide costs relief to the industry.

As the 1980s progressed, Congress repealed the Power Plant and Industrial Fuel Use Act, and natural gas prices stabilized and went down. Coupled with significant improvement in natural gas fired gas turbine/combined cycle technology, the cost of electric generation also went down.

RECENT DEVELOPMENTS: COMPETITION IN ELECTRICITY

In 1992, the Energy Policy Act (EPAct) was passed. The act amended PURPA and created exempt wholesale generators (EWGs). This new class of power generators would be exempt from the provisions of the Public Utility Holding Company Act (PUHCA). The act also granted FERC with the authority to order and condition access by eligible parties to the interconnected transmission grid.

This action by Congress mandated wholesale competition in electricity, but it allowed states to decide whether to allow retail competition.

In 1996, FERC issued the rules for wholesale competition. These rules contained in Orders 888 and 889, established policies governing a more open wholesale market.

Order 888 is entitled *Promoting Wholesale Competition Through Open Access Nondiscriminatory Transmission Services by Public Utilities; Recovery of Stranded Cost by Public Utilities and Transmitting Utilities*. Order 888 requires all public utilities that own, control, or operate transmission facilities to provide nondiscriminatory open access transmission services at a fair and reasonable price through the functional unbundling of their wholesale power services. Also included in Order 888 is a stranded cost mechanism.

Order 889 is entitled *Open Access Same Time Information Systems and Standards of Conduct (OASIS)*. Order 889 requires all public utilities to develop or participate in an Internet-based bulletin board system. The system would furnish information about the transportation capacity that is available on transmission lines. Also included are standards of conduct for public utilities that are intended to guard against transmission owners, and their affiliates, from having an unfair competitive advantage by using information about the power transmission system.

Other federal provisions that relate to open access transmission are: Independent System Operators (ISO), Regional Transmission Groups (RTG), sometimes called Regional Transmission Organizations (RTO), Power Marketers, Exempt Wholesale Generators (EWG), Qualifying Facilities (QF), Market-Based Rates, and Fuel Prices.

For Florida, the Public Service Commission(PSC) has intrastate regulatory oversight of utility services.

The PSC's specific jurisdiction of electric utilities includes:

1) Setting Rates
2) Grid Reliability, which encompasses:
   a) Ten-Year Site Plans
   b) Territorial Agreements
   c) Power Plant Siting
   d) Transmission Line Determination
3) Florida Energy Efficiency and Conservation Act
4) Safety
5) Solid Waste Act

It is also within the PSC's jurisdiction to ensure that an appropriate level of generation reserve is available within the state in order to avoid service interruptions and unexpected increases in customer load.

Twenty-one states have passed restructuring legislation and 3 states have enacted restructuring through public utility commission order. Twenty-six states and the District of Columbia have ongoing studies of the issue.

In 1996, California and Pennsylvania passed restructuring legislation that is currently being implemented. All customers in both states now have access to alternative energy suppliers. The California legislation established an Independent System Operator to operate the transmission grid and also established a Power Exchange where utilities can buy and sell electricity. The average revenue per kilowatt hour is used to compare rates for different sectors of the market. The average revenue in California for 1998 was: 9.03 cents per kilowatt hour for all sectors; 10.6 cents for the residential sector; 9.66 cents for the commercial sector; and 6.59 cents for the industrial sector. The California legislation provides for a 10 percent rate reduction for residential and small commercial customers. It provides for a rate freeze for other sectors. It provides for the recovery of stranded costs and funding of the rate reduction by itemized charges on the customer's bills. At the end of September 1999, 13.3% of the investor owned utility customers had switched to alternative energy suppliers.

In Pennsylvania, the average revenue for 1998 was: 7.86 cents per kilowatt hour for all sectors; 9.93 cents for the residential sector; 8.26 cents for the commercial sector; and 5.63 cents for the industrial sector. The Pennsylvania Public Utilities Commission reached agreement with the investor owned utilities for the restructuring plans required by its act. Each utility was approved for specific stranded cost recovery and was required to reduce its rates for a certain period of time. At the end of September 1999, 7.5% of the investor owned utility customers had switched to alternative energy suppliers.

The average revenue in Florida for 1998 was: 7.01 cents per kilowatt hour for all sectors; 7.89 cents for the residential sector; 6.38 cents for the commercial sector; and 4.81 cents for the industrial sector.

I. INTRODUCTION

The staff of the House Committee on Utilities and Communications was directed by the Chairman and the Speaker of the House to conduct an interim project on the status of the electric industry in Florida and selected states.

The report gives a history of the electric industry and the current status of industry in Florida. It compares two states, California and Pennsylvania that are in the process of implementing their restructuring legislation.

Various representatives from the electric industry and consumer groups were contacted for their comments. Reports from the Florida Public Service Commission, other states, and industry were reviewed for this report. Interested parties were contacted to identify issues that should be considered for any restructuring proposal. The web sites from the U.S. Department of Energy, National Conference of Legislatures, and other groups were also visited to gather data on the electric energy situation in other states and the nation.

A special thanks to the staff of the Florida Public Service Commission, especially the staff of the Division of Electric and Gas. Also, to the many people who helped us review the report for errors, and omissions. Thank you for your assistance.

II. HISTORY OF THE ELECTRIC INDUSTRY

This section of the report addresses the beginnings of the industry and its progression to the electric industry of today.

A. EARLY ELECTRIC UTILITY DEVELOPMENT

The modern electric utility industry had its beginnings in the 1800s. The industry evolved from "gas and electric carbon-arc commercial and street lighting systems."[1] Thomas Alva Edison's Pearl Street Station opened September 4, 1882 in New York City. The station featured four key elements of an electric system. This system had "reliable central generation, efficient distribution, a successful end use (in 1882, the light bulb), and a competitive price."[2] The Pearl Street Station, "was a model of efficiency for its time."[3] New York City became the first to have electric lights.

More efficient and broader uses for electricity emerged, with them developed the business of providing electric power, and along with that came the evolution of a regulatory structure.

B. EARLY FEDERAL LEGISLATION

The following federal laws of general application governed big businesses:

- The Sherman Antitrust Act of 1890,[4] which was based on the power of Congress to regulate interstate commerce, summarily it outlawed trusts and prohibited monopolies that could be shown to be using their power to stifle competition. For several years, the Sherman Act could not be effectively enforced, but as a result of President Theodore Roosevelt's "trust-busting" campaigns, it began to be invoked with some success. [5]
- The Clayton Antitrust Act of 1914[6] outlawed the following: agreements between other businesses offering competing products; agreements between the other

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[1]Energy Information Administration: *The Changing Structure of the Electric Power Industry: An Update* (May 1997)

[2]*Id.*

[3]I*d*.

[4]July 2, 1890, ch 647, 26 Stat. 209, 15 USCS §§ 1-7

[5]At the time, and currently, state initiatives to dissolve trusts were limited to intrastate businesses.

[6]Oct. 15, 1914, ch 323, 38 Stat. 730, 15 USCS §§12-27, 44; 29 USCS § 52

businesses to control the supply-and the price-of a product; and abuse market power to gain or maintain a monopoly.

- The Securities Act of 1933[7] required registration of securities and disclosure of accurate data on them. The Securities Exchange Act of 1934[8] established the Securities Exchange Commission (SEC).

Together, the Clayton Antitrust Act and the Securities Act required independent audits of company books and records, barred deceptive and unfair schemes, and required public reporting of publicly traded company assets, liabilities, and control rights.

Two early federal laws that were specific to electric utilities were:

- The Federal Power Act of 1935[9] which created the Federal Power Commission. The Federal Power Act imposed cost-of-service regulation on the interstate electric wholesale generation and transmission markets and gave the Federal Power Commission broad auditing, accounting, and subpoena rights to ensure accurate rates.[10]

- The Public Utility Holding Company Act of 1935[11] (PUHCA).[12] Two primary objectives to the enactment of the PUHCA were "the integration and simplification of complex natural gas and electric utility holding company systems; and protection of investors and consumers through effective regulation of multi-state utilities operating through subsidiaries."[13]

[7]May 27, 1933, ch 38, 48 Stat. 74, 15 USCS §§ 77a-77aa

[8]June 6, 1934, ch 404, 48 Stat. 881, 15 USCS §§ 77b-77e, 77j, 77k, 77m, 77o, 77s, 78a-78o, 78o-3, 78p-78hh

[9]Aug. 26, 1935, ch 687, 49 Stat. 838, 16 USCS §§ 791, 791A, 796-800, 803, 807 810 and others

[10]The Federal Trade Commission was created to serve as an enforcement agency.

[11]Aug. 26, 1935, ch 687, 49 Stat. 803, 15 USCS §§ 79 to 79z-6

[12]Currently, on Capitol Hill, debate is occurring as to whether the intent of the act has been satisfied and consequently whether the act needs to now be repealed.

[13]Alliance for Competitive Electricity: What is PUHCA (www.afce.org/today/pucha.htm)

States copied these federal models. The result at the state level was cost of service or "rate base"[14] regulation.[15]

During 1920s and 1930s, huge electric utility holding companies dominated the industry. In 1921, privately owned utilities were providing "94 percent of the total generation of electric power, and publicly owned utilities contributed *only* 6 percent."[16] These large privately owned or investor owned utilities controlled utilities in different parts of the country, making it impossible for state regulators to provide appropriate oversight over such far-flung enterprises. These holding companies had complicated pyramid-type structures.

C. EARLY PUBLIC, MUNICIPAL, AND RURAL POWER DEVELOPMENT

1. EARLY PUBLIC POWER

During the 1930s, President Franklin D. Roosevelt implemented a plan to build four hydroelectric power projects which were owned and operated by the federal government. In addition to power generation, controlling floods, promoting river transportation and supplying water to farms and rural communities were the primary purposes of these federal projects. By the end of 1941, public power contributed approximately 12 percent of the total utility generation, and federal power alone contributed almost 7 percent.[17]

During 1937, as a result of Roosevelt's efforts, the federal Power Marketing Administration (PMA) began to sell hydroelectric power. Primarily sold to electric utilities and government entities, hydroelectric power was sold wholesale from five federal PMAs.[18]

2. MUNICIPAL POWER

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[14]*Florida's Electric Utilities: A Reference Guide(Glossary of terms, statewide statistics and more)* 1994 defines rate base is defined as: The accumulated capital cost of facilities purchased or installed to serve the utility's customers and on which the utility is allowed to earn a return. The three major components of rate base are: intangible plant (fees); tangible plant (historical costs and physical facilities used by the utility to serve present and future customers); working capital (investment in materials and supplies and an allowance for working cash).

[15]These regulations were to protect consumers, but they were also to provide electric reliability and a fair rate of return to utilities.

[16]Energy Information Administration, *Annual Outlook for U.S. Electric Power* 1985, DOE/EIA-0474(85) (Washington, DC, August 1985) (emphasis supplied)

[17]Even during the Eisenhower administration's policy of "no new starts", federal power continued to grow as earlier projects came on line.

[18]Dams built by the Bureau of Reclamation and the Army Corps of Engineers continue to supply most of the hydroelectric power sales.

As private utilities began forming in 1882, municipal electric utilities were growing rapidly in numbers. During the decade of 1897 to 1907, between 60 and 120 new municipal systems were formed each year nationwide.[19] In Florida, the cities of Jacksonville and Ocala formed municipal electric utilities in 1896 and 1897, respectively, creating the first electric utilities in the state.[20]

The first usage of electricity was for street lighting. Since this was considered a community service, many early municipal electric utilities formed initially to deliver street lighting. Their service expanded over time to include businesses and household services.

3. EARLY RURAL POWER

An important aspect of the federal projects was to provide electricity and foster economic development in poor rural and sparsely populated regions in both the east and the west.

The Rural Electrification Act of 1936[21] established the Rural Electrification Administration (REA). In an effort to "electrify rural America," the Rural Electric Administration was formed to provide low interest funds and subsidies to rural electric cooperatives to construct electric facilities to service rural areas.

Electric service was lacking in rural areas because it was not profitable for investor owned utilities to extend long transmission and distribution lines into sparsely populated areas.

D. HISTORICAL EVENTS AND OTHER FEDERAL LEGISLATION THAT IMPACTED THE ELECTRIC INDUSTRY

1. HISTORICAL EVENTS

Operating for decades without competitive pressures, utilities were able to meet increasing demand at decreasing prices. This overall trend "continued until the late 1960s, when the electric utility industry saw decreasing. . . costs and rapid growth give way to increasing. . . costs and slower growth."[22] A number of events occurred that affected the industry.

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[19]Today there are more than 2,000 in the United States.

[20]Florida Power was established in 1899.

[21]May 20, 1936, ch 432, 49 Stat. 1363, 7 USCS §§ 901-914

[22]Energy Information Administration, *Annual Outlook for U.S. Electric Power 1985*, DOE/EIA-0474(85) (Washington, DC, August 1985)

On November 9, 1965, history's largest blackout occurred across the northeastern United States and Ontario, Canada. Thirty million people were without electricity for as long as 13 hours. In a letter to the chairman of the Federal Power Commission, President Lyndon Johnson wrote:

> Today's failure is a dramatic reminder of the importance of the uninterrupted flow of power to the health, safety, and well being of our citizens and the defense of our country.
>
> This failure should be immediately and carefully investigated in order to prevent a recurrence. . .
>
> A report is expected at the earliest possible moment as to the causes of the failure and the steps you recommend to be taken to prevent a recurrence.[23]

The regional reliability councils were formed in response to the 1965 Northeastern blackout. The first reliability council was formed in 1966, the Northeast Power Coordinating Council (NPCC). In June 1968, the National Electric Reliability Council was formed. It was later renamed the North America Electric Reliability Council, or NERC.

The NERC is an association of the regional reliability councils.[24] The NERC councils foster initiatives that promote the reliability of North America's electric power supply. The NERC works upon its own agenda as well as with all segments of the electric industry, and the consumers to develop and maintain a continuous reliable bulk electric system.

In 1973, the Organization of the Petroleum Exporting Countries' (OPEC) oil embargo was the first significant oil supply disruption. It created major price increases and a worldwide energy crisis. At the time, the U.S. reliance on imported oil had grown to the point of dependence, and the OPEC oil embargo announcement quickly caused the price of gasoline, boiler fuels, residual oil, and natural gas to rise. Utility oil prices dramatically increased. This had a significant affect on Florida since a substantial amount of electric generation was fueled by oil and gas.

Oil prices doubled again in mid-1973-74 as a result OPEC oil embargo.

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[23]Central Maine Power Company: *The Great Northeast Blackout of 1965*; www.cmpco.com/aboutCMP/powersystem/blackout.html

[24]Florida was a member of the Southeastern Electric Reliability Council; however, it became the Florida Reliability Coordinating Council (FRCC) in September 1996, making it tenth Reliability Region of NERC.

Further efforts by OPEC to restrict the production of oil coupled with the building international crisis in the middle east (the taking of U.S. hostages by Iran and the beginning of the Iran/Iraq war) caused oil prices to double again by 1979.

Also in 1979, another event that affected the electric industry was the accident at Three Mile Island, PA. This nuclear accident heightened concerns about the safety of nuclear power generation. This, in turn, resulted in additional costs for nuclear safety systems at existing nuclear power plants and thus, higher production cost for nuclear power.

Through the early 1980s, high inflation and increasing fuel costs resulted in a sluggish economy throughout the U.S., and federal fuel use restrictions were relaxed.

Finally while the recession of 1982 hurt electricity sales, it lowered the rate of overall inflation, resulting in lower interest rates and that lowered the rate of increase in other utility capital, operating, and maintenance costs. It was also in the early 1980s that the OPEC Cartel began to fall apart.

From approximately 1983 to 1988, "crude prices declined in both real and nominal terms, and petroleum use per capita rose slightly. After 1988, expansion of natural gas availability and environmental considerations . . .helped stabilize per capita oil use-especially oil used for industrial and electricity production."[25]

2. OTHER LEGISLATION

The passage of the Clean Air Act of 1970,[26] and its amendments in 1977, required utilities to reduce air and water pollutant emissions. This added substantially to the cost of generating electricity. Added environmental costs put upward pressure on the electric rates paid by consumers.

On October 1, 1977, through the Department of Energy Organization Act, the Federal Energy Regulatory Commission (FERC)[27] was created within the Department of Energy. In the process, the Federal Power Commission (FPC), established in 1935, was abolished, and the FERC acquired most of its regulatory responsibilities.

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[25]Energy Information Administration, *Annual Energy Review* (1997), DOE/EIA-0384(97). Washington, DC, July, 1998, Tables 1.5 AND 5.1.

[26]Dec. 31, 1970, P.L. 91-604, 84 Stat. 1676, 42 USCS §§ 1857a, 1857b, 1857b-1, 1857c-1857c-9, 1857d, et. seq.

[27]See later discussion on FERC.

The National Energy Act (NEA) reflected a national legislative goal to reduce the U.S. dependence on foreign oil. An important component of reducing energy dependence was the development of renewable and alternative energy and the efficient use of fossil fuels. One element of the NEA was the Public Utility Regulatory Policies Act of 1978 (PURPA).[28]

Among PURPA's purposes were the establishment of a special class of power generators, known as qualifying facilities (QFs),[29] and the requirement that utilities buy, at avoided costs,[30] all the electricity that QFs wished to sell.

The PURPA is broken into six titles. Each title sets forth procedures and requirements applicable to electric and natural gas utilities, state utility commissions, and certain federal regulatory agencies. Some of the major provisions of PURPA are summarized below:

Title I of PURPA was established to achieve the following three purposes:

- conservation of energy supplied by electric utilities,
- efficiency in the use of facilities and resources by those utilities, and equitable rates to electric customers.

In addition, Title I required each state utility regulatory commission to consider, for qualified individuals, adoption of lifeline rates that are below costs of service.

Title II requires state utility regulatory commissions to consider and determine the applicability of ratemaking and regulatory standards for major public utilities under their jurisdiction.

Further under Title II, the FERC was ordered: to allow interconnections, wheeling, and pooling arrangements among utilities; to establish rules requiring utilities to report any anticipated shortages affecting wholesale customers and to submit contingency plans for dealing with those shortages; and to develop rules encouraging cogeneration and small-power production.

In 1978, the natural gas prices increased under the Natural Gas Policy Act (NGPA, P.L. 95-621). In an effort to respond to rising oil and gas prices,

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[28]Nov. 9, 1978, P.L. 95-617, 15 USCS §§ 717f, 717x-717z, 3201 et seq.; 16 USCS §§ 791a nt., 796, 824 et seq., 2601 et seq.; 30 USCS §§ 1311 1312, 1314-1316; 42 USCS §§ 6801 et seq.; 43 USCS §§ 2001 et seq.

[29]At the time, it was largely overlooked by the industry, but the establishment of QFs later proved to be one of the major consequences of the Act.

[30]Avoided costs - The cost a utility would pay for generating capacity and energy had it built new plant or purchased that capacity and energy from another utility.

Congress enacted the Power Plant and Industrial Fuel Use Act of 1978 which limited the use of natural gas in electric generation.

The Omnibus Budget Reconciliation Act of 1981 (P.L. 97-35) reduced federal authority to issue oil and natural gas use prohibitions. Following, the decontrol of petroleum prices, worldwide oil surpluses in the early 1980s resulted in lower utility costs which provided some industry and consumer relief.

In 1987, Congress repealed the Power Plant and Industrial Fuel Use Act. Natural gas prices stabilized and then dropped. Coupled with significant improvements in natural gas fired gas turbine/combined cycle technology, the cost of electric generation went down.

In 1992, the Energy Policy Act (EPAct)[31] was passed The EPAct amended The Public Utility Regulatory Act (PURPA) and created exempt wholesale generators (EWGs). This new class of power generators would be exempt from the provisions of the Public Utilities Holding Company Act of 1935 (PUHCA). The EPAct also granted the FERC the authority to order and condition access by eligible parties to the interconnected transmission grid.

By the EPAct, Congress mandated wholesale competition in electricity, but it permitted the states to decide whether to allow retail competition.

In 1996, the FERC issued the rules for wholesale competition. (See later discussion on FERC ORDERS 888 AND 889: Open Transmission Access/ Wholesale Competition).

[31]Oct. 24 1992, P.L. 102-486, 42 USCS § 13201 NT.

III. FEDERAL ENERGY REGULATION: The Federal Energy Regulatory Commission

This section of the report addresses the federal level. The Federal Energy Regulatory Commission (FERC) has oversight of energy issues.

The FERC is an independent regulatory commission with oversight of America's natural gas industry, electric utilities, hydroelectric projects, and oil pipeline transportation systems. It also has oversight of the rates set by federal power marketing administrations, and certification, under PURPA, for small power production and cogeneration facilities.

A. CREATION

In 1977, the 1935 Federal Power Commission was abolished by Congress through the Department of Energy Organization Act, which also created the Federal Energy Regulatory Commission (FERC) within the Department of Energy.

B. GENERAL OVERVIEW

According to FERC's 1996 Annual Report, its primary legal authority comes from the Federal Power Act of 1935 (FPA), the Natural Gas Act of 1938 (NGA)[32], the Interstate Commerce Act of 1976 (ICA), the Natural Gas Policy Act of 1978 (NGPA)[33], the Public Utility Regulatory Policies Act of 1978 (PURPA), and Energy Policy Act of 1992 (EPAct).

The FERC oversees:

- the transportation of natural gas and oil by pipeline in interstate commerce
- the transmission and wholesale sales of electricity in interstate commerce
- the licensing and inspection of private, municipal, and state hydroelectric projects, and
- the oversight of related environmental matters.

[32]June 21, 1938, ch 556, 52 Stat. 821, 15 USCS §§ 717-717w

[33]Nov. 9, 1978, P.L. 95-621, 15 U.S.C. §§ 3301, 3301 nt., 3311 et seq.; 42 USCS §7255

C. SPECIFIC JURISDICTION

1. ELECTRIC POWER

The FERC has authority over: "wholesale electric rates and service standards, as well as the transmission of electricity in interstate commerce, under the FPA."[34] It also conducts examinations of utility coordination and pooling agreements. The FERC "uses its ratemaking authority to ensure that wholesale power rates and transmission rates charged by utilities are just and reasonable and not unduly discriminatory or preferential."[35]

The EPAct amended the Federal Power Act (FPA) to provide the FERC with additional authority:

> (1) to order the provision of transmission services upon request, and
>
> (2) to authorize certain types of wholesale power producers exempt from regulation by the Securities and Exchange Commission (SEC).[36]

Certain public utility corporate endeavors are also within FERC's regulatory oversight. These include the: "issuance of certain stock and debt securities, assumption of obligations and liabilities,. . .mergers, consolidations, and dispositions of jurisdictional public utility facilities."[37] As a continued monitoring of trusts activities, FERC also reviews "interlocking directorates[38] involving public utilities, electrical equipment suppliers, and entities authorized to underwrite public utility securities."[39]

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[34]Federal Energy Regulatory Commission: 1996 Annual Report: Commission Responsibilities (www.ferc.fed.us/public/anual96.htm)

[35]*Id.*

[36]*Id.*

[37]*Id.*

[38]*Black's Law Dictionary* defines interlocking directorate as a board of directors linked with that of another corporation by interlocking directors so that the businesses managed by them are to some degree under one control.

[39]Federal Energy Regulatory Commission:*1996 Annual Report*: Commission Responsibilities

Lastly in the area of electric power, the FERC examines federal power marketing rates and, under the Public Utility Regulatory Policy Act (PURPA), certifies small power producers and cogenerators as qualifying facilities (QFs).

2. NATURAL GAS

In regulating the nation's natural gas pipeline industry, the FERC's primary authority comes from the "NGA, the NGPA, the Outer Continental Shelf Lands Act (OCSLA), the Natural Gas Wellhead Decontrol Act of 1989 (NGWDA), and EPAct."[40]

The FERC uses the provisions of the Natural Gas Act of 1938 (NGA) to regulate "both the construction of pipeline facilities and the transportation of natural gas in interstate commerce."[41] As a prerequisite to companies providing services, and constructing and operating interstate pipeline facilities, the FERC must issue the companies certificates of public convenience and necessity.

The Natural Gas Policy of 1978 (NGPA) and the Outer Continental Shelf Land Act (OCSLA) also give FERC the authority to regulate the transportation of natural gas, but FERC "no longer regulates the price of natural gas at the wellhead."[42]

Finally, in the area of natural gas, FERC oversees for the U.S. "construction and operation of facilities needed by pipelines at the point of entry or exit to import or export natural gas."[43]

3. HYDROELECTRIC POWER

In addition to federal hydroelectric power regulation, FERC "regulates nonfederal hydroelectric power projects that affect navigable waters, occupy U.S. public lands, use water or waterpower at a government dam, or affect the interests of interstate commerce. . ."[44]

4. OIL PIPELINES

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[40]Federal Energy Regulatory Commission: *1996 Annual Report*: Natural Gas

[41]*Id.*

[42]*Id.*

[43]*Id.*

[44]Federal Energy Regulatory Commission: 1996 Annual Report: Hydroelectric Power

The FERC regulates oil pipeline companies engaged in interstate transportation, and rates and practices under the Interstate Commerce Act (ICA) and Energy Policy Act (EPAct). "The objective is to establish just and reasonable rates to encourage maximum use of oil pipelines---a relatively inexpensive means of bringing oil to market---while protecting shippers and consumers against unjustified costs."[45]

The FERC lacks regulatory oversight over the construction of oil pipelines and, the supply or price of oil or oil products. It does, however, attempts to assure shippers equal access to pipeline transportation, equal service conditions on a pipeline, and reasonable rates for moving petroleum and petroleum products by pipeline.

D. FERC ORDERS 888 AND 889: Open Transmission Access/Wholesale Competition

In 1996, the FERC issued Orders 888 and 889, which established rules governing a more open wholesale market.[46]

Order No. 888 is entitled *Promoting Wholesale Competition Through Open Access Nondiscriminatory Transmission Services by Public Utilities; Recovery of Stranded Costs by Public Utilities and Transmitting Utilities*.

Order 888 requires all public utilities that own, control, or operate transmission facilities to provide nondiscriminatory open access transmission services at a fair and reasonable price through the functional unbundling of their wholesale power services.

Functional unbundling entails requiring transmission owning utilities to:

> (1) take transmission services under the same tariff rates, terms, and conditions as do others; (2) state separate rates for wholesale generation, transmission, and ancillary services; and (3) rely on the same electronic information network that its transmission customers rely on to obtain information about its transmission system when buying or selling power.[47]

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[45]Federal Energy Regulatory Commission: 1996 Annual Report: Oil Pipelines

[46]Florida Public Service Commission: *States' Electric Restructuring Activities: Update* (August 1999)

[47]*Id.*

Order 888 also provides for a stranded cost[48] mechanism.

The FERC has determined that the treatment of stranded costs is essential to ensure a fair and efficient transition to a market-oriented electricity industry. The FERC has put stranded costs estimates at "$20 billion to $300 billion, most of which is now the subject of state regulation of retail rates."[49] As a result of Order 888, the FERC has further determined other benefits to include new market mechanisms and technological innovations.

Order No. 889 is entitled *Open Access Same Time Information Systems and Standards of Conduct (OASIS)*. Order 889 requires all public utilities to develop or participate in an Internet-based bulletin board system. The system will furnish information about the transportation capacity that is available on transmission lines.

In Order No. 889, the FERC instituted standards of conduct for public utilities. These standards are intended to guard against transmission owners and their affiliates, having an unfair competitive advantage by using information about electric power transmission systems. Public utilities are required by Order 889 to:

- Obtain information about their transmission system for their own wholesale power transactions in the same way their competitors do, via an OASIS on the Internet; and

- Completely separate their functions of wholesale power marketing and transmission operation.[50]

Additionally, Order 889 establishes the type, frequency, and format for the transmission-related information on OASIS. The FERC projects that "OASIS and the standards of conduct will fundamentally change the way business is conducted in bulk power markets and will continue to evolve as the competitive market matures."[51]

Increasingly, the FERC relies on market forces to discipline the prices of wholesale electricity. The FERC has stated that "with the implementation of these initiatives, the Nation will see the largest transformation in the electric power industry since the

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[48]Stranded costs are those costs that utilities prudently incur to serve customers, under a regulated environment, and costs that could go unrecovered if customers switch to other suppliers.

[49]Federal Energy Regulatory Commission: 1996 Annual Report: Electric Power Overview

[50]Id.

[51]Id.

passage of the FPA in 1935."[52] The FERC estimates that the savings to retail customers are between $3.8 and $5.4 billion each year.

Because the provisions included in Orders 888 and 889 were intended to address all transmission-owning systems, the FERC required that non-FERC regulated utilities (e.g. municipal electric utilities and rural electric cooperatives) adopt reciprocating and conforming transmission access policies before securing the benefits obtained under a FERC regulated public utility tariff.

[52] Id.

E. OTHER CONCEPTS RELATED TO OPEN ACCESS TRANSMISSION

1. INDEPENDENT SYSTEM OPERATORS (ISOs)

An ISO acts as a neutral operator, responsible for scheduling and controlling energy flow on the electric transmission system. The ISO performs its function by coordinating transactions among generation providers, customers, and the transmission owners, in order to ensure that transmission service is provided without adverse reliability affects on the grid.

The FERC has not yet ordered vertically integrated providers to relinquish ownership of their transmission component. However, the FERC has established structured criteria for ISO creation in the event the divesture is voluntarily undertaken. The developed ISO is then subject to FERC's approval. The maintenance and governance of an ISO must be independent of any individual utility or market participant and must ensure fair access to the transmission system.

2. REGIONAL TRANSMISSION GROUPS

The formation of regional transmission groups (RTGs), sometimes called Regional Transmission Organizations (RTOs), are subject to FERC's approval. These entities are formed to provide non-discriminatory transmission services on a regional level that may encompass more than one state or entire regions of the country.

The FERC views RTGs as one way:"[t]o capitalize on the significant technical resources of the electric industry"[53] by using them to help implement transmission services and resolve transmission issues on a regional basis and "by providing coordinated regional planning of the transmission system to assure that system capabilities meet system demands. . ."[54]

On December 15, 1999, the FERC approved a Final Rule expressing its expectation that transmission owners will "voluntarily" join regional transmission organizations. However, the FERC has made clear that this approach does not preclude it from taking action under the Federal Power Act (FPA) to require participation in the RTO as a remedy for undue discrimination or the exercise of market power.

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[53]Federal Energy Regulatory Commission: 1996 Annual Report: Electric Power Overview

[54]Id.

3. POWER MARKETERS

Power marketers are "public utilities under Part II of the FPA that buy and sell power but generally own neither generation nor transmission facilities. Some power marketers are affiliated with public utilities."[55] Additionally, these entities resell power across state boundaries and as a result must submit a filing to FERC.

4. EXEMPT WHOLESALE GENERATORS

Exempt Wholesale Generators (EWG) are a new class of power producers which were created under the Energy Power Act of 1992, section 32. Subject to a FERC determination of exempt status, EWGs are exempt from the Public Utility Holding Company Act (PUHCA) and can sell power to other power producers in the wholesale market. EWGs may also sell generation directly to retail customers in those states which have adopted retail competition.

5. QUALIFYING FACILITIES

Under Public Utility Regulatory Act (PURPA), cogeneration, small power production, and renewable energy sources (hydropower, solar, and wind) were advocated. The PURPA required vertically-integrated utilities to purchase energy from, or sell energy to, PURPA qualified cogenerators and small power producers. As a result, independent power producers (IPPs), sometimes called non-utility generators (NUGs), increased in number.[56]

However as a prerequisite, these IPPs have to file a notice with FERC stating that their facility meets certain standards for certification as a qualifying facility (QF), or they have to apply to FERC for an order granting QF certification.

As a certified QF, these producers are "exempt in whole or in part from federal and state utility regulation"[57] and are allowed to sell power to IOUs at avoided costs.

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[55]Federal Energy Regulatory Commission: 1996 Annual Report: Electric Power Overview

[56]The terms IPP (independent power producer) and NUG (non-utility generator) are terms of art for non-regulated generation providers

[57]Id.

6. MARKET-BASED RATES

Sales of electricity for resale, (sales between public utilities or sales by a public utility to a municipality or a cooperative), and sales of transmission service, comprise a little over a quarter of the total U.S. investor-owned electric utility sales. Retail electric sales (sales to end use customers such as homeowners and businesses) comprise the remaining three quarters of utility sales. Retail electric sales are generally regulated by state public utility commissions.

Normally, for public utilities under FERC's jurisdiction, the utilities' rate filings are evaluated on a cost-of-service basis for the resale of electricity. However, based on stipulated criteria, some cases are evaluated on market-based rates. In order to receive FERC approval for market based rates, the selling utility must demonstrate that it does not exercise excessive market power within a region. Typically market based rates are "negotiated by the public utility and its wholesale customer."[58]

The FERC in Order 888:

> codified its determination that there is no generation dominance in new generating capacity but that intervenors could, nonetheless, raise generation dominance issues related to new capacity. . .also. . .for public utilities to obtain market-based rates for existing generation, it would continue to require applicants to show, on a case-by-case basis, that there is no generation dominance in existing capacity. . . further . . . that it would continue to look at whether an applicant and its affiliates could erect other barriers to entry and whether there could be problems due to affiliate abuse or reciprocal dealing.[59]

7. FUEL PRICES

Section 206 of the Federal Power Act (FPA) grants liberal authority to FERC to modify unjust and unreasonable utility rates. The FERC "monitors electric utility fuel procurement practices under Section 208 of PURPA to ensure the reasonableness of prices passed through to ratepayers under wholesale fuel

[58]Federal Regulatory Commission: 1996 Annual Report: Electric Power Overview

[59]*Id.*

adjustment clauses."[60] The Public Utility Regulatory Polity Act (PURPA) also provides the FERC with the authority to monitor the "types of charges passed through the wholesale fuel clause."[61]

8. OTHER RULEMAKING

Other FERC electric rulemaking initiatives being considered by FERC relate to transmission service availability on a capacity reservation basis, and to the FERC's merger policy.

F. OVERVIEW OF FEDERAL REQUIREMENTS

The trend towards separating the generation component from vertically operating utilities[62] is being driven by three major influences.

- First the passage of the 1978 Public Utilities Policy Act (PURPA) required public utilities to purchase any power produced by certified cogenerators at the utility's full avoided costs. Utilities were required to pay cogenerators an amount equal to what it would have cost the utility to construct and generate the same amount of electricity.

- One result of PURPA, was the coupling by turbine manufacturers of "jet engine technology with steam driven recovery boilers to produce combined cycle power plants. These low cost units are modular in size and can be permitted relatively easily. Moreover, these plants are extremely fuel efficient and environmentally clean."[63] This significant modernization in electric generating technology came into the market at the same time natural gas prices were extremely low. The combination of low fuel cost and high fuel efficiency resulted in an economic incentive by large customers (self-service generation), independent power producers (EWGs, merchant plants) to by-pass the local utility.

- The FERC's issuance of Order 888 required all public utilities to provide open access to their transmission lines to transmit electricity at wholesale. The open access initiatives of Order 888 resulted in power marketers, independent power producers, and utilities having the ability to buy and sell in both regional and national markets.

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[60] *Id.*

[61] Federal Regulatory Commission: 1996 Annual Report: Electric Power Overview

[62] A utility which engages in generation, transmission, and distribution operations

[63] Electrical Restructuring in Florida: Presentation to the Committee on Utilities and Communications (1997)

G. SUMMARY OF HOW FEDERAL REQUIREMENTS HAVE AFFECTED FLORIDA

While FERC has no jurisdiction over retail sales of electricity, some aspects of Order 888 appear counter to the Federal Power Act (FPA), and considerably blur the jurisdictional separation between federal and state regulation of wholesale and retail sales.

On April 11, 1997, the Florida PSC, the National Association of Regulatory Commissioners (NARC), and the state commissions of New York, Arkansas, Idaho, North Carolina, Wyoming, Illinois, and Washington filed a petition in the United States Court of Appeals challenging elements of Order 888.[64]

Prior to Order 888, the state was operating under the provisions of section 212(g) of the Federal Power Act (FPA) which states:

> (g) Prohibition On Orders Inconsistent With Retail Marketing Areas. --No order may be issued under this Act which is inconsistent with any state law which governs the retail marketing areas of electric utilities.

It appears that the intent of the section is to preserve the distinction between state and federal jurisdiction. Under the FPA, the FERC regulates interstate commerce wholesale transactions and transmission. The PSC regulates retail generation, transmission, and distribution services to end-use customers pursuant to the Florida Statutes.

At issue, is FERC's assertion of jurisdiction over the regulation of unbundled retail transmission. If states provide for open retail access, the FERC appears to usurp state authority over the unbundled transmission component.

Additionally, the FERC contends it will provide deference to states for stranded costs recovery and the transition from bundled to unbundled rates; however, state regulators are unsure of the weight the FERC will give to their judgment of stranded assets. The PSC writes in its 1999 restructuring update: "In most cases, the states have approved both the construction and cost recovery for these facilities under bundled rate structures." As a result, in many cases, states already have in place methods for assessing recovery and transition costs.

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[64]See Transmission Access Policy Study Group v. Federal Energy Regulatory Commission (U.S. Court of Appeals for the D.C. Circuit).

Another issue of concern identified by the PSC is FERC's Notice of Proposed Rulemaking (Docket No. RM99-2-000) issued on May 13, 1999. The FERC has proposed "to amend its regulations under the Federal Power Act (FPA) to facilitate the formation of Regional Transmission Organizations (RTOs)"[65] or RTGs. Included in FERC's notice are "certain characteristics and functions for a transmission entity to qualify as a RTO."[66] For all users of the nation's transmission system, the FERC contends such an organization would ensure fair and nondiscriminatory access to transmission and ancillary services.

An RTO would coordinate transmission planning, expansion, and operation duties that are currently performed by the transmission owners on a regional basis. Owners would be compensated "for their existing transmission investments based on the usage of their transmission lines."[67]

Whether the FERC can mandate the formation of RTOs as a one size fits all solution is questioned by the PSC, other state regulators, and state energy officials. It is the PSC's belief that FERC "must proceed on a case-by-case basis to address specific transmission problems, and work with states to develop regional approaches that achieve regional market consensus. . ."[68]

Throughout 1999, the PSC has held workshops to examine Florida-unique transmission concerns. From those workshops, four proposals were discussed regarding regional transmission. The following are summaries of those proposals which are more fully outlined in PSC's 1999 restructuring update.

1. INDEPENDENT TRANSMISSION ADMINISTRATOR (ITA) PROPOSAL -- submitted by Constellation Power Development, Inc.; Duke Energy New Smyrna Beach Power Company LTD., L.L.P.; Florida Municipal Power Agency; Orlando Utilities Commission; Reliant Energy, Inc.; Seminole Electric Cooperative, Inc.;Tampa Electric Company; and U.S. Generating Company.

This proposal provides that the ITA would oversee and administer the planning and operation of peninsular Florida transmission grid facilities. The ITA would administer an Open Access Transmission Tariff for Florida that would provide fair, equitable, and non-discriminatory access and use by all eligible users. Its duties would merge with the Florida Reliability Coordinating Council (FRCC) and the FRCC's existing infrastructure would be used under the ITA's governance.

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[65]Florida Public Service Commission: *States' Electric Restructuring Activities: Update* (August 1999)

[66]*Id.*

[67]*Id.*

[68]*Id.*

The ITA would not own or profit from any generation, transmission, or distribution facilities nor engage in any electricity or capacity transactions. It would be governed by a 15 member board of directors.

2. REGIONAL TRANSMISSION SOLUTION (RTS) PROPOSAL -- submitted by Florida Power & Light Co. and Florida Power Corp.

This proposal does not mirror a RTO's formation criteria and as such would not require the FERC's approval. The PSC would have the independent oversight and governance over transmission planning and operations, disputes involving need, new transmission facilities, or new interconnection, and it would have binding authority on all parties. A newly created Security Coordinator Representative would handle monitoring transmission services and regular unplanned audits. The FRCC would remain a reliability-only organization, with a currently undefined voting structure.

Also proposed are discounted transmission rates to mitigate "pancaked"[69] or added transmission rates; discounted rates would apply to new transactions that occur on or after October 1, 1999.

3. PUBLIC NOT-FOR-PROFIT TRANSCO PROPOSALS -- submitted separately by Jacksonville Electric Authority; Gainesville Regional Utilities (and supported by the City of Tallahassee)

No details of the formation of a Transco were provided by the parities. Ownership and operation of the transmission facilities would be by a not-for-profit public entity.

4. INDEPENDENT SCHEDULING ADMINISTRATOR (ISA) -- submitted by Florida Power Corporation (FPC)

The ISA would provide independent oversight over the transmission facilities of FPC and other participants in the ISA. This proposal combines features of the Regional Transmission Solution and the Independent Transmission Administrator proposals. The ISA would be a non-profit corporation and would be controlled by an independent Board of Directors. Members of the Board would have no financial or other in interest in the ISA transmission owners, users, or participants

[69]Pancaking involves paying two or more utilities for the use of transmission when generation must travel through each system to reach the load to be served.

IV. STATE OF FLORIDA

This section of the report addresses the geographical structure of the state with a brief electrical growth history.

A. GEOGRAPHICAL STRUCTURE

Florida is a peninsula bordered by Alabama and Georgia on the north, the Atlantic Ocean on the east, the gulf of Mexico and Alabama on the west, and the Straits of Florida on the south.

Due to its unique geography, Florida's bulk transmission grid has interconnections only to the Southern Company along the state's northern border with Georgia.

The state has limited native fuels. As a result, fuels must be brought into the state by various transport systems. Natural gas flows into the state primarily through one major pipeline. Coal is delivered by train or barge, and oil is delivered by tanker. Nuclear fuel is delivered by truck and train.

B. BRIEF HISTORY OF ELECTRICAL GROWTH

Many early utility generating units in Florida were fueled primarily by oil, and it was the oil embargo of the 1970s that forced utilities to turn more to domestic fuels such as coal, nuclear, and natural gas. During the embargo, the state's "utilities were especially hard hit. As prices soared at the gas pump, so did customers' electric bills."[70]

Forced outages worsened the pull on the weak tie lines between peninsular Florida and the Southern Company causing protective switching relays to open, "thereby aggravating the problem and increasing the magnitude of customer blackouts."[71]

To reduce reliability concerns and the state's dependence on oil-fired generation, two utilities constructed two 500 kV transmission lines which interconnected with the Southern Company. These transmission "lines increased the maximum transmission import capability into peninsular Florida to its present level of 3,600MW"[72] with a maximum export limit of 2,400 MW.

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[70]The Florida Public Service Commission: *States' Electric Restructuring Activities: Update* (August 1999)

[71]*Id.*

[72]Id.

Currently, oil-fired generation provides approximately 19 percent of Florida's electricity. Coal generation provides approximately 40 percent of Florida's electric energy and is projected to remain relatively stable over the next 10 years[73]. Approximately 16 percent of Florida electricity is provided by nuclear generating units. There are currently no plans to build additional nuclear generating units in Florida. Florida's utilities project an increase in natural gas-fired generation over the next ten years, from approximately 16 percent to 36 percent of all energy generated.[74] Hydroelectric generating units provide a small contribution to Florida's generating mix. Florida's utilities also rely on purchases from out-of-state utilities for approximately 3 percent of the state's energy needs while purchases from non-utility generators provide an additional 6 percent of Florida's energy needs.[75]

Although a significant increase in maximum capacity was created with the construction of the two 500 kv transmission lines, the 3,600 MW import limit represents only 11 percent of total peak demand in the state. Consequently, most of Florida's demand for electricity must be met by electric generators built within the state and delivered in a reliable manner on the state's electric transmission grid. To serve these needs, Florida utilities have built a highly interconnected transmission grid within the state which links the utilities generation resources to electric "load"[76].

[73]Dips to 36% in 2008.

[74]The projected increase is due primarily to planned natural gas-fired combined cycle and combustion turbine additions.

[75]FRCC 1999 Regional Load and Resource Plan (issued July 1999)

[76]*Florida's Electric Utilities: A Reference Guide (Glossary of terms, statewide statistics and more)* 1994 defines load as the amount of electric power delivered or required at any specified point or points on a system as a result of power usage by customers. It also may refer to the amount required by a customer or a piece of equipment.

V. STATE ENERGY REGULATOR: Florida Public Service Commission

This section of the report addresses the state level. The Florida Public Service Commission (PSC) has jurisdiction to regulate the state's electric utilities.

A. CREATION

A leading spokesman for the small farmers against the railroads was Wilkinson Call, a colorful Populist who pushed the State of Florida to establish a Florida Railroad Commission.[77] In 1887, the Florida Legislature created the Railroad Commission of the State of Florida. "The Commission was created for the purpose of protecting the general public from unreasonable and arbitrary charges that might be made by railroads and other transportation companies which may be classified as monopolies."[78] The commission originally consisted of three members.

In 1947, the name of the Railroad Commission of the State of Florida was changed to the Florida Railroad and Public Utilities Commission[79]. In 1963, the Florida Railroad and Public Utilities Commission was changed to the Florida Public Utilities Commission.[80] Finally, Senate Bill 9 was codified in chapter 65-52, Laws of Florida, amending section 350.011, Florida Statutes, and renaming the Florida Railroad and Public Utilities Commission to the Florida Public Service Commission (FPSC).

Originally, the commission members were elected. However, in 1978, the Legislature passed Senate Bill 7-D, chapter 78-426, Laws of Florida. This bill changed the commission to a five-member appointed body and created the, nine member, Florida Public Service Commission Nominating Council.[81]

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[77]New Waves of Change: The New Florida: 1876-1919 - The Bourbon Majority (www.floridahistory.org./history/newwave.htm)

[78]Louise Olsen v. Edwin E. Simpson, 39 So.2d 801, Supreme Court of Florida, Division A. March 18, 1949. Rehearing Denied April 25, 1949.

[79]1947, c. 24095, L.O. F.

[80]1963, 63-279, L.O.F.

[81]The bill provided that:

> . . .Three members, including one member of the House of Representatives, shall be appointed by the Speaker of the House; three members, including one member of the Senate, shall be appointed by the President of the Senate; and three members shall be selected and appointed by a majority vote of the other six members of the council. All terms shall be for 4 years, except those members of the House and Senate, who shall serve 2-year terms concurrent with the 2-year elected terms of House members. Vacancies on the council shall be filled for the unexpired portion of the term in the same manner as original appointments to the council.

Pursuant to s. 350.001, Florida Statutes, the PSC "has been and shall continue to be an arm of the legislative branch of government."

Pursuant to s. 1, Art. V of the State Constitution:

> . . .Commissions established by law, or administrative officers or bodies may be granted quasi-judicial power in matters connected with the functions of their offices.

As a quasi-judicial[82] commission that determines issues of substantial interest, the PSC is subject to the provisions of chapter 120, Florida Statutes, the Administrative Procedures Act (APA). Depending on the issue involved, decisions rendered by the PSC are subject to direct appeal to either the district courts of appeal or to the Florida Supreme Court.

B. GENERAL OVERVIEW

The mission of the PSC is:

> [t]o provide a regulatory environment that facilitates the efficient provision of safe and reliable utility services at fair prices.[83]

During the years 1911-1959, the PSC received legislatively conferred duties in the areas of telephone and telegraph, motor carrier transportation, investor owned electric, gas, and water and wastewater.

Regulation of electric and gas utilities by the PSC was first codified in 1951.[84]

The PSC's jurisdiction over electric utilities is governed by chapter 366, Florida Statutes. Pursuant to s. 366.04, Florida Statutes, the PSC fully regulates five

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Additionally, s. 350.001, F.S., provides that: It is the desire of the Legislature that the Governor participate in the appointment process of commissioners to the Public Service Commission. The Legislature accordingly delegates to the Governor a limited authority with respect to the Public Service Commission by authorizing him or her to participate in the selection of members only from the list provided by the Florida Public Service Commission Nominating Council in the manner prescribed by s. 350.031, Florida Statutes.

[82]Black's Law Dictionary defines quasi judicial as a term applied to the action, discretion, etc., of public administrative officers or bodies, who are required to investigate facts, or ascertain the existence of facts, hold hearings, and draw conclusions from them, as a basis for their official action, and to exercise discretion of a judicial nature.

[83]Florida Public Service Commission: Regulating Florida's Investor-Owned Utilities (Our Mission) www2.scri.net/psc/

[84]The 1951 act provided the basic framework for the PSC regulation of the rates to be charged for the retail sales of electricity by investor-owned utilities in operation today.

investor-owned utilities,[85](IOUs) with "limited rate structure"[86] jurisdiction over 18 rural electric cooperatives and 33 municipally-owned electric utilities. The PSC is charged with full regulation of all electric utilities "in the areas of public safety, territorial boundaries, major power plant and transmission line need determinations, conservation, cogeneration, and power supply planning."[87]

Seventy-seven percent of the total electricity supplied to retail end-users is provided by the IOUs. Municipally-owned utilities provide sixteen percent, and the rural cooperatives contribute the remaining seven percent of retail sales to homes and businesses.

Many of the electric utilities that supply retail energy services to homes and businesses do not produce the electricity that they sell. For these small utilities and cooperatives, their generation capacity is purchased through wholesale agreements with other utilities. These transactions also include purchasing transmission to carry the power to the load centers that serve the customers.

These wholesale purchases may be accomplished through partial[88] or full[89] requirement agreements or through an interchange[90] purchase. These types of wholesale sales by IOUs to the municipalities and co-ops which include rates, terms, and conditions are governed by FERC. However, the PSC has historically encouraged generating utilities to pursue cost-effective purchased power alternatives. The revenues generated for the selling utility and the savings realized by the purchasing utility from these wholesale transactions flow back to the utility's retail customers through a cost recovery clause, resulting in reduced electric bills.[91]

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[85]Florida Power & Light Co. (FP&L), Florida Power Corp. (FPC), Florida Public Utilities Co. (FPC), Gulf Power Co., Tampa Electric Co. (TECO)

[86]According to the PSC, the limited rate structure over municipal and co-op systems involves the rates charged and revenues collected by them and the fair division among the residential, commercial, and industrial customer classes. The PSC does not determine the total amount of revenues to be collected by municipal or rural electric cooperatives, but it is responsible for reviewing the fairness by which the monies are collected from the various customer classes

[87]Florida Public Service Commission: *States' Electric Restructuring Activities: Update* (August 1999)

[88]For all, except self-generation capacity, the remainder of the customer load requirement is purchased on the wholesale market.

[89]All generation capacity is purchased on the wholesale market to serve the entire customer load.

[90]In the interchange market, utilities which would otherwise own and operate all their own generation may find it economical to purchase capacity and energy from generating units owned by other utilities. Purchases in the interchange market can take place on an hour-by-hour basis, on a short-term basis up to a year, or on a long-term basis for many years. The price, terms, and conditions associated with interchange purchases are either negotiated by the purchasing and selling utilities or determined by a formula tariff approved by the FERC. (Florida Public Service Commission: *States' Electric Restructuring Activities: Update* (August, 1999))

[91]Florida Public Service Commission: States *Electric Restructuring Activities: Update* (August 1999)

The regulation costs of public utilities within the PSC's jurisdiction is initially borne by the utilities. These regulated utilities are assessed fees based on a percentage of their annual gross operating revenues to support the cost of regulation.[92] Specified by statute, these fees are deposited into the PSC's Regulatory Trust Fund and the General Revenue Fund.

These fees are considered a part of the utilities' operating and maintenance (O&M) expenses, and as such, utilities are entitled to pass the costs of regulation on to their customers. As a result, the utilities are regulated at no costs to themselves. However, since these costs are spread throughout a broad customer base, the economic impact on any one customer is negligible.

Pursuant to section 350.113, Florida Statutes, the PSC is authorized to collect this regulatory assessment fee (RAF)[93] from the electric utilities. The RAF funds the Regulatory Trust Fund which is the sole basis for funding the PSC's budget. The maximum rate chargeable is .00125 (one-eighth of 1 percent) for investor-owned utilities (IOUs) and .00015625 (one sixty-fourth of 1 percent) for municipal electric utilities and rural electric cooperatives. At the current time, IOUs are being assessed at a rate of .00072 (approximately one-fourteenth of 1 percent), prior to January 1, 1999, the assessment rate was .000833 (one-twelfth of 1 percent). Municipal electric utilities and electric cooperatives are being assessed at the maximum rate. The current regulatory assessment fee rates in effect are specified in Rule 25-6.0131, Florida Administrative Code.

In 1963, the Legislature gave the PSC the authority to supervise the issuance and sale of securities by public utilities.

C. SPECIFIC JURISDICTION

1. SETTING RETAIL RATES

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[92]While electric cooperatives and municipal electric utilities are not included in the definition of public utility, the PSC does exercise jurisdiction over them for certain matters, and these entities are also assessed a regulatory fee to cover the cost of their limited regulation.

[93]The following represents the total revenues reported by the electric utilities and the total regulatory assessment fees paid for the fiscal years ended June 30, 1998, and June 30, 1999.

	1998	1999
Total Revenues	$12,945,818,995	$13,256,033,187
Total RAF	$8,739,981	$8,483,401
RAF as % of Revenues	.068%	.064%

Rate regulation in Florida has historically been cost based. Utilities are allowed to charge rates which recover the actual cost of producing and delivering electricity plus a fair return on investment. The PSC has established numerous procedures to ensure that electric rates are fair.

The ratemaking and rate review methods currently in use by the PSC include:

- A full revenue requirements rate case - all costs and expenses are utility justified, and recurring operating expenses and prudent expenses are included in the net operating income. "A fair rate of return (or profit) on investment is determined based on prevailing market conditions."

- Monthly surveillance reports - filed with the PSC monthly, by each investor-owned utility, showing "current and year to date accounting and financial data." This information is used "to ensure that the rates being charged remain reasonable."

- Recovery clauses[94] - Annual evidentiary hearings are conducted by the PSC to consider these pass through charges. Currently, there are four separate cost recovery clauses available to utilities. These include

    - Fuel and Purchase Power
    - Purchased Capacity
    - Environmental
    - Energy Conservation[95]

2. GRID RELIABILITY

a. POWER SYSTEM RELIABILITY COMPONENTS

Each of the three component of a vertically-integrated utility, generation, transmission, and distribution, "has its own independent measure of reliability."[96] In terms of system-wide reliability, it is a measure of the ability of a power system to transfer power from generation sources to load centers, not only in the amounts desired, but also within acceptable degrees of continuity and quality.

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[94]This pertains only to investor-owned utilities.

[95]Florida Public Service Commission: Electric Restructuring Activities: Update (August 1999)

[96]Institute of Electrical and Electronic Engineers, Inc. (IEEE) *Spectrum: What is Power System Reliability* June 1999 Vol. 36 Number 6

1. Generation reliability is based mainly on installed capacity measured against expected demand. To plan for the future, utilities have used an analysis of loss of load expectation (LOLE) which "provides a forecast of the capacity required to meet demand with a failure to do so no greater than a target value, nominally one day in every 10 years."[97]

   Traditionally, this approach has yielded a reserve capacity on the order of 15-25 percent, allowing for both planned (maintenance) and forced (failures) outages and variations in normal weather patterns.

2. Transmission reliability is determined or measured deterministically. Generally, sufficient transmission is planned to allow for the loss of any single system element without subsequent loss of any other element, or of any demand, while maintaining the remaining system elements within their load-carrying capacity. The potential loss of more than one element does not, however, imply a need for additional lines or equipment. Rather, any loss can be handled by operational means and special protection schemes.

   A further requirement in transmission reliability is that the system must maintain stability. Under a variety of demand scenarios, "it is assumed that the system could break up but that it must do so "gracefully" into separate, independently viable islands."[98]

3. Distribution reliability is viewed by Electrical and Electronics Engineers, Inc. as a "post facto" or "after the fact" measure. Distribution companies monitor reliability by maintaining performance records of failures and their duration. From this data, reliability indices of actual performance are developed.

The Florida Legislature has granted the PSC significant authority to address reliability issues. Beginning in the early 1970s, the Legislature enacted broad sweeping reforms which addressed the need for effective utility planning of the generation and transmission facilities necessary to maintain an adequate, reliable, and affordable supply of electricity in Florida. These initiatives are discussed below in letters b-c:

b. TEN-YEAR SITE PLANS

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[97] *Id.*

[98] Id.

In 1973, the Legislature enacted s. 186.801, Florida Statutes, which required Ten-Year Site Plans. Initially, these plans were submitted to the Department of Community Affairs, Division of Resource Planning and Management, but during the 1995 legislative session, the administration of the Ten-Year Site Plans was turned over to the PSC.

The PSC now has the lead role in determining the suitability of plans by soliciting and compiling the review comments of other agencies, conducting public workshops to gather the views and opinions of the public, and performing an internal analysis to assess the need for power.[99] Within the statutory allotment of nine months after receipt of a utility's Ten-Year Site Plan, the PSC must provide a report of all its findings to the Department of Environmental Protection (DEP) for its consideration of any subsequent electrical power plant cite certification proceedings.

Procedurally, the utilities' Ten-Year Site Plans are filed by April 1, of each year. An aggregation of the plans, to provide a statewide and peninsular-wide perspective, is performed by the Florida Reliability Coordinating Council (FRCC) and is usually completed by July 1 each year. These plans are provided to the DEP, the Department of Community Affairs, the water management districts and other local, state, and federal agencies for their review and comments. The PSC also provides copies of the plans to interested members of the public. Public workshops are then held to solicit comments on the plans.

Finally, the PSC analyzes the plans, compiles the agency and public comments, and prepares a report which is submitted to DEP for consideration in prospective power plant siting proceedings.

c. TERRITORIAL AGREEMENTS

Pursuant to s. 366.04, Florida Statutes, it is within the jurisdiction of the PSC to "approve territorial agreements between and among rural electric cooperatives, municipal electric utilities, and other electric utilities under its jurisdiction"[100] and to resolve territorial disputes.

The 1974 Legislature added "[t]he first specific statutory reference to territorial agreements between electric utilities. . . as part of an act commonly known as

[99]This authority, however, is limited in regard to utilities' Ten Year Site Plans. The PSC may only designate them as suitable or unsuitable after review. Further, the utilities are free to change their plans at any time for any reason.

[100]*Drawing the Lines: Statewide Territorial Boundaries for Public Utilities in Florida* Richard C. Bellack and Martha Carter Brown

the Grid Bill."[101] The thrust of the Grid Bill was to give the PSC "expanded authority over the planning, development, and coordination of electric facilities throughout the state."[102]

Although prior to 1974, the PSC lacked any jurisdictional authority over municipal utilities or rural electric cooperatives, such authority was granted in order to achieve the purposes of the Grid Bill.

The Grid Bill provides for the establishment and maintenance of a coordinated energy grid for the State; and established utility service territories which have been viewed as an essential part of a coordinated energy grid. "Thus, since its passage in 1974, the Grid Bill has become the focus of the Commission's regulatory authority over retail service territories of electric utilities in the State."[103]

There are elements of the Grid Bill which also affect electric utility reliability. They are as follows:

- Sections 366.04(2)(c) and 366.04(5), Florida Statutes:
  For operational and emergency purposes, the PSC is granted jurisdiction to require electric utility conservation and reliability within a coordinated grid. The PSC's powers include the planning, development, and maintenance of Florida's grid to assure an adequate and reliable energy source without any uneconomic duplication of generation, transmission, or distribution facilities.

- Section 366.05(7), Florida Statutes:
  The PSC can require reports from all electric utilities to assure the development of an adequate and reliable energy grid.

- Section 366.05(8), Florida Statutes:
  If the PSC determines that inadequacies exist with respect to the energy grid, it has the power, after proceedings as provided by law, to require installation or repair of necessary facilities, with the costs to be distributed in proportion to the benefits received, and to ensure compliance. This subsection does not supersede or control any provision of the Florida Electrical Power Plant Siting Act, ss. 403.501-403.518, Florida Statutes.

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[101] *Drawing the Lines: Statewide Territorial Boundaries for Public Utilities in Florida* Richard C. Bellack and Martha Carter Brown (The amendments were part of a package that granted the PSC jurisdiction over municipal utilities and rural electric cooperatives for certain specific purposes.)

[102] See ss. 366.04(2)(c), 364 .05(7)-(8), Florida Statutes (1989).

[103] *Id.*

- Section 366.05(1), Florida Statutes:
  With exceptions to prior commitments, the PSC is authorized to take action to assure the energy reserves of all utilities in the Florida energy grid are available at all times.

- Section 366.055(3), Florida Statutes:
  Subject to provisions hereof, the PSC has the power to require any electric utility to transmit electrical energy over its transmission lines from one utility to another or as a part of the total energy supply of the entire grid, subject to the provisions hereof.

d. POWER PLANT SITING

At the same time that the Grid Bill was enacted, the Legislature enacted the Florida Electrical Power Plant Siting Act (ss. 403.501-403.518, F.S.).[104]

Under the Siting Act, electric utilities are required to receive certification from the state in order to construct any major new power plant (defined as any steam or solar electrical generating facility greater than 75 MW). For approval, a utility must demonstrate that the new power plant is needed, that it is the most economical alternative available, and that it will meet all environmental standards.

In 1980, the Siting Act was amended to grant the PSC sole jurisdiction over determining whether a proposed power plant is needed and is cost-effective. Pursuant to s. 403.519, Florida Statutes:

> . . .In making its determination, the *commission* shall take into account the need for electric system reliability and integrity, the need for adequate electricity at a reasonable cost, and whether the proposed plant is the most cost-effective alternative available. The *commission* shall also expressly consider the conservation measures taken by or reasonably available to the applicant or its members which might mitigate the need for the proposed plant and other matters within its jurisdiction which it deems relevant. The *commission's* determination of need for an electrical power plant shall create a presumption of public need and necessity and shall serve as the

[104]The purpose of the power plant siting act was to provide a centralized and coordinated process through which all concerns about the siting and construction of major power plants in Florida can be evaluated and judged.

> *commission's* report required by s. 403.507(2)(a)2. An order entered pursuant to this section constitutes final agency action. (emphasis supplied).

Once the PSC issues its determination of need, the environmental, the land use, and the water impacts of the proposed power plant are reviewed in a separate proceeding before a hearing officer assigned by the Department of Administrative Hearings (DOAH).[105] The Governor and Cabinet sit as the Siting Board then make the final determination of whether certification should be granted.

e. TRANSMISSION LINE NEED DETERMINATION

In 1980, a statute similar to the Siting Act was enacted to require state certification of major transmission lines, defined as 230 kV or greater crossing a county line (ss. 413.52-413.539, Florida Statutes). Again, the PSC was charged with sole jurisdiction over determining the need for the proposed transmission line.

In the determination of need, the PSC must take into account the need for electric system reliability and integrity, the need for abundant, low-cost electrical energy to assure the economic well-being of the citizens of the state, the appropriate starting and ending point of the transmission line, and other matters within its jurisdiction deemed relevant to the determination of need. As with the Siting Act, the DEP acts as the lead agency for determining the environmental and land-use impacts of the proposed transmission line. The Governor and Cabinet sitting as the Siting Board ultimately determine whether certification should be granted.

3. FLORIDA ENERGY EFFICIENCY AND CONSERVATION ACT (FEECA)

In 1980, the Legislature adopted the Florida Energy Efficiency and Conservation Act (FEECA). FEECA requires the PSC to set goals and require utilities to develop and implement programs related to the conservation of electric energy and natural gas usage.

Additionally, the legislative findings in s. 366.81, Florida Statutes, provide:

> The Legislature further finds and declares that ss. 366.80-366.85 and 403.519 are to be liberally construed in

[105]The Department of Environmental Regulation is responsible for coordinating the reports and comments of other agencies and interested persons and it acts as the lead agency in the DOAH hearing process.

> order to meet the complex problems of reducing and controlling the growth rates of electric consumption and reducing the growth rates of weather-sensitive peak demand; increasing the overall efficiency and cost-effectiveness of electricity and natural gas production and use; encouraging further development of cogeneration facilities; and conserving expensive resources, particularly petroleum fuels.

Statutory definitional changes were made in 1996 that affected utilities subject to the FEECA statute.

4. SAFETY JURISDICTION

In 1986, the Legislature gave the PSC safety jurisdiction over all electric utilities. This included the enforcement of the National Electric Safety Code for all new transmission and distribution facilities built by electric utilities in the state.

5. SOLID WASTE ACT

In 1988, the Solid Waste Act was amended by ch. 88-130, Laws of Florida, to include provisions for the PSC to develop a favorable payment schedule for electricity generated by municipal solid waste resource recovery facilities. This schedule required levelized payments for future avoided capacity cost calculations and eliminated the application of a risk factor to the calculations.

6. OTHER

In 1989, the Legislature made numerous changes to Chapter 366, Florida Statute, by enacting ch. 89-292, Laws of Florida. The bill amended the statutory definition of public utility and electric utility. An electric utility underground study was required. Cogeneration language was added. The PSC was authorized to fix rates for power purchased by utilities from cogenerators at avoided costs.

In 1990, the Legislature amended the Electrical Power Plant Siting Act, including s. 403.519 on "Exclusive forum for determination of need." The language was changed to "an applicant" rather than "a utility." Also, an order entered by the PSC constitutes final agency action. Definition changes were also made.

In 1992, the Natural Gas Transmission Pipeline Siting Act was passed. It established a centralized and coordinated pipeline siting process in chapter 403, Florida Statutes.

In 1993, the Legislature enacted the environmental cost recovery clause, and other changes to ch. 366., F.S. The PSC was given the authority to seek injunctive relief in court; and a projected test year was added to the interim rate statute.

VI. FLORIDA: RESERVE MARGIN

This section of the report addresses the state's generation reserve margin.

A. GENERAL OVERVIEW

Reserve margin is described by the *Florida Electric Utilities: A Reference Guide* (1994) as the difference between the dependable capacity of a utility's system - including firm power purchases but excluding capacity on maintenance or forced outage - and the anticipated peak load for a specified period (peak demand period).

Further, a utility must have reserve or standby capacity in case any generating units in operation or supplies to the system fail, transmission service is interrupted, or customers demand more electricity than the operating plants can produce. As demand grows, so must the utility's generating capacity, which in turn leads to the need for an increased reserve margin.

This reserve margin may come from spare generating units or through an interconnection with another utility. Units already in operation, but not necessarily generating electricity at full capacity, can supply necessary power very quickly because they are already running. These "spinning reserves" can provide almost instant backup power in case of a major outage caused by a facility failure.

B. CURRENT SITUATION

In September 1997 at a Ten-Year Site Plan workshop, the PSC learned that Florida utilities were no longer conducting statewide studies of planned electric reliability using Loss-of-Load Probability (LOLP) methods. The LOLP and similar probabilistic methods have been used by the utility industry for decades to evaluate the adequacy of planned generation reserves.

For Florida, an appropriate level of generation reserves is needed in order to avoid service interruptions due to planned and unplanned generating unit outages and unexpected increases in customer load due to extreme hot or cold weather conditions or forecast error.

The PSC also learned that, in general, because of increased competition in the wholesale markets for electricity, Florida utilities appeared to be shifting their planning focus from a ten year outlook to five years. In addition, the reserve margin for some of peninsular Florida’s utilities is currently largely comprised of non-firm resources, such as load management and interruptible service. It is not clear whether customers will

tolerate long periods of interruptions which may be necessitated by extended periods of extreme weather conditions.[106] Over the ten-year planning horizon, non-firm resources are projected to comprise a greater percentage of the peninsular reserve margin, resulting in even less generating capacity being constructed in Florida to serve growing customer demands for electricity.

As a result of the concerns raised about the adequacy of the generation reserves being planned for construction by Florida's electric utilities, the PSC requested that the Florida Reliability Coordinating Council (FRCC) provide a reliability assessment of the 1997 aggregate Ten-Year Site Plans, including an LOLP study. When that study was finalized, it showed that about a 6 to 8 percent reserve margin was adequate for Florida. An additional study was performed in 1998, it yielded similar results. Because this level of reserve appeared unrealistically low, the FRCC recommended that, at a minimum, 15 percent reserve, at the time of winter and summer peak be adopted as an interim standard.

At the December 15, 1998, PSC Internal Affairs meeting, the PSC decided to open a docket to investigate the adequacy of electric utility generating reserves planned for Florida. At issue is whether the 15 percent reserve margin standard used by the FRCC was adequately tested and, if not, whether a higher reserve margin standard should be adopted.

Public hearings were scheduled for November 2 and 3, 1999. However, on November 2, 1999, the investor-owned utilities stipulated to voluntarily increase their planned reserve criteria from 15% to 20% by summer 2004. In December 1999, the stipulation, with some modification was approved by the PSC.

[106] This concern was heightened during the 1998 summer heat wave when about 46,000 load management customers of Florida Power Corporation opted out of load management due to excessive interruptions to their air conditioning equipment.

VII. FLORIDA: MERCHANT PLANT ACTIVITY

This section of the report addresses the current merchant plant ventures occurring and proposed in the state.

A merchant plant is a coined term. It was defined by the PSC as: a power plant with n o rate base and no captive retail customers.[107] A merchant plant is a FERC regulated utility, and it primarily sells wholesale power on a competitive basis to utilities and power marketers. Merchant plants, under federal and state law, cannot sell retail electricity to individuals or businesses.

A total of 24 states have adopted or endorsed retail competition. There are merchant plants in each of these states. They are: Arizona, Arkansas, California, Connecticut, Delaware, Illinois, Maine, Maryland, Massachusetts, Michigan, Montana, Nevada, New Hampshire, New Jersey, New Mexico, New York, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, Texas, Virginia, and Vermont.

In addition, the following states have not adopted retail competition but have merchant plant activity: Alabama, Florida, Georgia, Idaho, Indiana, Kentucky, Louisiana, Missouri, Mississippi, North Carolina, Tennessee, Washington, Wisconsin, West Virginia, and Wyoming.

In the PSC's States' Electric Restructuring Activities: Update (August 1999), the following is summary of the ventures which are more fully outlined in the report:

A. Duke New Smyrna: This joint project between the Utilities Commission, City of New Smyrna Beach, and Duke Energy New Smyrna Beach Power Company Ltd., L.L.P. (Duke New Smyrna), was found by the PSC to be needed and in the best interest of electric customers in Florida. On March 4, 1999, the PSC granted the determination of need for a 514 MW electrical power plant in Volusia County. The proposed merchant plant would supply under contract 30 MW to the City of New Smyrna Beach. The remaining 484 MW would be sold on the wholesale market.

   The PSC's report indicates that the availability and sale of the remaining 484 MW of capacity to other peninsular Florida utilities would enhance the reliability of the peninsular Florida's electric grid and put downward pressure on wholesale power costs. No utility or its retail ratepayers would be obligated to purchase from the project. Florida utilities would only purchase power from Duke New

[107] In re: Joint petition for determination of need for an electrical power plant in Volusia County by the Utilities Commission, City of New Smyrna Beach, Florida, and Duke Energy New Smyrna Beach Power Compant Ltd., L.L.P. Docket No. 981042-EM

Smyrna if it proves to be the lowest cost alternative at the time a contract is entered.

The socio-economic benefits to the state and city were described by the PSC as: 1) construction cost of approximately $160 million, a significant addition to the property tax base of Volusia County and other taxing agencies. 2) peak employment during the construction of the project is expected to be 250 people. 3) upon completion, approximately 20 permanent positions will be needed to operate the power plant with a total annual payroll of approximately $1 million. 4) the project will use approximately 2 million gallons of reclaimed waste water provided by the city that would otherwise be discharged into the Indian River. 5) the direct risks associated with the construction of the project will be borne by Duke New Smyrna. The PSC's final order was issued on March 22, 1999.

Florida's major investor-owned utilities have filed an appeal to the Florida Supreme Court. These utilities oppose the project because they contend that Duke New Smyrna should be required to enter into wholesale contracts with a retail-serving utility before construction of the power plant should be approved. As a FERC regulated utility, the question of whether Duke New Smyrna is a proper applicant for a determination of need by the PSC was also raised. It is the IOU's contention that only utilities with retail customers can (1) apply for a determination of need, or (2) sponsor an application for a need determination by an EWG with which they have entered a long-term firm wholesale contract.

Oral argument before the Florida Supreme Court was scheduled for January 4, 2000, but it was postponed until February 2000. The Governor and Cabinet, who sit as the Power Plant Siting Board, have postponed the final decision on the construction of the project until the Supreme Court makes its ruling.

B. Constellation Power - Oleander Power Plant Constellation Power, an unregulated subsidiary of Baltimore Gas and Electric Company, has announced its plans to construct a 950 MW natural gas-fired peaking power plant in Brevard County. The proposed plant will be an EWG merchant plant, selling capacity and energy through Florida's wholesale electric market. This combustion turbine plant with no steam generation does not require a determination of need by the PSC and is not subject to Power Plant Siting Act. The anticipated in-service date of the plant is January, 2001.

C. Reliant Energy - Reliant Energy, a Texas based energy provider, has been pursuing the purchase of the Indian River Power Plant from the Orlando Utilities Commission. Initially, Reliant plans to sell capacity and energy from the units back to OUC. These sales to OUC would be reduced over a period of about four

years. Capacity and energy not sold to OUC will be sold as EWG merchant capacity and energy on the wholesale market.

In a separate transaction, Reliant has also been exploring the construction of a new EWG merchant peaking plant, named Reliant Energy Osceola, near Kissimmee, Florida.

In the PSC's *States' Electric Restructuring Activities: Update* (August 1999) the following two plants are identified as merchant plants:

A. Okeechobee Generating Company (Okeechobee) - Okeechobee, a wholly-owned subsidiary of California based PG&E Generating, has recently filed an application for EWG status with the FERC. Additionally, PG&E applied for a need certificate without a retail utility partner. Okeechobee plans to construct a 500 MW natural gas-fired, combined cycle power plant in Okeechobee County, Florida. The project will be interconnected with FPL's transmission facilities in the area and is expected to be in service in Spring 2003.

B. El Paso Power Services Company - Florida Power Corporation (FPC) and El Paso Power Services Company have recently agreed to restructure certain existing cogeneration contracts. El Paso will acquire three existing contracts for the sale of capacity and energy to FPC. In total these contracts represent 184 MW of capacity and associated energy committed to be sold to FPC. Generation to supply these contracts is provided from two cogeneration facilities. Under the terms of the assignment, capacity payments made by FPC will be discounted for the remaining term of each contract, resulting in savings in excess of $100 million net present value. The agreement provides that El Paso will waive its rights under PURPA to require FPC to purchase the capacity and energy from the two cogeneration facilities serving the contracts. El Paso will not be required to maintain two of the involved units as QFs under PURPA; they will operate as EWG merchant plants. As a result of the terms, when FPC is not using their full capacity commitment, El Paso is free to sell the energy from two of the units on the wholesale market.

VIII. FLORIDA: NATURAL GAS SUPPLY

This section of the report addresses natural gas ventures proposed and occurring in the state.

The consumption of natural gas over other types of fossil fuels is encouraged through national policies, such as the Clean Air Act Amendments of 1990 and the Energy Policy Act of 1992.[108]

Based on Florida utilities' 1999 Ten-Year Site Plans, electric utilities project a 143% increase in natural gas usage during the next ten years. In addition to conventional utility generation, non-utility generation in the form of FERC regulated merchant plants, which also use natural gas as their primary fuel, are also being planned for construction.

Florida Gas Transmission Company (FGT) is the primary supplier of natural gas and transportation services to end-use customers and electric utilities in the state. Currently, FGT's system pipeline capacity is approximately 1.455 billion cubic feet per day (Bcf/day), with no unsubscribed capacity.[109]

FGT has filed an application with FERC to obtain approval for its proposed Phase IV Expansion, rather than new pipeline additions. This proposed expansion, consisting primarily of compression, would increase the average daily delivery capacity by 0.272 Bcf/day, to a total of approximately 1.727 Bcf/day. Twenty year firm commitments have been signed with eight shippers for the capacity. May, 2001, is the anticipated planned in-service date of this expansion.[110]

With its Phase IV application in its preapproval stage, FGT anticipates submission of an application to FERC for a proposed Phase V expansion. The open season, which closed on April 30, 1999, garnered enough interest for FGT to indicate that it will submit a certificate application to FERC late in 1999 to meet a projected in-service date of mid-2002. The anchor customers for this expansion are FPL and Gulf Power Company (Gulf). FPL will use the capacity to serve its planned repowering project at the Sanford site in Volusia County, while Gulf plans to use its share to fuel a new gas-fired combined-cycle unit at the Lansing Smith site near Panama City. Early estimates indicate that the

[108]Because natural gas is domestically produced, many electric utilities' dependence on foreign oil has decreased.

[109] Conservative estimates indicate that the future need for natural gas exceeds FGT's current capacity.

[110]On June 30, 1999, a preliminary determination on the non-environmental aspects of the expansion was issued by FERC.

completion of both Phase IV and Phase V will raise FGT's capacity to nearly 2.0 Bcf/day by mid-2002. This is sufficient capacity to meet the anticipated demand of 1.8 Bcf/day for 2003, but is 0.25 Bcf/day less than the forecasted need of 2.25 Bcf/day for 2008.

Additionally, three other companies are competing to bring new pipeline capacity into the state.

1. Coastal Corporation has proposed to build a 700-mile pipeline named Gulfstream Natural Gas System. As proposed, the 1.0 Bcf/day pipeline will extend from near Mobile, Alabama, across the Gulf of Mexico, to near Port Manatee. Once on shore, the pipeline will proceed east to a terminus near Lake Okeechobee. This pipeline has an expected in-service date of June, 2002. Gulfstream seeks to gain FERC approval by filing its application late in 1999.

2. Duke Energy, plans to construct the Sawgrass pipeline project. This project consists of two pipeline segments which represent two different ownership interests. The first segment will commence at the tailgate of the Dauphin Island Gathering Partnership processing plant near Coden, Alabama. This segment owned jointly by Enron and Duke Energy Southeast Pipeline Corporation, terminates in Panama City, Florida. The proposed in-service date is 2001. The other pipeline segment, owned by Duke Energy Southeast Pipeline Corporation will commence at the Coden plant through expansion of the Enron-Duke Energy system and will extend into peninsular Florida. The pipeline, as proposed, will have a capacity of 0.7 Bcf/day at its November 2002 in-service date.

3. The third project is the Williams-Transco Buccaneer pipeline. As proposed, this 420 mile pipeline will extend from a processing plant in Mobile County, Alabama, across the Gulf of Mexico to the west coast of Florida just north of Tampa, and continue onshore in a easterly direction. The Buccaneer pipeline project is currently designed at a capacity of just under 1.0 Bcf/day. Williams plans to file an application with the FERC during 1999, and projects an in-service date of April, 2002.

IX. FLORIDA: AN OVERVIEW OF RESTRUCTURING CONCEPTS SUBMITTED BY CONSUMER GROUPS AND INDUSTRY REPRESENTATIVES

Various interested parties were requested to identify some of the specific issues involved in electric restructuring. The parties providing input believe that if changes are to be considered, at a minimum addressing the following concepts should set the precedent to discussions.

Additionally, the consensus among all the parties was that any initiative for competition should result in meaningful benefits for everyone, including investors, low income and elderly residents, industrial and commercial users, as well as the environment and the reliability of service, without a reduction in quality of service.

These statements are the suggestions of the interested parties and are not recommendations of this report. The issues are presented as both as questions and statements from the parties.

- Terms for Retail Access: Should discussions include aggregation? Should proposals specifically allow for all types of aggregation of customers, especially by municipalities or co-ops, individually or jointly to buy-down the cost of power for residential and small business customers? Should provisions be included to require that customer bills show separate prices for generation, transmission and other services? Should there be authorization for customer-friendly interconnection and net billing for customer-owned small generation facilities?

- Licensing: Who should set the criteria and make license determinations? Should license determinations be made by the PSC? Should the PSC, with assistance from the Attorney General and Public Counsel, establish minimum codes of conduct? Should there be basic consumer disclosure regarding contracts for services?

- Consumer Protection: Should there be provisions regarding switching suppliers, denial of service, substantiating claims, itemized billing, disconnection, complaint resolution, and rate protection? Should there be specific mechanisms provided to fully enforce existing laws and regulations against slamming, cramming, and other deceptive marketing practices? Should there be service access at fair and reasonable prices? Should all entities have the authority to aggregate retail customers? Should all customers benefit from restructuring, or at least not be harmed, from cost, service, or reliability perspectives?

- Consumer Education: Should the PSC conduct consumer education with the assistance of competitive electric providers and consumer advisory groups?

- Adequacy, Reliability, and Safety: Should reliability be maintained through continued regulation of the transmission and distribution systems? Should there be assurances that all suppliers will have fair access to transmission and distribution facilities? Should the PSC be authorized to adopt rates for service based on the performance of the utility systems? Should provisions be provided for the establishment and maintenance of an adequate reserve margin? All barriers provided by incumbent utilities, who invest in new, cleaner, low cost generation plants in other states, should they be removed to clear the entrance for cleaner, low cost generation plants in Florida? Will mechanisms be needed to address customer blackouts? Why review the establishment of a not-for-profit, fully independent ISO with management and planning responsibilities in order to optimize an efficient, competitive generation market? A comparison review of the implementation of an I.S.O. versus a TransCo. should one be conducted? Should there be an adherence by all market participants to rules necessary to maintain the reliability of the electric system? Should there be an appropriate mandatory reserve level? How should owners of reserves be compensated?

- Environmental Protection and Energy System Benefits: Should there be generation performance standards that reward electric power providers that are less polluting and that place emission caps on producers statewide? Should there be encouragement for in-state universities and others to continue research and development of new energy technologies? Funding should it be provided for energy efficiency, renewable, and public interest research and development, through a non-by passable charge? Should goals be set for suppliers and provisions for trading of renewable energy credits? Should there be benefits for the economy and the environment by reducing reliance on power plants in favor of cost effective energy efficiency and clean renewable resources? Should restructuring benefits protect Florida's most vulnerable citizens against potential price spikes and volatility?

- Stranded Costs: Should there be a freeze or cut on residential and small business rates, until all stranded costs are recovered, with the market fully competitive and residents have a viable choice of electric suppliers? Should all utilities be able to recover 100% of verifiable, non-mitigable stranded costs? Stranded costs mandated or permissive? Should securitization of stranded costs be permitted? What happens to "Gain on Sale" of assets sold above book value?

- Electric Rates: Currently, big user customers may enter into discounted electric utility agreements should this continue?. Should there be a full investigation of utility revenues that are such that only select customers receive discounts, especially if the discounts are at the expense of smaller customers? Additionally, should provisions be provided that revenue benefits be spread among all users instead of "cherry picked" customers? Should there be utility incentives to attract businesses to the state and keep business and jobs that are already here?

- Increased Oversight of Utility Regulation: Should there be increased consumer representation to insure that the PSC is holding fast to its duties and responsibilities? Loss of reserve margins should it occur?

- Meaningful Assessment of Deregulation in Florida: Should a true review of the pros and cons of restructuring in Florida be conducted? Until such a study is conducted, should the PSC lobby in Washington regarding restructuring?

- Unbundling: Should all services be unbundled, including ancillary services such as metering, billing, service, not just generation, transmission, and distribution?

- Divestiture of Assets: Should electric utilities be allowed to elect to divest generation assets into companies independent of remaining regulated transmission and distribution assets? If so, should a condition for recovery of any stranded investment be only on that divesture? Transmission and distribution should they remain regulated? Should divesture be mandated or permissive? What happens to "Gain on Sale" of assets sold above book value?

- Power Plant Siting: Should amendments be made to the Power Plant Siting Act that are consistent with the transition to a competitive market? Should any amendments require entities other than regulated electric utilities to apply for a need certificate? The types of facilities that come under the statute should they be expanded beyond steam and solar facilities? Should the law be changed? How should merchant plant siting determinations be made and by whom? Should the PSC continue any determination of need, or should it be a market issue?

- Securitization: Should securitization be a mechanism least desirable? Mandated or permissive who should determine the answer as it relates to securitization?

- Cost Allocation: Should there be appropriately assigned accelerated depreciation expenses, transmission and distribution costs to those customers responsible for such costs and expenses? Should provisions be included,

based on a user-pays principle, whereby all ratepayers share in the responsibility for paying joint and common costs?

- Universal Service: Universal service fund, should there be one? If so, who determines the definition for universal service? Should there be specific references that rates shall be just, reasonable, and affordable, and that energy assistance programs are available to low-income households, and to ratepayers in high cost areas? Should there be a separate wire charge, paid by all electric users, and should it also be required for the economically disadvantaged individuals?

- Pilot Programs: Residential ratepayers should they be allowed to participate on an equal basis with industrial and commercial ratepayers in any pilot programs?

- Obligation to Serve: Should there be a provider of last resort, a default provider, or standby generation needs?

- Market Power: If any electric utility is deemed to have "market power" should it be required to divest itself of generation to extent necessary? How will "market power" be determined, and how should it be remedied? Should it be considered a generation issue, a transmission issue, or simply an antitrust issue?

- Tax Loss:[111] Tax losses to the state should they be recovered? Should all competitors, including new entrants, be legally obligated to collect and remit an equivalent level of taxes on power sales? Should consideration be made for the income tax impact of gain on sale, as well as the property tax differentials between IOUs and unregulated market entrants? Gross receipts tax, Regulatory Assessment Fee differentials, local franchise fee differentials should these be points of discussion? Should taxes, franchise fees and other revenues to local government be maintained?

- Consumer Protection: Should all consumers have access to electrical service at fair and reasonable prices? All customers should benefit or at least not be harmed, from cost, service, or reliability perspectives.

- Labor to Safely Operate Electric Grid: Should restructuring ensure that adequate staffing levels and training of labor be necessary to achieve the highest level of safety, reliability, customer service, and planning standards?

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[111]In 1998, the Office of Economic and Demographic Research prepared a report entitled Potential Fiscal Impact of Electric Utility Deregulation on Florida's Public Education Capital Outlay (PECO) Program. It came to the conclusion that: The potential impact of competition in the electric industry has been a source of considerable concern for those responsible for funding the capital outlays of Florida's public schools, community colleges and universities. However, it is clear from the analysis presented in this report that the probable fiscal consequences are minor and can in fact, be entirely avoided. Therefore, although there may be numerous other legitimate policy concerns attendant to competition and deregulation, the fiscal consequences for state government need not be among them."

- Safety Issues: Should there be consistency among all providers?

- Mergers: What, if any, are the consequences of mergers, especially with companies outside the state?

- Renewable Energy and Energy Conservation: Should these programs be temporarily supported . A separate wire charge, paid by all electric users, may be required for a period of time, why?

- Social Responsibility: Why should all customers contribute equitably to support environmental and social programs?

- Differences Among States: Differences among states why should they be recognized? Federal mandates to the states for restructuring should they be questioned. Why can't one size not fit all?

- Less Regulation: More regulation by FERC in the areas of transmission and generation is it necessary to create a competitive market?

- Subsidies and Preferences: A set of the same consistent rules should that be imposed on all suppliers?

- Transmission Access, Operation and Transparency of Transactions: All transmission owners should they be required to provide access to their systems on a comparable basis? State vs. federal jurisdiction, what are the points of discussion?

- Which Industry Segments Offers the Greatest Earning Opportunities: Fuel supply, generation, transmission, distribution, back office-others what are the points of discussion?

- Restructuring: Should restructuring be mandatory or voluntary? Should it be time certain or flexible?

- Transmission Siting: Who can own transmission? Will transmission line siting still be appropriate? Eminent domain - who will have the final right?

- Affiliate Transaction Issues: Codes of conduct should they "handcuff" incumbents? Sharing of company logos are areas of discussion. Will joint market efforts be prohibited? What PSC access to affiliate books and records should be appropriate?

- Cost Recovery: Should regulation of transmission systems provide sufficient cost recovery to ensure reliable operation and expansion of the systems?

- Distributed Generation: Should it address market opportunities for regulated or unregulated affiliates or both? What are the other points of discussion in this area?

- Market Structure: The following should be points of discussion: Poolcos (market aggregators), Spot markets, Arbitrage opportunities, Futures, Derivatives and other hedging opportunities (for cost reduction or as an income producing affiliate opportunity). Should the government are the market place determine how electric companies are structured?

- Which Entities Should be Involved: Should restructuring involve the IOU's only or muni/co-ops, too? Should the PSC have any authority?

- Alternative Plans: No gas supply, what happens? Interest rates or gas shortage price spikes occur, who establishes alternative plans?

X. SELECTED STATE ACTIVITY

The activity regarding restructuring of the electric industry has involved legislation, regulatory orders, and investigation/studies. As of January 1, 2000, the following 21 states have enacted restructuring legislation: Arizona; Arkansas; California; Connecticut; Delaware; Illinois; Maine; Maryland; Massachusetts; Montana; Nevada; New Hampshire; New Jersey; New Mexico; Ohio; Oklahoma; Oregon; Pennsylvania; Rhode Island; Texas; and Virginia. Michigan, New York, and Vermont have issued regulatory orders by their public service commissions. The remaining 26 states[112] and the District of Columbia have ongoing commission or legislative investigations.[113] The states that have restructured their electric industry have attempted to introduce competition into the retail electric generation segment of the industry. The distribution of electricity continues to be regulated by the state utilities commission. Transmission is regulated by the Federal Energy Regulatory Commission.

This section of the report reviews selected topics for two states that have implemented restructuring of electricity generation. It also provides rate information for Florida as a comparison. The National Conference of State Legislatures and the Florida Public Service Commission documents were consulted to identify some of the selected topics that are reviewed.[114] The topics discussed are retail access, rates/securitization, number of customers switching to alternative providers, stranded costs, independent system operators, power exchanges, generation divestiture, and customer bills/charges. California and Pennsylvania were chosen for this review because of their experience in restructuring. Rhode Island, Montana, and Massachusetts are also currently implementing their legislation.[115]

A. Florida

The following information is provided to show the situation in Florida. The average revenue per kilowatt hour is used to compare rates for different sectors of the market. The total average revenue for all segments of the retail electric industry for the United States in 1998 was 6.74 cents per kilowatt hour. The average for Florida was 7.01

[112]Alabama, Alaska, Colorado, Florida, Georgia, Hawaii, Idaho, Indiana, Iowa, Kansas, Kentucky, Louisiana, Minnesota, Mississippi, Missouri, Nebraska, North Carolina, North Dakota, South Carolina, South Dakota, Tennessee, Utah, Washington, West Virginia, Wisconsin, and Wyoming.

[113]U.S. Energy Information Administration. *Status of State Electric Industry Restructuring Activity as of January 1, 2000*. http://www.eia.doe.gov/cneaf/electricity/chg_str/regmap.html

[114]National Conference of State Legislatures Checklist. Florida Public Service Commission. *States' Electric Restructuring Activities: An Initial Progress Report, Florida.* October 1997.

[115]Florida Rural Electric Cooperative Association. *E:mail message*. January 11, 2000.

cents per kilowatt hour. The average for Florida in 1996 was 7.18 cents per kilowatt hour and in 1997, it was 7.19 cents per kilowatt hour.[116]

The **residential** sector's average revenues was: **7.99** cents per kilowatt hour in 1996, **8.08** cents in 1997, and **7.89** cents in 1998. The **commercial** sector was **6.63** cents in 1996, **6.62** cents in 1997, and **6.38** cents in 1998. The **industrial** section was **5.11** cents in 1996, **5.04** cents in 1997, and **4.81** cents in 1998.[117] The market share of retail sales in Florida in 1998 was 51.1% residential, 35.9% commercial, and 9.8% industrial.[118]

Monthly residential rates vary greatly by utility in Florida. Residential rates range from a high of 9.4 cents per kilowatt hour for the City of Havana to a low of 5.5 cents per kilowatt hour for Florida Public Utilities-Fernandina, an investor owned utility in Fernandina Beach.[119]

B. California

California enacted one of the first restructuring laws in the nation. AB 1890 was signed by the Governor on September 23, 1996.[120] It provides for competition in the generation of electricity.[121] Distribution remains regulated by the California Public Utilities Commission. California's three major investor owned utilities, Southern California Edison, Co. (SCE), Pacific Gas and Electric Co.(PG&E), and San Diego Gas and Electric Co. (SDG&E), supplied slightly over 80% of the electric energy market in 1995. Almost all of the remaining 20% was supplied by municipalities.[122] California has been primarily reliant on hydroelectric power, even though none of the five largest generating plants are hydroelectric.[123] In addition to hydroelectric power, the state relies on nuclear power. Of the five largest utility plants in the state, in 1996, the two

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[116]U.S. Department of Energy. Energy Information Agency. *Form EIA-861, Annual Electric Utility Report.* 1996-98

[117]*Id.*

[118]Florida Public Service Commission. *Comparative Utility Statistics -- Selected States, 1998.* (Draft) (January 2000).

[119]Florida Public Service Commission. *1,000 kWh Residential Monthly Bills for All Florida Electric Utilities.* December 31, 1998.

[120]Signed by the Governor on September 23, 1996. Chaptered by Secretary of State on September 24, 1996 - Chapter 854, Statutes of 1996. http://www.leginfo.ca.gov.

[121]1996 Cal. Stat. 854, s.12. (AB 1890) (codified at Cal. Pub. Util. Code s. 9600).

[122]U. S. Department of Energy. Energy Information Administration. *State Electricity Profiles.* 1996. http://www.eia.doe.gov/cneaf/electricity/st_profiles/california.pdf

[123]*Id.*

largest plants were nuclear.[124] There is no coal-fired generation in California.[125] The average rate for electricity in 1997 was 9.48 cents per kilowatt-hour, the eleventh most expensive in the nation.[126]

There are differences between Northern and Southern California electricity prices. In 1997 the average rate for electricity for the City of Los Angeles was 9.07 cents per kilowatt hour and the average price in San Francisco was 5.34 cents per kilowatt hour.[127] The difference is attributable, in part, to the fact that Northern California utilities import cheaper power from the Northwest.[128]

1. Retail Access

The California Legislature enacted AB 1890 (act) in 1996.[129] The original implementation date was January 1, 1998, but the implementation was delayed until March 31, 1998 due to problems with the California Independent System Operator and the Power Exchange computers created by AB 1890.[130] All consumers had access to competitive power as of the new start-up date of March 31, 1998.[131]

2. Independent System Operator

The independent system operator (ISO) is the "traffic controller" of the electric grid in California.[132] Its role includes being the responsible agent for grid safety, dispatch, and reliability.[133] It also is charged with ensuring the efficient and

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[124]*Id.* The plants are: 1) San Onofre - Nuclear @ 2,586 MW; 2) Diablo Canyon - Nuclear @ 2,160 MW; 3) Alamitos - Gas @ 2,083 MW; 4) Pittsburg - Gas/Oil @ 2,022 MW; and 5) Redondo Beach - Gas @ 1,602 MW.

[125]*Id.*

[126]U.S. Department of Energy. Energy Information Administration. *Electric Sales and Revenues, 1995.*

[127]U. S. Department of Energy. Energy Information Administration. *State Electricity Profiles.* 1996. http://www.eia.doe.gov/cneaf/electricity/st_profiles/california.pdf

[128]*Id.*

[129]1996 Cal. Stat. 854.

[130]National Association of Regulatory Utility Commissioners. *Restructuring Summary.* http://www.naruc.org

[131]U. S. Department of Energy. Energy Information Administration. *Status of State Electric Industry Restructuring Activity: Retail Access as of January 1, 2000.* http://www.eia.doe.gov/cneaf/electricity/chg._str/retail .html.

[132]Florida Public Service Commission. *States' Electric Restructuring Activities: An Initial Progress Report.* October 1997.

[133]*Id.*

reliable operation of the transmission grid.[134] The planning and operating capacity reserve criteria for the grid must be no less stringent than that established by the Western Systems Coordinating Council and the North American Electric Reliability Council.[135] The ISO is controlled by a governing board.[136] The establishment of the ISO was intended to ensure that the owners of the electric transmission facilities cannot favor their own generation operations over those of other utilities and non-utility generators attempting to compete in the market by restricting access to transmission.[137] The utilities will continue to own the transmission facilities, but control of the facilities was required to be turned over to the ISO by January 1, 1998.[138]

3. Power Exchange

The Power Exchange (PX) is a spot market power pool wholesale market where utilities buy and sell electricity. The PX is required to provide "an efficient competitive auction, open on a nondiscriminatory basis to all suppliers, that meets the loads of all exchange customers at efficient prices."[139] The electricity prices are published by the PX on an hourly basis and they are publicly available.[140] Participation in the PX is mandatory only for the investor owned utilities in California.[141] The investor owned utilities must sell all the power necessary to meet the needs of their full service customers. After the current service territories evolve to open markets, the investor owned utilities will be permitted to compete directly with other utilities and power producers and providers.[142]

4. Stranded Costs

The act required the California Public Utilities Commission to identify and determine

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[134]1996 Cal. Stat. 854, s.10. (AB 1890) (codified at Cal. Pub. Util. Code s. 345).

[135]*Id.*

[136]Florida Public Service Commission. *States' Electric Restructuring Activities: An Initial Progress Report.* October 1997.

[137]*Id.*

[138]*Id.*

[139]1996 Cal. Stat. 854, s.10. (AB 1890) (codified at Cal. Pub. Util. Code s. 355).

[140]Florida Public Service Commission. *States' Electric Restructuring Activities: An Initial Progress Report.* October 1997.

[141]*Id.*

[142]*Id.*

> costs and categories of costs for generation-related assets and obligations . . . that may become uneconomic as a result of a competitive generation market, in that these costs may not be recoverable in market prices in a competitive market . . .[143]

The act provided for the establishment of a competition transition charge (CTC) on the electric bills of all customers to recover these costs.[144] This charge is levied on all consumers according to their use of electricity, however, no customer will pay higher rates than they paid on June 10, 1996.[145] The investor owned utilities have a transition period that extends until March 31, 2002 to recover the majority of these charges.[146] The act provides a "firewall" to insulate residential customers from rate shifts from other classes of customers.[147]

No investor owned utility is allowed to collect a competition transition charge unless it commits its transmission facilities to the Independent System Operator after the operator was approved by FERC.[148]

5. Rates

The average revenue per kilowatt hour for all segments of the retail electric industry was 9.9 cents per kilowatt hour, one of the highest in the country in 1995.[149] The **average** in 1996 was 9.48 cents, in 1997, it was 9.54 cents, and 9.03 cents in 1998.[150] The market share of retail sales in California in 1998 was 33.0% residential, 37.8% commercial, and 26.0 % industrial.[151]

The **residential** sector's average revenues was: ***11.33*** cents in 1996, ***11.50*** in 1997, and ***10.6*** in 1998. The **commercial** sector was: ***9.83*** cents in 1996, ***9.98***

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[143]1996 Cal. Stat. 854, s.10. (AB 1890) (codified at Cal. Pub. Util. Code s. 367).

[144]*Id.* AB 1890 Bill Analysis, Proposed Conference Report No. 1 - August 28, 1996. http:// www.leginfo.ca.gov.

[145]*Id.*

[146]California Energy Commission. *Consumer Electricity Bills' Explanation of the Ten Percent Retail Price Reduction and Rate Reduction Bonds*. www.energy.ca.gov/homeprofiler/ten_percent_reduction.html (March 3, 1998).

[147]AB 1890 Bill Analysis, Proposed Conference Report No. 1 - August 28, 1996. http:// www.leginfo.ca.gov.

[148]1996 Cal. Stat. 854, s.12. (AB 1890) (codified at Cal. Pub. Util. Code s. 9600(b)).

[149]*Id.*

[150]U. S. Department of Energy. Energy Information Administration. Form EIA-861. *Annual Electric Utility Report.*

[151]U. S. Department of Energy. Energy Information Administration. *State Electricity Profiles.* 1996. 1996. http://www.eia.doe.gov/cneaf/electricity/st_profiles/california.pdf.

cents in 1997, and ***9.66*** cents in 1998. The **industrial** sector was: ***6.97*** cents in 1996, ***6.95*** cents in 1997, and ***6.59*** cents in 1998.[152]

The act provided that electricity rates for all customers of the investor owned utilities were to be frozen at the June 10, 1996 rates.[153] The act further required rate cuts for residential and small commercial customers of no less than 10 percent for 1998 and continuing through 2002. The act also provided that it was the intent of the Legislature for the rate reduction for residential users be a cumulative rate reduction of not less than 20 percent by April 1, 2002.[154] The 10 percent reduction for residential and small commercial customers and the rate freeze for large commercial, industrial and agricultural customers will remain in effect until each utility recovers the investment costs for its non-nuclear generation assets (stranded costs) or until March 31, 2002, whichever is earlier.[155]

The California Public Utilities Commission approved a request from SDG&E to reduce its rates effective July 1, 1999 when it paid off its stranded cost and was taken out from under the rate freeze. The rate decrease will vary by type of customer and the amount of energy they use, including the seasonal energy cost fluctuations. San Diego Gas and Electric estimated that the base electric rates for residential and small commercial customers will drop an another 5 percent in addition to the 10 percent reduction mandated by AB 1890.[156]

The electric rates are frozen for the generation portion of the customer's electric bill. Pacific Gas and Electric Company applied to the California Public Utilities Commission to reduce its generation electric rates at the end of the rate freeze. The proposed rate reduction is an 11 percent reduction for residential customers and a 13 percent reduction for small commercial customers.[157]

Pacific Gas and Electric also submitted a request to the California Public Utilities Commission regarding distribution rates. The commission will also decide whether to grant a request by PG&E for a rate hike of 33 percent for its

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[152]U. S. Department of Energy. Energy Information Administration. Form EIA-861. *Annual Electric Utility Report.*

[153]1996 Cal. Stat. 854, s.10. (AB 1890) (codified at Cal. Pub. Util. Code s. 368(a)).

[154]1996 Cal. Stat. 854, s. 1. (b)(4).

[155]*Id.*

[156]San Diego Gas & Electric Co., a subsidiary of Sempra Corp. *Press Release* - May 28, 1999. Public.sempra.com/newsreleases/viewpr.cfm?id=257

[157]Pacific Gas & Electric. *Press Release*. March 5, 1999. http://www.pge.com/whats_new/news/releases/1999/quarter01/990305r.htm.

distribution rate base.[158] An Administrative Law Judge has proposed only a 9.4 percent raise in monthly residential bills.[159]

[158]Leap Letter. Sept./Oct. 1999, 4:6.

[159]U.S. Department of Energy. Energy Efficiency and Renewable Energy Network. *Electric Restructuring Weekly Update.* October 29, 1999. http://www.eren.doe.gov/electricity_restructuring/weekly/oct29_99.html

6. Securitization

The 10 percent reduction was funded by the issuance of rate reduction bonds by a special purpose trust authorized by the California Infrastructure and Economic Development Bank.[160] These estimated reductions were from the rates of the three major investor owned utilities, Pacific Gas and Electric, Southern California Edison, and San Diego Gas and Electric, and were in the form of bill credits.[161] Residential and small commercial customers of Sierra Pacific Power and Pacificorp also received a 10 percent rate reduction, but those utilities have not applied for approval to issue bonds.[162] The manufacturing sector will have estimated rate cuts as high as 30 percent by 2002.[163]

The bonds were issued to refinance approximately $6.5 billion in utility company debt with a lower interest rate (approximately 6 percent). Ratepayers have been paying off this debt as part of their regular monthly bills, but at a higher interest rate. This charge is on the residential and small commercial customer's bills as the Trust Transfer Amount.[164] Residential and small commercial customers receive a 10 percent electricity rate reduction during the transition period, but they will continue to pay for the cost of the bonds over a 10 year period.[165] According to the California Energy Commission, customers should receive an overall cost savings by paying less in interest charges over the 10 year period when compared to the higher rates for the cost of the old debt of the utilities.[166]

7. Nuclear Decommissioning

The act also provides for the payment of costs associated with decommissioning California's nuclear power plants.[167] It authorizes these costs to be recovered

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[160]California Energy Commission. *Consumer Electricity Bills' Explanation of the Ten Percent Retail Price Reduction and Rate Reduction Bonds*. March 3, 1998. www.energy.ca.gov/homeprofiler/ten_percent_reduction.html.

[161]*Id.*

[162]*Id.*

[163]National Rural Electric Cooperative Association. *NRECA Retail Wheeling Report*. September 1999.

[164]California Energy Commission . *Understanding Your New Electricity Bill.* www.energy.ca.gov/homeprofiler/your_electricity_bill.html

[165]*Id.*

[166]*Id.*

[167]1996 Cal. Stat. 854, s.10. (AB 1890) (codified at Cal. Pub. Util. Code s. 379).

through a charge on the customer's bill. The charge is authorized until the time the decommissioning costs are fully recovered.[168]

8. Generation Divestiture

The act provides that the California Public Utilities Commission shall continue to regulate the nonnuclear generation assets that were owned by a public utility prior to January 1, 1997, that were subject to commission regulation.[169] This regulation continues until those assets have been subject to market valuation "in accordance with the commission's procedures."[170] If the utility wishes to retain ownership of the assets after the commission has completed the market valuation, the utility must show that the ownership would be consistent with the public interest and would not give the utility an undue competitive advantage.[171]

Pacific Gas and Electric auctioned its electric generating power plants in San Francisco, the East Bay, and The Geysers in Sonoma and Lake counties on November 24, 1998. The winning bids totaled $1.04 billion.[172] Southern Energy, Inc. bid $801 million for the fossil fuel Pittsburg (2,022 MW), Contra Costa (680 MW), and Potero (362 MW) Power Plants. FPL Energy, Inc. bid $213 million for The Geysers (1,224 MW), the largest geothermal generating facilities in the United States. The purchase is subject to the right of first refusal by the geothermal steam suppliers.[173]

Southern California Edison Co. sold its 12 fossil fuel generating stations in 1997 according to its parent company's (Edison International) corporate profile.[174] It filed an application on December 16, 1999, with the California Public Utilities Commission, seeking approval to value its hydroelectric generating facilities. The plan would allow the utility to continue to retain, maintain, and operate the facilities.[175]

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[168] *Id.*

[169] 1996 Cal. Stat. 854, s.10. (AB 1890) (codified at Cal. Pub. Util. Code s. 377).

[170] *Id.*

[171] *Id.*

[172] Pacific Gas & Electric. *Press Release*. November 24, 1998. www.pge.com/whats_news/news/releases/1998/quarter04/981124r.htm

[173] *Id.*

[174] Southern California Edison Co. a Edison International Company. *Corporate Profile*. http://www.edison.com/profileexa/sce/index.htm

[175] Southern California Edison Co. *News Releases.* December 16, 1999. http:// www.edison.com/releasesexe/99-184.htm

San Diego Gas and Electric sold its South Bay Power Plant (693 MW) to the San Diego Unified Port District on April 23, 1999 for $110 million. Duke South Bay, a subsidiary of Duke Energy Power Services, will manage the plant for the Port District and SDG&E will operate the facility for the next two years.[176] On May 21, 1999, SDG&E sold its Encina Power Plant (965 MW) and its facility in San Diego County (253 MW) to Dynegy Inc. and NRG Energy Inc.[177]

The sale of these last two power plants helped allow SDG&E to end its rate freeze[178] on July 1, 1999, ending its transition period. The rate freeze was ended partially as a result of the utility selling its generation assets for more than book value[179] and recovering all of its stranded costs.[180] The California Public Utilities Commission issued an interim order in October 1999 to establish post rate-freeze rate making mechanisms for the three investor owned utilities.[181] Neither PG&E nor SCE are expected to end their rate freeze in the immediate future. SDG&E has disposed of all of its nonnuclear assets and the other two utilities have not.[182] PG&E filed an application with the California Public Utilities Commission to auction its hydro facilities and assets; it would be an auction open to all market participants, including its affiliate PG&E Generating Co.[183]

9. Number of Customers Switching Providers

At the end of September 1999, the market share served by competitive energy service providers[184] in the investor owned utility service areas was 13.3 percent.[185] This was down 0.2 percent from March 1999, but remained steady

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[176]San Diego Gas and Electric Co. *News Releases*. April 23, 1999. http://public.sempra.com/newsreleases/viewpr.cfm?id=220

[177]San Diego Gas and Electric Co. *News Releases*, May 21, 1999. http://public.sempra.com/newsreleases/viewpr.cfm?id=251

[178]*Id.*

[179]Edison Electric Institute. *Retail Wheeling & Restructuring Report.* 6:1, June 1999.

[180]U. S. Department of Energy. Energy Information Administration. *Status of State Electric Industry Restructuring Activity: Retail Access as of January 1, 2000.* http://www.eia.doe.gov/cneaf/electricity/chg._str/retail .html.

[181]*Id.* Docket number 99-10-057 in consolidated proceedings on utility application numbers 99-01-016 (PG&E), 99-01-019 (SDG&E), and 99-01-034 (SCE).

[182]U. S. Department of Energy. Energy Information Administration. *Status of State Electric Industry Restructuring Activity: Retail Access as of January 1, 2000.* http://www.eia.doe.gov/cneaf/electricity/chg._str/retail .html.

[183]Leap Letter. 4:5, Sept/Oct. 1999. (October 31, 1999)

[184]A competitive energy service provider (ESP) is a company registered with the California Public Utilities Commission to provide electric service. http://www.cpuc.ca.gov/electric_restructuring/esp_registration/providers/esp_udc.htm.

[185]Edison Electric Institute. *Retail Wheeling & Restructuring Report.* 6:1, September 1999.

from June 1999. The customer figures were: (1) 1.5 percent for residential customers,[186] (2) 3.1 percent of the small commercial customers,[187] (3) 6.3 percent of the medium-sized commercial/industrial customers,[188] (4) 20.7 percent of the large industrial customers,[189] and (5) 2.7 percent of the agricultural customers.[190]

10. Customer Bills/Charges

The customer bill format changed under the restructured industry. The California Energy Commission has posted on its web site an example of the new electricity bill that customers started receiving as of June 1, 1998.[191] A copy of the example is listed in Appendix A. Each of the charges such as generation, distribution, transmission, as well as the add-on charges,[192] are now itemized on the bill.

11. Consumer Activity

A coalition of environmental, consumer, and conservative free-market advocates ranging from the Consumer Federation of America to the Cato Institute placed a referendum on the November 1998 ballot to repeal portions of AB 1890.[193] Proposition 9 would have imposed a 20% residential rate reduction rather than the 10% provided in AB 1890. It would have prohibited stranded cost recovery for nuclear generation, and it would have prohibited securitization.[194] The referendum was defeated by a 70% to 30% margin.[195]

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[186] *Id.* 131,427 of the 8.850 million customers.

[187] *Id.* 30,595 of the 982,893 small commercial customers. Small commercial customers are those with peak loads of less than 20 kW.

[188] *Id.* 12,435 of the 198,712 medium-sized commercial/industrial customers. Medium sized commercial/industrial customers are those with peak loads from 20 kW to 500 kW.

[189] *Id.* 1,020 of the 4,932 large industrial customers. Large industrial customers are those with peak demand of more than 500 kW.

[190] *Id.* 3,224 of the 118,958 agricultural customers.

[191] California Energy Commission . *Understanding Your New Electricity Bill.* www.energy.ca.gov/homeprofiler/your_electricity_bill.html

[192] The add-on charges include charges for the energy program surcharge, a power exchange credit, the competition transition charge, power exchange charge, public purpose program charge, nuclear decommissioning charge, trust transfer charge and other charges. These items are explained in the California Energy Commission' s *Understanding Your New Electricity Bill* in Appendix A.

[193] National Rural Electric Cooperative Association. *NECA Retail Wheeling Report*. September 1999.

[194] *Id.*

[195] Defeat of Proposition 9. *PRNewswire*, Nov. 3, 1998.

12. Rural Electric Cooperatives

There are 3 cooperatives in California and they are exempted from commission regulations.[196] The Plumas-Sierra Cooperative decided to freeze its rates and attempt to pay off as much of its stranded investment as it could in the next 5 years. It is the only cooperative with stranded investment.[197]

13. Municipalities

There are 31 municipal utilities in California.[198] The regulatory body of any local publicly owned electric utility is allowed to retain its existing rate making authority under the act.[199] The regulatory body is required to decide whether to open its territory to retail competition after a public hearing.[200] If the publicly owned electric utility opens its territory to direct transactions (retail competition), then a phase-in of transactions shall be no later than January 1, 2000 or two years after the start of direct transactions by the investor owned utilities, whichever is later. The phase-in shall be completed by December 31, 2010.[201]

The local publicly owned electric utility's regulatory body must establish a generation-related severance fee or transition charge no later than 6 months prior to the implementation date of direct transactions if such transactions are authorized. A publicly owned electric utility may not collect a CTC unless it commits control of its transmission facilities to the ISO and authorizes retail competition in its territory.[202]

C. Pennsylvania

Pennsylvania enacted its restructuring law on December 3, 1996. It also divided the electric energy supply into generation, distribution, and transmission. HB 1509[203], the

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[196]National Rural Electric Cooperative Association. *NRECA Retail Wheeling Report.* September 1999.

[197]*Id.*

[198]Florida Public Service Commission. *Comparative Utility Statistics -- Selected States.* (Draft) January 2000.

[199]1996 Cal. Stat. 854, s.12. (AB 1890) (codified at Cal. Pub. Util. Code s. 9605).

[200]1996 Cal. Stat. 854, s.12. (AB 1890) (codified at Cal. Pub. Util. Code s. 9602(a)).

[201]1996 Cal. Stat. 854, s.12. (AB 1890) (codified at Cal. Pub. Util. Code s. 9602(b)).

[202]1996 Cal. Stat. 854, s.12. (AB 1890) (codified at Cal. Pub. Util. Code ss. 9600(b) and 9602(e)).

[203]1996 Pa. Laws 138

"Electricity Generation Customer Choice and Competition Act,[204] permitting retail customers to obtain direct access "to a competitive generation market for the generation of electricity, while maintaining the safety and reliability of the electric system for all parties."[205] Pennsylvania ranked fifth nationally in population and fourth in generating capacity in 1996.[206] Over 50 percent of the generating capability is coal-fired.[207] Nuclear energy represents about a quarter of the state's generating capability. The nation's first nuclear plant, Shipping port was in Pennsylvania. It is no longer in service.[208] Three of the five largest plants in the state are nuclear.[209] Coal and nuclear plants produce over 96 percent of all electricity produced in the state, the remainder comes from small hydroelectric plants.[210]

The price of retail electricity was the twelfth most costly in the United States at 7.96 cents per kilowatt hour in 1996. Higher prices have been a catalyst for moving toward a competitive market in electricity.[211] There is a high disparity in electric rates across Pennsylvania. The residential electricity prices ranged from 6.69 cents per kilowatt hour to 11.58 cents per kilowatt hour and industrial rates ranged from 4.53 to 7.13 cents per kilowatt hour.[212]

1. Retail Access

The Pennsylvania legislation originally provided for the state's consumers to have a choice among competitive generation suppliers on the following schedule: one-third by January 1999, a total of two-thirds by January 2000 and all consumers by January 2001. The utilities were required to submit

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[204]1996 Pa. Laws 138, s. 4 (codified at 28 Pa. Cons. Stat. s. 2801).

[205]1996 Pa. Laws 138, s. 4 (codified at 28 Pa. Cons. Stat. s. 2802(12)).

[206]U. S. Department of Energy. Energy Information Administration. *State Electricity Profiles.* 1996. http://www.eia.doe.gov/cneaf/electricity/st_profiles/pennsylvania.pdf.

[207]*Id.*

[208]*Id.*

[209]*Id.* The plants are: 1) Bruce Mansfield - Coal @ 2,371 MW; 2) Peach Bottom - Nuclear @ 2,186 MW; 3) Susquehanna - Nuclear @ 2,184 MW; 4) Limerick - Nuclear @ 2,170 MW; and 5) Martins Creek - Oil/Coal @ 1,949 MW.

[210]*Id.*

[211]*Id.* The declaration of policy for HB 1509 states that "[rates for electricity in this commonwealth are on the average higher than the national average ... "

[212]Florida Public Service Commission. *States' Electric Restructuring Activities: An Initial Progress Report.* October 1997.

restructuring plans to the Pennsylvania Public Utilities Commission by September 1997.[213]

The state initially began with a statewide pilot program that opened the market to 5 percent of each utility's load beginning November 1997.[214] The pilot programs were fully subscribed in March 1998 with 72,000 participants, it grew to 230,000 in April 1998.[215] The phase-in for all customers to be eligible for retail competition was advanced to January 1, 2000.[216]

2. Stranded Costs

Stranded costs are defined by HB 1509 as:

An electric utility's known and measurable net electric generation-related costs, determined on a net present value basis over the life of the asset or liability as part of its restructuring plan, which traditionally would be recoverable under a regulated environment but which may not be recoverable in a competitive electric generation market and which the commission determines will remain following mitigation by the electric utility.[217]

The Pennsylvania Public Utilities Commission is authorized to determine the amount of stranded costs a utility is permitted to recover.[218] The amount of stranded costs allowed is listed below under the rate section. The utilities are allowed to recover the stranded costs through a competitive transition charge.[219] The charge is recovered from every customer who elects to receive service from

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[213]U. S. Department of Energy. Energy Information Administration. *Status of State Electric Industry Restructuring Activity as of January 1, 2000.* http://www.eia.doe.gov/cneaf/electricity/chg._str/tab5rev.html.

[214]1996 Pa. Laws 138, s. 4 (codified at 28 Pa. Cons. Stat. s. 2806(G)(4)). U. S. Department of Energy. Energy Information Administration. *Status of State Electric Industry Restructuring Activity: Pilot Projects as of January 1, 2000.* http://www.eia.doe.gov/cneaf/electricity/chg._str/pilot.html.

[215]U. S. Department of Energy. Energy Information Administration. *Status of State Electric Industry Restructuring Activity as of January 1, 2000.* http://www.eia.doe.gov/cneaf/electricity/chg._str/tab5rev.html.

[216]*Id.*

[217]1996 Pa. Laws 138, s. 4 (codified at 28 Pa. Cons. Stat. s. 2803).

[218]1996 Pa. Laws 138, s. 4 (codified at 28 Pa. Cons. Stat. s. 2808).

[219]1996 Pa. Laws 138, s. 4 (codified at 28 Pa. Cons. Stat. s. 2808).

an alternative generation provider.[220] The competitive transition charge may not exceed nine years unless an alternative payment provision is mutually agreed upon by the customer and the utility or unless the Pennsylvania Public Utilities Commission orders an alternative payment period for good cause shown.[221]

3. Rates/Restructuring Plans

The **average** revenue per kilowatt hour for all segments of the retail electric industry in 1996 was 7.96 cents per kilowatt hour, in 1997 it was 7.99 cents, and in 1998 it was 7.86 cents.

The **residential** sector's average revenues was: **9.73** cents in 1996, **9.9** cents in 1997, and **9.93** cents in 1998. The **commercial** sector was: **8.34** cents in 1996, **8.41** cents in 1997, and **8.26** cents in 1998. The **industrial** sector was: **5.93** cents in 1996, **5.89** cents in 1997, and **5.63** cents in 1998. The market share of retail sales in Pennsylvania in 1998 was 32.7% residential, 28.6% commercial, and 37.6% industrial.

The Pennsylvania Public Utilities Commission has approved the restructuring plans of the state's major investor owned utilities: GPU Energy, Allegheny Energy, PECO Energy (formerly Philadelphia Electric Company), Pennsylvania Power and Light (PP&L) and Duqesne Light.[222] Each utility reached a separate settlement with the state's commission. The rates for generation, transmission, and distribution were capped by the act for a period of 54 months from the effective date of the act.[223] The utilities were required to file their restructuring plans with the commission no later than September 30, 1997.[224] The plans were required to include: unbundled prices or rates for generation, jurisdictional transmission, distribution, and other services, a proposed competitive transition charge, a proposed universal service and energy conservation recovery mechanism, procedures to ensure access to all electric generation suppliers, the impacts on the utility's employees, and revised rate schedule.[225]

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[220]Florida Public Service Commission. *States' Electric Restructuring Activities: An Initial Progress Report*. October 1997. and 1996 Pa. Laws 138, s. 4 (codified at 28 Pa. Cons. Stat. s. 2808(A)).

[221]1996 Pa. Laws 138, s. 4 (codified at 28 Pa. Cons. Stat. s. 2808(B)).

[222]National Rural Electric Cooperative Association. *NRECA Retail Wheeling Report*. September 1999.

[223]1996 Pa. Laws 138, s. 4 (codified at 28 Pa. Cons. Stat. s. 2804(4)). The act does provide for some limited exceptions to this cap under this section.

[224]1996 Pa. Laws 138, s. 4 (codified at 28 Pa. Cons. Stat. s. 2806(D)).

[225]1996 Pa. Laws 138, s. 4 (codified at 28 Pa. Cons. Stat. s. 2806(E)).

Allegheny Power reached a compromise agreement with the commission in November 1998. The commission allowed the utility to have a 3.16 cents shopping credit[226] and allowed the recovery of $670 million in stranded costs over a 10 year period.[227]

Duquesne Light had its plan approved by the commission in May 1998. The plan allows a stranded cost recovery of $1.331 billion over seven years beginning in January 1999. It is estimated that consumers will have a price reduction of 12 percent for 1999.[228]

Pennsylvania Power & Light reached an agreement with the commission and its plan was tentatively approved also in May 1998. The utility was required to provide an estimated 10 percent rate reduction for 1999 and will be allowed to recover $2.864 billion in stranded costs.[229]

GPU Energy reached a settlement with the commission in August 1998 which was finalized in October. The customers of the utility were estimated to receive a 4 percent rate reduction for 1999 and the utility will be allowed $2.97 billion in stranded cost recovery over 11 years.[230]

PECO Energy received final approval of its plan in May 1998. Customers were required to receive an estimated 8 percent rate reduction for 1999. The rate reduction will be reduced to an estimated 6 percent rate for 2000. After that time the rate reduction will end.[231] The utility will be allowed to recover $5.26 billion in stranded costs over a 12 year period.[232]

On December 29, 1999, GPU Energy notified its customers that their electric bills will rise between 2.5 and 3.0 percent beginning January 1, 2000.[233] The new rates will be at the same level as December 1998, before the reduction

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[226]A shopping credits represent the generation portion of the unbundled bill for retail electric service.

[227]U. S. Department of Energy. Energy Information Administration. *Status of State Electric Industry Restructuring Activity as of January 1, 2000.* http://www.eia.doe.gov/cneaf/electricity/chg._str/retail .html.

[228]*Id.*

[229]*Id.*

[230]*Id.*

[231]PECO Energy. *Frequently Asked Questions*. http:// www.peco.com/choice/residential/faq_fr.htm.

[232]*Id.*

[233]GPU Energy. Residential Customers - Information About Your Account. http://www2.gpu.com/home/PA_InfoMyAcct.shtml.

began.[234] According to this recent report, the customers of Metropolitan Edison Co. (a GPU company) received a rate reduction of 2.5 percent in 1999. The rate reduction expired on December 31, 1999 according to the company's restructuring settlement reached with the Pennsylvania Public Utilities Commission.[235] Pennsylvania Electric (also a GPU company) received a 3 percent reduction for 1999.[236] The increase will also affect these customers.[237]

4. Securitization

As noted above, the stranded cost recovery is a separate line item on the customer's bill entitled the competitive transition charge (CTC). HB 1509 authorized the issuance of transition bonds.[238] A utility can apply to the Pennsylvania Public Utility Commission to recover all or part of the utility's transition or stranded costs by the issuance of transition bonds.[239] The commission is authorized to issue a qualified rate order to the amount it finds to be in the public interest. The bonds are paid back by a charge on the customer's bill entitled the intangible transition charge (ITC). This charge would replace the CTC on the customer's bill. The proceeds from the financing would be used to reduce the utility's transition costs and related capitalization. The term of the bonds cannot exceed 10 years.[240]

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[234] *Id.*

[235] *Id.*

[236] *Id.*

[237] *Id.*

[238] 1996 Pa. Laws 138, s. 4 (codified at 28 Pa. Cons. Stat. s. 2812).

[239] *Id.* American Power Association. *Securitization Provisions of State Electric Utility Restructuring Acts.* http://appanet.org/member/stats/securitization.html.

[240] *Id.*

5. Generation Divestiture

The Pennsylvania legislation does not require that the investor owned utilities divest themselves of facilities or reorganize their corporate structures.[241] However, some of the investor owned utilities have sold generating facilities.

GPU Energy sold its 786 MW Three Mile Island Unit 1 to AmerGen, a conglomeration of PECO Energy and British Energy, for $23 million. The Federal Nuclear Regulatory Commission approved the sale in April 1999.[242] GPU Energy also sold 23 plants to Sither Energies for $1.72 billion in November 1998. The utility plans to focus on transmission, distribution and diversifying into other industries. A significant portion of the proceeds will be used to pay GPU's stranded costs.[243]

Duquesne Light Co. sold seven coal-fired plants to Orion Power Holdings, Inc. for $1.7 billion on September 27, 1999. The sale will provide proceeds offsetting more than $1.331 million in stranded costs. The utility expects its stranded cost recovery to end by 2001, rather than 2005. This will provide an estimated 25 percent rate reduction for the utilities' customers.[244] The sale must be approved by the Pennsylvania Public Service Commission, the Federal Energy Regulatory Commission, and the United State Department of Justice. The sale also depends on the exchange of nuclear plant assets for coal-plant ownership with Ohio's FirstEnergy Corp.[245]

6. Number of Customers Switching Providers

At the end of September 1999, the total number of customers in investor owned utility service areas that were being served by alternative energy suppliers rose 7.1 percent from the preceding quarter to 479,271 from 447,590.[246] This rate

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[241]Florida Public Service Commission. *States' Electric Restructuring Activities: An Initial Progress Report.* October 1997.

[242]U.S. Department of Energy. Energy Efficiency and Renewable Energy Network. *Electric Restructuring Weekly Update*. May 7, 1999. http://www.eren.doe.gov/electricity_restructuring/weekly/may_99.html.

[243]U. S. Department of Energy. Energy Information Administration. *Status of State Electric Industry Restructuring Activity: Stranded Costs as of January 1, 2000.* http://www.eia.doe.gov/cneaf/electricity/chg._str/scostsl..html.

[244]U. S. Department of Energy. Energy Information Administration. *Status of State Electric Industry Restructuring Activity: Retail Access as of January 1, 2000.* http://www.eia.doe.gov/cneaf/electricity/chg._str/retail .html.

[245]Leap Letter. 4:5, July/Aug. 1999. (August 1999)

[246]Edison Electric Institute. *Retail Wheeling & Restructuring Report.* 6:2, September 1999.

shows a considerable leveling compared to the 84 percent increase from the end of March to the end of July 1999. The **total percentage** of customers who have switched **statewide** was **7.5 percent**.[247] The breakdown by customer class was not available. Percentage figures were available for the major investor owned utilities.

PECO Energy has the largest number of customers who have switched to alternative suppliers. The utility lost 14.5 percent of its residential customers, 26.34 percent of its commercial customers, and 58.61 percent of its industrial customers to alternative energy providers.[248] The figures for customers who switched from *GPU Energy* are: 4.89 percent residential; 15.53 percent commercial; and 32.32 percent industrial. For customers who switched from *Duquesne Light,* the figures are: 19.1 percent residential; 15.2 percent commercial; and 15.1 percent industrial. *PP&L* had the following number of customers switch providers: 2.3 percent residential; 12.4 percent commercial; and 10.3 percent industrial. For *Allegheny Power* the figures for customers who switched are: 1.4 percent residential; 6.3 percent commercial; and 31.7 percent industrial.[249]

7. Customer Bills/Charges

The customer bill formats have changed under the electric restructuring scheme. The charges for each particular service are separated on the bill. A sample bill from Allegheny Power is in Appendix A.

8. Independent System Operator and Power Exchange

The Pennsylvania utilities are connected to PJM Interconnection which is the largest centrally-dispatched electric control area in North America.[250] PJM, established in 1927, has always been the power pool for Pennsylvania[251] and was established as an ISO on January 1, 1998.[252] PJM now also operates as the competitive wholesale energy market for the region and facilitates open access to transmission. It was the first regional bid-based energy market. PJM

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[247]National Rural Electric Cooperative Association. *NRECA Retail Wheeling Report*. September 1999.

[248]Edison Electric Institute. *Retail Wheeling & Restructuring Report.* 6:2, September 1999.

[249]*Id.*

[250]PJM Interconnection LLC. *About PJM*. http://www.pjm.com.

[251]Interview with Pennsylvania Office of Consumer Advocate, January 5, 2000.

[252]PJM Interconnection LLC. *About PJM*. http://www.pjm.com.

allows the participants to buy and sell energy, schedule transactions and reserve transmission service. The objectives of the organization is to ensure reliability of the bulk power transmission system and to facilitate the competitive wholesale electric market.[253] The service area for PJM includes Pennsylvania, New Jersey, Maryland, Delaware, Virginia and the District of Columbia.[254]

9. Rural Electric Cooperatives

The 13 electric cooperatives[255] in Pennsylvania are exempt from regulation by the Pennsylvania Utility Commission.[256] House Bill 1509 provides that persons who are members of electric cooperatives have the right to purchase electric generation from an alternative electric supplier. The act also provides for a 4 year transition and phase-in period beginning on the effective date of the law.[257] The electric cooperatives in Pennsylvania implemented retail choice for all customers on January 1, 1999.[258] A departing member of a cooperative or the alternative electric provider must pay a transition surcharge to each electric cooperative if the member chooses an alternative electric provider.[259]

10. Municipalities

Municipal utilities and electric cooperatives that distribute electricity to end-use customers in Pennsylvania may not use the transmission or distribution system of an investor owned utility to supply that customer unless they allow alternative suppliers to use their facilities to make sales to their end-use customers.[260] A borough (municipalities) may prohibit sales of electricity to its customers within its borough limits, but the borough is prohibited from selling electricity outside its borough limits.[261] There are 34 municipal utilities in Pennsylvania.[262]

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[253] *Id.*

[254] *Id.*

[255] Florida Public Service Commission. *Comparative Utility Statistics -- Selected States.* (Draft) January 2000.

[256] National Rural Electric Cooperative Association. *NECA Retail Wheeling Report*. August 1999.

[257] 1996 Pa. Laws 138, s. 1 (codified at 15 Pa. Cons. Stat. s. 7404)

[258] *Id.*

[259] 1996 Pa. Laws 138, s. 1 (codified at 15 Pa. Cons. Stat. s. 7404(6)(IV)).

[260] 1996 Pa. Laws 138, s. 1 (codified at 28 Pa. Cons. Stat. s. 2805 (B)1.I.).

[261] *Id.*

[262] Florida Public Service Commission. *Comparative Utility Statistics -- Selected States.* (Draft) January 2000.

D. Federal Energy Regulatory Commission (FERC)

When California and Pennsylvania moved to retail competition (as well as the other states adopting retail competition), regulatory jurisdiction over certain aspects of the electric grid were transferred from the states to FERC. Approval had to be sought from FERC for the establishment of the California ISO and Power Exchange and FERC now has jurisdiction over the transmission prices paid by retail customers for transmission and ancillary services needed to deliver generation to retail customers in Pennsylvania and California. Under Order 888, FERC assumes jurisdiction of the transmission portion of electric rates when those rates are unbundled, i.e., when rates are separated into generation, distribution, and transmission.[263]

[263]Discussion with Division of Electric and Gas staff, Florida Public Service Commission. January 5, 2000.