BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

DOCKET NO. 070098-EI
FLORIDA POWER & LIGHT COMPANY

IN RE: FLORIDA POWER & LIGHT COMPANY'S PETITION TO DETERMINE NEED FOR FPL GLADES POWER PARK UNITS 1 AND 2 ELECTRICAL POWER PLANT

DIRECT TESTIMONY & EXHIBIT OF:

SETH SCHWARTZ

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

FLORIDA POWER & LIGHT COMPANY

DIRECT TESTIMONY OF SETH SCHWARTZ

DOCKET NO. 07____EI

JANUARY 29, 2007

Q. Please state your name and business address.

A. My name is Seth Schwartz. My business address is 1901 North Moore Street, Suite 1200, Arlington, Virginia 22209.

Q. By whom are you employed and what is your position?

A. I am employed by Energy Ventures Analysis, Inc. (EVA), where I am a principal.

Q. Please describe your duties and responsibilities in that position.

A. EVA is a consulting firm that engages in a variety of projects for private and public sector clients. These consulting projects are related to energy and environmental issues. In the energy area, much of our work is related to analysis of the electric utility industry, fuel markets, particularly coal, natural gas, oil, and petroleum coke, and the transportation thereof. Our clients in these areas include coal, oil and natural gas producers, electric utility and industrial energy consumers, and energy transporters. We also work for a number of public agencies, such as state regulatory commissions, the U.S. Environmental Protection Agency, and the U.S. Department of Energy, as well as intervenors in utility rate proceedings, such as consumer counsels and municipalities. Another group of clients include trade and industry associations, such as the Electric Power Research Institute, the Gas Research Institute and the Center for Energy and Economic Development. EVA has provided testimony to numerous state public utility commissions, including the Florida Public Service Commission. Furthermore, the firm has filed testimony in a number of cases in both state and federal courts, as well as before the Federal Energy Regulatory Commission.

Q. Please describe your educational background and professional experience.

A. I received a Bachelor of Science Degree in Geological Engineering from Princeton University in 1977. I was a founder of EVA in 1981, and have been a principal in the company since then. I perform and manage a variety of fuel-related consulting work for the electric utility industry, including fuel supply strategy studies, market analyses and price forecasts. I also audit the management and performance of electric utility fuel supply departments and provide testimony to public service commissions. My resume is attached as Document No. SS-1, page 1 and 2.

PURPOSE AND SUMMARY OF TESTIMONY

Q. Are you sponsoring an exhibit in this case?

A. Yes. I am sponsoring an exhibit, which consists of the following documents:

Document No. SS-1	Resume of Seth Schwartz
Document No. SS-2	Power Generation in Florida
Document No. SS-3	Changes in Fuel Prices since 1992

Document No. SS-4	U.S. Coal Industry Production
Document No. SS-5	Map of U.S. Coal Supply Regions
Document No. SS-6	U.S. Coal Demand by Sector
Document No. SS-7	U.S. Coal Imports
Document No. SS-8	U.S. Coal Pricing
Document No. SS-9	Central Appalachia Coal Production
Document No. SS-10	Central Appalachia Coal Demand by Sector
Document No. SS-11	Outlook for Central Appalachia Coal
Document No. SS-12	Central Appalachia Coal Reserves
Document No. SS-13	Central Appalachia Coal Production by Company
Document No. SS-14	Routings from Central Appalachia to FGPP
Document No. SS-15	Global Thermal Coal Trade
Document No. SS-16	Global Metallurgical Coal Trade
Document No. SS-17	Coking Capacity Additions
Document No. SS-18	Petroleum Coke Pricing
Document No. SS-19	FPL Fuel Price Forecast
Document No. SS-20	Comparisons of FGPP Delivered Price Forecasts

Q. Are you sponsoring any sections of the Need Study in this proceeding?

A. Yes. V.A.2.c (parts iii and iv) and I co-sponsor Appendix E of the Need Study.

Q. What is the purpose of your testimony?

A. The purpose of my testimony is to provide background information on the coal industry and to provide EVA's expert opinion on an assessment of the transportation strategy FPL is employing at the FPL Glades Power Park

(FGPP) and to affirm the reasonableness of the projected delivered costs and procurement strategy for coal and petroleum coke included in this application.

Q. Please provide an overview of the fuel supply for FGPP.

A. Like the other utilities in Florida, FPL's reliance on coal-based generation is less than the national average. FPL has ownership interests in two coal-fired plants, Scherer 4 and St. Johns River Power Park (SJRPP), which provided 5.2% of its energy sources in 2005. Historically, coal prices have displayed lower volatility than natural gas or oil prices. Even with its small ownership share, FPL's coal assets have helped to reduce fuel prices and fuel price volatility for FPL's customers. In my opinion, an expansion of its coal position with the addition of FGPP, should further reduce fuel prices and price volatility

FPL's decision to use 40 % Central Appalachia coal, 40 % imported coal and 20 % petroleum coke as its fueling plan for FGPP is reasonable. FPL will be able to adjust these ratios over time to purchase the lowest-cost combination of these fuels, reacting to changes in market prices. Historically, the price relationship between imported coal and Central Appalachia coal has varied due to changes in world markets. This plan will provide flexibility in sources of solid fuel, in order to achieve the lowest cost with reliable supplies.

The U.S. coal industry is undergoing a major shift as utility compliance with the Clean Air Interstate Rule will result in the retrofit of a significant number of scrubbers on power plants resulting in inter- and intra-regional switching of coal supplies. Demand for Central Appalachia coal overall will decline but Central Appalachia will remain a significant source of coal supply for utility plants in the southeastern U.S. to which it has a transportation advantage. Even in its diminished role, Central Appalachia has adequate coal reserves and will be a reliable source of supply for the life of the FGPP project.

Imports of coal into the U.S. will continue to grow as global coal trade expands with the continued development of export coal industries throughout the world. The largest source of import coal into the U.S. will be South America (Colombia and Venezuela) given its proximity. Since the mid 1980s when the U.S. started importing coal from South America, South America has been a reliable source of high quality bituminous coals. However, other sources, such as Russia, South Africa, Indonesia, and Australia coals are also possible sources of supply that can serve as alternatives to South American supplies when they are lower-cost, and provide reliability in the event that the primary sources of import coal are disrupted.

Petroleum coke supply is expected to expand over time as additional coking capacity is installed. Petroleum coke is a lower cost source of Btu's that many utilities have successfully incorporated into fuel supply as a means of controlling costs. The low volatile content of petroleum coke limits the extent to which it can be burned as part of the fuel blend.

The use of a portfolio strategy for fueling a power plant is consistent with best practices within the utility industry. A portfolio strategy consists of a combination of short, medium, and long term procurements which incorporate both supply and supplier diversification. By designing FGPP for a blend of Central Appalachia coal, import coal, and petroleum coke, FPL has a supply which incorporates three solid fuel sources but can swing supply as the market dictates subject to the technical limits for petroleum coke and contracting constraints on commitments for coal supply and transportation.

The delivered price forecast developed by FPL is reasonable and consistent with the delivered price forecast EVA prepared for Orlando Utilities Commission's new integrated gasification combined cycle (IGCC) plant at Stanton, to which I submitted testimony to the Florida Public Service Commission in the Need For Power application in February 2006.

FLORIDA ELECTRICITY GENERATION

Q. How do the sources of electric power generation in Florida compare to nationwide generation?

A. The sources of generation in 2005 by fuel type for Florida and the total U.S. are summarized on Document No. SS-2. Solid fuel (principally coal, but including petroleum coke) accounted for only 33% of total generation in Florida, compared to 52 % for the U.S. as a whole. Florida also had lower than the national shares for nuclear power generation and other (principally hydro power). As a result, Florida relied upon oil and natural gas for 52% of total generation in 2005, compared to only 20% for the U.S.

Q. What effect does this fuel mix have on Florida customers?

A. Florida customers are much more vulnerable to disruptions (both in price and reliability) than the average U.S. customer. The prices of oil and natural gas are historically much more volatile than the price of coal, as shown on Document No. SS-3. The increase in natural gas prices since 1992 has been 3 times the increase in coal prices over the same period (and up to 9 times the increase at the peak of natural gas prices in 2005). As experienced in the period 2004 to 2006, high prices for oil and natural gas have a major impact on electric power rates.

Q. What is FPL's supply of electric power by fuel type?

A. Because of its location in southern Florida, farthest from the U.S. coal fields, FPL has a lower share of coal-fired generation than the Florida average. In 2005, FPL supplied 5.2% of its power from coal (its ownership shares of Scherer 4 and SJRPP), 59.4% of its power from oil and natural gas, 19.2% from nuclear, and 16.0% from purchased power.

Q. How will FGPP affect FPL's generation by fuel source?

A. Based on FPL's 2006 Ten Year Power Plant Site Plan, the construction of FGPP will increase the share of coal (including petroleum coke) from 5.2% of FPL's power supply in 2005 to 14.4% in 2014.

Q. Will this increase in coal-fired generation benefit FPL's customers?

A. Yes. Diversifying the portfolio of generation sources will provide a more stable cost of electric generation for FPL, and reduce its exposure to disruptions in the oil and natural gas markets.

FUEL SUPPLY PLAN FOR FGPP

Q. What is FPL's fuel supply plan for FGPP?

A. FPL's fuel supply plan is to burn a blend of coals consisting of 40 % Central Appalachia coal, 40 % imported coal, and 20 % petroleum coke.

Q. What do you mean by FPL's fuel supply plan?

A. This is the mix of fuels for which FGPP would be designed and that FPL would expect to purchase over the long term. However, should the relative pricing of these products change, FPL will be able to adjust its fuel purchases to maximize the use of the least-cost combination of solid fuels subject to contractual limits.

Q. How does FPL's fuel supply plan for FGPP compare with the mix of solid fuels used by St. Johns River Power Park?

A. The mix of fuels used at SJRPP (20% owned by FPL) has been similar to the proposed plant for FGPP. In 2005, the fuel supply for SJRPP was 30% Central Appalachia coal, 52% imported coal, and 18% petroleum coke. This fuel supply plan has been very successful at SJRPP over the long term, providing both low cost and reliability.

Q. How does FPL's fuel supply plan compare with the mix of solid fuels currently used by Florida utilities?

A. In 2005, Florida utilities purchased over 25 million tons of solid fuels from three major coal supply regions plus petroleum coke. Central Appalachia coal accounted for over a third of the total purchases with the Illinois Basin and Imports not far behind. Petroleum coke accounted for 11 % of purchases on a tonnage basis. The other large supply regions, Northern Appalachia, Powder River Basin, and the Rockies accounted for a very small amount. In other words, FPL's plans are consistent with the fuel procurement of the other utilities in Florida.

Q. Please explain why FPL is not considering Illinois Basin coal for FGPP.

A. Although Illinois Basin coal is used by some of the coal-fired plants in Florida, this coal tends to be high in chlorine and is not compatible with the plant and scrubber design selected for FGPP.

Q. Is FPL's fuel supply plan for FGPP a good plan?

A. Yes, in several important respects. First, FPL has developed a fuel supply plan that is not dependent upon either a single coal supply region or a single coal within a coal supply region. Subject to meeting an average input sulfur content, FPL has considerable flexibility with respect to its solid fuel procurements. The ability to use coal from more than one supply region provides both security of supply as well as market competition. Second, FPL has incorporated petroleum coke into its plant design, permit, and fuel supply plan. Petroleum coke is an economic source of energy that has provided a number of utilities with an effective means of minimizing fuel costs. Third, FPL can receive coal from two rail carriers. As with multiple coal supply regions, multiple carriers provide both security of supply and competition.

US COAL INDUSTRY

Q. Please provide an overview of the U.S. coal industry.

A. In 2005, the U.S. coal industry produced over 1.1 billion tons of coal (Document No. SS-4). It is estimated that there is approximately 230 years of domestic coal reserves based on current demand. There are five major commercial producing coal regions in the U.S, of which the largest is the Powder River Basin. The largest coal supply region in the East is Central Appalachia, with Northern Appalachia and the Illinois Basin also major supplies to the commercial market. A map of the supply regions is provided in Document No. SS-5. Despite overall growth in U.S. coal production, demand for eastern coals has been declining as they have been displaced by western coals moving into eastern markets and by imported coal.

Most U.S. coal production is consumed domestically. The utility sector dwarfs all other sectors, accounting for almost 90 % of U.S. coal consumption (Document No. SS-6). The domestic metallurgical and industrial markets have declined over time with the collapse of the traditional steel industry and some loss of heavy industry. As a high cost producer of coal, the U.S. is now the swing exporter in the global coal market such that demand for U.S. coal increases when global supply is tight and falls when the market is in balance or there is a supply overhang.

Q. What role do imports play in the U.S.?

A. In 2005, electric generators imported over 23 million tons of coal (Document No. SS-7). Most of the coal went to coastal utilities which represent the most attractive market for imports due to the inland transportation savings.

Q. What is the outlook for U.S. coal demand?

A. U.S. demand for coal is expected to grow at an average annual rate of 1.3 % between 2006 and 2025 largely in response to the addition of almost 100 GW of new coal fired generating capacity. About 17 GW of new coal-fired capacity is expected to be added by the end of the decade, but much of the new capacity is expected to be added after 2010. The forecast assumes that this new generating capacity can be permitted and financed.

Q. What are the factors that affect the mix of coals burned by electric generators?

A. Utilities generally burn the coals which have the most favorable economics. The economics of the alternative coal supply regions have changed over time driven by three primary factors: environmental requirements, relative coal prices at the mine, and coal transportation costs.

Q. How have these factors affected FPL's fuel plan?

A. FPL's plan has selected the fuels likely to be the least-cost on a delivered basis. The selected fuels (Central Appalachia coal, imported coal, and petroleum coke) are the closest sources of solid fuel for FGPP, minimizing transportation costs, resulting in the most economic supply on a delivered basis.

Q. How have environmental requirements affected coal choice?

A. The Clean Air Act of 1970 and various amendments thereto have resulted in a variety of air pollution regulations which have limited the emissions of criteria pollutants including sulfur dioxide (SO_2). Utilities which have complied with regulations through the use of technology have more flexibility with respect to coal supply, not being limited to certain sulfur coals. Conversely, utilities which have complied through the use of low sulfur coals have been limited to low sulfur coals.

The most recent additions to these regulations are the 2005 Clean Air Interstate Rule (CAIR) and the 2005 Clean Air Mercury Rule (CAMR). Compliance with CAIR and CAMR will require the retrofit of many eastern power plants with flue gas desulfurization equipment (FGD) also known as scrubbers. These installations will enable utility coal buyers to reconsider coal supply options as sulfur content will no longer be as limiting a factor. The expected result of CAIR and CAMR compliance will be shifts both between and within supply regions to higher sulfur coals. Demand for Central Appalachia coals is expected to decline while demand for Northern Appalachia and Illinois Basin coals is expected to rise.

Q. How do environmental requirements affect FPL's fuel plan?

A. FPL is able to take advantage of the fact that the demand for lower-sulfur Central Appalachia coal is likely to fall, as customers in the Midwest retrofit control technologies and switch to higher-sulfur local coals. This will increase the availability of Central Appalachia coal at a lower price for FGPP, which will benefit from the fact that this is the closest domestic coal source, with the lowest transportation cost. By using this lower-sulfur coal, as well as lower-sulfur imported coal, FPL can blend low-cost, high-sulfur petroleum coke and still meet stringent emission limits.

Q. How do relative coal prices affect coal supply patterns?

A. Relative coal prices have also been important determinants of coal demand. It is not simply how much a particular coal costs, it is how much it costs compared to the alternatives.

Coal price formation is complex because coal is not a worldwide, or even a national, commodity. Rather coal operates as a set of overlapping regional commodities connected by the varying ability of customers to switch supply from one coal region to another. Within each coal supply region, coal functions like a commodity and long-term coal prices are set by the marginal cost of the production needed to satisfy demand.

Until 2000, coal prices had been relatively flat to declining on a nominal dollar basis as gains in mine productivity offset inflation-related increases. (Document No. SS-8) Low prices for Powder River Basin coals (PRB), particularly, made their use competitive in many eastern power plants designed for eastern coals.

In 2001 and again in 2004, eastern coal prices increased above historic levels, albeit for different reasons. The increase in pricing in 2001 was caused largely by inflated consumer stocks in 2000 which caused prices to fall as utilities stopped buying coal to return stocks to normal levels. The reduced purchasing led to mine closures such that when stocks were back to normal and purchasing resumed, the underlying supply was inadequate to meet demand and prices spiked. In 2004, eastern coal prices increased above historic levels when global demand for metallurgical coals caused some U.S. metallurgical coals that had been moving into the utility market to be diverted to the metallurgical coal market creating a shortfall of steam coal. The incremental demand tightened the demand supply balance and resulted in a price response.

While prices have fallen from their most recent peaks as a result of additional supply becoming available in response to higher prices and a return to better western rail performance, prices continue to be above historic levels as there has been a step increase in costs. In the east, costs have increased primarily as a result of lower mine productivity which has resulted from a slew of factors including worsening mine conditions as the better reserves are mined out, a tight labor situation with a declining pool of qualified miners, a more difficult regulatory environment, and higher prices which reduces management attention to costs. Higher commodity prices (oil, explosives, tires, etc.) have also increased mine costs. In the west, costs have increased as a result of declining mine productivity and higher mineral costs. The declining productivity reflects the higher ratios combined with the fact that the low-cost dragline capacity is already fully utilized, meaning the additional handling is using equipment with higher operating costs. Also, bonus payments for new mineral leases have increased substantially, requiring higher coal prices to obtain recovery of leasing costs.

Q. How do rail rates affect coal supply patterns?

A. Utilities do not decide which coals to buy based upon coal prices alone. Rather, they evaluate their coal choices on a delivered price basis. Two decades of declining rail rates (in constant dollars) intensified inter-regional coal competition and brought over 175 million tons of western coal to the east. Most of the western coal moving east was coal from the Powder River Basin which could compete with many eastern coals as a result of a low mine price and low rail rates. The best example is Georgia Power's Scherer station which consists of four units designed to burn low sulfur Central Appalachian coal. With the conversion of Scherer to Powder River Basin coal, this plant alone will account for about 14 million tons of Powder River Basin coal moving east.

New much higher western transportation rates may lead to different distribution patterns in the future. The rates now being quoted for movements are more than two times the rates in place when Georgia Power committed to convert Scherer to Powder River Basin coal. The rail system is not dissimilar to coal supply. Higher rates have increased railroad profitability which in turn has resulted in greater investment in the railroads in capacity expansions. As overall economic growth slows, the expansions will ease capacity and rates will fall, although unlikely to the low levels of the 1990's. As rail markets return to long-term price stability, we expect rail rates to average 50% - 100% more than the low rates which prevailed until 2003.

Q. How does FPL's fuel supply plan consider these factors which affect coal prices and transportation costs?

A. Because relative coal prices and freight rates vary over time, a fuel plan which allows flexibility in selecting coals from different supply regions will reduce costs over the long term. FPL's fuel plan provides for substantial flexibility in regional coal supply by developing multiple transportation options for delivery of coals from different supply regions, with competitive sources. This will allow FPL to adjust its fuel procurement decisions over time to minimize fuel costs.

Q. Given the prominence of the Powder River Basin, why is this coal not the design fuel for FGPP?

A. In the long-term, demand for Powder River Basin coals is expected to continue to increase as new power plants located in the West and Texas come on line. Over the last 10 years, much of the growth in demand for Powder River Basin coals has come from increasing capacity utilization of existing plants and displacement of others, particularly in eastern markets. Further displacement of eastern coals is unlikely as utility plants are retrofit with scrubbers and some of the displacement that has already occurred is likely to revert to eastern coals once scrubbers are retrofit. For new plants, the higher mine price for Powder River Basin coals combined with higher transportation costs makes it less economic in the eastern markets.

Q. Please provide an overview of the Central Appalachia coal supply region.

A. Central Appalachia includes coal production from eastern Kentucky, southern West Virginia, Virginia, and Tennessee. Central Appalachia is the largest coal supply region in the eastern U.S., although production has declined since 1990, as shown on Document No. SS-9.

Mining in Central Appalachia is somewhat different than mining in other coal supply regions given the nature of the reserves. The remaining reserve blocks in Central Appalachia are smaller and less conducive to either large surface mining operations (such as those in the Powder River Basin or lignite fields) or large underground mining operations (such as those in Northern Appalachia or the Rockies or under development in Illinois). The "typical" Central Appalachia operation is a facility consisting of a preparation plant/load out with several mines. The mines are generally small, i.e., less than two million tons per year of production, and have limited lives such that each mine typically has less than ten years of production. As a result, there is continuous need for new mine development and reserve acquisition in Central Appalachia.

Q. What is the market for Central Appalachia coal?

A. Central Appalachia's primary market is power generation, accounting for over 70 % of 2005 shipments, as shown on Document No. SS-10. Unlike other supply regions, substantial volumes move to other sectors as well including the domestic steel industry, other domestic industries and the export steam and metallurgical coal markets. The utility market consists of both power plants that were designed for Central Appalachia coals as well as power plants that switched to Central Appalachia coals in order to comply with Clean Air Act requirements.

Q. **What is the outlook for the demand for Central Appalachia coal?**

A. Most forecasts call for a decline in demand for Central Appalachia coal as utilities return to their design fuels with the retrofitting of scrubbers and imports continue to penetrate the coastal utilities.

EVA's most recent long-term forecast, which is provided in Document No. SS-11, calls for Central Appalachia coal demand to decline from 235.6 million tons in 2005 to about 173 million tons in 2020 and then hold steady. While the largest declines are projected for the utility sector due to fuel switching related to CAIR compliance and imports, declines in the other sectors are also forecast. Most notably, metallurgical coal exports are forecast to decline with the growth in overseas metallurgical coal supply.

Future utility demand for Central Appalachia coal includes a number of new coal-fired plants such as FGPP for which the logical coal supply is Central Appalachia. These plants are located primarily in the southeast, notably the Carolinas and Florida. Central Appalachia coal is the proximate source of supply and, in such cases, the economic source of supply. The decline in demand for Central Appalachia coal in other markets will increase the supply available for FPL and other customers in the southeast at economical prices.

Q. What is the outlook for the supply of Central Appalachia coal?

A. The Central Appalachia coal industry will contract in response to declining demand. Contraction in Central Appalachia may be somewhat easier than in other supply regions due to the nature of the supply. In other words, as the mines are depleted, some will not need to be replaced. Further, Central Appalachia has experienced recent production problems due to a variety of factors including reserve depletion, permitting, labor, and high production costs. As the supply contracts in response to declining demand, the pressures resulting from these problems on individual mines will lessen. For example, labor availability will improve.

Q. Are there adequate reserves to support Central Appalachia coal production at the 175 million ton per year level?

A. Yes. Reserve depletion is somewhat of a misnomer as significant Central Appalachia reserves remain. The coal producers will mine the lowest-cost reserves first and the mining conditions will steadily become more difficult over time. Reserve depletion has had a greater impact on production recently due to the depletion of the large reserve blocks that were the basis of the mines developed from old steel company properties in the last 15 to 20 years. As the steel company reserves are mined out, there are simply not comparable reserves to replace these mines. Nevertheless, substantial reserves remain. As shown on Document No. SS-12, the 10 publicly-traded coal companies in Central Appalachia (who accounted for 53 % of production in 2005) report almost five billion tons of controlled reserves as of the end of 2005, or 38 years of life at current production rates.

Q. What is the industry make up in Central Appalachia?

A. Central Appalachia is the least concentrated of any supply region. Looking at Central and Southern Appalachia combined; only two producers had markets shares greater than ten % in 2005 (Document No. SS-13). Consolidation within Central Appalachia is likely but the region is still likely to be less concentrated than other major supply regions. As a result, supply and pricing in Central Appalachia will continue to be very competitive.

Q. How would Central Appalachian coal move to FGPP?

A. The site has direct rail access to a short line railroad, the South Central Florida Express, which connects to both the CSXT Railroad (CSXT) and the Florida East Coast Railroad (FEC), which in turn connects to the Norfolk Southern Railroad (NS) at Jacksonville. The CSXT and NS are the two major rail carriers serving Central Appalachia, and provide access to all of the Central Appalachia reserves and production. The rail routings and connections to deliver this coal to FGPP are shown on Document No. SS-14.

Q. Considering all of these factors, is it likely that Central Appalachia coal will be an economic source of coal for FGPP?

A. Yes. FPL's plan maximizes competition for transportation of coal from this region, which is the closest source of coal for FGPP. This should minimize the delivered cost of coal and provide maximum flexibility and reliability of supply.

GLOBAL COAL INDUSTRY

Q. Please describe the global coal market.

A. The global coal market is best divided between thermal (steam) and metallurgical (coking) coal markets.

Global thermal coal trade has increased significantly in the last decade or so with the development of coal industries in South America and Indonesia and the expansion of the coal industries in Australia, Russia, and China (Document No. SS-15). On a tonnage basis, Indonesia surpassed Australia as the largest thermal coal exporter in 2004 and has additional expansion plans.

The thermal coal market is typically divided between the Atlantic and the Pacific with South American, South African and Russian coals dominating the Atlantic market and Australian and Indonesian coals dominating the Pacific market. With the large increased supply from the Pacific Rim, increasing volumes of Australian and Indonesian coals are moving into the Atlantic market and the distinction is lessening but will never disappear because of the difference in distances. The metallurgical coal market is smaller and fewer countries produce metallurgical grade coals (Document No. SS-16). The U.S. has retained a share of the European and South American markets. Australia is by far the largest exporter of metallurgical grade coals and accounts for over 50 % of the global market. Western Canada also produces high quality metallurgical coals which almost exclusively move to the Pacific Rim market.

The world's largest coal producer and consumer is China. In 2005, China is estimated to have produced 2.1 billion tons, over 95 % of which is consumed domestically. China produces both thermal and metallurgical coals. Despite China's relatively recent entrance into the global market, it is now a significant participant and the amount of coal it has available to export in any one year explains much of the recent volatility in global coal pricing. China also imports some coal which also affects the global market balance. In virtually all forecasts of global coal prices, the prognosticators state that China is the wild card. Higher exports can cause global pricing to fall; conversely lower exports can cause global pricing to increase.

Q. What are the primary sources of imported coal to Florida?

A. The primary source of steam coal imports to Florida is South American coal, because its proximity means that the delivered price is less than other imported coal sources. Colombia is the principal source of imported coal, but Venezuela also has an active coal industry.

Q. Please describe the Colombian coal industry.

A. Colombian coal is produced in three major coal fields. All of the coal from these reserves is bituminous. The mines are typically surface mines operating in multiple seams. Coal quality is good. While the heating content varies among the basins, it typically runs from 11,000 to 12,600 Btu per pound. The sulfur content is typically below 1.0 % and can run as low as 0.6 %. Ash is generally low. The coal is classified as a steam coal.

Colombian coal exports have grown significantly over the last decade. Exports exceeded 60 million tons in 2005 and are expected to continue to grow with the expansion of existing mine and development of new mines. Infrastructure investments are also underway with a May 2006 government commitment to a new export terminal in Santa Marta Bay.

Most of the coal produced in Colombia comes from two large mines: the Cerrejon mine and Mina Pribbenow. Cerrejon, owned by BHP-Billiton, Anglo American and Xstrata, produced 28 million tons in 2005. Mina Pribbenow, which is owned by Drummond, produced 24 million tons. The balance comes from two Glencore mines and a smattering of other small producers.

The Colombia coal is exported through several ports. The two main ports are Puerto Bolivar which handles the Cerrejon coal and Puerto Drummond which handles the Mina Pribbenow production. Most of the ports can accommodate all vessel types and sizes.

Colombia is reported to have 7.3 billion tons of recoverable reserves. The reserves are mostly high quality bituminous steam coal. At current or even expanded production levels, Colombia has well over 100 years of reserves. In addition, reserves of a like or greater amount are indicated and inferred which could double these estimates.

Q. Please describe the Venezuelan coal industry.

A. Venezuela, by contrast, is much smaller. In 2005, Venezuela exported under 10 million tons. Most reserves are in the western part of the country in the state of Zulia. Venezuelan coal is hotter than Colombian coal, typically 12,200 Btu per pound and above. Estimated recoverable reserves are about 0.5 billion tons.

Venezuelan coal moves primarily into the steam coal market although some has been successfully marketed as a PCI coal[1]. Venezuela coal exports move primarily to Europe and North America.

One mine accounts for most of Venezuela coal production. Carbones del Guasare's Paso Diablo mine, which is currently owned in varying %ages by the government, Anglo American, and Peabody, produced 6.3 million tons in 2005. The balance of Venezuela production comes from several small mines.

Coal production in Venezuela has been limited by infrastructure. Most of the coal is exported through Bulkwayuu, a storage and loading vessel on Lake Maracaibo. Vessel sizes at Bulkwayuu are limited to panamax. In order for exports from Venezuela to expand, significant investment in infrastructure must take place. The current political instability makes such investment questionable in the near term. However, even if not immediately, this

[1] Pulverized Coal Injection is the process by which some non-coking coal is added to coke ovens, reducing the metallurgical coal requirements.

investment is still likely such that over time Venezuelan coal exports can be expected to increase.

Q. What has the record of performance of these suppliers been?

A. Overall, performance has been good. In 2006, there was a labor dispute at Drummond's mine which disrupted production for about one month. Other than that and the occasional contract dispute, shipments from South America have been very reliable.

Q. Are there other potential sources of imports besides South America?

A. Yes. Coal imports are not limited to Colombia and Venezuela although they do clearly have a transportation advantage. As noted above, a number of other countries are large coal exporters, several of which also present potential sources of supply.

The closest, non-South American source is Russia, whose reserves are the second largest in the world. In recent years, Russia has become a major coal exporter into the Atlantic market. Europe is Russia's largest market although test quantities have moved across the Atlantic. The coal is good quality steam coal, high in Btu and low in sulfur. The Russian coals do not have the same level of quality control as other exporters but this situation should improve over time. Next promising is Indonesia, which passed Australia in 2004 as the largest global exporter of thermal coal. The Indonesian coal industry has expanded rapidly. The coal is not as high quality as that from other exporting countries, much of it is sub-bituminous. Indonesian coals have a range in sulfur contents from the ultra low sulfur of 0.1 % to over one %. The ultra low sulfur has gained some markets in the U.S. where its use has allowed utilities to comply with air pollution regulations without scrubbing. Penetration of Indonesian coals is limited due to the distance, combined with the lower heat content, which together increase transportation costs. Indonesian coals also generally require big vessels which not all importing terminals can accommodate. Other coals from Australia, South Africa, and elsewhere also present potential sources of imports.

Q. How are imported coals transported to FGPP?

A. Import coals are generally bought loaded into the vessel at the respective origin ports. Vessels would move the coal to an import terminal designated by FPL and the coal would then be offloaded at the terminal and put into rail cars for delivery to FGPP. FPL is evaluating access to both existing facilities and potential new import terminal locations in Florida.

Q. Given all of these considerations, is it likely that imported coal will be an economic source of fuel for FGPP?

A. Yes. Although world coal prices can fluctuate, the long-term trend is for world coal prices to fall relative to domestic coal prices, making imported coals a more likely supply to FGPP over time. FGPP is well-situated to receive imported coals, because of its location near the large supply region of South America. FPL's fuel supply plan has developed a sound strategy for delivering imported coals to FGPP economically and has provided flexibility to increase or decrease reliance on imported coal depending on the relative changes in the market compared to domestic coal over time.

PETROLEUM COKE

Q. What is petroleum coke?

A. Crude oil is turned into lighter transportation fuels in the refinery process. Refineries use a variety of methods to maximize production of the lighter transportation fuels including heating the heavy residual fuel oil in a coking process. Petroleum coke is a by-product of the coking process.

Petroleum coke has a high carbon content, low ash, and low volatility. If the petroleum coke has less than two % sulfur content and a low metals count, it can be calcined to produce anode coke, which is a higher value product used in the aluminum, steel and titanium oxide industries. Petroleum coke with more than two % sulfur is a fuel grade coke and historically has been a low valued, by-product material that was "disposed of" in the cement industry and, where possible, utility plants.

Q. How suitable is petroleum coke for pulverized coal boilers?

A. The low volatility of petroleum coke limits its use in pulverized coal boilers. Low volatility fuels burn slower than high volatility coal which creates issues with flame stability and carbon burnout. As a result, petroleum coke is typically limited to 20 % of the feed stock although some utilities have demonstrated success with slightly higher %ages.

Q. What is global petroleum coke production?

A. Global petroleum coke production capacity in 2005 is estimated to be 90 million tons; global 2005 production was about 85 million tons. 2005 production in the Gulf Coast and the Caribbean is estimated to be about 32 million tons.

Q. What is the outlook for petroleum coke supply?

A. Petroleum coke production is driven by crude oil and refined product prices. Ultimately, the supply of petroleum coke is a function of oil demand and crude oil quality.

Demand for crude oil continues to grow. Between 1990 and 2005, demand grew from 66 million barrels per day to 82 million barrels per day. Industry analysts including EVA forecast continued strong growth driven by China. EVA's forecast calls for an average annual growth of 1.6 % between 2005 and 2025 which results in a 2025 demand of 113.5 million barrels per day.

To satisfy demand growth, production increases are expected. As the incremental crude oil supply is expected to come from heavier and sourer crude oil, coking capacity is expected to be added and petroleum coke production will increase. Some forecasters expect annual petroleum coke production to exceed 120 million tons by 2010 and over 165 million tons by 2025.

Substantial coking capacity additions are underway at refineries in the Gulf and the Caribbean. Six projects currently under construction are listed in Document No. SS-17. Another eight or so are under development.

Collectively, these projects could add about 15 million tons of petroleum coke production within the next five to 10 years.

Q. What is the outlook for petroleum coke demand?

A. With its competitive pricing, demand for petroleum coke has been growing. While the industrial sector continues to be the primary market for petroleum coke, petroleum coke use in utility power plants has tripled since 1995. Nevertheless, total 2005 demand from domestic plants was less than eight million tons.

Because of its characteristics (i.e., high sulfur and low volatility), petroleum coke usage is limited in pulverized coal boilers, which account for most utility solid-fuel fired plants. Petroleum coke generally has a technical limit of about 20 %. Petroleum coke can be used for a larger share of fuel supply (in some cases up to 100 %) in fluidized bed combustors and integrated gasification combined cycle plants.

Several new fluidized bed projects are under development, which anticipate using petroleum coke as the primary source of supply. Existing projects include the repowering of two units at Jacksonville Electric Authority's (JEA) Northside plant for petroleum coke and projects adjacent to refineries such as the Entergy Nisco project at the Lake Charles refinery and the AES Deepwater project at the BP Houston refinery. Proposed new projects include CLECO's Rodemacher #3 plant in Louisiana, Edison's hydrogen project at the BP Carson refinery in California, and two new power plants in Texas.

Similarly, increased demand is expected from utilities for existing and new plants as part of the fuel mix. Growth from existing plants is expected as scrubbers are retrofit, thereby enabling the use of higher sulfur fuels. Growth from new plants is expected as utilities anticipate the use of petroleum coke as part of the blending stock. Examples of the latter include Santee Cooper at the new Cross units.

Q. How is petroleum coke priced?

A. The economics of petroleum coke in new or existing plants is tied to its price. Historically, petroleum coke prices have been very low (Document No. SS-18). However, as with other products, prices are set by the supply/demand balance although they have exhibited great volatility. Prices generally track the crude oil price, with ceilings set by coal prices. Prices soared to record levels in 2006 as a result of higher oil prices, residual supply related impacts from the active 2005 hurricane season, and predictions of an active 2006 season. Prices hit their ceiling in 2006, but have started to fall as at least two consumers (i.e., JEA and Nova Scotia Power) reported to have reduced petroleum coke purchases in favor of high sulfur coal.

Q. How is petroleum coke delivered to FGPP?

A. Petroleum coke is purchased either at the loading port or delivered to the terminal. If it is purchased at the port, the mechanics are the same as that for import coal. FPL charters the freight for delivery to the designated unloading terminal. If it is purchased delivered, the petroleum coke vendor charters its own freight for delivery to the designated terminal. In either event, FPL would be responsible for the rail from the terminal to FGPP.

PROCUREMENT STRATEGY FOR FGPP

Q. What is FPL's procurement strategy for FGPP?

A. As noted above, FPL's fuel plan is to source FGPP 40 % from Central Appalachia, 40 % imports, and 20 % petroleum coke. This procurement strategy incorporates the concept of a portfolio strategy through its supply and supplier diversification.

Q. What is a portfolio strategy?

A. Portfolio strategy is the leading practice with respect to fuel procurement. Adapted from a Nobel Prize winning theory on how investment profits can be maximized over time through diversified investments, in a portfolio strategy utilities purchase their fuel requirements under a combination of short, medium and long-term agreements with supply and supplier diversity. Furthermore, utilities seek to stagger expiration dates among the agreements in order to limit utility exposure to market at any one time.

Q. How will a portfolio strategy benefit FPL's customers?

A. This strategy is designed to provide a reliable fuel supply at stable prices over time. It will reduce the exposure to price volatility and will work to minimize long-term costs.

Q. Is FPL's fuel transportation strategy a sound and reasonable plan for FGPP?

A. Yes. The transportation strategy provides for multiple rail options to deliver coal to the FGPP site. This will provide competition among carriers and reduce transportation costs, as well as increase the reliability of service. The transportation strategy also provides access to coal terminals to import coal and petroleum coke by water for final delivery by rail. This increases FPL's options to purchase solid fuels from a wide variety of supply regions, allowing it to obtain the lowest-cost fuel over time.

Q. Will FPL have storage of coal and petroleum coke at FGPP and the terminal?

A. Yes. FPL will have up to 60 days storage of projected burn of coal and petroleum coke at FGPP and up to 30 days storage of projected burn of coal and petroleum coke at the terminal.

PRICE FORECASTS

Q. What are the delivered price forecasts assumed by FPL?

A. The delivered price forecasts assumed by FPL are provided in Document No. SS-19.

Q. How were the price forecasts developed?

A. FPL developed delivered price forecasts based upon assumptions regarding commodity prices, rail, ocean freight, and terminal charges. FPL also established a high and low case for the delivered prices based upon historic ranges in the delivered fuel prices to Jacksonville Electric Authority's St. Johns River Power Park, which is 20% owned by FPL and purchases a mix of solid fuels similar to the proposed supply to FGPP.

Q. Are the price forecasts reasonable?

A. Yes.

Q. How did you evaluate the reasonableness of the price forecast?

A. In February 2006, I prepared a delivered solid fuel price forecast for Orlando Public Utilities which was included in its Need for Power Application for the Stanton IGCC. I have compared the delivered price forecast for Central Appalachia, imports and petroleum coke to the Stanton site with FPL's delivered price forecast for FGPP. The FGPP site is reasonably close to the Stanton site and should have similar delivered solid fuel prices.

Q. What are the results of that comparison?

A. The results are provided in Document No. SS-20. My forecast for all three fuels in the Stanton testimony was within the range of FPL's forecasts for FGPP in this case.

Q. Please summarize your testimony.

A. FPL's plan to supply solid fuel for FGPP is a sound and reasonable plan, designed to achieve the lowest-cost mix of fuel (coal and petroleum coke) over the life of the project. The fuel transportation plan will provide economic options for delivery at reasonable prices with reliability of service. FPL's forecasted delivered prices for coal and petroleum coke are reasonable projections of future market prices. Finally, the addition of FGPP will provide increased diversity of fuel supply for power generation for FPL, which will reduce the volatility of electric power prices for FPL's customers.

Q. Does this conclude your testimony?

A. Yes.

RESUME OF
SETH SCHWARTZ

EDUCATIONAL BACKGROUND

B.S.E. Geological Engineering, Princeton University, 1977

PROFESSIONAL EXPERIENCE

Current Position

Seth Schwartz is a co-founder of Energy Ventures Analysis. Mr. Schwartz directs EVA's coal and utility practice and manages the COALCAST Report Service. The types of projects in which he is involved are described below:

Fuel Procurement
Assists utilities, industries, and independent power producers in developing fuel procurement strategies, analyzing coal and gas markets, and in negotiating long-term fuel contracts.

Fuel Procurement Audits
Audits utility fuel procurement practices, system dispatch, and off-system sales on behalf of all three sides of the regulatory triangle, i.e., public utility commissions, rate case intervenors, and utility management.

Coal Analyses
Directs EVA analyses of coal supply and demand, including studies of utility, industrial, export, and metallurgical markets and evaluations of coal production, productivity, and mining costs.

Natural Gas Analyses
Evaluates natural gas markets, especially in the utility and industrial sectors, and analyzes gas supply and transportation by pipeline companies.

Expert Testimony
Testifies in fuel contract disputes, including arbitration and litigation proceedings regarding prevailing market prices, industry practice in the use of contract terms and conditions, market conditions surrounding the initial contracts, and damages resulting from contract breach.

Acquisitions and Divestitures
Assists companies in acquisitions and sales of reserves and producing

properties both in consulting and brokering activities. Prepares independent assessments of property values for financing institutions.

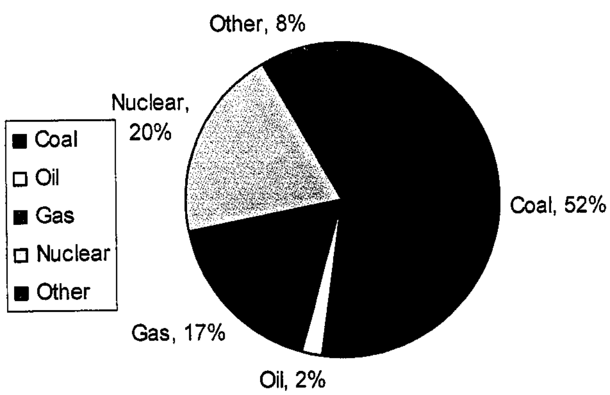
Prior Experience

Before founding Energy Ventures Analysis, Mr. Schwartz was a Project Manager at Energy and Environmental Analysis, Inc. Mr. Schwartz directed several sizable quick-response support contracts for the Department of Energy and the Environmental Protection Agency. These included environmental and financial analyses for DOE's Coal Loan Guarantee Program, analyses of air pollution control costs for electric utilities for EPA's Office of Environmental Engineering and Technology, Energy Processes Division, and technical and economic analysis of coal production and consumptions for DOE's Advanced Environmental Control Technology Program.

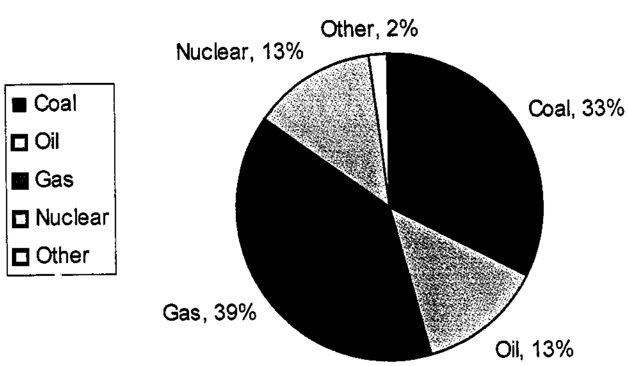
Publications

Crerar, D.A., Susak, N.J., Borcsik, M., and Schwartz, S., "Solubility of the Buffer Assemblage Pyrite + Pyrrhotite + Magnetite in NaCl Solutions from 200° to 350°", Geochimica et Cosmochimica Acta (42)1427-1437, 1978.

U.S. Generation by Fuel Type, 2005



Florida Generation by Fuel Type 2005



Source: DOA/EIA, Electric Power Monthly.

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S. Schwartz, Exhibit No.___
Document No. SS-3, Page 1 of 1
Changes in Fuel Prices since 1992

Changes in Fuel Prices From January 1992

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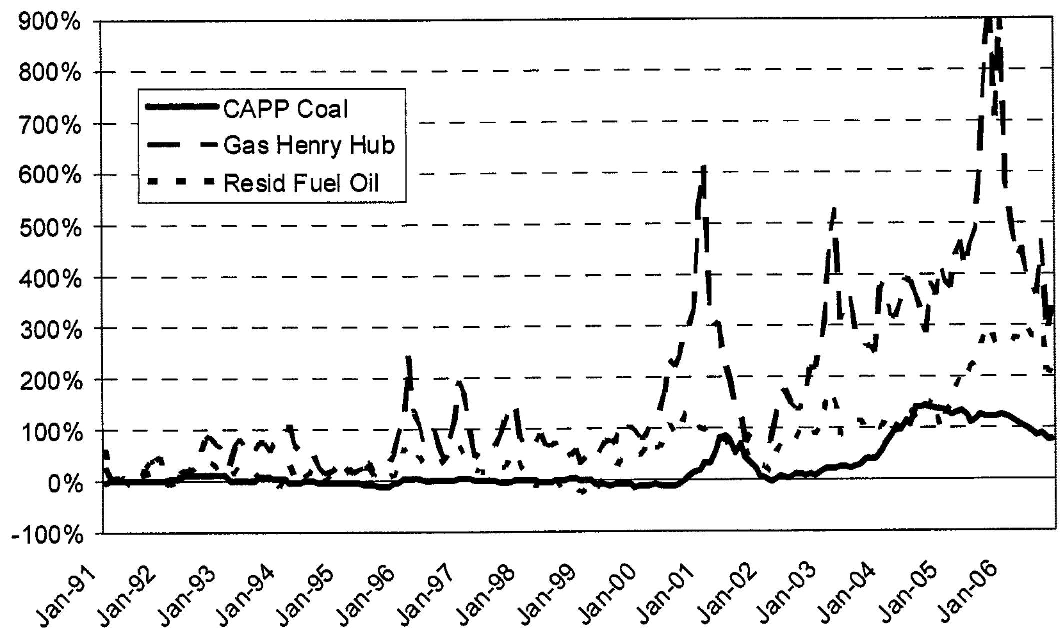

Source: Pricing data from Energy Argus, Natural Gas Week and Weekly Petroleum Status Report, as analyzed by EVA.

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S. Schwartz, Exhibit No.___
Document No. SS-4, Page 1 of 1
U.S Coal Industry Production

TOTAL U.S. COAL PRODUCTION BY SUPPLY REGION
(Million Short Tons)

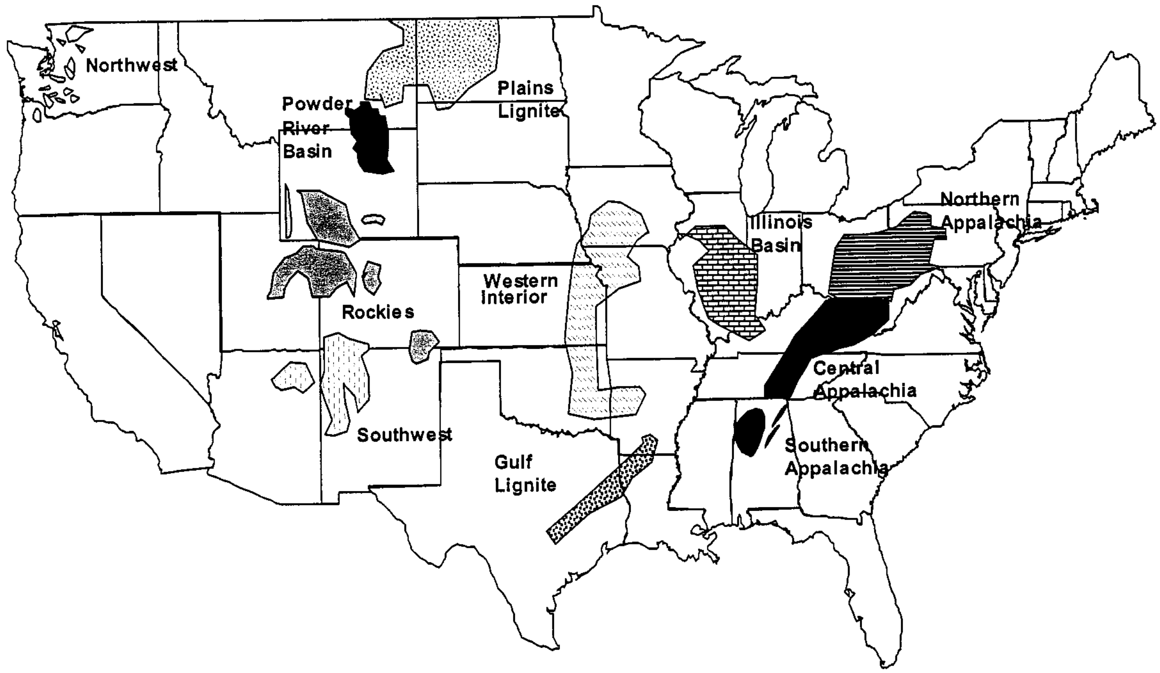
	2000	2001	2002	2003	2004	2005
Eastern Coal						
Northern Appalachia	136.9	140.7	126.0	124.8	132.8	137.1
Central Appalachia	263.0	270.2	249.4	230.7	230.6	235.6
Southern Appalachia	20.7	19.3	18.6	20.0	22.2	21.5
Illinois Basin	89.7	95.2	92.8	88.9	90.9	92.7
Subtotal	510.2	525.4	486.8	464.4	476.5	486.9
Western Coal						
Powder River Basin						
Gillette Area	323.4	353.9	359.6	363.3	381.2	390.0
Tongue River/Colstrip	38.2	38.8	37.0	36.6	39.4	39.9
Subtotal	361.6	392.7	396.6	399.9	420.6	429.9
Other Western						
Rockies	85.1	89.1	87.4	83.1	88.1	87.7
Gulf Lignite	53.1	49.2	50.9	55.1	53.4	53.6
Plains Lignite	31.5	30.8	31.1	31.1	30.2	30.3
Interior	2.4	2.6	2.1	2.6	2.5	2.6
San Juan	27.9	29.1	29.9	26.6	28.2	29.6
Northwest	5.9	6.1	7.0	7.3	7.2	6.7
Subtotal	205.8	207.0	208.3	205.9	209.5	210.6
Total Western	567.4	599.7	604.9	605.8	630.1	640.4
Anthracite	1.9	1.5	1.3	1.2	1.6	1.7
Total Production	**1,079.6**	**1,126.6**	**1,093.0**	**1,071.5**	**1,108.2**	**1,129.0**

Source: MSHA data as analyzed by EVA.

Docket No. 07_____EI
S. Schwartz, Exhibit No.___
Document No. SS-5, Page 1 of 1
Map of U.S Coal Supply
Regions

COAL SUPPLY REGIONS

Source: EVA.



TOTAL U.S. COAL DEMAND
(Million Short Tons)

	2000	2001	2002	2003	2004	2005
Domestic Receipts						
Electric Generation Burn	966.8	939.8	952.2	976.9	989.5	1,004.7
Elec Gen Inventory Incr./(Decr.)	(36.1)	33.5	1.3	(19.7)	(14.9)	(5.4)
Met	28.7	26.4	23.2	23.7	24.1	23.2
Industrial	66.5	66.7	62.2	63.0	64.0	64.5
Other	6.4	6.8	6.7	6.4	7.3	6.3
Total Domestic Receipts	1,032.3	1,073.2	1,045.6	1,050.4	1,070.1	1,093.3
Exports						
Steam	25.5	22.3	18.7	22.3	21.4	24.2
Metallurgical	32.6	25.6	21.0	22.6	31.7	30.5
Total Exports	58.1	47.9	39.7	44.9	53.1	54.6
Unaccounted	2.3	23.5	23.9	(0.1)	11.8	10.3
Total Demand	**1,092.7**	**1,144.6**	**1,109.1**	**1,095.1**	**1,134.9**	**1,158.2**

Source: EVA analysis of data from EIA Quarterly Coal Report, EIA Form 906, and COALCAST Monthly Stockpile Report.

Docket No. 07_____EI
S. Schwartz, Exhibit No.___
Document No. SS-7, Page 1 of 1
U.S Coal Imports

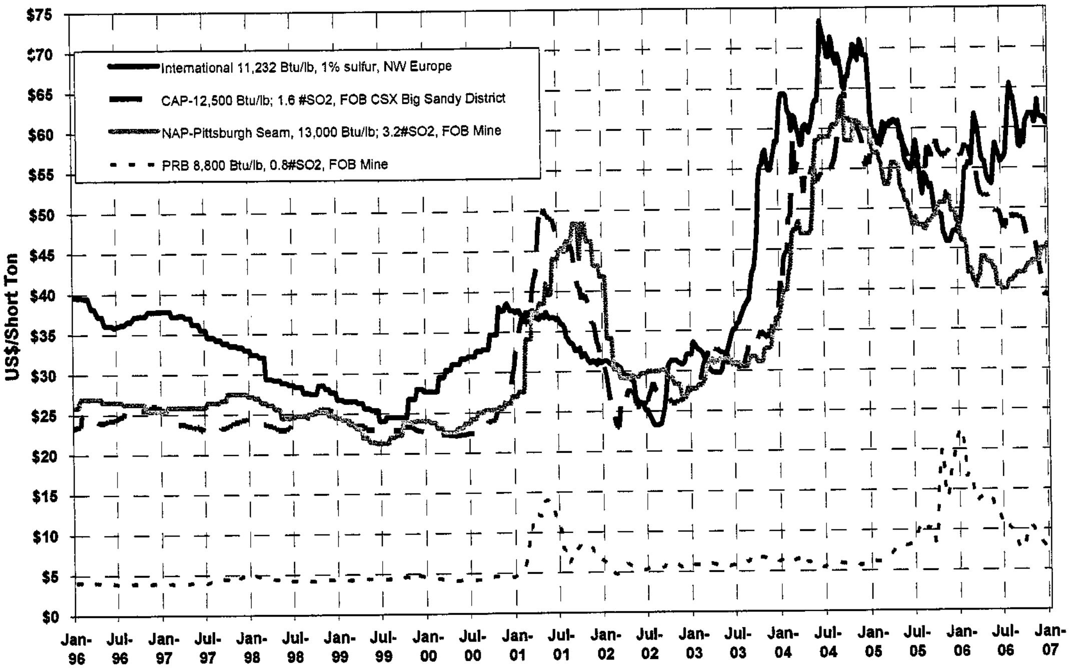
2005 COAL IMPORTS BY STATE AND UTILITY

State	Owner	Plant	Tons (1,000)
AL	Alabama Electric	Lowman	513
	DTE	Mobile Energy	16
	Southern Company	Barry	4,068
		Greene County	19
Alabama Total			4,615
CA	ArcLight Capital	Stockton	4
California Total			4
CT	PSEG Power	Bridgeport	1,377
Connecticut Total			1,377
DE	Conectiv	Edge Moor	34
Delaware Total			34
FL	Jacksonville Electric	Northside	8
		St Johns River	1,703
	Lakeland, FL	McIntosh	171
	Progress Energy	Crystal River	1,611
	Southern Company	Crist	1,644
		Smith	260
	TECO Energy	Big Bend	147
		Polk IGCC	159
Florida Total			5,703
GA	Southern Company	Bowen	151
		Hammond	129
		Kraft	507
		McIntosh	394
		Wansley	354
		Yates	131
Georgia Total			1,665
HI	AES	Barbers Point	706
Hawaii Total			706
LA	Central Louisiana Electric	Rodemacher	9
	NRG Energy	Big Cajun 2	76
Louisiana Total			85
MA	Dominion Generation	Brayton Point	2,553
		Salem Harbor	1,051
	Energy Capital Partners	Mount Tom	348
	NRG Energy	Somerset	174
Massachusetts Total			4,125
ME	ArcLight Capital	Rumford	133
	SD Warren	SD Warren	112
Maine Total			245
MS	Southern Company	Daniel	182
		Watson	1,664
Mississippi Total			1,846
NC	Progress Energy	Mayo	99
		Roxboro	80
		Sutton	409
North Carolina Total			589
NH	Northeast Utilities	Merrimack	518
		Schiller	419
New Hampshire Total			937
NJ	Vineland, NJ	Howard Down	43
New Jersey Total			43
NY	Dynegy	Danskammer	818
New York Total			818
PA	Exelon	Eddystone	250
Pennsylvania Total			250
TX	American National Power	Coleto Creek	97
	Lower Colorado River Authority	Fayette	54
	San Antonio City Public Service	Deely	58
Texas Total			209
VA	Vepco	Chesapeake	31
Virginia Total			31
TOTAL			**23,281**

Source: FERC Form 423 and EIA Form 423.

Docket No. 07_____EI
S. Schwartz, Exhibit No.___
Document No. SS-8, Page 1 of 1
U.S Coal Pricing

HISTORICAL COAL PRICES



Source: Energy Argus coal prices.

CENTRAL APPALACHIA COAL PRODUCTION

	Tons Produced (Millions)				
	1985	**1990**	**1995**	**2000**	**2005**
Underground					
East Kentucky & Tennessee	67.2	83.4	71.5	61.2	53.9
Southern West Virginia	56.9	73.0	69.8	65.9	53.6
Virginia	31.8	38.5	25.7	23.1	16.4
Total Underground	155.8	194.8	166.9	150.2	123.8
Surface					
East Kentucky & Tennessee	46.1	50.1	46.4	46.8	44.2
Southern West Virginia	14.3	37.9	47.5	54.4	57.8
Virginia	6.3	7.8	8.8	9.9	11.6
Total Surface	66.7	95.8	102.8	111.1	113.5
Total Central Appalachia					
East Kentucky & Tennessee	113.2	133.5	117.9	108.0	98.0
South West Virginia	71.1	110.9	117.3	120.3	111.4
Virginia	38.1	46.3	34.5	33.1	28.0
Total	222.5	290.6	269.7	261.3	237.4

Source: MSHA data analyzed by EVA.

2005 CENTRAL APPALACHIA COAL DEMAND

	Million Tons	Market Share
Domestic		
Electric Generation	166.4	71%
Met	21.5	9%
Industrial	21.6	9%
Residential/Commercial	1.2	1%
Total Domestic	210.4	89%
Export		0%
Steam	3.2	1%
Metallurgical	21.9	9%
Total Exports	25.1	11%
Total Demand	235.6	100%

Source: EVA.

OUTLOOK FOR CENTRAL APPALACHIA COAL (Million Tons)

	2005	2010	2015	2020	2025
Domestic					
Electric Generation	166.4	123.8	119.4	116.5	119.7
Met	21.5	23.2	21.8	20.5	19.2
Industrial	21.6	21.2	20.3	19.4	18.4
Residential/Commerci	1.2	1.1	1.0	0.9	0.8
Total Domestic	210.4	168.1	162.4	157.5	158.2
Export					
Steam	3.2	1.9	2.4	2.6	2.9
Metallurgical	21.9	16.4	14.5	13.3	12.2
Total Exports	25.1	18.3	16.9	15.9	15.1
Total Demand	**235.6**	**186.5**	**179.4**	**173.4**	**173.3**

Source: EVA forecast.

Reported Central Appalachia Coal Reserves for Public Companies

	Production (1000 tons)		Reserves and Resources 12/05 (mm tons)		Years of Life	
Company	**2004**	**2005**	**Assigned**	**Total**	**Assigned**	**Total**
Alliance Resource Partners	3,661	3,227	41	41	13	13
Alpha Natural Resources	14,429	15,380	205	443	13	29
Arch Coal	11,659	12,292	223	409	18	33
Consol Energy	13,079	10,560	245	437	23	41
Foundation Coal	7,089	7,181	77	201	11	28
ICG	6,941	7,057	68	289	10	41
James River Coal	8,780	9,023	242	242	27	27
Massey Energy	42,015	43,112	926	2,194	21	51
Peabody Energy	11,790	10,697	96	338	9	32
Rhino Resources	4,591	5,263	86	158	16	30
	124,033	**123,793**	**2,208**	**4,752**	**18**	**38**

Source: MSHA data evaluated by EVA and SEC Forms 10-K.

2005 CENTRAL APPALACHIA COAL PRODUCTION BY COMPANY

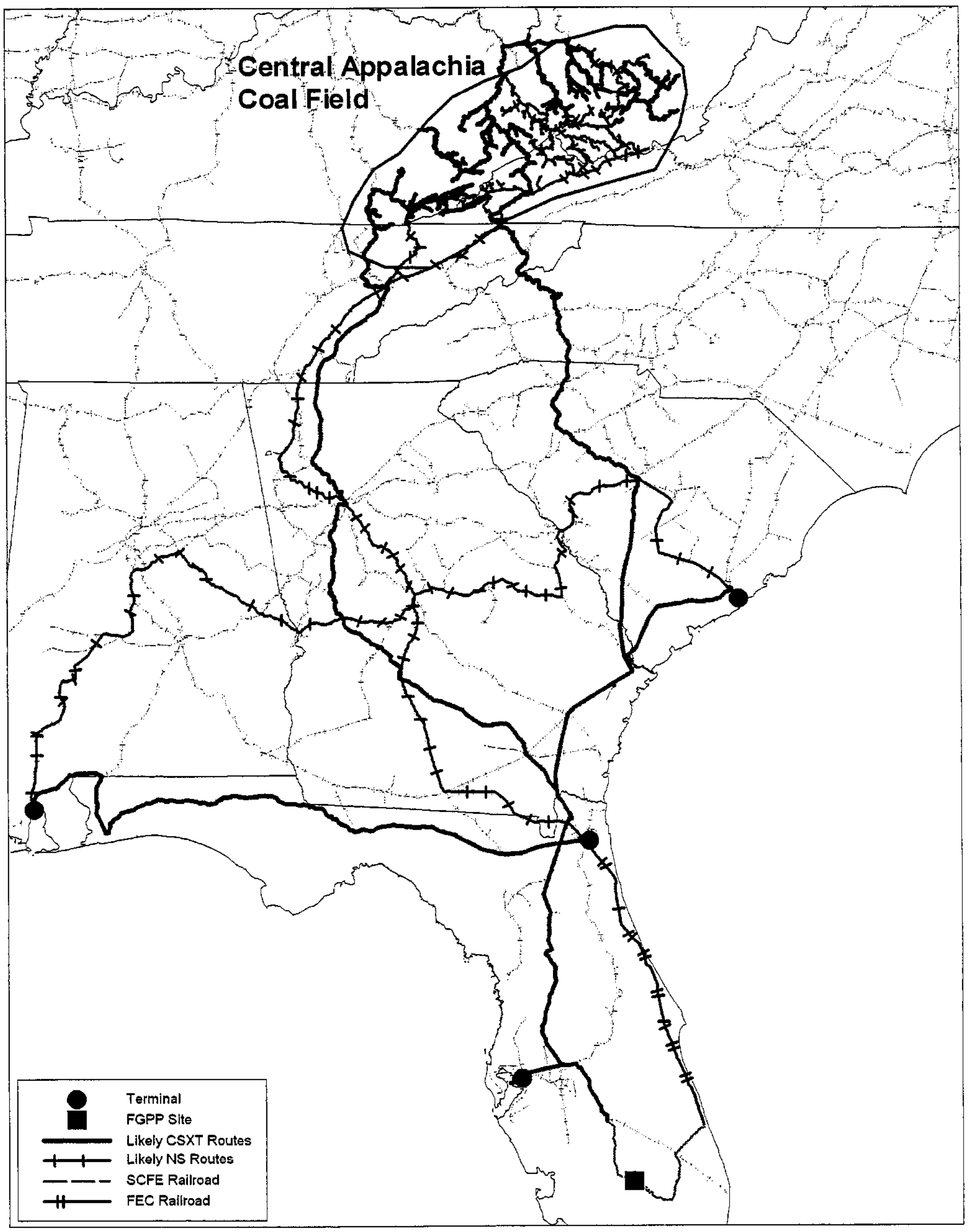
Rank	Company	Tons (1,000)	Market Share
1	Massey	42,871	18.2%
2	Magnum Coal*	18,884	8.0%
3	Alpha	13,790	5.9%
4	Arch Coal*	12,332	5.2%
5	Peabody	10,714	4.6%
6	Consol Energy	10,331	4.4%
7	TECO Coal	9,026	3.8%
8	James River	8,890	3.8%
9	Cumberland Resources	8,255	3.5%
10	Foundation Coal	8,090	3.4%
11	ICG	7,091	3.0%
12	Beech Fork	6,485	2.8%
13	Appalachian Fuels	6,214	2.6%
14	Rhino Resources	5,287	2.2%
15	Amvest	4,558	1.9%
16	Eagle Hawk	4,520	1.9%
17	United Coal	3,401	1.4%
18	A & G Coal	3,295	1.4%
19	Alliance Resource	3,227	1.4%
20	Trinity Coal	3,223	1.4%
21	PinnOak	3,022	1.3%
22	Bluestone Coal	2,877	1.2%
23	Clearwater Resources	2,458	1.0%
24	Humphreys	2,290	1.0%
25	Pine Branch Coal	1,607	0.7%
	All Other	32,643	13.9%
	TOTAL	235,383	100.0%

* Note Arch mines sold to in 2005 Magnum are included with Magnum

Source: MSHA data analyzed by EVA.

Docket No. 07_____EI
S. Schwartz, Exhibit No.___
Document No. SS-14, Page 1 of 1
Routings from Central Appalachia
to FGPP

Solid Fuel Transportation Options for FGPP



Source: NS and CSXT maps.

GLOBAL THERMAL COAL TRADE
(Million Tons)

	2004	2005
Trade	607.2	629.5
Imports		
China	13.5	21.0
Chinese Taipei	58.1	58.7
India	16.0	22.6
Japan	124.7	125.1
Korea	65.2	68.5
Malaysia	6.8	11.0
Other Asia	25.3	26.7
European Union	173.8	169.1
Other Europe	45.1	45.6
Other	78.7	81.1
Exports		
Australia	117.9	118.7
China	88.5	73.4
Colombia	56.5	60.2
Indonesia	112.9	136.0
South Africa	73.3	74.1
U.S.	21.0	20.4
Other	137.2	146.8

Source: ABARE and EVA

GLOBAL METALLURGICAL COAL TRADE
(Million Tons)

	2004	2005
Trade	228.0	238.5
Imports		
Japan	73.9	74.2
Taiwan	9.0	9.5
Korea	20.4	20.2
India	16.5	19.6
China	7.5	7.9
EU 25	63.7	65.6
Brazil	18.1	17.4
Other Asia	1.9	3.0
Other	17.0	20.3
Exports		
Australia	128.4	137.7
Canada	25.9	30.6
United States	26.8	28.7
China	6.3	5.8
Russia	14.2	10.5
Other	26.3	25.2

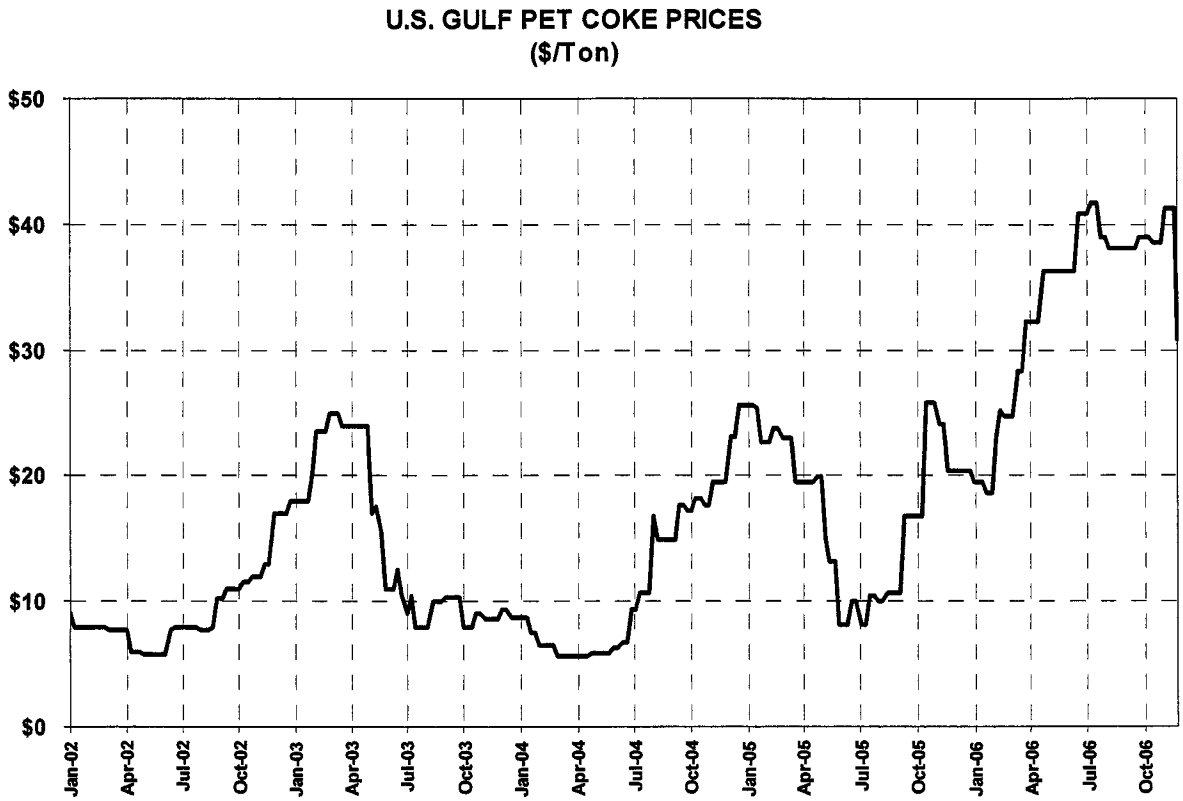
Source: ABARE and EVA

NEW COKING CAPACITY IN GULF UNDER CONSTRUCTION

Producer	Location	Sulfur (%)	Additional Pet Coke MMTPY	Year
Pemex	Mexico	6.5	1.2	2007
Valero	Louisiana	6.7	0.6	2007
Marathon	Louisiana	6.5	1.0	2008
Conoco Phillips	Texas	5.0	0.5	2008
Valero	Texas	6.5	0.4	2009
Pemex	Mexico	6.5	1.7	2009

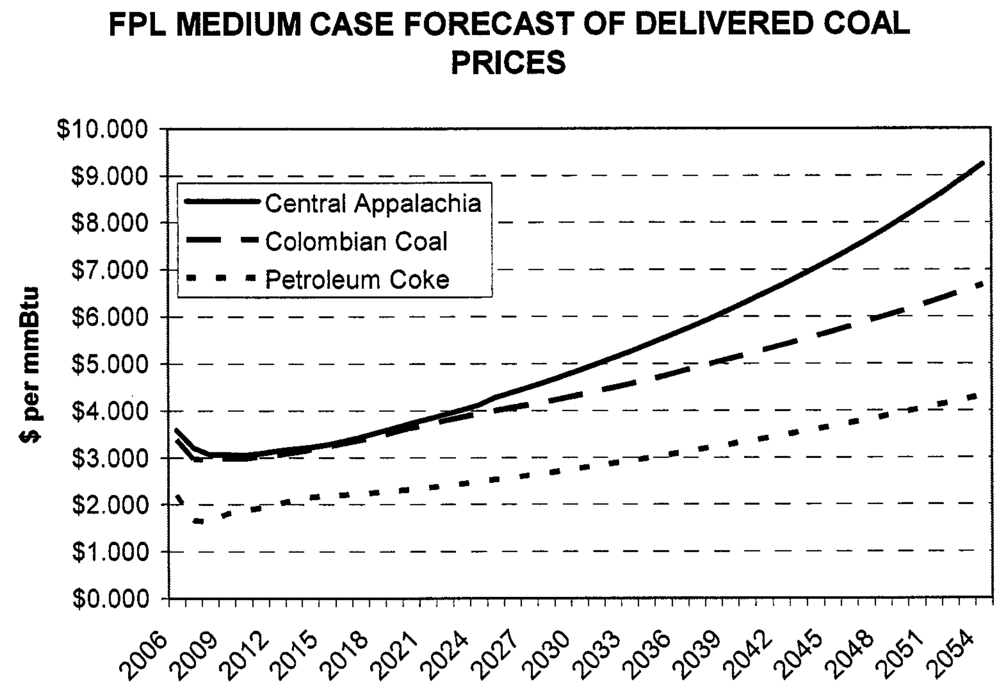
Source: Skye Resources, Inc. "Coal and Petroleum coke Strategy Supply Plan", PACE Global Energy Services, July 11, 2006.

Docket No. 07_____EI
S. Schwartz, Exhibit No.___
Document No. SS-18, Page 1 of 1
Petroleum Coke Pricing



Source: Platt's International Coal Report.

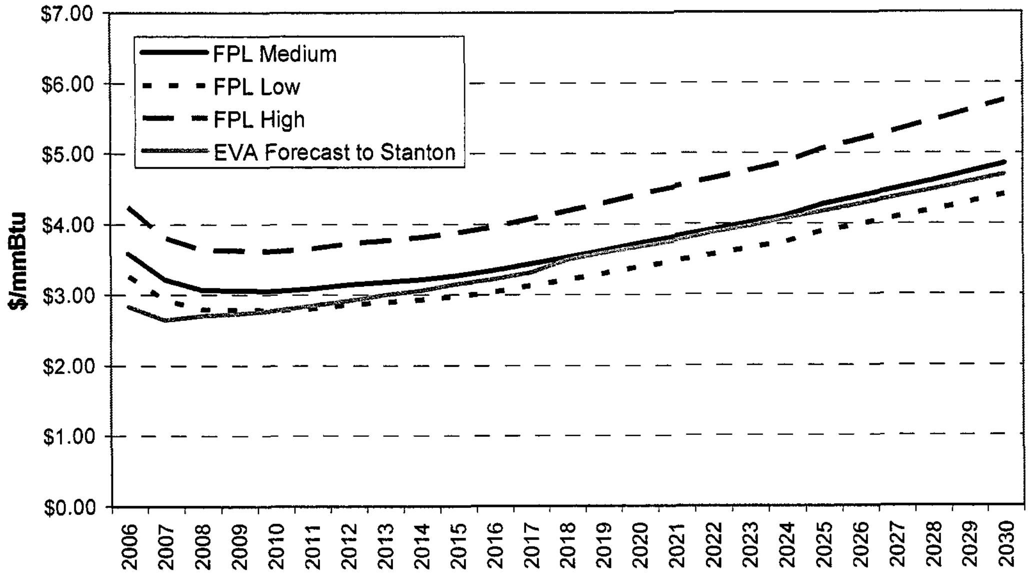
Docket No. 07_____EI
S. Schwartz, Exhibit No.___
Document No. SS-19, Page 1 of 1
FPL Fuel Price Forecast



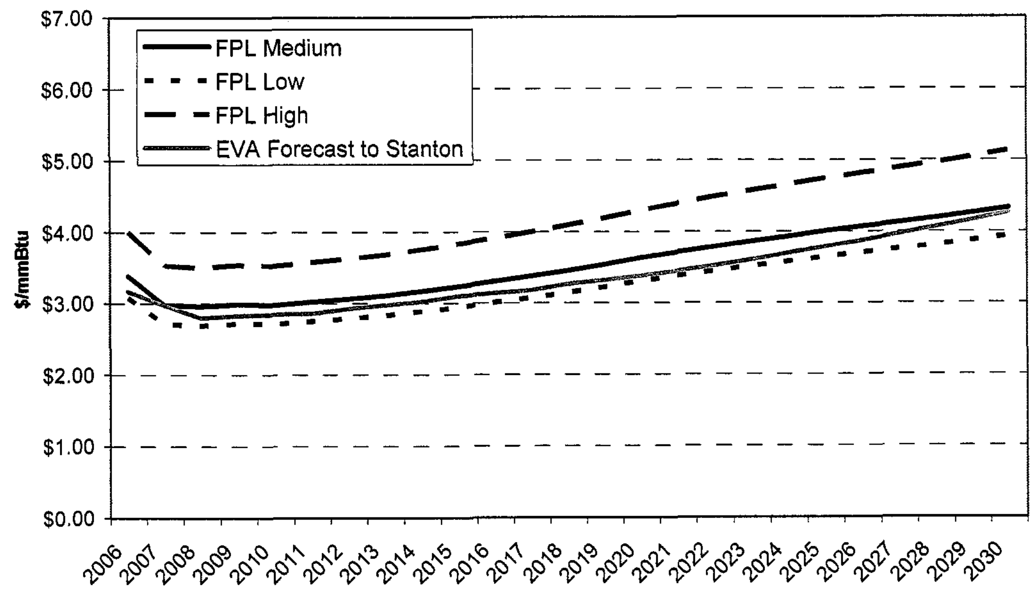
Source: FPL forecast.

Docket No. 07_____EI
S. Schwartz, Exhibit No._
Document No. SS-20, Page 1 of 2
Comparisons of FGPP Delivered
Price Forecasts

Comparison of Delivered Price Forecasts of Central Appalachia Coal



Comparison of Delivered Price Forecasts of Colombian Coal



Source: FPL forecast and EVA testimony.

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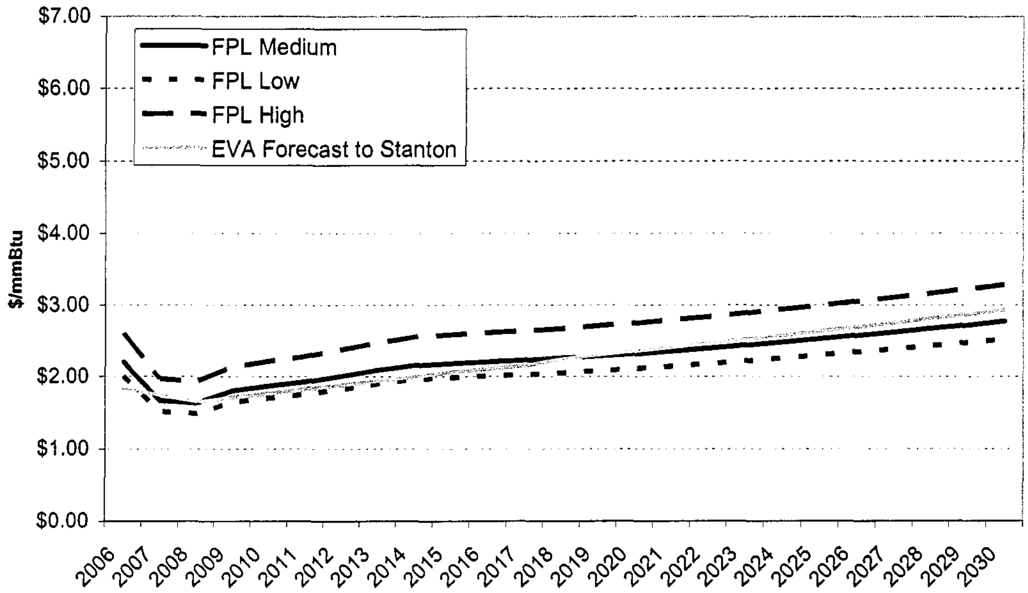
S. Schwartz, Exhibit No._
Document No. SS-20, Page 2 of 2
Comparison of FGPP Delivered
Price Forecasts

Comparison of Delivered Price Forecasts of Petroleum Coke



Source: FPL forecast and EVA testimony.