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STEEL HECTOR & DAVIS

Steel Hector & Davis LLP
215 South Monroe, Suite 601
Tallahassee, Florida 32301-1804
904.222.2300
904.222.8410 Fax

Matthew M. Childs, P.A.

September 23, 1997

Ms. Blanca S. Bayó, Director
Division of Records and Reporting
Florida Public Service Commission
4075 Esplanade Way, Room 110
Tallahassee, FL 32399

971237-EI

RE: Petition of Florida Power & Light Company to Increase the Annual Storm Fund Accrual

Dear Ms. Bayó:

Enclosed for filing please find the original and fifteen (15) copies of Florida Power & Light Company's Petition in the above matter.

Very truly yours,

Matthew M. Childs, P.A.

MMC:ml

Enclosure

cc: Jack Shreve, Esq., Office of Public Counsel

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FPSC-RECORDS/REPORTING

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

IN RE: Petition of Florida Power & Light Company to Increase the Annual Storm Fund Accrual	)	DOCKET NO. ______________ FILED: SEPTEMBER 23, 1997

P E T I T I O N

Florida Power & Light Company ("FPL"), pursuant to Section 366.05(1), Florida Statutes, and Rules 25-22.036(4) and 25-6.0143, Florida Administrative Code, hereby petitions the Commission for authorization to increase the annual storm fund accrual commencing January 1, 1997 to $35 million.

Any documents required to be served in this docket should be furnished to:

William G. Walker III
Florida Power & Light Co.
9250 West Flagler Street
Miami, FL 33174

Matthew M. Childs, P.A.
Steel Hector & Davis LLP
215 South Monroe Street
Suite 601
Tallahassee, FL 32301

FPL is a public utility subject to the jurisdiction of the Florida Public Service Commission pursuant to Chapter 366, Florida Statutes. FPL's general offices are located at 9250 West Flagler Street, Miami, Florida 33174.

In support of the petition, FPL states:

1. Currently, FPL is authorized an annual storm fund accrual

of $20.3 million funded on a net-of-tax basis. This annual accrual was authorized by Order No. PSC-95-1588-FOF-EI dated December 27, 1995. The storm damage study which was the basis for establishing $20.3 million as the estimated long term average annual damage level to FPL's Transmission and Distribution (T&D) system from hurricanes was approved by Order No. PSC-95-0264-FOF-EI which was entered in Docket No. 930405-EI on February 27, 1995.

2. The $20.3 million annual average expected damage to FPL's T&D system addressed in that docket was expressed in 1992 dollars and thus does not reflect cost increases due to inflation since 1992 or due to concentrations of T&D facilities to accommodate customer growth since 1992.

3. On June 30, 1997 the balance in the storm and property insurance reserve was $236.9 million, gross of tax. As was shown in Docket No. 930405-EI, damage and restoration costs to FPL's T&D system resulting from Hurricane Andrew was estimated to be in excess of $270 million. If the actual damage to FPL's T&D system from Hurricane Andrew were escalated through July 1997 to reflect inflation and system growth since 1992, then the repair cost would be approximately $350 million.

4. FPL has continued to evaluate the availability and conditions for insurance for hurricane damage to T&D facilities since 1993. The availability of such insurance has not improved and the limited traditional insurance available continues to be too expensive.

5. Since this Commission last established $20.3 million as

the annual average hurricane damage level and the annual storm fund accrual, FPL has commissioned additional studies of hurricane damage expectations to FPL's T&D system and a solvency study to address the annual funding level necessary to assure reasonable fund performance.

6. Recently, FPL commissioned EQE International, Inc. (EQE) to analyze FPL's T&D system to estimate the potential losses resulting from hurricane damage. EQE is a consulting structural engineering firm with comprehensive expertise in natural hazards risk analysis world-wide. The resulting study by EQE is attached hereto as Attachment 1 and the included Executive Summary of that Study provides an overview of the study techniques and conclusions. The EQE Study has employed modeling techniques that are much more sophisticated and intensive than that previously used by FPL. This added modeling capability was a significant factor in producing a revised expected annual hurricane damage figure. The expected annual T&D hurricane damage figure developed from this study is $42.3 million.

7. EQE also prepared a Storm Reserve Solvency Analysis to evaluate performance of the reserve under various funding and loss scenarios. This report is attached as Attachment 2. As explained in the Executive Summary to that Analysis, three performance measures were looked at: solvency of the Storm Reserve, stability of the Storm Reserve and overall cost to the customer. The Study concluded that, of the scenarios tested, a $40 million annual accrual provided the better balance in meeting the three criteria

of solvency, stability and cost.

8. FPL believes that the methodology and resulting evaluation of potential damage losses to its T&D system from hurricanes in the EQE Loss Estimation Study is much more sophisticated evaluation technique than FPL's 1993 Study. Although FPL recognizes the increased sophisticatio of the EQE Study, and that funding at the EQE determined level of $42.3 million is a reasonable approach to protect against future storm scenarios at this time, FPL feels that funding at that level may be unnecessary due to FPL's continued search for insurance coverage and the fact that FPL may petition the Commission for additional funding in the event of catastrophic loss, from either one or a series of storms. FPL does feel that a funding level sufficient to protect against another "Andrew type" event is appropriate. As a result, FPL is requesting authorization to increase the annual accrual to $35 million per year commencing January 1, 1997. The accrual of $35 million per year should permit the reserve to approach the level of an Andrew size loss in several years given reasonable fund earnings and modest storm damage losses in the period. FPL will continue to evaluate the hurricane T&D damage exposure question so that possible funding adjustments may be pursued in the future. FPL asks that the Commission continue to recognize, as it did in Order PSC-95-1588-FOF-EI, that FPL may petition the Commission for emergency relief if FPL experiences a catastrophic loss.

WHEREFORE, FPL respectfully requests authorization to increase the annual storm fund accrual to $35 million effective January 1, 1997.

DATED this 23rd day of September, 1997.

Respectfully submitted,

STEEL HECTOR & DAVIS LLP
Suite 601
215 South Monroe Street
Tallahassee, FL 32301
Attorneys for Florida Power & Light Company

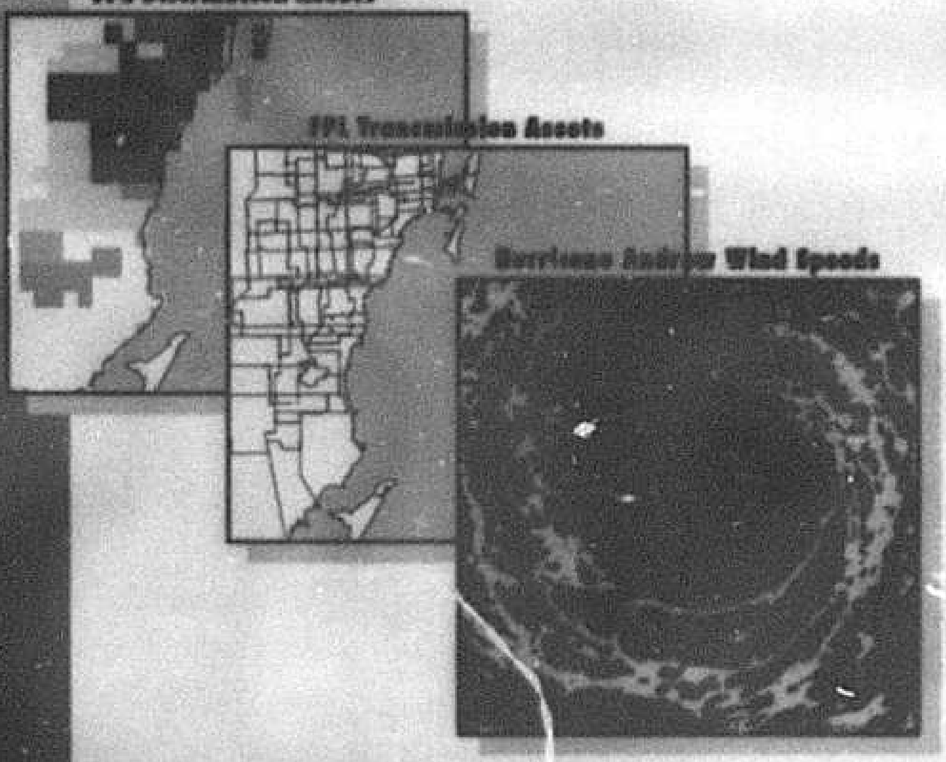
By: ______________________
Matthew M. Childs, P.A.

Petition of Florida Power & Light Company to Increase the Annual Storm Fund Accrual

Attachment 1

INTERNATIONAL

Florida Power and Light Company Hurricane Loss Estimation Study for Transmission and Distribution Assets



Prepared for:

FLORIDA POWER AND LIGHT COMPANY

Prepared by:

EQE INTERNATIONAL, INC.
San Francisco, CA

September 1997

EQE INTERNATIONAL

Florida Power and Light Company Hurricane Loss Estimation Study for Transmission and Distribution Assets

Prepared for:

FLORIDA POWER AND LIGHT COMPANY

Prepared by:

EQE INTERNATIONAL, INC.
San Francisco, CA

September 1997

EXECUTIVE SUMMARY

EQE analyzed the Florida Power and Light Company (FPL) transmission and-distribution (T&D) system to estimate the potential losses resulting from hurricane damage. The analysis consisted of determining damage estimates using both a scenario approach, which modeled specific storm characteristics, and a probabilistic approach, which captured the full range of potential storm characteristics and corresponding effects. The scenario analysis produces expected or most likely damage amounts resulting from the defined storms, while the probabilistic analysis identifies the probability of expected damage at or below specific levels, with damage in all cases defined as the cost associated with repair and/or replacement of T&D assets necessary to restore service. Results of the modeling were benchmarked to actual loss data experienced by FPL in hurricanes Andrew, Erin, and Gordon. All analyses were performed using the proprietary computer program, USWIND™. This program was developed as a tool to assist our large corporate and insurance clients in evaluating and managing hurricane risk.

The total replacement value of FPL's T&D assets is estimated to be $8.23 billion. Transmission assets account for $1.61 (20%) billion of this total, and distribution assets account for the remaining $6.62 billion (80% of the total asset value). The methodology used to estimate expected annual damage to these T&D assets consisted of subjecting FPL's system to the USWIND™ probabilistic storm set. The USWIND™ probabilistic analysis is based on a storm set that accounts for approximately 170,000 simulated hurricanes in Florida. Each storm in this set has an associated return period. The storm return period is developed as a function of landfall location, intensity, and storm track based on historical information.

Based on analyses using the USWIND™ probabilistic storm set, the mean "Expected Annual Damage" to FPL T&D assets was calculated to be $42.3 million. This represents the amount of funding required, on an annual basis and accumulated over a long period, to repair hurricane damage to T&D assets.

In addition to the above analysis, two damage exceedance tables, per occurrence and annual aggregate, were derived considering all hurricanes from levels 1 through 5, measured on the Saffir/Simpson Intensity (SSI) scale. Loss exceedance tables provide the probability that losses will not exceed a certain specified amount in any one-year period. For this study, loss-exceedance values were developed for probabilities ranging from 50% to 99.9%. The "per occurrence" table shows the probability that the losses for any single storm in a given year will not exceed a specified amount. The "annual aggregate" table shows the probability that losses for one or more storms over a year's time will not exceed a specified amount. The results of the annual aggregate analysis show that a damage level with a 98% probability of nonexceedance within a single year (approximately a 50-year return period) is $559 million. The results of the per-occurrence analysis show that there is a 98% probability of nonexceedance of $540 million for a single event.

Three other analyses and reports are provided. They include the likelihood of exceeding several specified loss thresholds within periods of 1, 10, 25, 50, 100, 250, and 500 years (see Table 1); the annual statistical probability of a Category 1, 2, 3, 4, or 5 hurricane making landfall in FPL's western, southeastern, and northeastern service territories (see Table 2); and the probability of more than one storm making landfall in FPL's service territory during 1-, 3-, 5- and 10-year periods.

FPL has a substantial hurricane damage exposure based on these analyses. The results of these analyses provide input for FPL decisions on appropriate levels of annual funding for hurricane restoration. The expected annual damage figure of $42.3 million derived in this study would typically be used as a basis for determining insurance premiums, and is sometimes referred to as the "pure premium."

Table 1

PROBABILITY OF EXCEEDING AN ANNUAL DAMAGE THRESHOLD

Gross Loss Thresholds ($thousands)	% of Total T&D Replacement Value	Time Horizon		
		1 year (%)	10 years (%)	100 years (%)
246,779	3%	4.21	34.93	98.64
616,947	7.5%	1.80	16.59	83.70
1,233,893	15%	0.30	3.00	26.25

Table 2

ANNUAL PROBABILITY OF LANDFALLING STORMS

Region	SSI 1	SSI 2	SSI 3	SSI 4	SSI 5
Western (Manatee through Collier)	3.3%	2.0%	2.1%	0.4%	negligible
Southeastern (Dade/Broward/Palm Beach)	4.8%	5.3%	6.3%	2.4%	0.4%
Northeastern (Martin and north)	2.8%	2.8%	1.6%	0.5%	0.2%

Table 3

PROBABILITY OF LANDFALLING STORMS

Time window	Probability of more than one hurricane making landfall in FPL's service territory within the specified time window
1 year	7%
3 years	24%
5 years	42%
10 years	64%

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FIGURES

1. INTRODUCTION

EQE International, Inc. (EQE) is pleased to present these results of a computerized portfolio hurricane loss assessment of The Florida Power and Light Company transmission and distribution assets.

EQE performed a hurricane loss assessment using the proprietary computer program, USWIND™. This program was developed as a rapid assessment tool and is used to assist corporate and insurance clients in evaluating and managing hurricane risk. Vulnerability functions, to represent FPL's exposure of transmission and distribution (T&D) assets, were also developed.

1.1 SCOPE OF WORK

The analyses presented in this report are those as outlined in EQE's proposal dated April 29, 1997, and include the following tasks:

Task 1. **Data Collection.** Meetings with FPL staff to collect data required to perform the Hurricane Loss Estimation study will be held. Data requirements will include identification of transmission and distribution (T&D) asset characteristics such as design and construction standards, loss statistics from Hurricane Andrew, and asset distributions within FPL service territory.

Task 2. **Development of Vulnerability Functions.** Vulnerability functions for wood, concrete, and steel structures will be developed based upon available FPL design standards, structure performance studies, and loss data from Hurricanes Erin and Andrew. Vulnerability functions will relate damage factors for structure and asset types to storm wind speeds.

Task 3. **Allocation of Assets.** Due to the large sizes of some of the zip codes in Florida, the zip code inventoried data provided by FPL will be allocated to area grids of the uniform size of .025 degrees in latitude and longitude (approximately 1.7 miles by 1.7 miles). This will result in approximately 10,000 locations analyzed. The values of distribution and transmission facilities have been provided to EQE in two formats, and these will be treated in different manners.

Task 4. **Maximum Potential Loss for 500-, 250-, 100- and 50-Year Storms.** The USWIND™ landfall series storms corresponding to these return periods will be run on this portfolio of assets. The storm intensities correspond to the intensity of a storm landfalling anywhere in a 50-mile stretch of coast centered at the landfall point within the specified return period. EQE will analyze landfall locations at 10-mile intervals along the coast.

Task 5. **Loss Exceedance Curves.** Two loss exceedance curves, per occurrence and annual aggregate, will be provided considering all hurricanes from Saffir-Simpson Intensity (SSI) 1 through 5. The loss exceedance curves generated by USWIND™ will provide loss levels corresponding to twenty (20) exceedance levels between 50% and 99.99%. Additionally, the mean annual loss will be provided.

Task 6. **Loss Threshold Report.** The likelihood of exceeding several specified loss thresholds within periods of 1, 10, 25, 50, 100, 250, and 500 years will be calculated using USWIND™.

Task 7. **Statistical Probability of Landfalling Hurricanes by SSI Level and FPL Service Territory.** The statistical probability of a Category 1, 2, 3, 4, or 5 hurricane making landfall in either of FPL's northern, central, or southern service territories will be developed. Definitions of geographic bounds for this analysis will be developed with FPL staff.

Task 8. **Probability of more than One Storm Making Landfall in FPL's Service Territory During 1-, 3-, 5- and 10-Year Periods.** The probability of more than one storm making landfall in FPL's service territory during 1-, 3-, 5- and 10-year periods will be calculated.

Task 9. **Final Report and Presentation of Results.** The results of the foregoing Tasks will be presented in a written report, which will document the scope of work, analysis methods, and summary of results.

2. DESCRIPTION OF ASSETS

The transmission and distribution (T&D) assets for Florida Power & Light (FPL) were analyzed for catastrophic hurricane risk. All values and location information were provided to EQE by FPL personnel (see Appendix A). The total replacement value of assets is $8.23 billion. Transmission assets accounted for $1.61 (20%) billion of this total, and distribution assets accounted for the remaining $6.62 billion (80% of the total asset value).

2.1 SUMMARY

FPL's service territory encompasses a large portion of the state, but the values are not distributed evenly. Table 2-1 shows the values by county within Florida for the counties that make up 90% of the total T&D values, showing that a concentration of values is in the southern tip of Florida. Appendix A contains the listing of all counties.

The asset data received by EQE was different for each asset type, transmission, and distribution.

2.2 TRANSMISSION ASSETS

Florida Power & Light provided normal replacement value information for transmission assets distinguished as aboveground ($1.483 billion) and underground ($201 million), which totaled $1.68 billion. Normal replacement value is the cost of replacing the assets under normal non-catastrophe conditions. The location information for aboveground transmission towers was received in electronic form.

Underground transmission lines were provided on a county basis. These values were allocated to zip codes within 20 miles of the ocean (e.g., the 76 miles of underground transmission lines for Dade county were allocated to all the coastal zip codes of Dade county). Underground transmission facilities represent a very small portion of the FPL T&D assets, and the net effect of this de-aggregation is expected to be small.

Aboveground transmission tower locations (latitude, longitude coordinates) and selected attributes (framing and voltage codes, along with number of circuits) were provided by

FPL, and were used in the risk analysis. A map of the transmission locations used in this analysis is shown in Figure 2-1. A discussion of how the transmission attributes were used in the vulnerability analysis is included in Chapter 4. Transmission values were provided to EQE aggregated to the zip code, and these values were distributed evenly to the locations within a particular zip code.

2.3 DISTRIBUTION ASSETS

FPL distribution information was provided as values aggregated to the zip code level. Values were broken down as overhead ($3.48 billion) and underground ($3.22 billion), for a total value of $6.7 billion.

Both overhead and underground distribution facilities were analyzed at a much finer resolution than the zip-code level. Because windspeeds can vary greatly within a given zip code, it was decided to analyze distribution facilities at a "grid" level, and have the zip code values allocated to specific grids within the zip code. The grids used in this analysis were 1/40th of a degree grid points. The size of these grids is approximately 1.7 miles in a north-south direction and 1.6 miles in an east-west direction.

Figure 2-2 shows the overhead distribution portfolio that was analyzed for this project. This map shows the concentration of FPL's distribution assets in the State of Florida and the high concentration within a few metropolitan areas in the southern tip of Florida. Figure 2-3 shows a similar map for underground distribution assets. This map very closely parallels the overhead distribution values.

The actual locations of all distribution transformers for FPL was provided to EQE, but unfortunately time did not permit the usage of this location information. It is expected that this improved location information would permit better sensitivity studies for specific locations and storm types, but the effect on the portfolio results is believed to be small.

Table 2-1

T&D VALUES BY COUNTY, LARGEST COUNTIES*

County	Value ($Millions)
Dade	$1,752.4
Broward	$1,407.5
Palm Beach	$1,148.6
Brevard	$ 508.3
Sarasota	$ 383.8
Volusia	$ 321.2
Saint Lucie	$ 302.1
Lee	$ 269.9
Martin	$ 238.7
Manatee	$ 226.7
Collier	$ 211.5
Charlotte	$ 198.9
Indian River	$ 138.5
Flagler	$ 133.0
Saint Johns	$ 122.3
Putnam	$ 114.9
21 Other Counties	$ 747.6
Sum	**$8,225.9**

* There is an additional $748 million distributed in 21 additional counties: Seminole, Nassau, Columbia, De Soto, Bradford, Glades, Hendry, Osceola, Clay, Suwannee, Baker, Duval, Okeechobee, Orange, Union, Highlands, Alachua, Hardee, Hamilton, Lake, and Hillsborough counties.

In addition, $135 million of the total value was not geocodable, and these values were allocated to all regions by value.

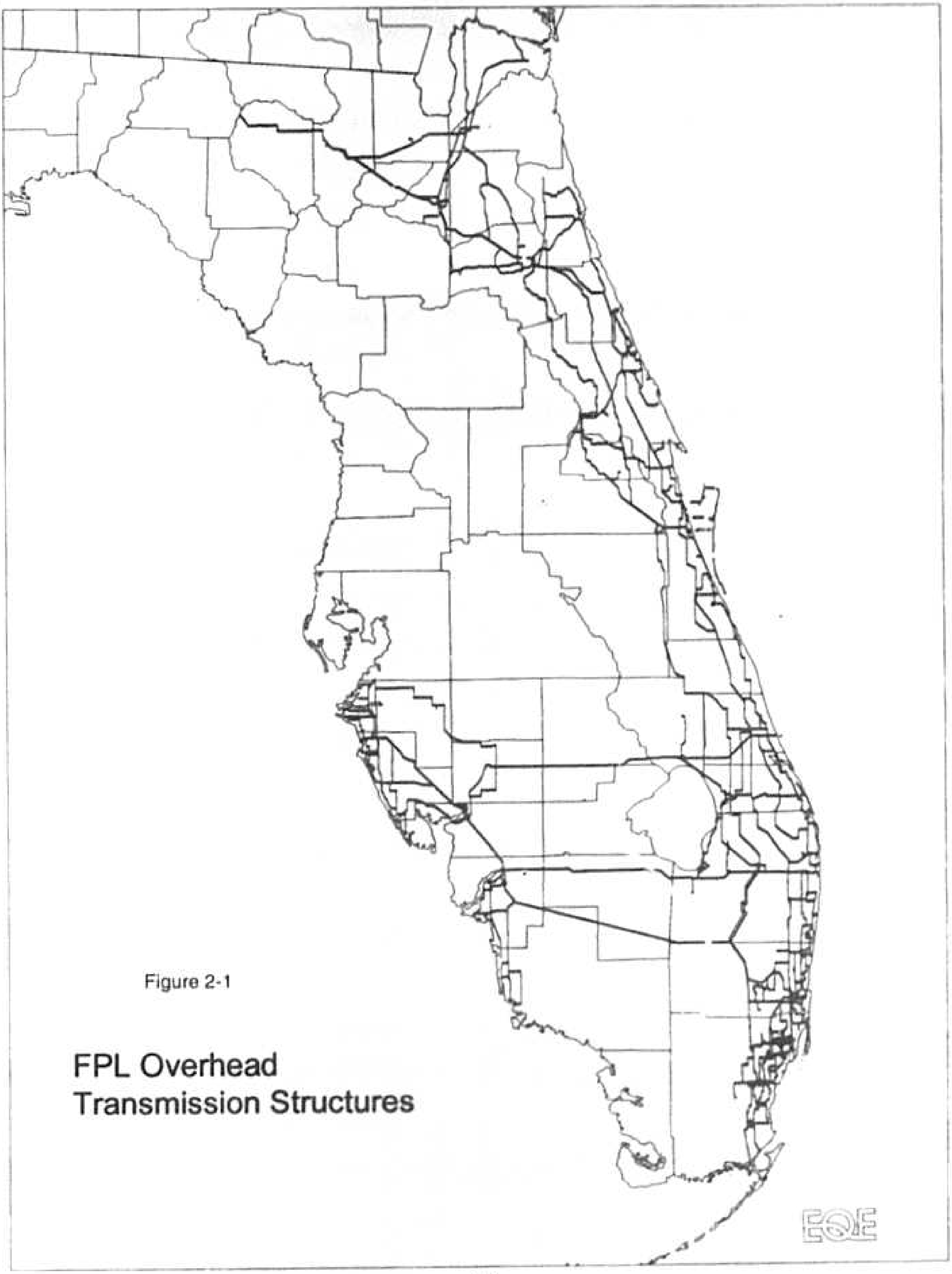


Figure 2-1

FPL Overhead Transmission Structures

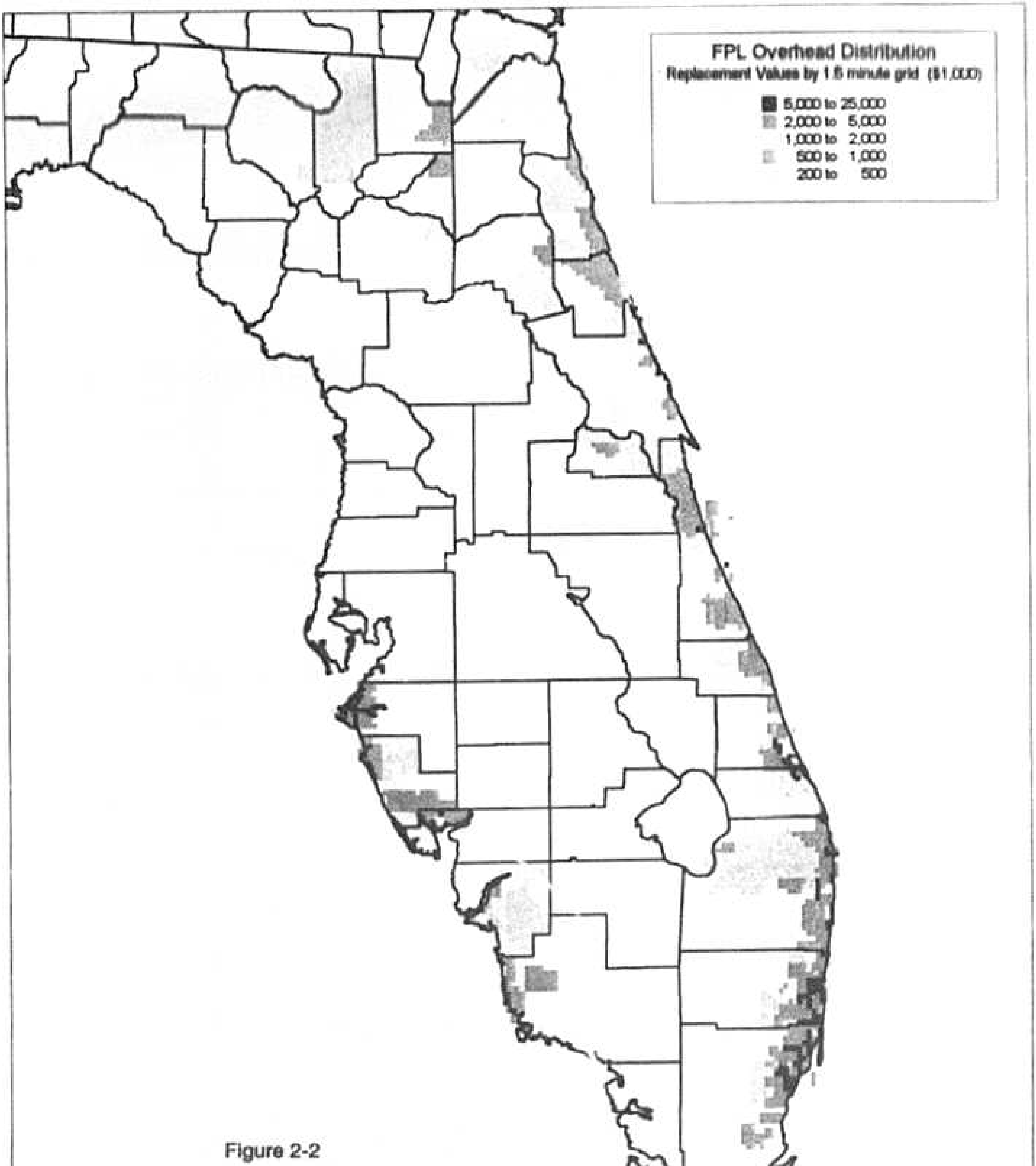

FPL Overhead Distribution
Replacement Values by 1.6 minute grid ($1,000)
5,000 to 25,000
2,000 to 5,000
1,000 to 2,000
500 to 1,000
200 to 500

Figure 2-2

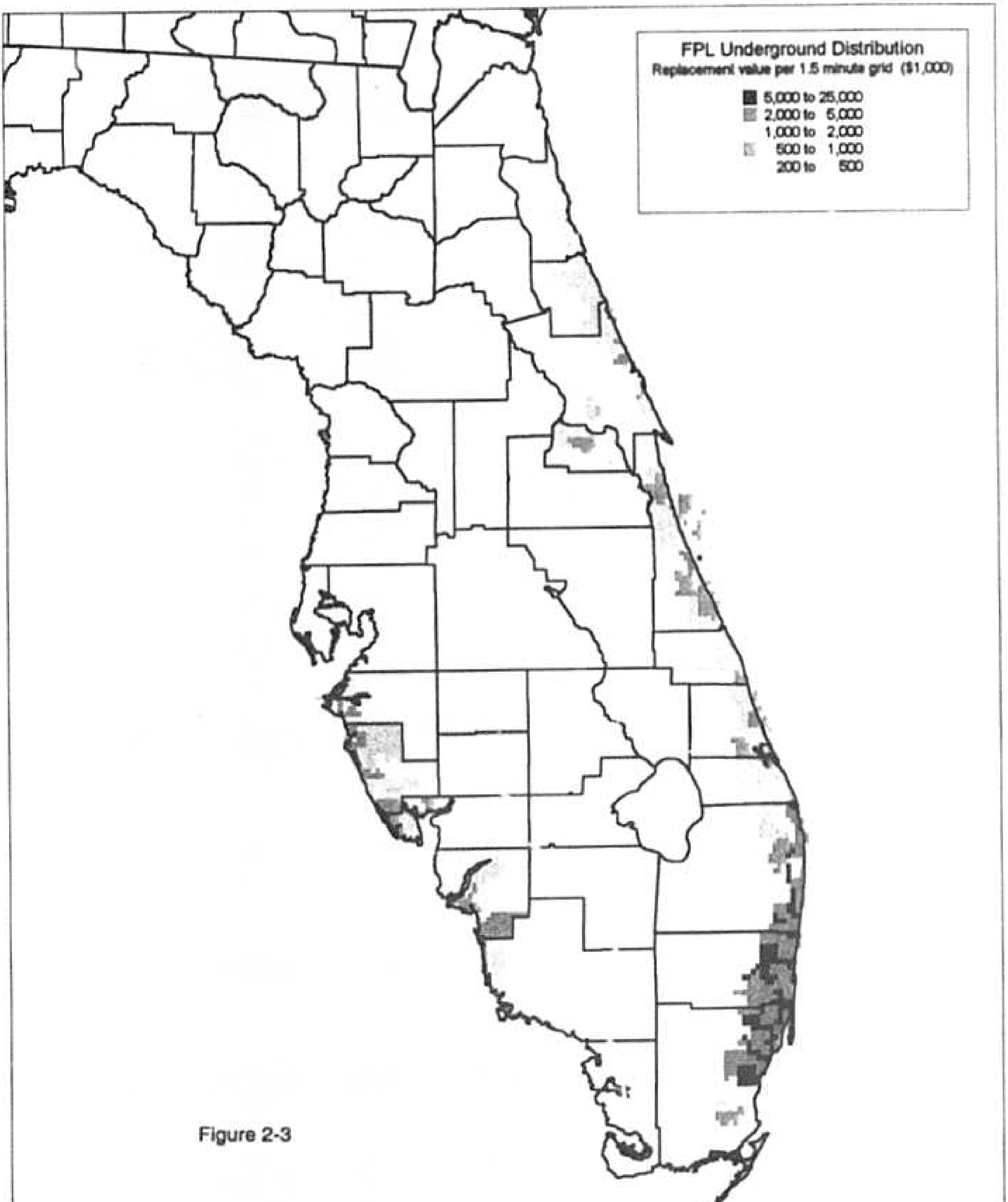

FPL Underground Distribution
Replacement value per 1.5 minute grid ($1,000)
5,000 to 25,000
2,000 to 5,000
1,000 to 2,000
500 to 1,000
200 to 500

Figure 2-3

3. HURRICANE HAZARD

3.1 BACKGROUND

The historical record for hurricanes on the Gulf and Atlantic coasts of the United States consists of approximately 100 years ıor which reasonably accurate information is available. Written descriptions of earlier storms are available, but it becomes increasingly difficult to estimate actual storm intensities and track locations in a reliable manner consistent with the later data. For this reason, all hypothetical storms used in this analysis, as well as their corresponding frequencies, have been based only on hurricanes that have occurred since 1900. The analysis did not include tropical (sub-hurricane) or winter storms. For example, storms similar to the March 13, 1993, winter storm causing $14.5 million damage have not been included in this analysis.

While it is sometimes of interest to estimate the losses that would occur to a portfolio given an exact repeat of a particular hurricane, the historical record is simply too sparse to estimate long-term statistical losses such as loss exceedances or annualized losses. For such calculations, it is therefore necessary to generate a series of hypothetical storms, essentially "filling in" the gaps in the historical data. The USWIND™ probabilistic storm database (described in Section 3.3) is the series of hypothetical storms used as a basis for all analyses in this project.

Before discussing the probabilistic storm database, it is worthwhile to explain the SSI (Saffir-Simpson Intensity) scale for describing hurricane. The Saffir-Simpson hurricane damage-potential scale classifies hurricanes into five categories, from 1 (the weakest storms classified as hurricanes) to 5 (the most severe hurricanes observed). The categories, or intensity levels, can be defined in terms of central pressure, maximum winds, or storm-surge height, since a rough correspondence exists among these three characteristics of hurricanes. For each intensity level, the typical extent of damage is described. Table 3-1 summarizes the Saffir-Simpson intensity scale.

3.4 PROBABILISTIC STORMS

As discussed in Section 3.1 above, the analyses performed for this project utilize hypothetical storms defined in the USWIND™ probabilistic storm database. This database was developed by breaking the coastline into 10-mile segments and modeling more than 1,500 hypothetical storms for each segment. The net result is a stochastic storm or probabilistic database of more than 500,000 storms. This database provides a very good representation of all hurricanes that can affect the eastern United States, along both the Gulf and the Atlantic coasts. Each hurricane in the database has been defined by associating a central pressure with a unique storm track. In addition, each hurricane is assigned an annual frequency of occurrence, which depends on the storm track location and the storm intensity as measured by central pressure.

Table 3-1

THE SAFFIR-SIMPSON INTENSITY (SSI) SCALE

(NOTE THAT WINDSPEEDS GIVEN ARE 1-MINUTE SUSTAINED)

Saffir-Simpson Intensity (SSI)	Central Pressure (mb)	Maximum Sustained Winds (mph)	Storm-Surge Height (ft)	Damage
1	≥ 980	74-95	4-5	Damage mainly to trees, shrubbery, and unanchored mobile homes
2	965-979	96-110	6-8	Some trees blown down; major damage to exposed mobile homes; some damage to roofs of buildings
3	945-964	111-130	9-12	Foliage removed from trees; large trees blown down; mobile homes destroyed; some structural damage to small buildings
4	920-944	131-155	13-18	All signs blown down; extensive damage to roofs, windows, and doors; complete destruction of mobile homes; flooding inland as far as 6 mi.; major damage to lower floors of structures near shore
5	< 920	> 155	> 18	Severe damage to windows and doors; extensive damage to roofs of homes and industrial buildings; small buildings overturned and blown away; major damage to lower floors of all structures less than 15 ft. above sea level within 500m of shore

4. PORTFOLIO LOSS ESTIMATION: METHODOLOGY

This section presents an overview of the methodology used to estimate hurricane damage to FPL's T&D assets.

4.1 ESTIMATING PORTFOLIO LOSS FROM WIND DAMAGE

4.1.1 General Methodology

The basic components of hurricane risk analysis include:

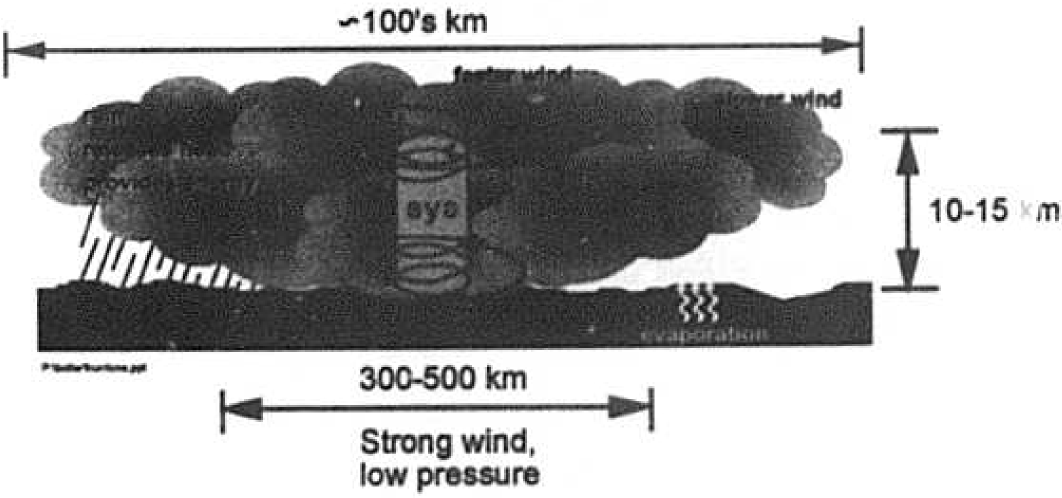
- Identification of assets at risk
- Determination of hurricane hazard
- Determination of asset vulnerabilities
- Analysis of asset damage

4.1.2 Identification of Assets at Risk

The first step is identifying what is at risk. For the FPL portfolio, the assets at risk include aboveground and underground distribution and transmission facilities, including cables, poles, and transformers. The typical information developed includes: the location of the assets, values at risk, asset type (e.g., is the asset underground or aerial; are the structure's materials wood, concrete, steel, etc.).

4.1.3 Determination of Hurricane Hazard

While the formation of damaging hurricanes can be viewed as random, the physical attributes of hurricanes are quite structured. Seen from above, the storm appears as a fairly organized spiral of clouds. The center of a hurricane, or "eye," follows a path, or "track." The shape of most hurricane tracks in the northern hemisphere share some common traits. Hurricanes are born in the tropics at sea, and tend to move steadily toward higher latitudes while also moving in a westerly direction. As a general rule, the higher the latitude, the larger the probability that the hurricane track will begin to travel clockwise, turning toward the east. The actual mechanisms that steer tracks are quite complex, with the above description serving only as a general rule. A pictorial representation of hurricane vital statistics is shown below.



- 1-3 week life
- Generated by low pressure at 5 - 20 degrees latitude
- Travel @ 10-50 km/hr
- Late summer

Hurricane Vital Statistics

The eye is also the point of lowest barometric pressure. The barometric pressure increases as the distance away from the eye increases. Further, a negative correlation exists between barometric pressure and wind speed. Therefore as a general rule, the farther a site is located from the eye, the lower the maximum observed winds. Storm intensity is measured using the Saffir/Simpson Damage Potential Scale, or SSI (Saffir/Simpson Intensity, see Table 3-1 for definition).

USWIND™ software determines the hurricane hazard according to the following process:

1. Geocode the properties at risk (i.e., determine their latitude-longitude).

2. Determine distance to coast based on geocoding.

3. For the specific location's region, determine parameters for a given probabilistic event. Parameters of interest include central barometric pressure, radius of maximum winds, translational velocity, and frequency of occurrence.

4. The mean gust speed at the site of interest is determined by considering both attenuation inland from the coast and attenuation from the center of the hurricane track.

4.1.4 Development of Vulnerability Functions

EQE conducted limited interviews with FPL Distribution and Transmission staff in May 1997 to obtain information on system assets and past system hurricane damage. Aerial transmission and distribution lines and structures have suffered damage in past wind storms. Damage patterns tend to be most severe in coastal areas due to a combination of wind and storm surge. Damage to inland lifelines tends to be less severe with greater contributions to damage from wind-borne debris. The types of wind-borne debris can include tree and tree limbs, and roofing materials as well as structure debris at higher wind speeds. Underground distribution lines have also been subject to storm-surge damage, which results in salt-water intrusion to cables.

FPL aerial transmission and distribution structures are designed to sustain design-level hurricane winds. These design criteria specify design wind speeds for both transmission and distribution structures. Design criteria for transmission structures are microzoned, or segmented, into geographic areas that correspond to the expected wind hazard for the area. The segmentation considers wind speeds as shown in Figure 4-1 from ANSI A58.1 by county and prescribes the appropriate design criteria for the county. In Dade and Broward counties, for example, transmission structures are designed for 110-mph sustained wind speeds. This is contrasted with Nassau and Duval counties where design wind speeds are 90 mph. Distribution poles have been taken as having a 110-mph design wind speed throughout the FPL service territory. Failure of undeteriorated transmission and distribution structures resulting from wind loadings below their design wind speeds is unlikely. Damage to conductors, insulators and other system components has still been observed due to wind-borne debris.

FPL provided wind speed versus damage data from Hurricane Andrew to distribution poles and transformers. These data were utilized as the basis for aerial distribution vulnerability functions. Five vulnerability functions for transmission structures were developed. These included vulnerabilities for wood single poles, wood H frames, concrete single poles, concrete H frames, and steel transmission structures. These vulnerabilities were developed using FPL-provided data on Hurricane Andrew damage, FPL design standards, and engineering judgments of the relative performance of the structures and material types. Vulnerability functions for transmission structures were scaled to correspond to design wind speeds in each county location as shown in Figure 4-1.

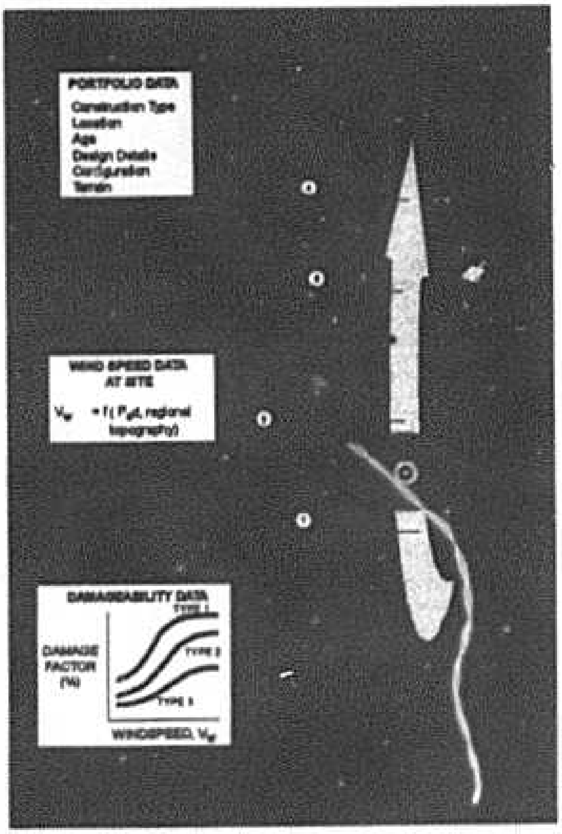
Underground distribution vulnerability functions were developed based on FPL-supplied data from Hurricane Andrew. The data provided includes a map showing the FPL service areas affected by the storm surge and underground transformers within the storm-surge area and summary status ledgers for repairs performed to underground cables and transformers. Andrew storm-surge data showed an inundation area of approximately one to two miles inland in the 140-150 mph wind fields. A vulnerability relationship was developed that considered both wind speed and distance to the coast. The vulnerability relationship assigns highest surge-related damage at the coast and rapidly diminishes with distance inland. Vulnerability functions for underground transmission were developed using a similar formulation. Interviews with FPL Transmission Division Staff indicates that underground transmission cables have significantly different construction attributes and therefore are inferred to have substantially lower surge vulnerability. These insights have been reflected in the values assigned to the transmission function.

4.1.5 Analysis of Asset Damage

EQE developed its own hurricane model, using the National Oceanic and Atmospheric Administration (NOAA) model as the base, to determine individual risk wind speeds. The NOAA model was designed to model only for a few specific types of storms. While the eye of the hurricane follows the selected track, the EQE model uses up to a dozen different storm parameters to estimate wind speeds at all distances away from the eye.

The asset vulnerability data consist of a database of damage algorithms for every transmission and distribution asset type as described above. Damage is based on the estimated wind speed at the property location.

For each location in the portfolio, the wind speed is calculated and based on the type of asset, and the degree of damage is estimated. The result for each property is an estimate of the mean damage and associated uncertainty. Total portfolio damage, or normal expected (mean) damage, is the sum of the individual property's damage. Uncertainty of individual property's damage is calculated to determine the total portfolio damage uncertainty, taking into account correlation between properties. Knowledge of the total portfolio damage uncertainty permits estimation of total portfolio damage with varying probability levels. The hurricane portfolio risk analysis is idealized in the following figure:



4.1.6 Wind Speed Calculation

USWIND™ calculates hurricane wind speeds using a model based on equations developed in NOAA Report NWS 23 (Schwerdt et al. 1979) and climatological data presented in NOAA Report NWS 38 (Ho et al. 1987). Each individual hurricane scenario is defined by a storm track (i.e., the storm center's path) and several meteorological parameters, including:

- P_0 , the central pressure of the storm: The central pressure is the best indicator of storm intensity (see Table 3-1)—the lower the pressure, the more severe the storm.

- R, the radius to maximum winds: This parameter essentially determines the storm's width.

- T, the translational speed of the storm: The translational speed acts to increase wind speeds on the right half of the storm and decrease wind speeds on the left half.

- μ, the filling rate parameter: The filling rate describes how quickly the storm weakens as it travels inland.

These parameters are used to calculate the maximum-sustained wind speed for the hurricane given a specified location of the storm center (equivalently, given a specified time). Several additional factors must be considered to calculate the peak gust wind speed at each site:

- Distance from the site to the storm track: If the site is within the radius to maximum winds (R), it will be affected by the highest winds in the storm; if the site is outside this radius, the wind speed is reduced accordingly.

- The side of the storm on which the site is: As mentioned in the discussion of the translational speed (T) above, sites on the right half of the storm will experience higher wind speeds than those on the left half.

- Local terrain features: The rougher the terrain, the greater the frictional reduction in the wind speeds. Examples of rough terrain are dense urban areas and forests; examples of terrain with very little frictional influence are beaches, marshes (e.g., the Everglades), and grazing land.

- Distance from the site to the coast: This distance determines the degree to which local terrain features can reduce the wind speeds from the essentially frictionless values they have over the ocean.

- Gust factor: This is the factor used to convert sustained wind speeds, which are the wind speeds commonly reported, to peak gust wind speeds, on which all USWIND™ vulnerability functions are based.

4.2 PROBABILISTIC LOSS ANALYSIS METHODOLOGY

The probabilistic loss analysis consists of calculating portfolio losses for all relevant storms, using the methodology described in Section 4.1. The USWIND™ probabilistic database was developed by breaking the coastline into 10 mile segments and modeling more than 1,500 hypothetical storms for each segment. The net result is a stochastic storm database of more than 500,000 events that represents all possible hurricanes affecting the eastern United States, along both the Gulf and the Atlantic coasts. Each hurricane in the database has been defined by associating a central pressure with a unique storm track. In addition, each hurricane is assigned an annual frequency of occurrence, which depends on the storm track location and the storm intensity as measured by central pressure.

Given the annual frequency and the portfolio loss for each event, a probabilistic database of losses is developed. By manipulating this database, various loss exceedance or non-exceedance distributions are generated.

4.3 BENCHMARK STUDIES

Several hurricane benchmark studies were performed to validate and calibrate the T&D vulnerability functions and hurricane model. Storm data and losses from three recent storms that affected FPL service areas were utilized. These include Hurricane Andrew (1992), Hurricane Erin (1995) and Hurricane Gordon (1994). The FPL asset portfolio was analyzed for each of historic storm using USWIND™, and the results are compared against reported FPL losses in Table 4-1 below and shown in detail in Appendix B.

These historic storm simulations allow calibration of the model to forecast restoration and repair costs to damaged FPL system assets. These costs typically include the cost of damaged capital plant and equipment as well as payroll, associated vehicle, inventory, and support costs for the restoration efforts.

These three storms are important benchmarks because they are relatively recent, all having occurred in the last five years. Although FPL is constantly expanding its service areas, and possibly changing design and construction practices, the portfolio has not changed significantly in the last five years. Moreover, relatively "good" exposure and claims data are available for these storms. These three storms provide a relevant measure of the model's validity.

All hurricanes are unique, and these three hurricanes were each significantly different. SSI intensities for each storm was different as were the affected regions. Erin was an SSI 2 and affected a limited region of the East Coast, as shown in Figure 4-2. Gordon was both a tropical storm and an SSI 1, crossing Florida—both west and east coasts (Figure 4-3). Damage done by Erin and Gordon occurred mostly in low wind-speed fields. Andrew was an SSI 4 and affected a large part of the densely populated south Dade County. Damage done by Andrew occurred from a wider range of failure modes where wind speeds reached 150 mph (Figure 4-4). The smaller storms produce a smaller extent of damage, and damage patterns tend to be dependent on fine details of local topography, wind fields and random occurrences. Larger events are expected to produce more uniform and more accurately reproducible damage patterns.

Perfect agreement is not expected between the current simulations and FPL actual losses. The reason for this is that the assets at risk at the time of these historical storms may have been different than they are today. Also, the normal replacement values of assets at the time of the losses would be expected to be different than they are in the current model due to changes in cost indices. However, the comparisons between simulated losses and FPL historic losses should show reasonable correlation, which they do for the three storm simulations with SSI intensities of 1, 2, and 4.

Table 4-1

COMPARISON OF EQE HISTORIC LOSS SIMULATION WITH FPL HISTORIC HURRICANE LOSSES

(Dollars in Thousands)

Simulation(1) Losses	Andrew 1992	Erin 1995	Gordon 1994
Distribution	$266,113	$4,294	$2,748
Transmission	32,785	1,073	76
Grand Total	$298,898	$5,367	$2,825
FPL Actual Losses	**$283,580**	**$6,006**	**$2,175[1]**
Relative Difference	**+5.4%**	**-10.6%**	**+29.9%**

Note 1: All analyses were done using the 1997 values. No adjustments were made for asset inflation or system expansion.

Note 2: Losses in North East and East Divisions

ANSI A58.1 - 1982 BASIC WIND SPEED
(WITHIN FPL TERRITORY)

90 MPH	95 MPH	100 MPH	105 MPH	110 MPH	115 MPH
Duval	St. Johns	Hendry	Collier	Broward	Dade
Baker	Putnam	Glades	Lee		Monroe
Union	Alachua	DeSoto	Charlotte		
Nassau	Clay	Okeechobee	Sarasota		
Suwannee	Bradford	St. Lucie	Palm Beach		
Hamilton	Marion	Indian River	Martin		
Columbia	Lake	Brevard	Manatee		
		Volusia			
		Flagler			
		Hardee			
		Highlands			
		Seminole			
		Orange			
		Osceola			

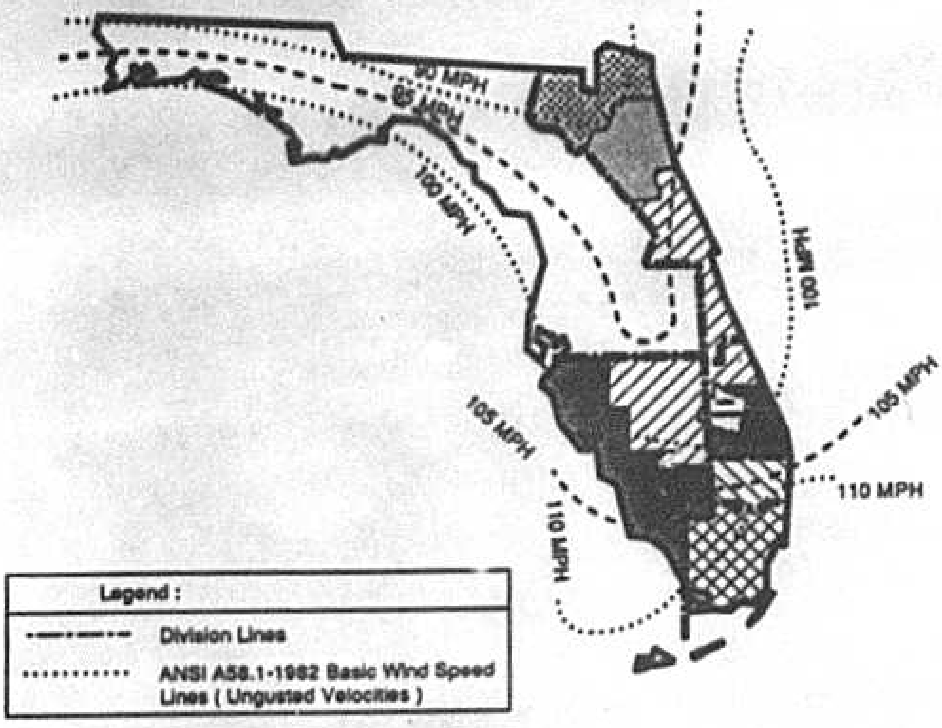


Figure 4-1

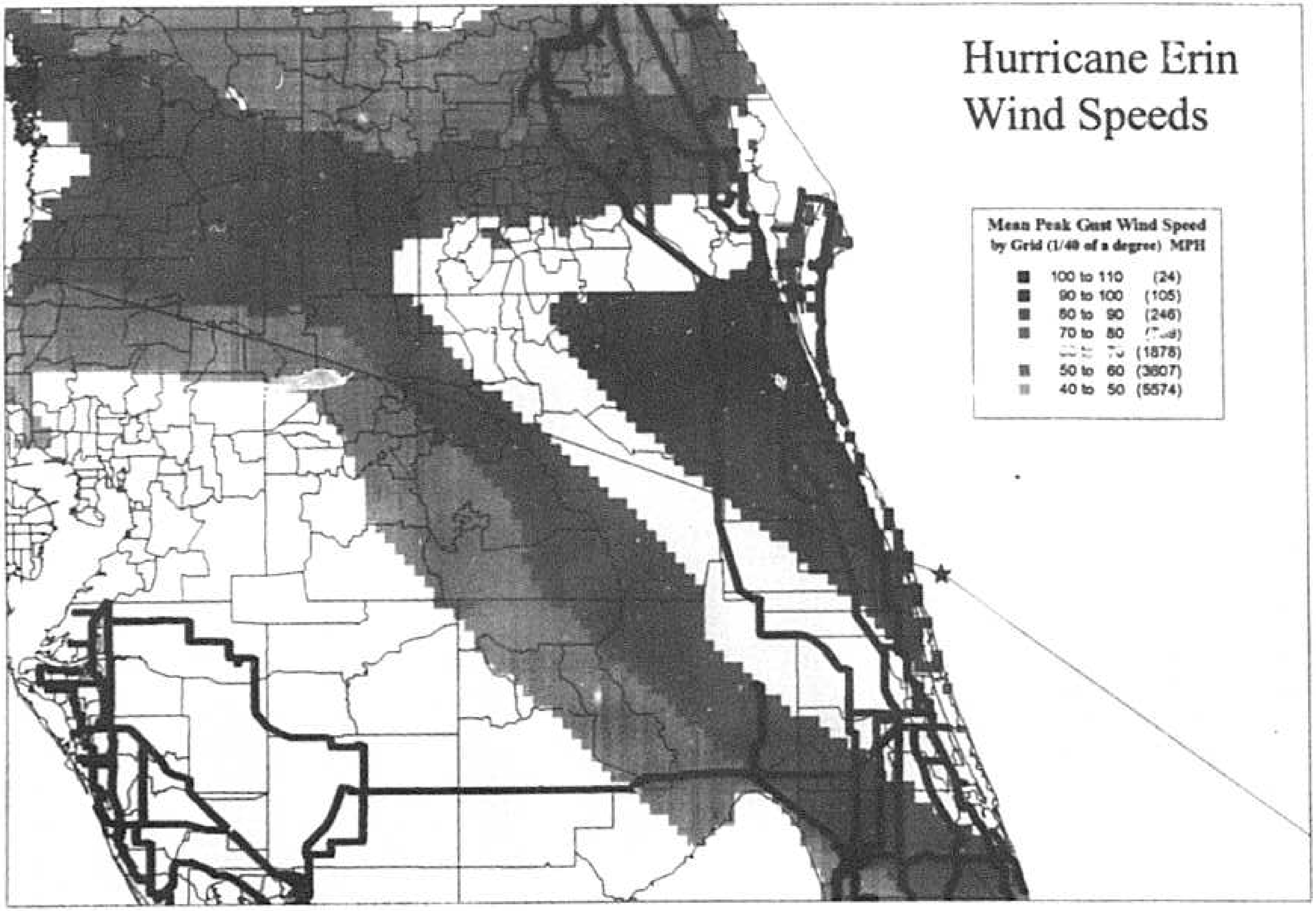

Hurricane Erin
Wind Speeds
Mean Peak Gust Wind Speed
by Grid (1/40 of a degree) MPH
100 to 110 (24)
90 to 100 (105)
80 to 90 (246)
70 to 80
(1878)
50 to 60 (3607)
40 to 50 (5574)

Figure 4-2

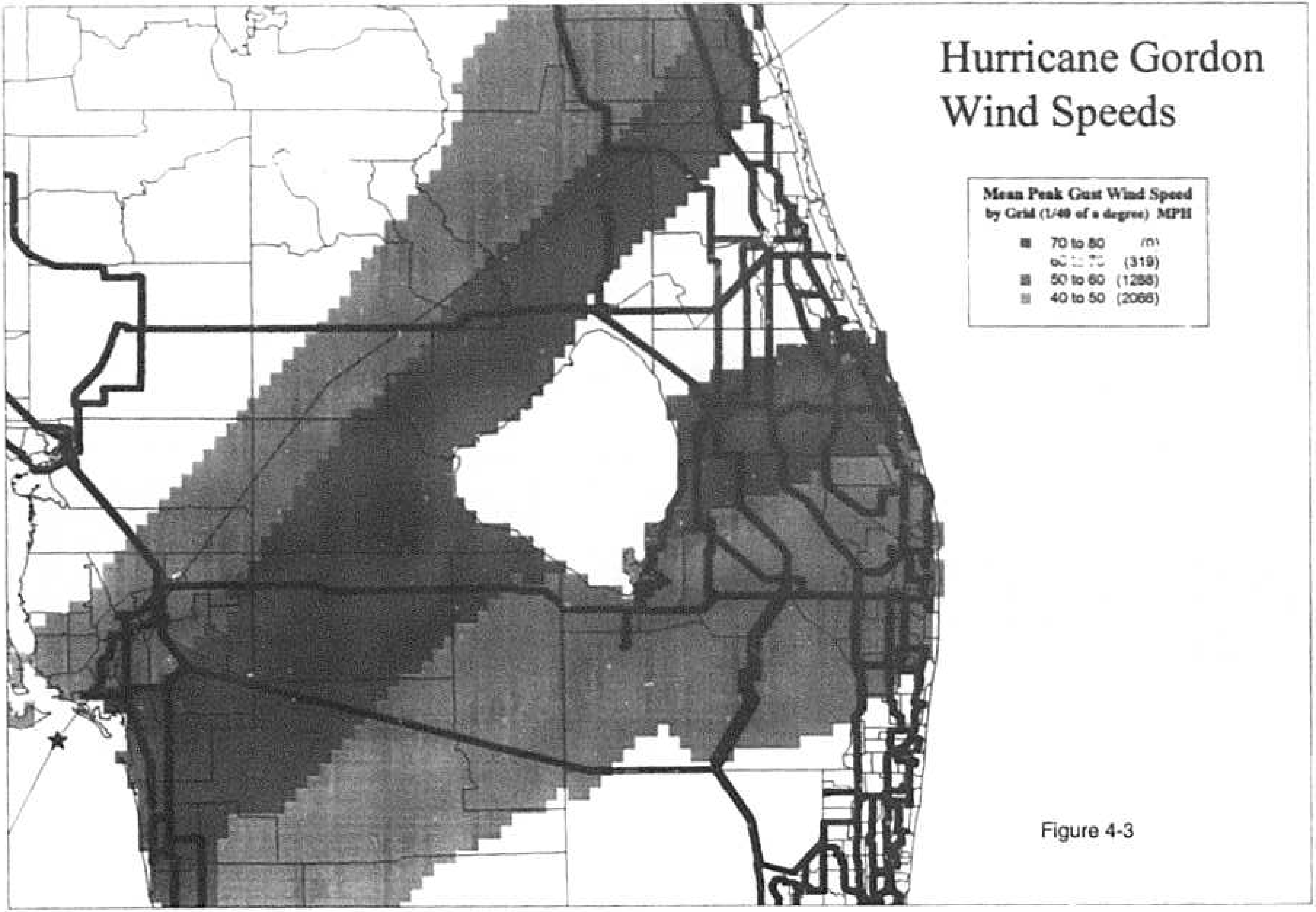

Hurricane Gordon
Wind Speeds
Mean Peak Gust Wind Speed
by Grid (1/40 of a degree) MPH
70 to 80
(319)
50 to 60 (1288)
40 to 50 (2066)

Figure 4-3

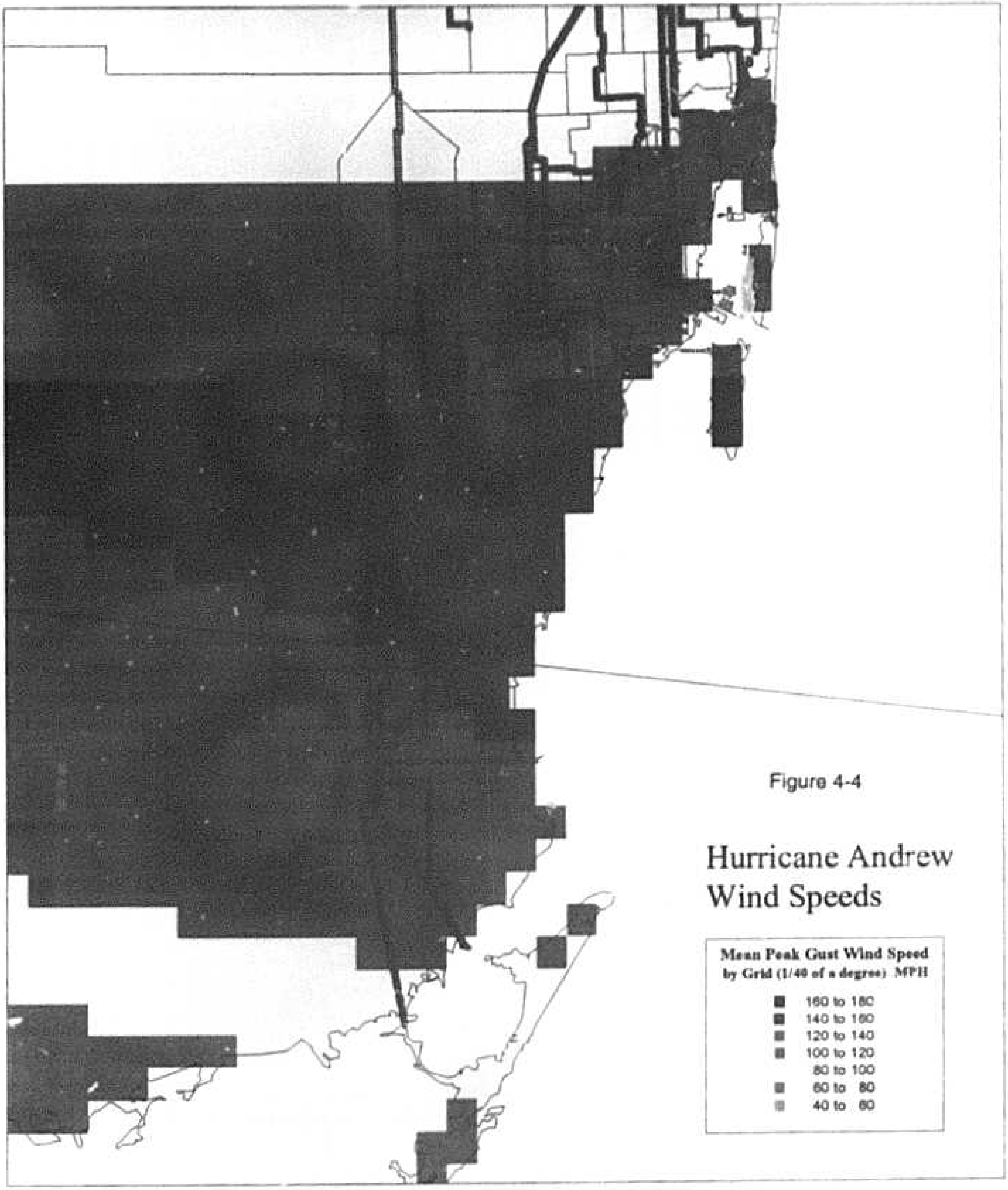


Figure 4-4

Hurricane Andrew Wind Speeds

5. ANALYSIS RESULTS

This section presents the results of the hurricane damage analysis of Florida Power and Light's (FPL) transmission and distribution assets (T&D) using USWIND™. The sections below are organized corresponding to the tasks in EQE's proposal to FPL. (see Chapter 1).

5.1 SUMMARY

All damage estimations were performed using USWIND™. Discussions regarding landfall probabilities are consistent with the hurricane hazard database incorporated into USWIND™.

All losses are based on estimates of damage to T&D assets only. Damage is defined as the cost associated with repair and restoration of damaged assets. Damage and losses to electrical system substation assets, and control and communications assets such as micro-wave, fiber optic, and telephone lines, are excluded from the scope of the analyses.

The specific results for the analyses performed on the current T&D portfolio are discussed below.

5.2 TASK 4 RESULTS: LANDFALL SERIES ANALYSES

The USWIND™ landfall series storms corresponding to return periods of 500, 250, 100 and 50 were run on this portfolio of assets. The storm intensities correspond to the intensity of a storm landfalling anywhere in a 50-mile stretch of coast centered at the landfall point within the specified return period. Landfall locations at 10-mile intervals along the coast were analyzed. Analysis results are included in Appendix C.

Each simulated storm represents the intensity of a storm that is not expected to be exceeded within the given time period landfalling anywhere along a 50-mile stretch of coast centered at the milepost designated in the report. The range of damage estimates for these storms shows the sensitivity of the portfolio results to storm landfall location. For example, reviewing the 100-year storm results in Dade County for the 50-

mile stretch between mile posts 1440 and 1490 shows that the expected damage can range from $103 million to $522 million. The $522 million damage estimate is close to a "worst-case" expected 100-year storm damage, and the $103 million damage estimate is close to a "best-case" expected 100-year storm damage.

The hurricane intensities used for these analyses conform to basic NOAA information regarding hurricane intensity recurrence relationships corresponding to locations along the coast. In the Miami-Dade region, the intensity of these storms is approximately: 50 years - SSI 3, 100 years - weak SSI 4, 250 years - moderate SSI 4, and 500 years - strong SSI 4 storm. The Miami-Dade region is in the highest risk region of Florida due to the frequency of hurricanes in this area combined with the population concentration compared to the other areas of Florida.

5.3 TASK 5 RESULTS: EXCEEDANCE TABLES

Two damage exceedance tables, per occurrence and annual aggregate, are provided considering all hurricanes from SSI 1 through 5. The loss exceedance tables generated by USWIND™ provide loss levels corresponding to 23 exceedance levels between 50% and 99.90%. The results of this analysis show that a damage level with a 98% probability of nonexceedance within a single year (approximately a 50-year return period) is $559 million. Similarly, the 99% probability level (approximately a 100-year return period) is $1.02 billion. The damage exceedance tables calculated for FPL are included in Appendix D.

There are two annual probability of nonexceedance tables provided from this analysis. The first is the annual aggregate damage nonexceedance table. This table provides the total expected damage within a single year for varying probabilities of nonexceedance. The damage values are for one or more storms in a single year. For several years in recent history, Florida has had more than one landfalling hurricane, and this exceedance curve includes this small likelihood of multiple storms in one year inflicting damage upon FPL's system.

The second nonexceedance table is the per-occurrence damage distribution table. This table presents the probability that a single storm loss will not exceed a specific value.

For comparison, the per-occurrence 98% probability of nonexceedance value is $543 million, compared to the $559 million value for annual aggregate.

5.4 EXPECTED ANNUAL DAMAGE RESULTS

The expected annual aggregate damage for this portfolio is $42 million. This number represents the average annual damage to FPL's T&D assets over a very long sampling period. This number is often used as a starting point for insurance premiums, and is sometimes referred to as "pure premium." The expected annual damage reports are included in Appendix E.

The expected annual damage has been broken down into many subdivisions to enable inspection of the various contributions to portfolio risk. The expected annual damage by county report shows a geographical distribution of portfolio risk, and other reports break the results down by overhead versus underground, distribution versus transmission, etc. These analyses were not required by FPL's request for proposal, but are a relevant description of a hurricane risk analysis.

5.5 TASK 6 RESULTS: LOSS THRESHOLD REPORTS

The likelihood of exceeding several specified loss thresholds within periods of 1, 10, 25, 50, 100, 250, and 500 years are calculated using USWIND™. These results are included in Appendix G. This report can be interpreted, for example, by tracking the 100-year column down to the 5th row, which is read as "there is a 84% probability that a annual damage to this portfolio will exceed $616 million in any 100-year period."

5.6 TASK 7 RESULTS: PROBABILITY OF LANDFALLING STORMS

The statistical probability of a Category 1, 2, 3, 4, or 5 hurricane making landfall in FPL's western, southeastern, and northeastern service territories has been developed.

For this purpose, the western region has been defined to consist of the following coastal coutines: Manatee, Sarasota, Charlotte, Lee, and Collier. (The inland counties of De Soto, Glades, and Hendry are included as well.)

The southeastern region has been defined as Dade, Broward, and Palm Beach counties.

The northeastern region has been defined to include all counties in FPL's service territory from Martin county north along the Atlantic Coast through Nassau county (i.e. to the Georgia border), including all inland FPL counties not included in the western region.

Given these regional definitions, the annual probabilities of storms of each SSI category making landfall in each of the three regions of FPL's service territory are presented in Table 5-1.

Note that in some cases the probability of a landfall in a given region actually increases somewhat as the SSI category increases (e.g. SSI 1, 2, 3 in the southeastern region). Keep in mind three things regarding such trends: first, these probabilities are not cumulative, i.e., the 5.3% chance of an SSI 2 landfall in the southeastern region does not include landfalls of higher categories; second, the SSI categories are not of equal "width," e.g., SSI 3 spans roughly 20 mph (one-minute sustained), while SSI 2 only spans about 15 mph; finally, in high hazard areas such as southeastern Florida, weak storms actually do occur less frequently than stronger storms.

5.7 TASK 7 RESULTS: PROBABILITY OF MULTIPLE LANDFALLS IN ONE YEAR

The probability of more than one storm making landfall in FPL's service territory during 1-, 3-, 5- and 10-year periods has been calculated.

An analysis of all historical storms that have made landfall in FPL's service territory since 1900 was performed, using moving windows of widths 1, 3, 5, and 10 years. The SSI category of each storm was ignored, i.e., all storms were weighted equally. For each window width, the probability of having more than one storm was computed from the sample of all windows of that width, within a 97-year time frame (1900 - 1996).

Table 5-2 summarizes the results of this analysis.

Table 5-1

LANDFALL PROBABILITIES

Region	SSI 1	SSI 2	SSI 3	SSI 4	SSI 5
Western (Manatee through Collier)	3.3%	2.0%	2.1%	0.4%	negligible
Southeastern (Dade/Broward/Palm Beach)	4.8%	5.3%	6.3%	2.4%	0.4%
Northeastern (Martin and north)	2.8%	2.8%	1.6%	0.5%	0.2%

Table 5-2

MULTIPLE LANDFALLS PROBABILITIES

Time window	Probability of more than one hurricane making landfall in FPL's service territory within the specified time window
1 year	7%
3 years	24%
5 years	42%
10 years	64%

APPENDIX A

TIV by County within a State
for Portfolio FPL T&D Assets

County	Total TIV $(Thousands)
State: Florida	
Alachua	6,600
Baker	33,316
Bradford	52,860
Brevard	508,301
Broward	1,407,505
Charlotte	198,890
Clay	38,926
Collier	211,496
Columbia	79,145
Dade	1,752,399
De Soto	67,176
Duval	32,084
Flagler	132,962
Gilchrist	0
Glades	50,703
Hamilton	765
Hardee	926
Hendry	50,373
Highlands	8,689
Hillsborough	48
Indian River	138,475
Lafayette	0
Lake	358
Lee	269,870
Madison	0
Manatee	226,741
Marion	0
Martin	238,700
Nassau	81,114
Okeechobee	31,232
Orange	25,047

Note: TIV represents the total replacement value of assets as described in Chapter 2.

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TIV by County within a State for Portfolio FPL T&D Assets

County	Building TIV $(Thousands)
Osceola	40,213
Palm Beach	1,148,644
Polk	0
Putnam	114,917
Saint Johns	122,282
Saint Lucie	302,114
Sarasota	383,789
Seminole	98,645
Suwannee	35,469
Union	13,924
Volusia	321,227
Florida State Total	**$8,225,925**
Total for All States	**$8,225,925**

APPENDIX B

Florida Power Light
Historic Benchmarking Storms
($ Thousands)

	Andrew			Erin			Gordon		
Distribution	**Overhead**	**Underground**	**Total**	**Overhead**	**Underground**	**Total**	**Overhead**	**Underground**	**Total**
East	884.3	522.5	1,406.8	1,318.4	379.6	1,698.0	1,468.0	284.4	1,752.4
South	229,650.0	25,593.9	255,243.9	2,053.6	543.0	2,596.6	279.2	35.0	314.2
Southeast	6,112.5	1,841.7	7,954.2	NA	NA	NA	518.0	164.1	NA
West	1,130.8	377.6	1,508.4	NA	NA	NA	NA	NA	NA
Total	237,777.6	[illegible],335.7	266,113.3	3,372.0	922.6	4,294.6	2,26[illegible]	[illegible]83.5	2,748.7

	Andrew			Erin			Gordon		
Transmission	**Overhead**	**Underground**	**Total**	**Overhead**	**Underground**	**Total**	**Overhead**	**Underground**	**Total**
1 Curcuit	25,947.6	2,151.5	28,099.1	1,037.1	3.6	1,[illegible]40.7	74.3	2.2	76.5
2 Curcuits	4,663.7	NA	4,663.7	31.6	NA	31.6	0.3	NA	0.3
3 Curcuits	0.2	NA	0.2	0.9	NA	0.9	NA	NA	NA
4 Curcuits	1.2	NA	1.2	NA	NA	0.0	NA	NA	NA
Unk # Curcuits	21.0	NA	21.0	NA	NA	NA	NA	NA	NA
Total	30,633.7	2,151.5	32,785.2	1,069.6	3.6	1,073.2	74.6	2.2	76.8
Grand Total	268,411.3	30,487.2	298,898.5	4,441.6	926.2	5,367.8	2,339.8	485.7	2,825.5

Hurricane - Scenario Event Damage by Branch Within a Division Within a Company for Portfolio FPL T&D Assets and Andrew (08/16/1992)

Branch	Total TIV $(Thousands)	Affected TIV $(Thousands)	Mean Damage $(Thousands)	Mean Damage % Total TIV	Mean Damage % Affected TIV
Company: Distribution	**Division: U/G and O/H Distribution - East**				
Overhead	779,292	563,400	884	0.11	0.16
Underground	697,073	574,552	523	0.07	0.09
U/G and O/H Distribution - East Division Total	**$1,476,365**	**$1,137,952**	**$1,407**	**0.10%**	**0.12%**
Company: Distribution	**Division: U/G and O/H Distribution - South**				
Overhead	545,466	545,338	229,650	42.10	42.11
Underground	764,086	760,534	25,594	[illegible]	3.37
U/G and O/H Distribution - South Division Total	**$1,309,552**	**$1,305,872**	**$255,244**	**19.49%**	**19.55%**
Company: Distribution	**Division: U/G and O/H Distribution - Southeast**				
Overhead	521,769	521,508	6,113	1.17	1.17
Underground	864,537	863,986	1,842	0.21	0.21
U/G and O/H Distribution - Southeast Division Total	**$1,386,306**	**$1,385,494**	**$7,954**	**0.57%**	**0.57%**
Company: Distribution	**Division: U/G and O/H Distribution - West**				
Overhead	693,957	638,577	1,131	0.16	0.18
Underground	494,947	391,663	378	0.08	0.10
U/G and O/H Distribution - West Division Total	**$1,188,904**	**$1,030,240**	**$1,508**	**0.13%**	**0.15%**
Distribution Company Total	**$5,361,127**	**$4,859,558**	**$266,113**	**4.96%**	**5.48%**
Company: Transmission	**Division: O/H Transmission - 1 circuit**				

Note: TIV represents the total replacement value of assets as described in Chapter 2.

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Hurricane - Scenario Event Damage by Branch Within a Division Within a Company for Portfolio FPL T&D Assets and Andrew (08/16/1992)

Branch	Total TIV $(Thousands)	Affected TIV $(Thousands)	Mean Damage $(Thousands)	Mean Damage % Total TIV	Mean Damage % Affected TIV
Overhead	1,296,174	172,767	25,948	2.00	15.02
O/H Transmission - 1 circuit Division Total	**$1,[illegible]**	**$172,767**	**$25,948**	**2.00%**	**15.02%**
Company: Transmission	**Division: O/H Transmission - 2 circuits**				
Overhead	106,000	45,015	4,664	4.40	10.36
O/H Transmission - 2 circuits Division Total	**$106,000**	**$45,015**	**$4,664**	**4.40%**	**10.[illegible]%**
Company: Transmission	**Division: O/H Transmission - 3 circuits**				
Overhead	106	39	0	0.19	0.51
O/H Transmission - 3 circuits Division Total	**$106**	**$39**	**$0**	**0.19%**	**0.51%**
Company: Transmission	**Division: O/H Transmission - 4 circuits**				
Overhead	1,003	34	1	0.12	3.53
O/H Transmission - 4 circuits Division Total	**$1,003**	**$34**	**$1**	**0.12%**	**3.53%**
Company: Transmission	**Division: O/H Transmission - Unk # of circuits**				
Overhead	6,351	[illegible],458	21	0.33	1.44
O/H Transmission - Unk # of circuits Division Total	**$6,351**	**$1,458**	**$21**	**0.33%**	**1.44%**
Company: Transmission	**Division: U/G Transmission**				
Underground	201,300	197,111	2,152	1.07	1.09
U/G Transmission Division Total	**$201,300**	**$197,111**	**$2,152**	**1.07%**	**1.09%**

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Hurricane - Scenario Event Damage by Branch Within a Division Within a Company for Portfolio FPL T&D Assets and Andrew (08/16/1992)

Branch	Total TIV $(Thousands)	Affected TIV $(Thousands)	Mean Damage $(Thousands)	Mean Damage % Total TIV	Mean Damage % Affected TIV
Transmission Company Total	$1,610,934	$416,424	$32,785	2.04%	7.87%
Total for All Companies	[illegible]	$5,275,982	$298,899	4.29%	5.67%

Factors Used in Analysis:

Hurricane Event Type:	Historical
Demand Surge Factor:	Demand Surge Included
Event No:	899
Milepost No:	1,474
Milepost Description:	Dade FL
SSI:	4
Global Limits/Deductibles:	None Applied

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Hurricane - Scenario Event Damage by Branch Within a Division Within a Company for Portfolio FPL T&D Assets and Erin (08/01/1995)

Branch	Total TIV $(Thousands)	Affected TIV $(Thousands)	Mean Damage $(Thousands)	Mean Damage % Total TIV	Mean Damage % Affected TIV
Company: Distribution	**Division: U/G and O/H Distribution - East**				
Overhead	779,292	661,025	1,318	0.17	0.20
Underground	697,073	464,300	380	0.05	0.08
U/G and O/H Distribution - East Division Total	**[illegible],476,365**	**$1,125,325**	**$1,698**	**0.12%**	**0.15%**
Company: Distribution	**Division: U/G and O/H Distribution - North**				
Overhead	896,907	475,107	2,054	0.[illegible]	0.43
Underground	336,986	222,175	543	[illegible].15	0.24
U/G and O/H Distribution - North Division Total	**$1,253,893**	**$697,282**	**$2,597**	**0.21%**	**0.37%**
Distribution Company Total	**$2,730,258**	**$1,822,607**	**$4,295**	**0.16%**	**0.24%**
Company: Transmission	**Division: O/H Transmission - 1 circuit**				
Overhead	1,296,174	156,666	1,037	0.08	0.66
O/H Transmission - 1 circuit Division Total	**$1,296,174**	**$156,666**	**$1,037**	**0.08%**	**0.66%**
Company: Transmission	**Division: O/H Transmission - 2 circuits**				
Overhead	106,000	3,926	32	0.03	0.80
O/H Transmission - 2 circuits Division Total	**$106,000**	**$3,926**	**$32**	**0.03%**	**0.80%**
Company: Transmission	**Division: O/H Transmission - Unk # of circuits**				
Overhead	6,351	48	1	0.01	1.88

Hurricane - Scenario Event Damage by Branch Within a Division Within a Company for Portfolio FPL T&D Assets and Erin (08/01/1995)

Branch	Total TIV $(Thousands)	Affected TIV $(Thousands)	Mean Damage $(Thousands)	Mean Damage % Total TIV	Mean Damage % Affected TIV
O/H Transmission - Unk # of circuits Division Total	$6,351	$48	$1	0.01%	1.59%
Company: Transmission	Division: U/G Transmission				
Underground	201,300	1,993	4	0.00	0.18
U/G Transmission Division Total	$201,300	$1,993	$4	0.00%	0.18%
Transmission Company Total	$1,609,825	$162,633	$1,073	0.07%	0.66%
Total for All Companies	$4,340,083	$1,985,240	$5,368	0.12%	0.27%

Factors Used in Analysis:

Hurricane Event Type: Historical
Demand Surge Factor: Demand Surge Included
Event No: 924
Milepost No: 1,608
Milepost Description: Indian River FL
SSI: 2
Global Limits/Deductibles: None Applied

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July 8, 1997 9:34 AM

Hurricane - Scenario Event Damage by Branch Within a Division Within a Company for Portfolio FPL T&D Assets and Gordon (11/08/1994)

Branch	Total TIV $(Thousands)	Affected TIV $(Thousands)	Mean Damage $(Thousands)	Mean Damage % Total TIV	Mean Damage % Affected TIV
Company: Distribution	**Division: U/G and O/H Distribution - East**				
Overhead	779,292	675,169	1,468	0.19	0.22
Underground	697,073	421,645	284	0.04	0.07
U/G and O/H Distribution - East Division Total	[illegible]	**$1,096,814**	**$1,752**	**0.12%**	**0.16%**
Company: Distribution	**Division: U/G and O/H Distribution - North**				
Overhead	896,907	139,061	279	0.03	0.20
Underground	356,986	54,831	35	0.01	0.06
U/G and O/H Distribution - North Division Total	**$1,253,893**	**$193,892**	**$314**	**0.03%**	**0.16%**
Company: Distribution	**Division: U/G and O/H Distribution - West**				
Overhead	693,957	234,868	518	0.07	0.22
Underground	494,947	166,028	164	0.03	0.10
U/G and O/H Distribution - West Division Total	**$1,188,904**	**$400,896**	**$682**	**0.06%**	**0.17%**
Distribution Company Total	**$3,919,162**	**$1,691,602**	**$2,749**	**0.07%**	**0.16%**
Company: Transmission	**Division: O/H Transmission - 1 circuit**				
Overhead	1,296,174	28,766	74	0.01	0.26
O/H Transmission - 1 circuit Division Total	**$1,296,174**	**$28,766**	**$74**	**0.01%**	**0.26%**
Company: Transmission	**Division: O/H Transmission - 2 circuits**				

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User ID = 7, Window ID = 3
July 8, 1997 9:35 AM

Hurricane - Scenario Event Damage by Branch Within a Division Within a Company for Portfolio FPL T&D Assets and Gordon (11/08/1994)

Branch	Total TIV $(Thousands)	Affected TIV $(Thousands)	Mean Damage $(Thousands)	Mean Damage % Total TIV	Mean Damage % Affected TIV
Overhead	106,000	105	0	0.00	0.29
O/H Transmission - 2 circuits Division Total	$106,000	$105	$0	0.00%	0.29%
Company: Transmission	Division: U/G Transmission				
Underground	201,300	3,600	2	0.00	0.06
U/G Transmission Division Total	$201,300	$3,600	$2	0.00%	0.06%
Transmission Company Total	$1,603,474	$32,471	$77	0.00%	0.24%
Total for All Companies	$5,522,636	$1,724,073	$2,826	0.05%	0.16%

Factors Used in Analysis:

Hurricane Event Type:	Historical
Demand Surge Factor:	Demand Surge Included
Event No:	4,919
Milepost No:	1,303
Milepost Description:	Lee FL
SSI:	1
Global Limits/Deductibles:	None Applied

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User ID = 7, Window ID = 3
July 8, 1997 9:35 AM

APPENDIX C

Mean Loss by Event for the Landfall Series for Portfolio FPL T&D Assets

Milepost No.	Approximate Landfall	Affected TIV $(Thousands)	Mean Damage $(Thousands)
1,210	Pinellas FL	2,021,948	3,416
1,220	Pinellas/Hillsborough FL	2,053,308	3,428
1,230	Manatee FL	2,336,155	6,536
1,240	Sarasota FL	2,346,545	6,691
1,250	Sarasota FL	2,392,949	7,195
1,260	Sarasota FL	2,528,511	6,580
1,270	Charlotte FL	3,215,358	7,229
1,280	Charlotte FL	4,746,091	9,139
1,290	Lee FL	5,901,084	11,492
1,300	Lee FL	5,818,091	[illegible]
1,310	Lee FL	5,729,822	14,215
1,320	Collier FL	5,680,483	16,083
1,330	Collier FL	370,190	3,206
1,340	Collier FL	5,261,561	21,072
1,350	Collier FL	5,220,683	32,393
1,360	Monroe FL	5,164,086	50,759
1,370	Monroe FL	5,087,651	60,402
1,380	Monroe FL	4,826,293	51,328
1,390	Monroe FL	4,489,909	38,527
1,400	Monroe/Dade FL	4,195,326	26,645
1,410	Monroe/Dade FL	3,785,007	16,319
1,420	Monroe/Dade FL	3,493,793	13,355
1,430	Monroe/Dade FL	5,632,906	37,601
1,440	Monroe/Dade FL	5,895,651	65,867
1,450	Monroe/Dade FL	6,281,658	137,792
1,460	Dade FL	6,431,702	220,854
1,470	Dade FL	6,512,463	277,712
1,480	Dade FL	6,642,687	339,108
1,490	Dade FL	6,753,578	324,579
1,500	Dade FL	6,864,031	278,196
1,510	Broward FL	6,945,757	249,908
1,520	Broward FL	6,956,964	214,628
1,530	Palm Beach FL	6,894,466	165,112

Note: TIV represents the total replacement value of assets as described in Chapter 2.

User ID = 11, Window ID = 3
July 8, 1997 2:35 PM

Mean Loss by Event for the Landfall Series for Portfolio FPL T&D Assets

Milepost No.	Approximate Landfall	Affected TIV $(Thousands)	Mean Damage $(Thousands)
1,540	Palm Beach FL	6,896,551	134,434
1,550	Palm Beach FL	6,887,227	96,289
1,560	[illegible]lm Beach FL	6,785,981	74,140
1,570	Martin FL	6,525,027	62,031
1,580	St.Lucie FL	6,094,861	52,328
1,590	St.Lucie FL	5,201,859	37,766
1,600	Indian River FL	4,[illegible]8,949	25,535
1,610	Indian River FL	3,121,494	[illegible]
1,620	Brevard FL	2,674,051	12,634
1,630	Brevard FL	2,086,049	7,126
1,650	Brevard FL	1,401,169	3,417

Factors Used in Analysis:

Hurricane Event Type: Landfall
Demand Surge Factor: Demand Surge Included
Return Period: 50 Years
Global Limits/Deductibles: None Applied

EQE

User IL = 11, Window ID = 3
July 8, 1997 2:35 PM

Mean Loss by Event for the Landfall Series for Portfolio FPL T&D Assets

Milepost No.	Approximate Landfall	Affected TIV $(Thousands)	Mean Damage $(Thousands)
1,210	Pinellas FL	2,890,298	22,588
1,220	Pinellas/Hillsborough FL	3,422,806	31,552
1,230	Manatee FL	4,580,546	37,428
1,240	Sarasota FL	6,537,079	48,447
1,250	Sarasota FL	6,661,145	52,184
1,260	Sarasota FL	6,611,356	52,768
1,270	Charlotte FL	6,589,421	54,469
1,280	Charlotte FL	6,589,729	66,301
1,290	Lee FL	6,555,464	75,221
1,300	Lee FL	6,506,216	74,542
1,310	Lee FL	6,459,571	67,[illegible]
1,320	Collier FL	6,299,623	56,963
1,330	Collier FL	6,105,147	54,702
1,340	Collier FL	5,953,863	61,212
1,350	Collier FL	5,816,290	82,873
1,360	Monroe FL	5,610,026	114,749
1,370	Monroe FL	5,281,954	128,220
1,380	Monroe FL	5,113,368	101,333
1,390	Monroe FL	4,842,954	71,398
1,400	Monroe/Dade FL	4,508,465	48,688
1,410	Monroe/Dade FL	4,077,863	29,331
1,420	Monroe/Dade FL	3,819,506	24,422
1,430	Monroe/Dade FL	5,965,612	67,460
1,440	Monroe/Dade FL	6,167,576	102,915
1,450	Monroe/Dade FL	6,418,067	212,557
1,460	Dade FL	6,517,985	324,796
1,470	Dade FL	6,606,720	440,729
1,480	Dade FL	6,746,498	559,322
1,490	Dade FL	6,856,598	521,632
1,500	Dade FL	6,978,875	461,121
1,510	Broward FL	7,093,606	423,558
1,520	Broward FL	7,106,025	391,669
1,530	Palm Beach FL	7,138,454	381,332

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User ID = 9, Window ID = 1
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Mean Loss by Event for the Landfall Series
for Portfolio FPL T&D Assets

Milepost No.	Approximate Landfall	Affected TIV $(Thousands)	Mean Damage $(Thousands)
1,540	Palm Beach FL	7,124,744	311,512
1,550	Palm Beach FL	7,145,809	242,452
1,560	[illegible]a Beach FL	7,177,500	201,580
1,570	Martin FL	7,193,610	171,992
1,580	St.Lucie FL	7,186,212	145,669
1,590	St.Lucie FL	7,137,508	126,320
1,600	Indian River FL	6,7[illegible]3,806	98,262
1,610	Indian River FL	5,756,908	71,[illegible]22
1,620	Brevard FL	4,753,113	[illegible]4,290
1,630	Brevard FL	3,681,369	34,932
1,640	Brevard FL	2,789,618	18,245
1,650	Brevard FL	2,120,938	10,101
1,660	Brevard FL	1,508,993	4,971
1,670	Brevard FL	1,301,116	3,659

Factors Used in Analysis:

Hurricane Event Type: Landfall
Demand Surge Factor: Demand Surge Included
Return Period: 100 Years
Global Limits/Deductibles: None Applied

EQE

User ID = 9, Window ID = 1
July 8, 1997 2:45 PM

Mean Loss by Event for the Landfall Series for Portfolio FPL T&D Assets

Milepost No.	Approximate Landfall	Affected TIV $(Thousands)	Mean Damage $(Thousands)
1,210	Pinellas FL	5,999,729	75,588
1,220	Pinellas/Hillsborough FL	6,812,901	106,063
1,230	Manatee FL	6,833,803	129,794
1,240	Sarasota FL	6,875,974	150,989
1,250	Sarasota FL	6,826,420	149,865
1,260	Sarasota FL	6,864,981	145,443
1,270	Charlotte FL	6,849,986	142,327
1,280	Charlotte FL	6,812,044	153,063
1,290	Lee FL	6,743,476	169,542
1,300	Lee FL	6,694,322	183,781
1,310	Lee FL	6,632,577	157,878
1,320	Collier FL	6,559,575	129,843
1,330	Collier FL	6,438,833	106,465
1,340	Collier FL	6,261,299	118,265
1,350	Collier FL	6,091,779	152,319
1,360	Monroe FL	5,887,166	208,675
1,370	Monroe FL	5,600,824	233,397
1,380	Monroe FL	5,239,570	192,172
1,390	Monroe FL	5,057,263	138,826
1,400	Monroe/Dade FL	4,849,329	90,242
1,410	Monroe/Dade FL	4,293,815	52,827
1,420	Monroe/Dade FL	4,098,875	45,026
1,430	Monroe/Dade FL	6,163,928	97,564
1,440	Monroe/Dade FL	6,360,188	170,104
1,450	Monroe/Dade FL	6,528,238	329,860
1,460	Dade FL	6,620,881	503,451
1,470	Dade FL	6,702,233	665,502
1,480	Dade FL	5,877,598	868,543
1,490	Dade FL	6,979,071	878,527
1,500	Dade FL	7,112,595	797,256
1,510	Broward FL	7,168,747	746,299
1,520	Broward FL	7,225,498	694,151
1,530	Palm Beach FL	7,257,410	594,519

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User ID = 11, Window ID = 3
July 8, 1997 2:51 PM

Mean Loss by Event for the Landfall Series
for Portfolio FPL T&D Assets

Milepost No.	Approximate Landfall	Affected TIV $(Thousands)	Mean Damage $(Thousands)
1,540	Palm Beach FL	7,309,700	319,361
1,550	Palm Beach FL	7,298,517	414,770
1,560	Palm Beach FL	7,317,904	347,777
1,570	Martin FL	7,352,035	319,646
1,580	St.Lucie FL	7,422,247	291,931
1,590	St.Lucie FL	7,438,119	273,712
1,600	Indian River FL	7,423,372	232,823
1,610	Indian River FL	7,441,324	220,[illegible]
1,620	Brevard FL	7,377,689	[illegible]91,243
1,630	Brevard FL	6,899,336	147,624
1,640	Brevard FL	5,451,010	98,450
1,650	Brevard FL	3,773,456	54,837
1,660	Brevard FL	2,792,372	32,907
1,670	Brevard FL	2,179,987	19,220
1,680	Volusia FL	1,910,104	13,121
1,690	Volusia FL	1,650,238	10,938
1,700	Volusia FL	1,509,833	8,769
1,710	Volusia FL	1,460,364	8,036
1,720	Volusia FL	1,430,124	8,004
1,730	Flagler FL	1,291,378	6,831
1,740	St.Johns FL	1,206,586	6,060
1,750	St.Johns FL	1,122,035	5,127
1,760	St.Johns FL	1,019,000	4,432
1,770	St.Johns FL	936,972	3,718
1,780	Duval FL	821,293	2,841
1,790	Duval FL	769,817	2,433
1,800	Nassau FL	697,952	1,914

Factors Used in Analysis:

Hurricane Event Type: Landfall
Demand Surge Factor: Demand Surge Included

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User ID = 11, Window ID = 3
July 8, 1997 2:51 PM

Mean Loss by Event for the Landfall Series for Portfolio FPL T&D Assets

Milepost No.	Approximate Landfall	Affected TIV $(Thousands)	Mean Damage $(Thousands)

Return Period: 250 Years
Global Limits/Deductibles: None Applied

Mean Loss by Event for the Landfall Series
for Portfolio FPL T&D Assets

Milepost No.	Approximate Landfall	Affected TIV $(Thousands)	Mean Damage $(Thousands)
1,210	Pinellas FL	6,921,840	117,302
1,220	Pinellas/Hillsborough FL	6,955,926	165,099
1,230	Manatee FL	6,946,136	199,940
1,240	Sarasota FL	6,965,051	229,275
1,250	Sarasota FL	6,946,542	230,455
1,260	Sarasota FL	6,946,592	222,916
1,270	Charlotte FL	6,937,743	214,106
1,280	Charlotte FL	6,924,949	228,382
1,290	Lee FL	6,833,767	235,207
1,300	Lee FL	6,773,621	221,196
1,310	Lee FL	6,674,377	20[illegible],[illegible]62
1,320	Collier FL	6,617,081	[illegible]59,308
1,330	Collier FL	6,517,365	129,994
1,340	Collier FL	6,403,557	142,701
1,350	Collier FL	6,246,380	182,580
1,360	Monroe FL	5,975,481	234,677
1,370	Monroe FL	5,735,781	263,614
1,380	Monroe FL	5,341,032	222,816
1,390	Monroe FL	5,087,678	153,821
1,400	Monroe/Dade FL	4,942,853	108,198
1,410	Monroe/Dade FL	4,359,691	59,492
1,420	Monroe/Dade FL	4,188,030	50,565
1,430	Monroe/Dade FL	6,263,872	122,686
1,440	Monroe/Dade FL	6,414,700	202,980
1,450	Monroe/Dade FL	6,555,891	392,879
1,460	Dade FL	6,648,949	613,275
1,470	Dade FL	6,741,434	833,604
1,480	Dade FL	6,926,743	1,126,220
1,490	Dade FL	7,000,886	1,136,500
1,500	Dade FL	7,135,030	1,048,368
1,510	Broward FL	7,198,531	1,030,156
1,520	Broward FL	7,269,229	923,038

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User ID = 7, Window ID = 3
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Mean Loss by Event for the Landfall Series
for Portfolio FPL T&D Assets

Milepost No.	Approximate Landfall	Affected TIV $(Thousands)	Mean Damage $(Thousands)
1,530	Palm Beach FL	7,325,863	834,536
1,540	Palm Beach FL	7,408,817	702,239
1,550	Palm Beach FL	7,413,878	573,792
1,560	Palm Beach FL	7,433,454	511,547
1,570	Mart[illegible]	7,492,082	470,341
1,580	St.Lucie FL	7,527,732	430,044
1,590	St.Lucie FL	7,524,258	402,944
1,600	Indian River FL	7,527,004	347,108
1,610	Indian River FL	7,507,657	305,391
1,620	Brevard FL	7,508,099	304,020
1,630	Brevard FL	7,438,756	261,614
1,640	Brevard FL	7,177,220	213,666
1,650	Brevard FL	5,738,640	131,774
1,660	Brevard FL	3,776,729	78,989
1,670	Brevard FL	2,940,204	51,533
1,680	Volusia FL	2,488,072	42,759
1,690	Volusia FL	2,114,784	29,795
1,700	Volusia FL	1,972,693	24,942
1,710	Volusia FL	1,784,632	22,812
1,720	Volusia FL	1,689,423	20,122
1,730	Flagler FL	1,584,725	18,306
1,740	St.Johns FL	1,508,111	14,671
1,750	St.Johns FL	1,426,477	12,119
1,760	St.Johns FL	1,281,082	9,391
1,770	St.Johns FL	1,176,324	7,107
1,780	Duval FL	1,105,123	5,319
1,790	Duval FL	998,982	4,[illegible]89
1,800	Nassau FL	894,191	3,265

Factors Used in Analysis:

Hurricane Event Type: Landfall

EQE

User ID = 7, Window ID = 3
July 8, 1997 2:28 PM

Mean Loss by Event for the Landfall Series for Portfolio FPL T&D Assets

Milepost No.	Approximate Landfall	Affected TIV $(Thousands)	Mean Damage $(Thousands)

Demand Surge Factor:	Demand Surge Included
Return Period:	500 Years
Global Limits/Deductibles:	None Applied

EQE

User ID = 7, Window ID = 3
July o, 1997 2:28 PM

APPENDIX D

Hurricane - Annual Aggregate Damage and Loss Distribution for Portfolio FPL T&D Assets

Annual Probability of Non Exceedance (%)	Damage $(Thousands)
50.00	1,430
70.00	8,343
80.00	19,284
85.00	32,968
90.00	66,429
91.00	78,661
92.00	95,030
93.00	116,602
94.00	143,706
95.00	186,450
96.00	269,098
97.00	357,926
98.00	559,058
99.00	1,020,938
99.10	1,053,475
99.20	1,066,224
99.30	1,108,569
99.40	1,138,024
99.50	1,162,005
99.60	1,168,740
99.70	1,330,193
99.80	2,266,124
99.90	2,335,360

Factors Used in Analysis:

Demand Surge Factor:	Demand Surge Included
Region:	U.S. Mainland
Global Limits/Deductibles:	None Applied

EQE

User ID = 7, Window ID = 2
June 30, 1997 1:05 PM

Hurricane - Per Occurrence Damage and Loss Distribution for Portfolio FPL T&D Assets

Annual Probability of Non Exceedance (%)	Damage $(Thousands)
50.00	1,388
70.00	8,100
80.00	18,123
85.00	30,007
90.00	61,118
91.00	69,170
92.00	82,363
93.00	· 106,699
94.00	134,360
95.00	177,153
96.00	255,338
97.00	344,587
98.00	542,775
99.00	991,202
99.10	1,022,791
99.20	1,035,169
99.30	1,065,652
99.40	1,104,878
99.50	1,128,160
99.60	1,134,699
99.70	1,291,449
99.80	1,805,079
99.90	2,267,340

Factors Used in Analysis:

Demand Surge Factor:	Demand Surge Included
Region:	U.S. Mainland
Global Limits/Deductibles:	None Applied

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User ID = 7, Window ID = 2
June 30, 1997 1:05 PM

APPENDIX E

EQE

Hurricane - Expected Annual Damage by State for Portfolio FPL T&D Assets

State	Total TIV $(Thousands)	Expected Annual Damage $(Thousands)	Expected Annual Damage % Total TIV
Florida	8,225,954	42,326.21	0.5145
Total for All States	**$8,225,954**	**$42,326.21**	**0.5145 %**

Factors Used in Analysis:

Demand Surge Factor: Demand Surge Included
Region: U.S. Mainland
Global Limits/Deductibles: None Applied

Note: TIV represents the total replacement value of assets as described in Chapter 2.

Hurricane - Expected Annual Damage by County Within a State
for Portfolio FPL T&D Assets

County	Total TIV $(Thousands)	Expected Annual Damage $(Thousands)	Expected Annual Damage % Total TIV
State: Florida			
Alachua	6,600	7.60	0.1151
Baker	33,317	23.61	0.0709
Bradford	52,860	44.40	0.0840
Brevard	508,303	2,250.86	0.4428
Broward	1,407,492	8,515.29	0.6050
Charlotte	198,887	933.38	0.4693
Clay	38,921	29.25	0.0752
Collier	211,491	989.69	0.466[illegible]
Columbia	79,145	44.60	0.0[illegible]64
Dade	1,752,384	12,460.65	[illegible].7111
De Soto	67,176	150.89	0.2246
Duval	32,084	44.36	0.1383
Flagler	132,961	142.80	0.1074
Glades	50,703	104.28	0.2057
Hamilton	765	0.62	0.0815
Hardee	926	2.80	0.3023
Hendry	50,373	217.38	0.4315
Highlands	8,689	21.00	0.2417
Hillsborough	48	0.26	0.5387
Indian River	138,476	990.42	0.7152
Lake	358	0.41	0.1157
Lee	269,870	847.08	0.3139
Manatee	226,742	620.94	0.2739
Martin	238,712	1,591.15	0.6666
Nassau	81,114	65.95	0.0813
Okeechobee	31,232	78.83	0.2524
Orange	25,0[illegible]	47.03	0.1877
Osceola	40,213	31.04	0.0772
Palm Beach	1,148,651	7,754.33	0.6751
Putnam	114,926	121.36	0.1056
Saint Johns	122,288	162.75	0.1331

Hurricane - Expected Annual Damage by County Within a State
for Portfolio FPL T&D Assets

County	Total TIV $(Thousands)	Expected Annual Damage $(Thousands)	Expected Annual Damage % Total TIV
Saint Lucie	302,122	1,885.36	0.6240
Sarasota	383,813	1,384.36	0.3607
Seminole	98,646	118.95	0.1206
Suwannee	35,470	23.53	0.0663
Union	13,927	10.80	0.0776
Volusia	321,216	608.48	0.1894
Florida State Total	**$8,225,955**	**$42,326.51**	**0.5145 %**
Total for All States	**$8,225,955**	**$42,326.51**	**0.[illegible]145 %**

Factors Used in Analysis:

Demand Surge Factor: Demand Surge Included
Region: U.S. Mainland
Global Limits/Deductibles: None Applied

EQE

User ID = 7, Window ID = 2
July 7, 1997 2:06 PM

Hurricane - Expected Annual Damage by Division for Portfolio FPL T&D Assets

Division	Total TIV $(Thousands)	Expected Annual Damage $(Thousands)	Expected Annual Damage % Total TIV
O/H Transmission - 1 circuit	1,296,174	6,429.46	0.4960
O/H Transmission - 2 circuits	106,000	584.23	0.5512
O/H Transmission - 3 circuits	106	0.73	0.6868
O/H Transmission - 4 circuits	1,003	3.45	0.3439
O/H Transmission - Unk # of circuits	6,351	84.81	1.3353
U/G and O/H Distribution - East	1,476,365	9,164.83	0.6208
U/G and O/H Distribution - North	1,253,893	2,828.97	0.2256
U/G and O/H Distribution - South	1,309,552	10,363.15	0.7914
U/G and O/H Distribution - Southeast	1,386,306	8,469.35	0.6109
U/G and O/H Distribution - West	1,188,904	4,181.65	0.3517
U/G Transmission	201,300	215.90	0.1073
Total for All Divisions	**$8,225,954**	**$42,326.53**	**0.5145%**

Factors Used in Analysis:

Demand Surge Factor: Demand Surge Included
Region: U.S. Mainland
Global Limits/Deductibles: None Applied

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Hurricane - Expected Annual Damage by Branch for Portfolio FPL T&D Assets

Branch	Total TIV $(Thousands)	Expected Annual Damage $(Thousands)	Expected Annual Damage % Total TIV
Overhead	4,847,025	37,934.96	0.7826
Underground	3,378,929	4,391.52	0.1300
Total for All Branches	$8,225,954	$42,326.49	0.5145%

Factors Used in Analysis:

Demand Surge Factor: Demand Surge Included
Region: U.S. Mainland
Global Limits/Deductibles: None Applied

Hurricane - Expected Annual Damage by Line of Business
for Portfolio FPL T&D Assets

Line of Business	*Total TIV \$(Thousands)	Expected Annual Damage \$(Thousands)	Expected Annual Damage % Total TIV
Distribution System	6,615,020	35,007.77	0.5292
Transmission Lines	1,610,934	7,318.59	0.4543
Total for All Lines of Business	**$8,225,954**	**$41,326.36**	**0.5145%**

Factors Used in Analysis:

Demand Surge Factor:	Demand Surge Included
Region:	U.S. Mainland
Global Limits/Deductibles:	None Applied

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APPENDIX F

Hurricane - Probability of Exceeding a Gross Loss Threshold
for Portfolio FPL T&D Assets

Gross Loss Threshold $(Thousands)	Probability of Exceeding a Gross Loss Threshold with a Time Horizon of :						
	1 year (%)	10 years (%)	25 years (%)	50 years (%)	100 years (%)	250 years (%)	500 Years (%)
24,678	17.2863	85.0108	99.1301	99.9924	99.9990	99.9990	99.9990
61,695	10.5481	67.1982	93.8377	99.6203	99.9986	99.9990	99.9990
123,389	6.6785	45.9024	82.2360	96.8444	99.9004	99.9990	99.9990
246,779	4.2066	34.9339	65.8503	88.3380	98.6400	99.9978	99.9990
616,947	1.7979	16.5920	36.4640	59.6318	83.7011	98.9280	99.9885
1,233,893	0.3040	2.9988	7.3291	14.1211	26.2482	53.2876	78.1706
1,850,840	0.2243	2.2207	5.4597	10.6212	20.1144	42.9610	67.4655
2,467,786	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Factors Used in Analysis:

Demand Surge Factor:	Demand Surge Included
Region:	U.S. Mainland
Global Limits/Deductibles:	None Applied

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EQE INTERNATIONAL

World Headquarters
44 Montgomery Street
Suite 3200
San Francisco, CA
94104-4805 USA
Phone (415) 989-2000
FAX (415) 433-5107
[illegible]
[illegible]

Other U. S. Offices
[illegible]

[illegible]

Prepared by:
EQE International, Inc.

EQE

INTERNATIONAL

FLORIDA POWER & LIGHT

STORM RESERVE SOLVENCY ANALYSIS

Prepared by:
EQE International, Inc.

September 1997

Executive Summary

EQE performed a probabilistic hurricane damage analysis for the Florida Power and Light Company's (FP&L) Transmission and Distribution System assets to determine the potential impact on the solvency of the Storm Reserve. The Storm Reserve analysis also included other FP&L losses not related to the Transmission and Distribution System assets that would be covered by the Storm Fund. An expected annual damage estimate of $42.3 million for the T&D system was developed in a July 1997 study performed by EQE for FP&L. The solvency analysis estimated the expected annual damage for the non-T&D storm related losses at $2 million. Therefore, the total expected annual uninsured damage from hurricanes was estimated to be $44.3 million. In developing these and the other estimates in this report, the model assumed no growth in the asset or customer base and did not make any adjustments for inflation.

The expected annual damage estimate represents the average annual cost to repair hurricane damage and restore FP&L assets over a long period of time. The expected annual damage is also known as the "Pure Premium," which is the insurance premium level needed to pay just the expected losses. Insurance companies add their expense cost and profit margin to the Pure Premium to develop the premium charged to customers.

The Storm Reserve Solvency Analysis consisted of performing 3,000 iterations of hurricane damage simulations within the FP&L service territory, each covering a 30-year period, to determine the effect of the charges for damage on the Storm Reserve. Monte Carlo simulations were used to generate loss samples for the analysis. The analysis provided an estimate of the Storm Reserve assets in each year of the simulation accounting for the annual accrual, investment income, expenses, and losses using a financial model. The financial model was developed specifically for this analysis by EQE, based on discussions with FP&L. During this process, FP&L thoroughly reviewed the model to ensure that it properly reflected how the Reserve Fund operates.

The analysis concentrated on looking at three key performance measures, solvency of the Storm Reserve, Stability of the Storm Reserve (i.e., need for Special Assessments), and overall cost to the customer. All three criteria need to be balanced, since the lowest-cost scenario can jeopardize the solvency of the Storm Reserve and a higher-cost scenario can result in a Storm Reserve that grows quickly.

A total of 24 alternative administrative policies, each one differentiated based on three variables, were evaluated. The first variable was the annual accrual, which was assumed to be either $10 million, $20 million, $40 million, or $60 million.

The next variable was a reduction in the accrual when the Reserve balance grew to specified levels. In Schedule A, the annual accrual was reduced by 50% at a $500 million Reserve balance and suspended at $750 million. In Schedule B, the thresholds were $400 million and $600 million, respectively.

The last variable established minimum thresholds for the Reserve balance. If the Reserve balance fell below the threshold by more than the annual accrual, it was assumed that a Minimum Reserve Assessment would be made to restore the Reserve balance to the minimum threshold. The Assessment thresholds were set at either $0 million, $100 million, or $200 million. The $0 million threshold assumes that Minimum Reserve Assessments would not be made.

The analysis identified two scenarios that provided reasonable alternatives for administering the Storm Reserve based on three key performance measures: solvency of the Storm Reserve, stability of the Storm Reserve (i.e., need for Special Assessments), and overall cost to the Customer. The first scenario, identified as 20A0, requires a $20 million Annual Contribution, which is reduced according to Schedule A described above and has a $0 Assessment Threshold meaning that Minimum Reserve Assessments would not be assumed. However, Special Assessments are assumed to be made over a five-year period to cover losses that exceed the Reserve balance in any year. The second scenario, identified as 40B0, requires a $40 million annual accrual, which is reduced according to Schedule B and also has a $0 Assessment Threshold.

The difference in the level of Special Assessments between these two scenarios was significant. The cost per customer per year for Special Assessments under scenario 20A0 was $5.45 verses $4.12 under scenario 40B0. The reason for this is that the 20A0 scenario relied heavily on Special Assessments to maintain the Reserve balance, whereas this was less of a factor under scenario 40B0.

Of the two alternatives, scenario 40B0 provides a better balance in meeting the solvency, stability, and cost criteria used to assess the performance of the alternatives. The reason 40B0 provides a better balance is that the $40 million annual accrual level is very close to the expected annual damage of $44.3 million. With the accrual at this level, the Reserve balance grows moderately, there is less reliance on Special Assessments providing more stability, and the cost is almost the same as the 20A0 scenario. The cost based on the annual accrual plus Special Assessments under Scenario 20A0 is $10.45 per customer per year verses $11.07 for Scenario 40B0, or a difference of $0.62 per year.

Table of Contents

I. Introduction

The Storm Reserve Solvency Analysis consisted of running 3,000 iterations of hurricane damage simulations, each one covering a 30-year period, through a financial model to determine how the FP&L Storm Reserve would perform. The analysis considered several administrative policies with respect to management of the Storm Reserve. These policies included varying the levels of several funding parameters. The key Storm Reserve parameters investigated are the annual accrual to the Storm Reserve, the Reserve balance level at which the normal accrual is reduced due to growth in the Reserve, and the Reserve balance at which additional assessments are assumed to be levied to maintain a Minimum Reserve balance.

A total of 24 different scenarios were identified and modeled in the analysis. The 24 scenarios consist of four levels of annual accruals, three Assessment Thresholds, and two combinations of Maximum, Minimum/Maximum, and Minimum Reserve Balance thresholds as follows:

- Annual Accrual options
  - ⇒ $10 Million
  - ⇒ $20 Million
  - ⇒ $40 Million
  - ⇒ $60 Million
- Assessment Thresholds
  - ⇒ $0 Million
  - ⇒ $100 Million
  - ⇒ $200 Million
- Reserve Balance thresholds

	Reserve Balance	Accrual Reduction
⇒ Schedule A		
• Maximum:	$750 Million	100%
• Minimum/Maximum:	$500 Million	50%
⇒ Schedule B		
• Maximum:	$600 Million	100%
• Minimum/Maximum:	$400 Million	50%

With respect to the Reserve balance thresholds, whenever the Reserve balance exceeds the indicated threshold the annual accrual is reduced by the indicated percentage.

II. USWIND™ Damage Simulations

The Storm Reserve Solvency Analysis consisted of modeling 3,000 sets of hurricane T&D damage simulations, each covering a 30-year period, within the FP&L service territory to determine the effect of the damage on the Storm Reserve. The analysis provided an estimate of the Storm Reserve assets in each year of the simulation accounting for the annual accrual, investment income, and expenses.

The 3,000 simulations were probabilistically generated using EQE's USWIND™ Catastrophe Model. The USWIND™ probabilistic loss analysis calculated the damage to FP&L Transmission and Distribution assets for a comprehensive set of hypothetically possible storms. The basis for such an analysis was the USWIND™ probabilistic database, which is a finely segmented set of hypothetical storms affecting the Gulf and Atlantic coasts of the United States.

The hypothetical storm database was developed by dividing the coastline into 10-mile segments and modeling more than 1,500 hypothetical storms for each segment. The net result is a stochastic storm database more than 500,000 events. In addition, each stochastic event is assigned an annual frequency of occurrence based on the storm track location and the storm intensity as measured by central pressure.

Based on the annual frequency and the damage estimate for each stochastic event, a probabilistic database of damage can be developed. From this database, various loss-exceedance distributions can be statistically generated. For this analysis, an annual aggregate damage distribution was generated using the results from a July 1997 study performed by EQE for FP&L. In that study, EQE analyzed the potential T&D damage that FP&L would incur due to hurricanes. The analysis developed probabilistic estimates of the expected annual damage to all of FP&L's T&D assets. The expected annual damage calculated in the study was $42.3 million.

The expected annual damage estimate used in the solvency analysis includes the $42.3 million expected annual damage and an additional $1.9 million estimate for other FP&L losses not related to T&D assets. Therefore, the revised expected annual damage estimate is $44.3 million. The $1.9 million estimate for non-T&D losses was based on the assumption that the Storm Reserve would incur $16 million in non-T&D losses whenever the T&D losses were $50 million or greater. Higher T&D loss thresholds produced only moderate changes in the expected annual damage for non-T&D losses. At $100 and $150 million thresholds, the expected annual damage was $1.2 million and $0.9 million, respectively.

The Storm Reserve Solvency Analysis consisted of performing Monte Carlo simulations to generate loss samples consistent with the loss-exceedance distribution. Each damage sample has an equal likelihood of occurrence, and the annual probability of nonexceedance for the samples ranged from 0 to 0.999667. Since the annual aggregate damage distribution was used, the possibility that more than one storm in a given year may affect the Storm Reserve was included in the analysis.

The next step was to use a "Random Walk" technique to generate 3,000 sequences of 30 years' duration each. In each random walk, a sequence of 30 loss samples was selected from the loss distribution, resulting in one hypothetical set of occurrences, or random walk, for the thirty year period. This process is repeated 3,000 times to generate the 3,000 Random Walks of 30 years' duration each for the analysis. The sampling was done in such a manner that each year has a unique and statistically independent set of damage points, yet for each of the 30 years all the 3,000 damage points are equally likely.

III. Financial Analysis

The financial model used in this analysis was developed by EQE, based on discussions with FPL, specifically for the Storm Reserve Solvency Analysis. During this process, FPL thoroughly reviewed the model, made suggestions, and generally helped to ensure that the final product properly reflects how the Reserve operates. The financial model takes into account the Reserve Fund's beginning reserve balance, annual accrual, investment income, losses, and expenses to determine the ending reserve balance for each simulation. A representative example of the financial model covering an 11-year period can be found in Appendix A.

Selected terms utilized in the financial model that describe key parameters are defined as follows:

- Reserve Balance - This is the value of the Storm Reserve.

- Annual Accrual - This is the annual accrual being added to the Reserve through expense accruals. This is an input variable with the analysis looking at four accrual levels ($10 million, $20 million, $40 million, and $60 million).

- Minimum/Maximum Reserve - If the Reserve Balance grows to this level the annual accrual is reduced until losses drop the Reserve Balance below the Minimum/Maximum Reserve threshold. This is an input variable with the analysis looking at two thresholds ($400 million and $500 million).

- Reduction in Accrual - This is the amount of reduction that will be made in the annual accrual if the Reserve Balance exceeds the Minimum/Maximum Reserve threshold. The analysis reduces the accrual by 50% when the Minimum/Maximum Reserve threshold is exceeded.

- Maximum Reserve - If the Reserve Balance grows to this level, the annual accrual is suspended until losses reduce the Reserve Balance below the Maximum Reserve threshold. This is an input variable with the analysis looking at two thresholds ($600 million and $750 million).

- Investment Income - This is the after-tax rate of return on investments. It is calculated as the average of the Beginning Reserve Balance and Ending Reserve Balance for the prior year times the after-tax rate of return. However, for year one the income was calculated as the initial

Reserve balance times the after-tax rate of return. If the average balance is less than zero, the investment income is assumed to be zero. A 3.5% after-tax rate of return was used in the analysis.

- 1st Line of Credit - This is the limit on the Line of Credit that the Storm Reserve can draw on when the Reserve Balance goes below zero due to losses. The Line of Credit limit was assumed to be $300 million in the analysis.

- 1st Line of Credit Interest Rate - This is the interest rate that applies when the Line of Credit is used. The analysis does not include the cost of maintaining the Line of Credit. A 4.0% after-tax interest rate was used in the analysis.

- 2nd Line of Credit - If the 1st Line of Credit is exhausted, FPL will draw on other resources to cover the losses. It is assumed that this is an unlimited Line of Credit in the analysis.

- 2nd Line of Credit Interest Rate - This is the interest rate that applies when the Line of Credit is used. The analysis does not include the cost of maintaining the Line of Credit. A 4.0% after-tax interest rate was used in the analysis.

- Operating Expenses - This is the cost of administering the fund. The analysis assumed that the Operating Expenses would not be deducted from the Reserve.

- Assessment Threshold - When the Reserve falls below this threshold by more than the Annual Accrual, a Minimum Reserve Assessment is made. This assessment is made to maintain the Reserve balance at a minimum level. The threshold is an input variable.

- Deductible Amount - Non-T&D assets of FPL are covered by insurance, and/or they are subject to assessments (nuclear) in the event of a catastrophe. The deductibles and assessments are covered by the Storm Reserve. The Deductible Amount is the total value of all the deductibles and assessments that are covered by the Reserve Fund. A Deductible Amount of $16 million was used in the analysis.

- Deductible Threshold - If T&D damage exceeds this threshold, it is assumed that there will be significant damage to FPL's other non-T&D assets covered by insurance. The Storm Reserve is assumed to incur an additional loss equal to the insurance Deductible Amount. If the

T&D damage does not exceed this threshold, it is assumed that the damage to the other insured non-T&D assets is relatively minor. When this is the case, the Storm Reserve does not incur any additional loss due to deductibles and/or assessments. A Deductible Threshold of $50 million was used in the analysis.

The financial model also provides for two types of Assessments to restore the Reserve Balance when it falls below a specific threshold.

- Special Assessment - A Special Assessment is assumed to be made when the Reserve balance is insufficient to cover the losses. When this occurs, FPL will draw on its Lines of Credit to cover the shortfall. A Special Assessment is then assumed to be made over the next five years to cover the cost of paying back the principal and interest on the Lines of Credit.

- Minimum Reserve Assessment - A Minimum Reserve Assessment is assumed to be made when the Reserve Balance falls below the Assessment Threshold, plus the annual accrual for the next year. When this occurs, an assessment is assumed to be made equal to one fifth of the Assessment Threshold. The intent is to bring the Reserve Balance up to the Assessment Threshold within five years. However, since normal accruals will continue to be made during this period and the fund will also be earning investment income, the Assessment Threshold is usually reached in less than five years. When this happens, the Minimum Reserve Assessment is discontinued.

The financial model starts with a Reserve Balance of $237 million as of June 30, 1997, as the beginning balance. It then uses the damage estimates developed from EQE's USWIND™ Catastrophe Model to determine the potential impact of the various options being considered for each of the 3,000 simulations covering a 30-year period.

In doing this, the financial model first determines the Net Inflow (Outflow) by adding the Annual Accrual, Investment Income, Minimum Reserve Assessment, and Special Assessment together, and then subtracting losses from the total for each year. Once this is done, the Ending Reserve Balance for the year is determined by adding the Net Inflow (Outflow) to the Beginning Reserve Balance.

If the Ending Reserve Balance falls below the Assessment Threshold, a Minimum Reserve Assessment is assumed to be made to bring the Reserve Balance back up to the Assessment Threshold. As indicated above, this assessment is equal to one fifth of the Assessment Threshold and was made for up to five years.

The financial model also determines when the Lines of Credit have to be used. This occurs when the losses for the year cannot not be covered by the Beginning Reserve Balance. Whenever this occurs, the Lines of Credit are used to make up the difference. The Lines of Credit are then paid back whenever a positive Net Inflow (Outflow) exists.

Finally, the financial model also tracks the impact of the Minimum and Special Assessments on FPL's customers. The impact is shown as a rate per customer. In addition, the model monitors the Credit Requirement for each year and which Lines of Credit are being used along with the repayment of principal and outstanding balance for each Line of Credit.

IV. Analysis Results

A total of 24 alternative administrative policies were evaluated in the simulations described earlier. The three key variables are the Annual Accrual, the Reserve balance threshold at which the accrual is reduced, and the Reserve balance level at which Minimum Reserve Assessments are made. With respect to the Reserve balance threshold, two scenarios exist. In Schedule A, the Annual Accrual is reduced by 50% at $500 million and suspended at $750 million. In Schedule B, the thresholds are $400 million and $600 million, respectively. Each scenario analyzed can be identified based on these variables according to the following chart (all dollar amounts are shown in millions)

Number	Scenario ID	Annual Contribution	Reserve Thresholds			Assessment Threshold
			Minimum	Min/Max	Maximum	
1	10A0	$10	$250	$500	$750	$0
2	10A100	$10	$250	$500	$750	$100
3	10A200	$10	$250	$500	$750	$200
4	10B0	$10	$200	$400	$600	$0
5	10B100	$10	$200	$400	$600	$100
6	10B200	$10	$200	$400	$600	$200
7	20A0	$20	$250	$500	$750	$0
8	20A100	$20	$250	$500	$750	$100
9	20A200	$20	$250	$500	$750	$200
10	20B0	$20	$200	$400	$600	$0
11	20B100	$20	$200	$400	$600	$100
12	20B200	$20	$200	$400	$600	$200
13	40A0	$40	$250	$500	$750	$0
14	40A100	$40	$250	$500	$750	$100
15	40A200	$40	$250	$500	$750	$200
16	40B0	$40	$200	$400	$600	$0
17	40B100	$40	$200	$400	$600	$100
18	40B200	$40	$200	$400	$600	$200
19	60A0	$60	$250	$500	$750	$0
20	60A100	$60	$250	$500	$750	$100
21	60A200	$60	$250	$500	$750	$200
22	60B0	$60	$200	$400	$600	$0
23	60B100	$60	$200	$400	$600	$100
24	60B200	$60	$200	$400	$600	$200

Each Scenario ID is made up of the annual accrual ($10 million, $20 million, $40 million, or $60 million), the Reserve Balance Threshold for adjustments in the annual accrual level (Schedule A or B), and the Assessment Threshold ($0 million, $100 million, or $200 million). Therefore, a scenario code of 40A100 means a $40 annual million accrual, adjustments in the annual accrual level at $500 million and $750 million, and an Assessment Threshold of $100 million.

The analysis concentrated on looking at three key performance measures: solvency of the Storm Reserve, Stability of the Storm Reserve (i.e., need for Special Assessments), and Overall Cost to the Customer. All three criteria need to be balanced, since the lowest-cost scenario with small Annual Accruals has the highest Special Assessment requirements and jeopardizes the solvency of the Reserve. Conversely, a Reserve with Annual Accruals minimizes the requirement for Special Assessments, but has the highest potential cost.

The individual analysis results for all the scenarios can be found in the appendices. Appendix B presents a table showing, for each scenario considered, the mean values of the annual accrual, other assessments, investment income, interest expense, and hurricane losses, as well as the annual net inflow or outflow of Reserve assets. Appendix C displays the probability of the Reserve being depleted in each scenario, resulting in the need to borrow against the lines of credit. Appendix D contains a series of charts showing for the different cases the expected value as well as the upper and lower bounds on the Reserve assets in each year. Finally, Appendix E summarizes the findings from the analysis, showing the relative costs and source of funds for the scenarios considered.

Also, to maintain the solvency of the Storm Reserve the inflow of capital needs to be equal to the expected annual damage of $44.3 million, plus expenses. The expected annual damage represents the long-term average annual cost to repair hurricane damage and restore FP&L assets. However, due to the randomness of hurricane events, annual losses over any short-time period may be greater or lesser than the calculated expected annual value. The expected annual damage is also known as the "Pure Premium," which is the insurance premium level needed to pay just the expected losses. Insurance companies add their expense cost and profit margin to the Pure Premium to develop the premium charged to customers.

Grouping the scenarios by level of Accrual and reviewing them based on the above performance criteria reveals the following:

<u>$10 Million Annual Accrual</u>

Under almost all the scenarios with a $10 million annual accrual, a decline in the Reserve balance is expected, potentially jeopardizing the solvency of the Reserve Fund. These scenarios also require the highest levels of Special Assessments. However, even with these assessments the balance continues to decline. This is due to the annual accrual, plus assessments being lower than the expected annual damage. Since the accruals are lower than what is required to maintain the Reserve balance, the overall cost to the customer is naturally low.

The $10 million accrual scenarios are pay-as-you-go approaches with either large Special Assessments occurring at regular intervals or Special Assessments becoming the norm instead of the exception.

$20 Million Annual Accrual

Only one scenario results in a declining Reserve balance. However, all the scenarios require Special Assessments equal to 109% to 147% of the Annual Accrual. Therefore while the Reserve balance would be maintained, substantial fluctuation would exist from year to year in the accrual due to the need for Special Assessments. The combination of the Annual Accruals and Special Assessments maintains the Reserve balance, with Net Inflows equal to or slightly higher than Net Outflows.

$40 Million Annual Accrual

All scenarios at this accrual level maintain the Reserve balance and produce some positive growth. In addition, while Special Assessments are still needed, the expected frequency of these assessments is much lower than the $10 million and $20 million annual accrual levels. The reason for this stability is that the annual accrual level is the closest to the expected annual damage level of $44.3 million. This is also the lowest accrual level at which the Special Assessments are substantially less than the Annual Accrual. Since the Reserve balance shows some positive growth under these scenarios, the inflow of capital is somewhat higher than the outflow.

$60 Million Annual Accrual

All scenarios maintain the Reserve balance and produce positive growth. The need for Special Assessments is very low resulting in reduced reliance on Special Assessments. However, the overall inflow of capital is greater than the outflow, resulting in the highest overall cost to the customer.

Based on the above, the two most viable scenario groups are the $20 million and $40 million Annual Accrual levels. Within these two groups, the following two scenarios have the lowest cost in their groups and come closest to meeting the performance criteria:

- Scenario 20A0
  - ⇒ $20 Million Annual Accrual
  - ⇒ Accrual reduced 50% at $500 million Reserve Balance
  - ⇒ Accrual reduced to $0 at $750 million Reserve Balance
  - ⇒ Assessment Threshold for Minimum Reserve Assessments at $0

- Scenario 40B0
  - ⇒ $40 Million Annual Accrual
  - ⇒ Accrual reduced 50% at $400 million Reserve Balance
  - ⇒ Accrual reduced to $0 at $600 million Reserve Balance
  - ⇒ Assessment Threshold for Minimum Reserve Assessments at $0

Comparing these two scenarios, 40B0 performs better at ensuring the solvency of the Reserve fund than 20A0. Under 40B0 the Reserve balance grows moderately over the years, while 20A0 initially causes a drop in the Reserve balance and then grows slightly thereafter. In addition, the upper bound for the Reserve balance under both of the scenarios is very close. However, this is not the case with the lower bound, where 20A0 can result in a balance that is almost twice as low as 40B0. Due to the potentially low level of the Reserve balance under 20A0, it is less stable than 40B0.

This difference in stability is clearly seen in the area of Special Assessments. The 20A0 scenario relies heavy on Special Assessments to keep it solvent, which has the potential of causing the cost to fluctuate substantially from year to year. The cost per customer per year for Special Assessments under scenario 20A0 would be $5.45. While 40B0 also requires Special Assessments, they are substantially less than 20A0 at a cost per year per customer of $4.12. The one advantage 20A0 has over 40B0 is that its inflows more closely match its outflows.

Both scenarios provide reasonable alternatives for administering the Reserve Fund. However, between the two scenarios, 40B0 provides a better balance in meeting the solvency, stability, and cost criteria used to assess the performance of the scenarios. Finally, the difference in the cost per customer based on the Annual Accrual plus Total Assessments is small. Scenario 40B0 cost $11.07 per customer per year verses $10.45 for scenario 20A0, or a difference of $0.62 per year.

Appendix A

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FLORIDA POWER AND LIGHT - STORM RESERVE SOLVENCY ANALYSIS
Financial Model
Summary of Assumptions

Starting Reserve Balance	$237,000,000	
Annual Accrual	$20,000,000	(Variable)
Minimum Reserve Balance	$250,000,000	(Variable)
Min/Max Reserve Balance	$500,000,000	(Variable)
Reduction in Annual Accrual	50%	When reserve exceeds Min/Max the accrual is reduced by this factor
Maximum Reserve Balance	$750,000,000	(Variable - When the reserve reaches the Maximum the annual accrual is suspended)
Number of Customers	3,550,000	
Investment Income	.3.5%	(After Tax Rate)
1st Line of Credit	$300,000,000	
1st LOC Interest Rate	4.0%	(After Tax Rate)
2nd Line of Credit	Unlimited	
2nd LOC Interest Rate	4.0%	(After Tax Rate)
Operating Expense Rate	$0	
Special Assessment		Equal to one fifth of total Credit Line Draw Plus Interest
Credit Line Principal		Equal to one fifth of total Credit Line Draw
Assessment Threshold	$100,000,000	When the reserve falls below this threshold by more than the Annual Accrual, a Minimum Reserve Assessment is made equal to 1/5th of the threshold amount until the Reserve exceeds the Assessment Threshold
Deductible Amount	$16,000,000	Total Deductible amount for non-T&D property covered by insurance
Deductible Threshold	$50,000,000	If T&D damage exceeds this threshold, it is assumed that there will be significant damage to FPL's other non-T&D assets covered by insurance. The Storm Reserve is assumed to incur an additional loss equal to the insurance Deductible Amount. If the T&D damage does not exceed this threshold, it is assumed that the damage to the other insured non-T&D assets is relatively minor. When this is the case, the Storm Reserve does not incur any additional loss due to deductibles and/or assessments. A Deductible Threshold of $50 million was used in the analysis.

EQE

200439.01/FPLtable

FLORIDA POWER AND LIGHT - STORM RESERVE SOLVENCY ANALYSIS

Financial Model

(Dollars in thousands)

	1st Year	2nd Year	3rd Year	4th Year	5th Year	6th Year
Beginning Reserve Balance	237,000,000	149,295,000	176,055,163	85,748,790	110,330,360	-82,238,255
Annual Accrual	20,000,000	20,000,000	20,000,000	20,000,000	20,000,000	20,000,000
Investment Inc.	8,295,000	6,760,163	5,693,628	4,581,569	3,431,385	491,612
Min. Reserve Assessment	0	0	0	0	0	20,000,000
Special Assessment						
1st Year	0	0	0	0	0	
2nd Year		0	0	0	0	0
3rd Year			0	0	0	0
4th Year				0	0	0
5th Year					0	0
6th Year						18,472,942
7th Year						
8th Year						
9th Year						
10th Year						
11th Year						
Special Assessment Total	0	0	0	0	0	18,472,942
Total	28,295,000	26,760,163	25,693,628	24,581,569	23,431,385	58,964,554
EXPENSES:						
Loss (T&D)	100,000,000	0	100,000,000	0	200,000,000	300,000,000
Loss (Other)	16,000,000	0	16,000,000	0	16,000,000	16,000,000
Operating Exp.	0	0	0	0	0	0
Interest 1st LOC	0	0	0	0	0	3,289,530
Interest 2nd LOC	0	0	0	0	0	0
Total Expenses	16,000,000	0	116,000,000	0	216,000,000	319,289,530
Net Inflow (Outflow)	-87,705,000	26,760,163	-90,306,372	24,581,569	-192,568,615	-260,324,976
Ending Reserve Balance	149,295,000	176,055,163	85,748,790	110,330,360	-82,238,255	-342,563,232
Credit Requirement	0	0	0	0	82,238,255	260,324,976
1st Credit Line Draw - Effective	0	0	0	0	82,238,255	217,761,745
2nd Credit Line Draw - Effective	0	0	0	0	0	42,563,232
Repayment of Principal						
Principal 1st LOC	0	0	0	0	0	0
Principal 2nd LOC	0	0	0	0	0	0
1st Credit Line Balance	0	0	0	0	82,238,255	300,000,000
2nd Credit Line Balance	0	0	0	0	0	42,563,232
Assess. Impact/Customer	0.0000	0.0000	0.0000	0.0000	0.0000	10.8374

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Appendix B

Appendix B

The table in this section shows the expected annual Net Inflow (Outflow) for the Storm Reserve based on the Annual Accrual, Assessments, Investment Income, Interest Expense on Borrowings and Hurricane damage. The first scenario (10A0) shows that there is an expected annual Net Outflow of $7.8 million dollars a year which would reduce the Reserve balance each year. Conversely, the last scenario (60B200) produces an expected annual Net Inflow of $12.9 million dollars which would add value to the Reserve balance each year. It can be noted from the table that the expected annual accrual amount is different from (and less than) the 'nominal' accrual amount. For example, the first scenario, 10A0, represents one of the cases with a $10 million annual accrual amount. However, the average amount of the annual accrual for this scenario is only about $9.7 million. This is because there is some likelihood that the accrual amount will be reduced by 50% to 100% at some time over the thirty year period because of the Reserve balance exceeding certain thresholds.

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ANNUAL NET INFLOW (OUTFLOW)
($ Thousands)

SCENARIO	ACCRUAL	TOTAL ASSESSMENTS	INVESTMENT INCOME	INTEREST EXPENSE	HURRICANE DAMAGE	NET INFLOW (OUTFLOW)
10A0	9,715.6	24,069.9	6,275.1	3,567.8	44,290.9	(7,798.1)
10A100	9,715.3	26,318.9	7,228.1	2,459.2	44,290.9	(3,487.8)
10A200	9,667.3	28,184.9	8,962.3	1,888.4	44,290.9	635.2
10B0	9,373.1	24,162.2	6,144.5	3,580.3	44,290.9	[illegible]
10B100	9,368.7	26,428.0	7,099.0	2,469.5	44,290.9	(3,864.7)
10B200	9,211.9	28,334.5	8,817.4	1,898.7	44,290.9	174.3
20A0	17,761.8	19,342.1	9,699.1	2,492.8	44,290.9	19.3
20A100	17,680.8	20,924.8	10,597.5	1,904.3	44,290.9	3,007.9
20A200	17,315.8	22,606.4	12,005.2	1,541.1	44,290.9	6,095.3
20B0	16,598.6	19,713.8	9,116.0	2,537.8	44,290.9	(1,400.3)
20B100	16,415.0	21,356.9	10,006.1	1,944.0	44,290.9	1,543.1
20B200	15,744.2	23,160.4	11,348.7	1,580.1	44,290.9	4,382.4
40A0	27,403.6	13,702.0	15,690.3	1,492.3	44,290.9	11,012.6
40A100	26,871.6	14,791.1	16,308.1	1,266.7	44,290.9	12,413.3
40A200	25,905.8	16,198.3	17,131.6	1,097.8	44,290.9	13,847.0
40B0	24,683.3	14,610.8	13,882.8	1,593.5	44,290.9	7,292.6
40B100	23,928.2	15,837.1	14,450.9	1,360.5	44,290.9	8,564.7
40B200	22,680.9	17,455.6	15,187.2	1,186.9	44,290.9	9,845.8
60A0	31,561.6	10,869.3	19,702.3	1,066.1	44,290.9	16,775.6
60A100	30,873.0	11,744.5	20,073.4	949.5	44,290.9	17,450.5
60A200	29,856.3	12,921.0	20,559.4	855.0	44,290.9	18,190.8
60B0	28,024.7	12,136.4	16,877.0	1,194.0	44,290.9	11,553.1
60B100	27,146.7	13,169.9	17,199.0	1,069.9	44,290.9	12,154.8
60B200	25,941.3	14,532.5	17,637.1	967.9	44,290.9	12,852.1

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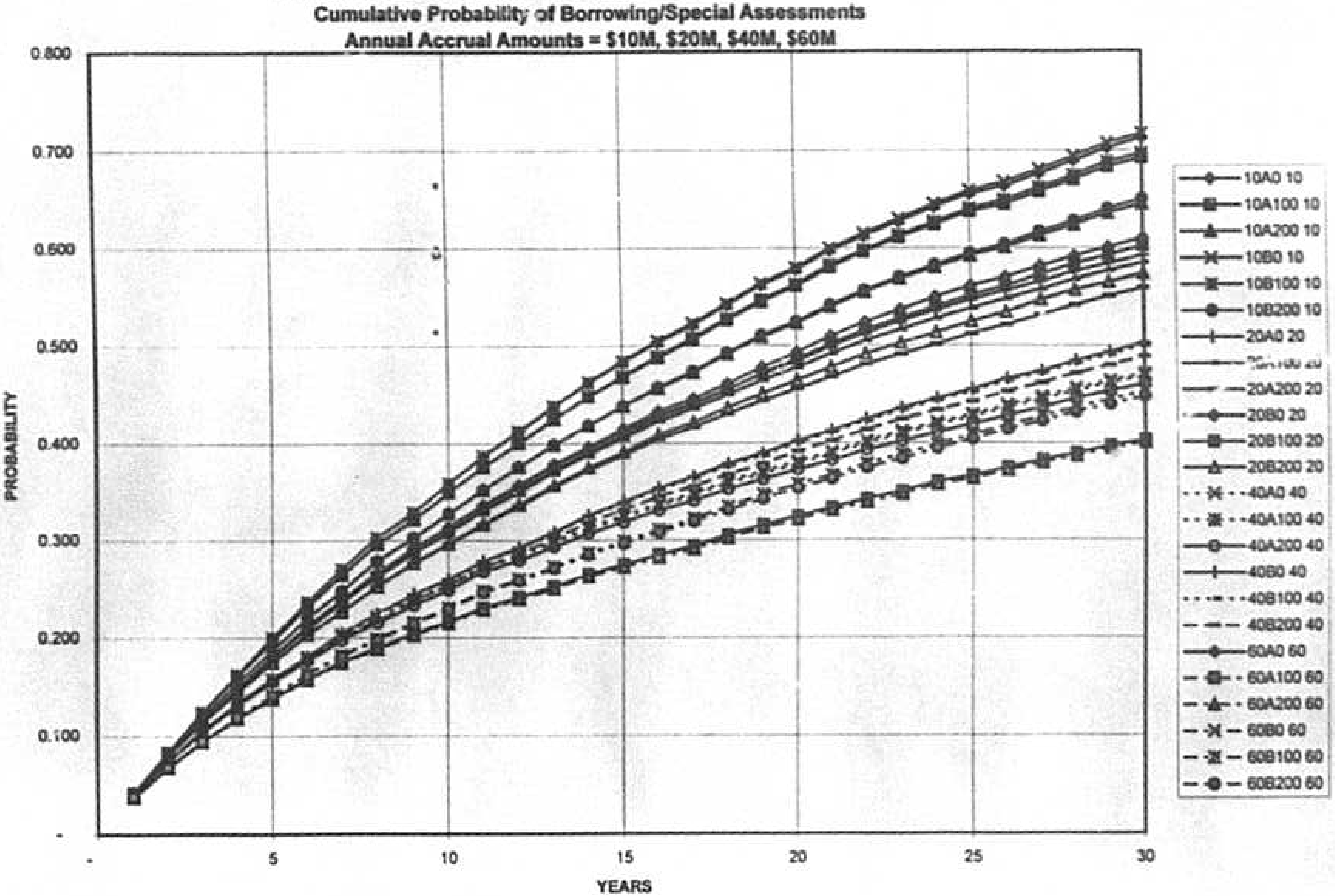
Appendix C

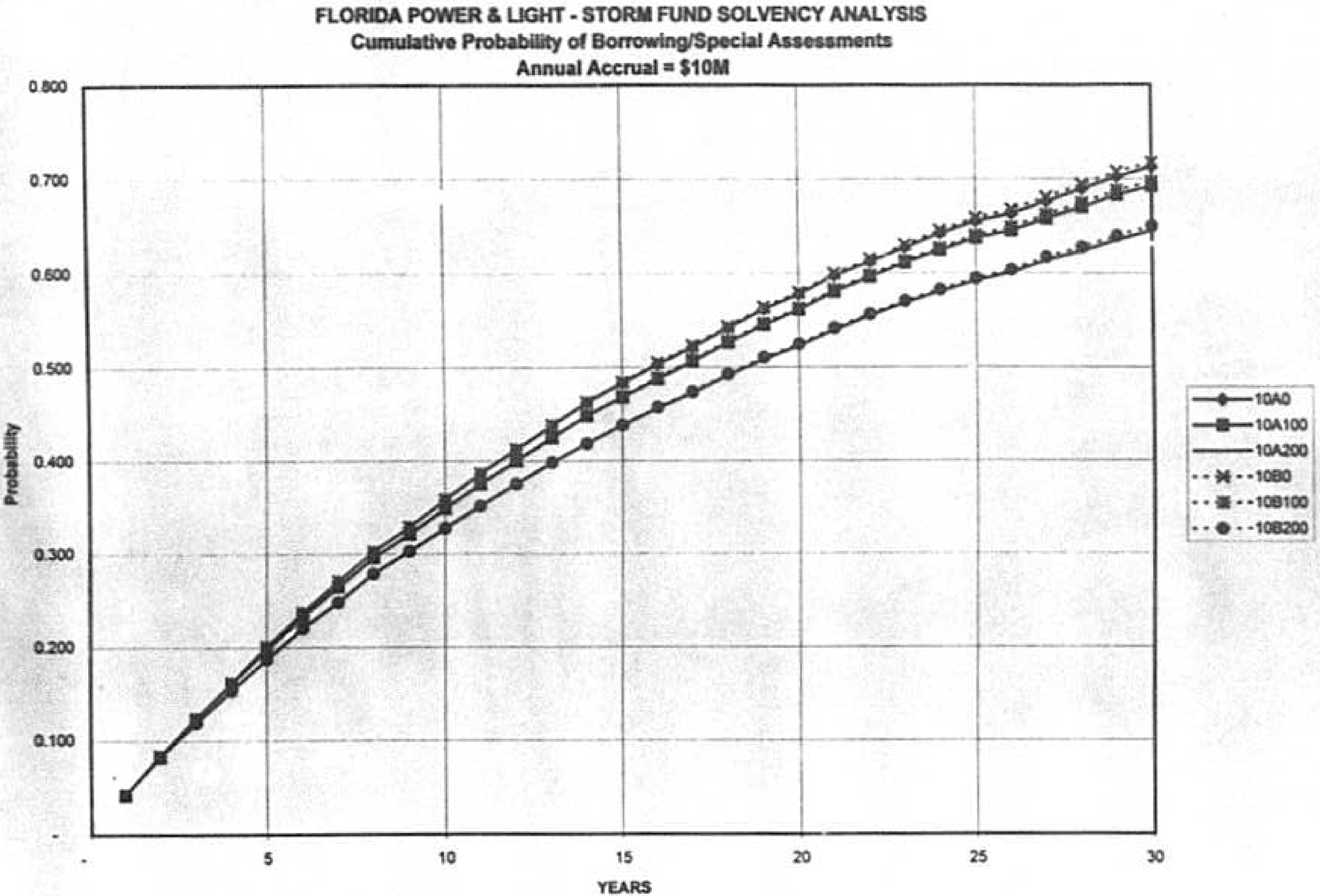
Appendix C

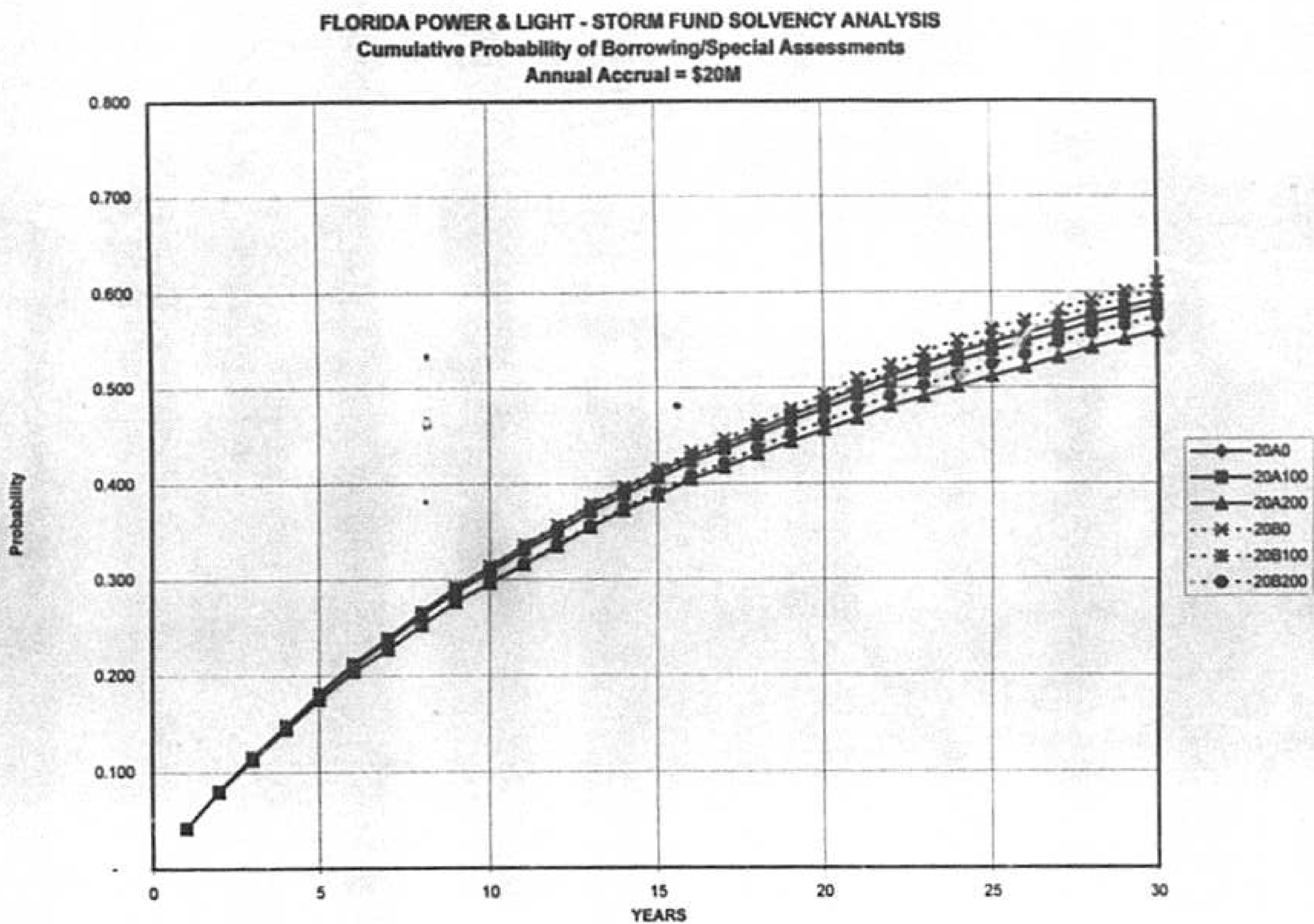
The charts in this section show the probability that the storm reserve assets will be inadequate to cover hurricane losses at some time during the relevant time horizon for each of the scenarios. Whenever this occurs it is assumed that the Storm Reserve borrows funds and requests Special Assessments to pay the losses. For example, a probability of 0.3 corresponding to the 10 year mark means that there is a 30% likelihood that borrowing will be necessary at least once during the first ten years of the storm fund to pay for hurricane losses.

The first chart summarizes the probabilities of borrowing for all the 24 scenarios considered. The subsequent charts group the scenarios by the amount of the annual accrual (i.e., $10, $20, $40 or $60 million) for easier reading. As an example, it can be seen from the chart for the annual accrual amount of $10 million, that for scenario 10B0 (i.e., annual accrual of $10 million, Minimum/ Maximum threshold of $400 million, Maximum threshold of $600 million, and no minimum assessments), there is more than a 70% likelihood that borrowing will be necessary at some time during the 30 year period from the start of the Storm Reserve. From the last chart in this section, it can be seen that for scenario 60A100 (i.e., annual accrual of $60 million, Minimum/ Maximum threshold of $500 million, Maximum threshold of $750 million, and Assessment threshold of $100 million) the corresponding probability of borrowing is about 40% over the 30 year period.

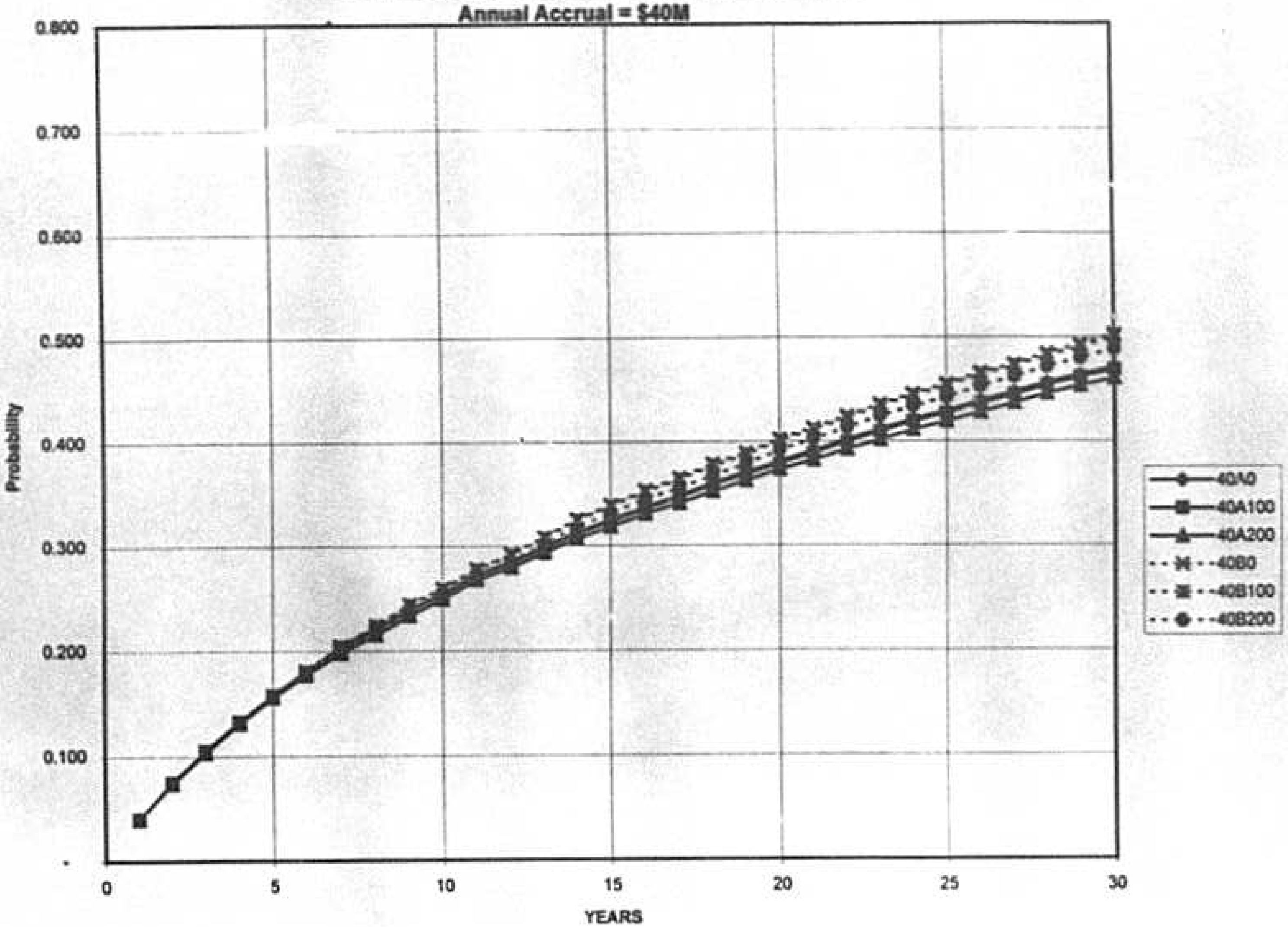
FLORIDA POWER & LIGHT - STORM FUND SOLVENCY ANALYSIS
Cumulative Probability of Borrowing/Special Assessments
Annual Accrual Amounts = $10M, $20M, $40M, $60M

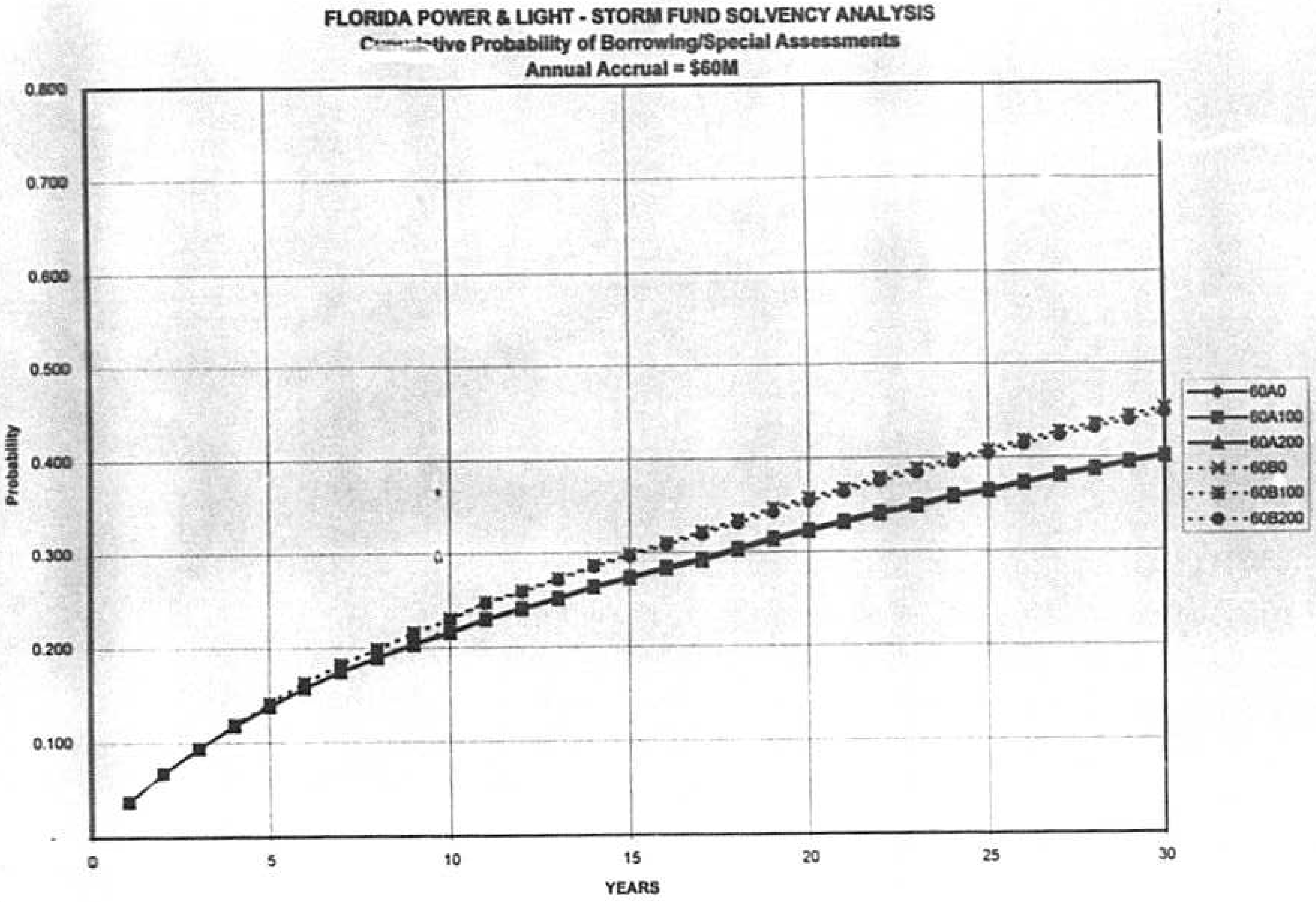



FLORIDA POWER & LIGHT - STORM FUND SOLVENCY ANALYSIS
Cumulative Probability of Borrowing/Special Assessments
Annual Accrual = $10M
Probability
0.800
0.700
0.600
0.500
0.400
0.300
0.200
0.100
5
10
15
20
25
30
YEARS
10A0
10A100
10A200
10B0
10B100
10B200


FLORIDA POWER & LIGHT - STORM FUND SOLVENCY ANALYSIS
Cumulative Probability of Borrowing/Special Assessments
Annual Accrual = $20M
Probability
0.800
0.700
0.600
0.500
0.400
0.300
0.200
0.100
0
5
10
15
20
25
30
YEARS
20A0
20A100
20A200
20B0
20B100
20B200

FLORIDA POWER & LIGHT - STORM FUND SOLVENCY ANALYSIS
Cumulative Probability of Borrowing/Special Assessments
Annual Accrual = $40M





FLORIDA POWER & LIGHT - STORM FUND SOLVENCY ANALYSIS
Cumulative Probability of Borrowing/Special Assessments
Annual Accrual = $60M
Probability
0.800
0.700
0.600
0.500
0.400
0.300
0.200
0.100
0
5
10
15
20
25
30
YEARS
60A0
60A100
60A200
60B0
60B100
60B200

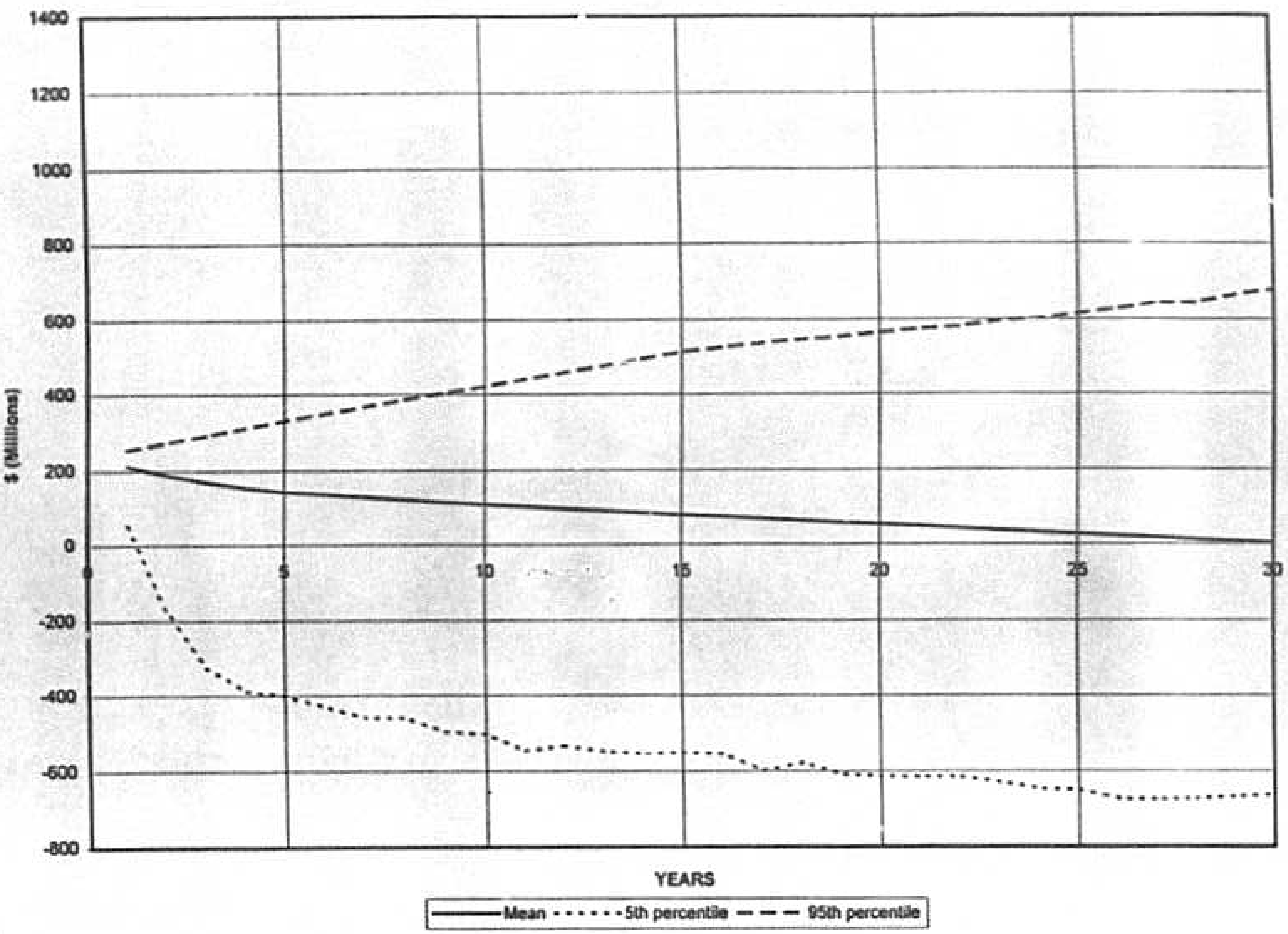
Appendix D

Appendix D

The charts in this section show the impact of the various scenarios on the Storm Reserve. The chart shows the mean value of the Reserve balance over the 30 year period and the upper and lower bound defined respectively as the 95th and 5th percentile of non-exceedance.

As an example, scenario 10A0 (annual accrual $10 million, Minimum/Maximum threshold of $500 million, Maximum threshold of $750 million and no minimum assessments) shows that the expected value (mean curve) of the Reserve balance declines from $237 million to $0 under this scenario over the 30 year period. The upper bound under this scenario at the end of the 30 year period is approximately $675 million and the lower bound is approximately -$650 million. This can also be interpreted as this scenario having a 90% probability that the Reserve balance will be between $675 million and -$650 million with an expected Reserve balance of $0 at the end of the 30 year period.

FLORIDA POWER & LIGHT - STORM FUND SOLVENCY ANALYSIS
Scenario: 10A0



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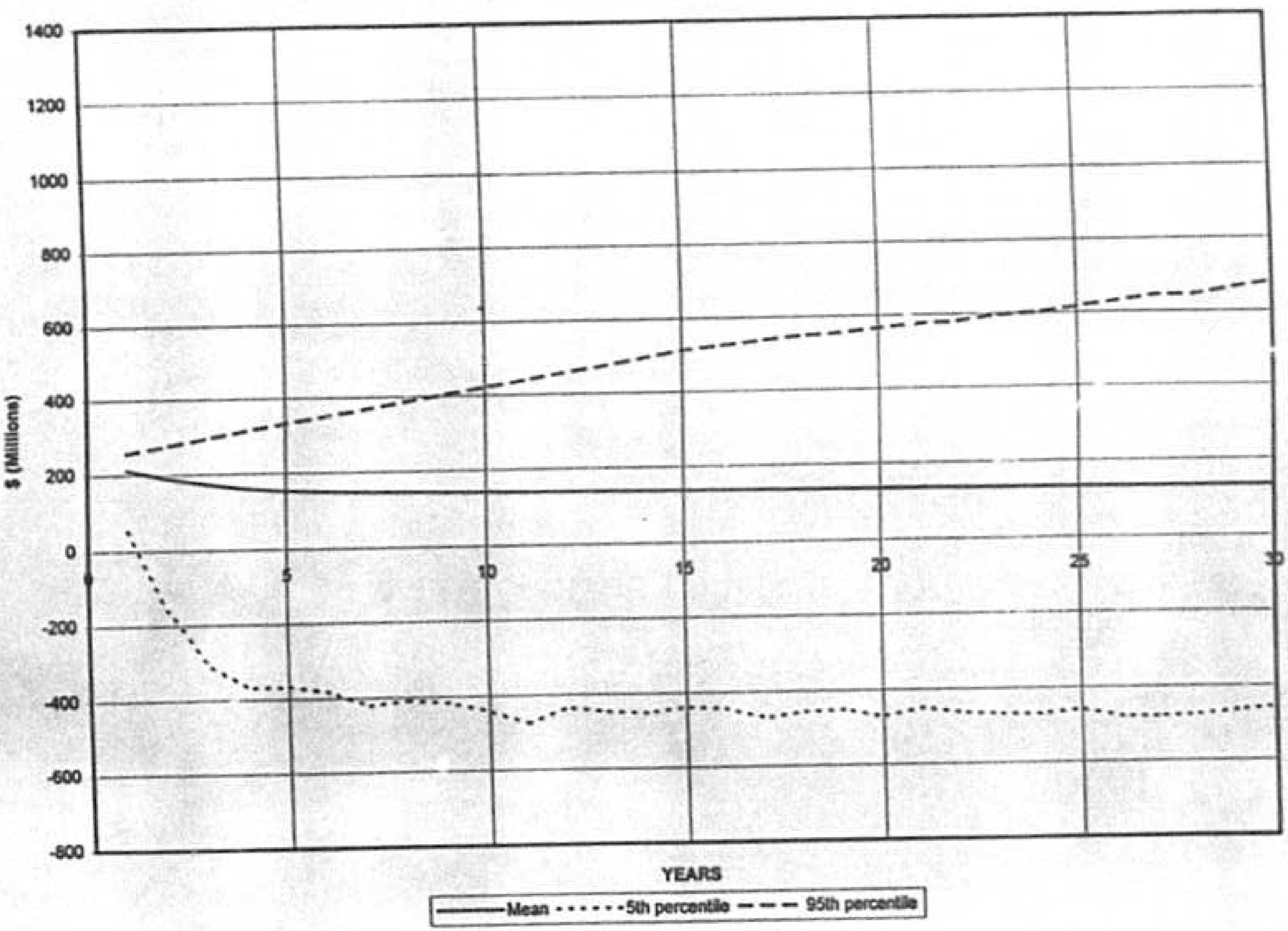
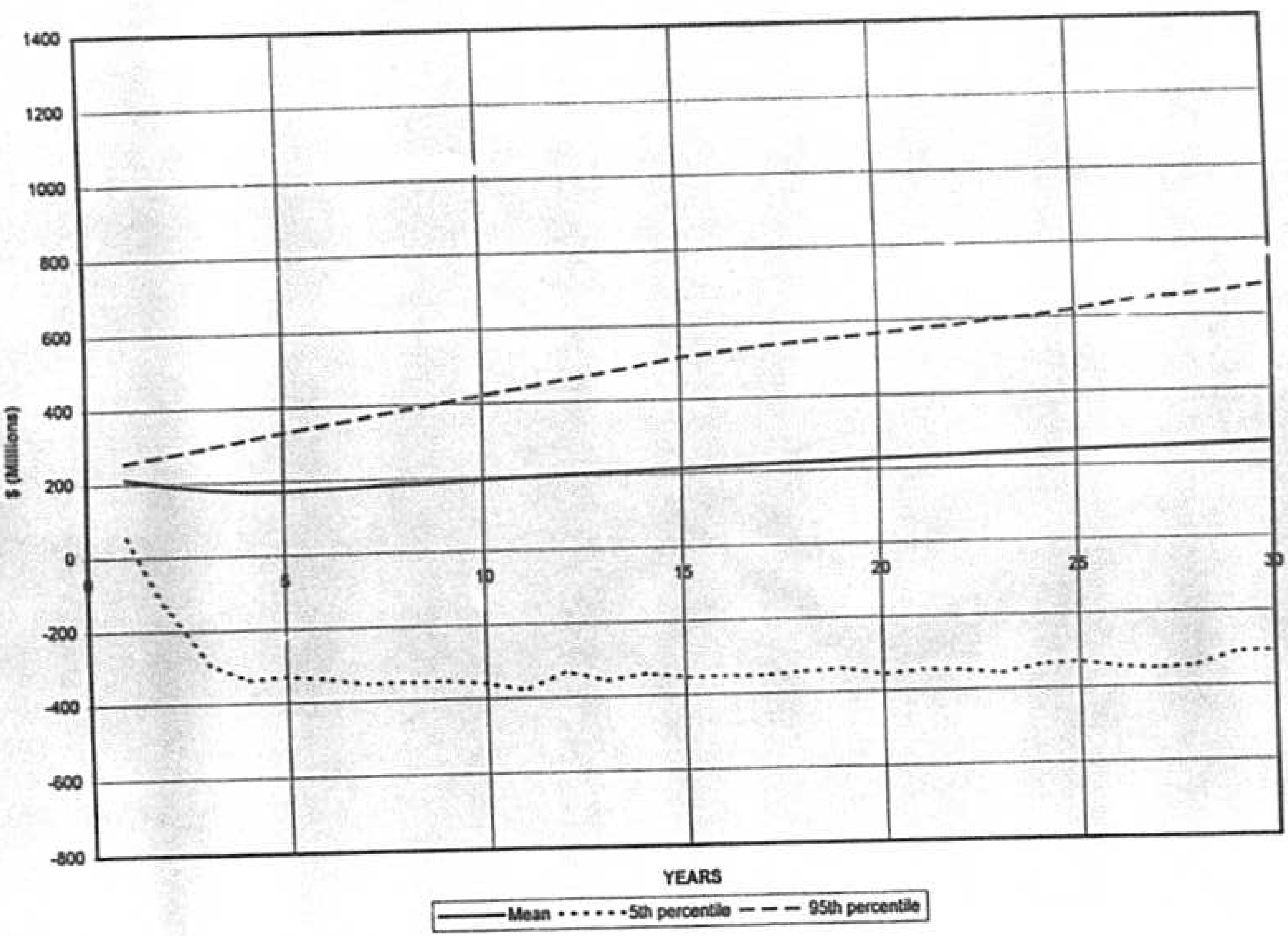
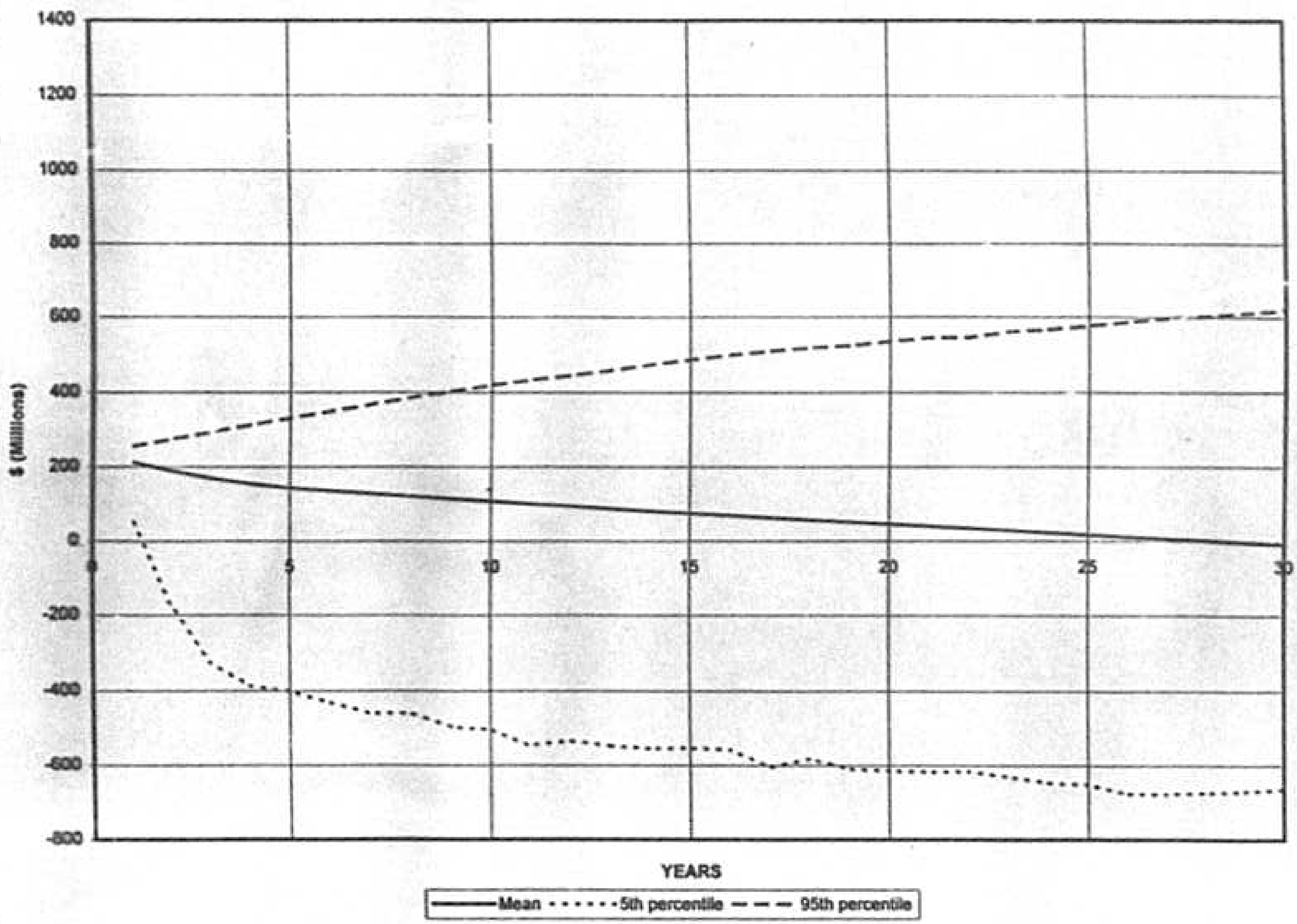
FLORIDA POWER & LIGHT - STORM FUND SOLVENCY ANALYSIS
Scenario: 10A100



FLORIDA POWER & LIGHT - STORM FUND SOLVENCY ANALYSIS
Scenario: 10A200

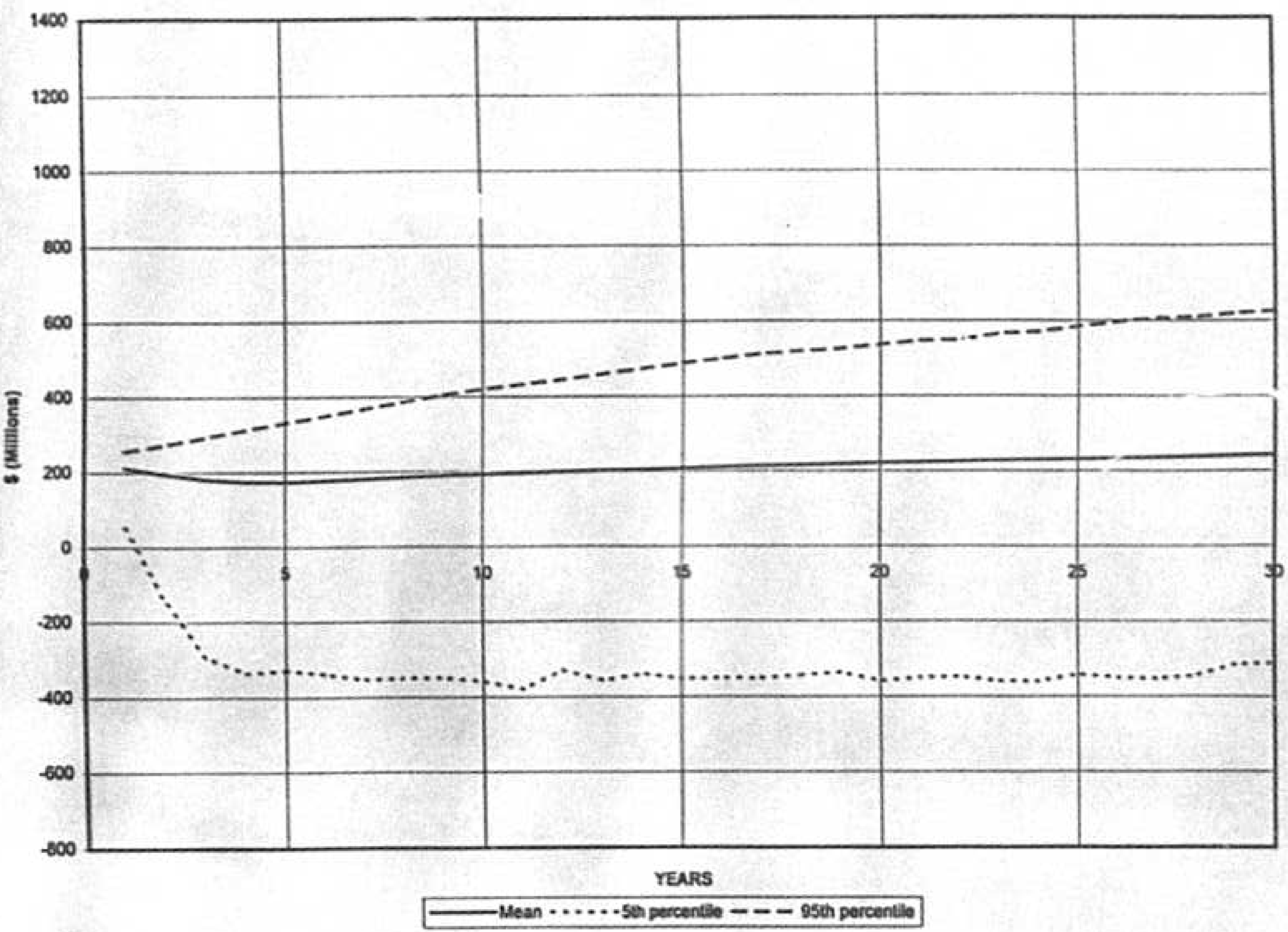


FLORIDA POWER & LIGHT - STORM FUND SOLVENCY ANALYSIS
Scenario: 10B0

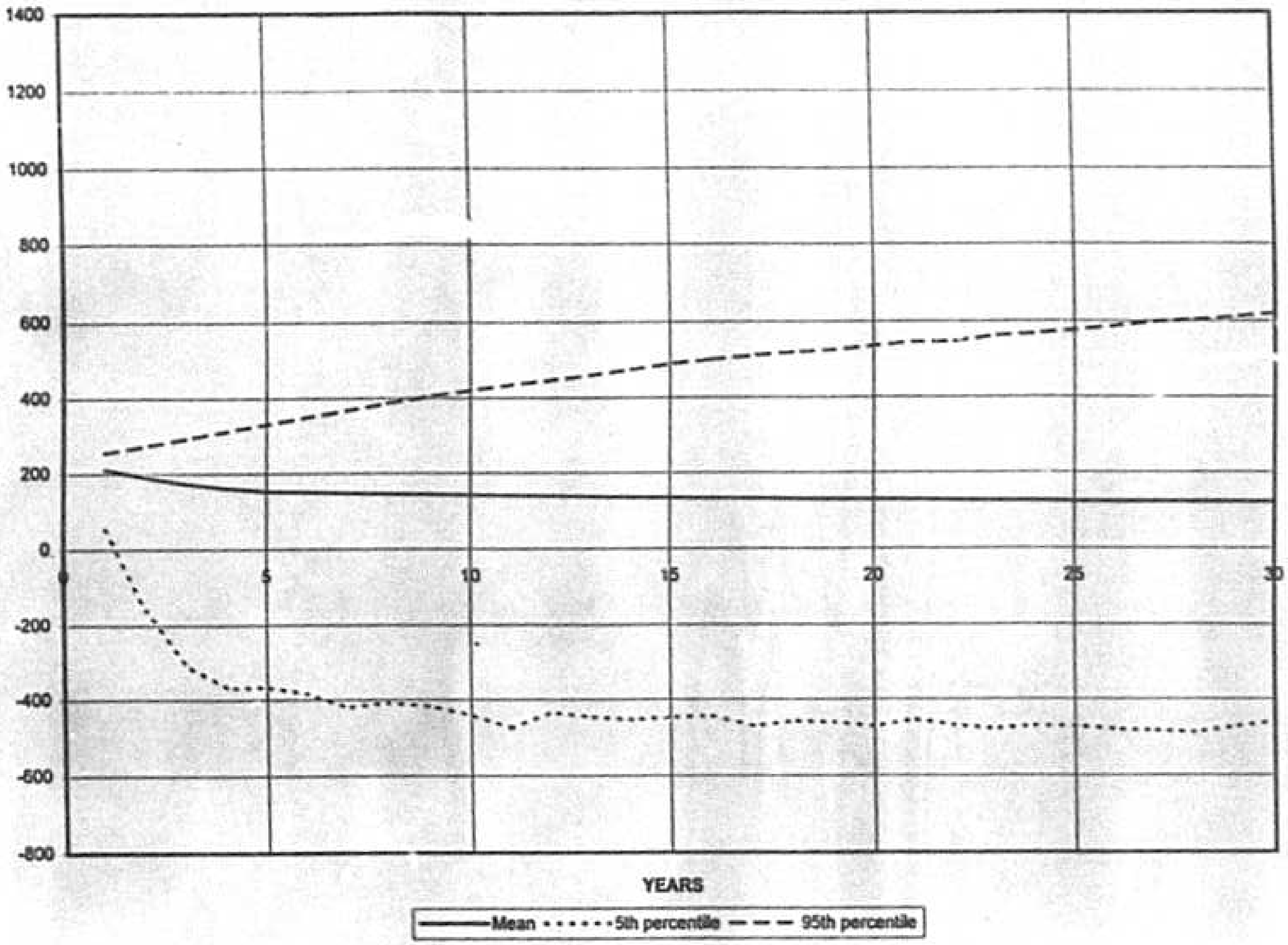


FLORIDA POWER & LIGHT - STORM FUND SOLVENCY ANALYSIS

Scenario: 10B200



FLORIDA POWER & LIGHT - STORM FUND SOLVENCY ANALYSIS
Scenario: 10B100



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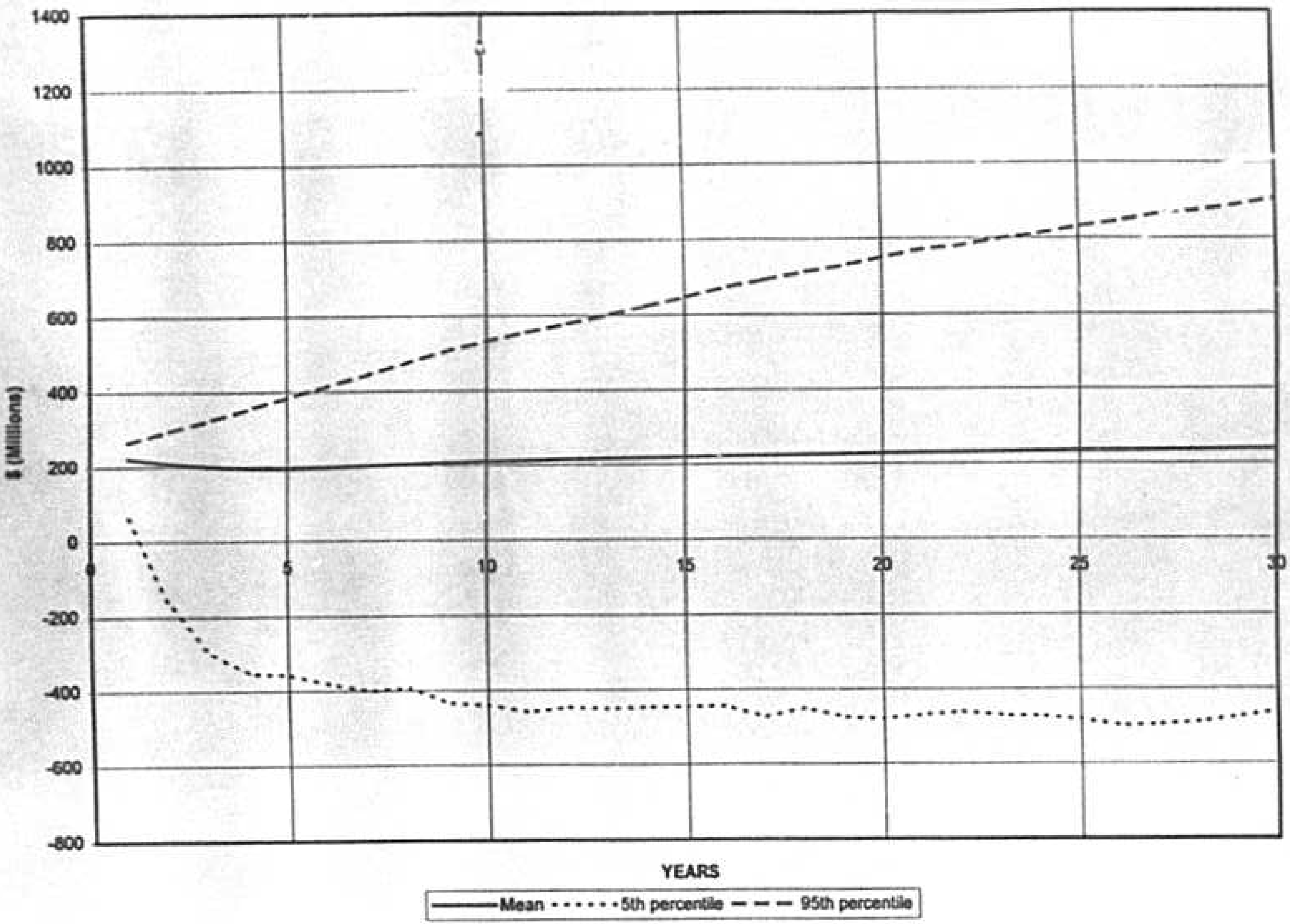
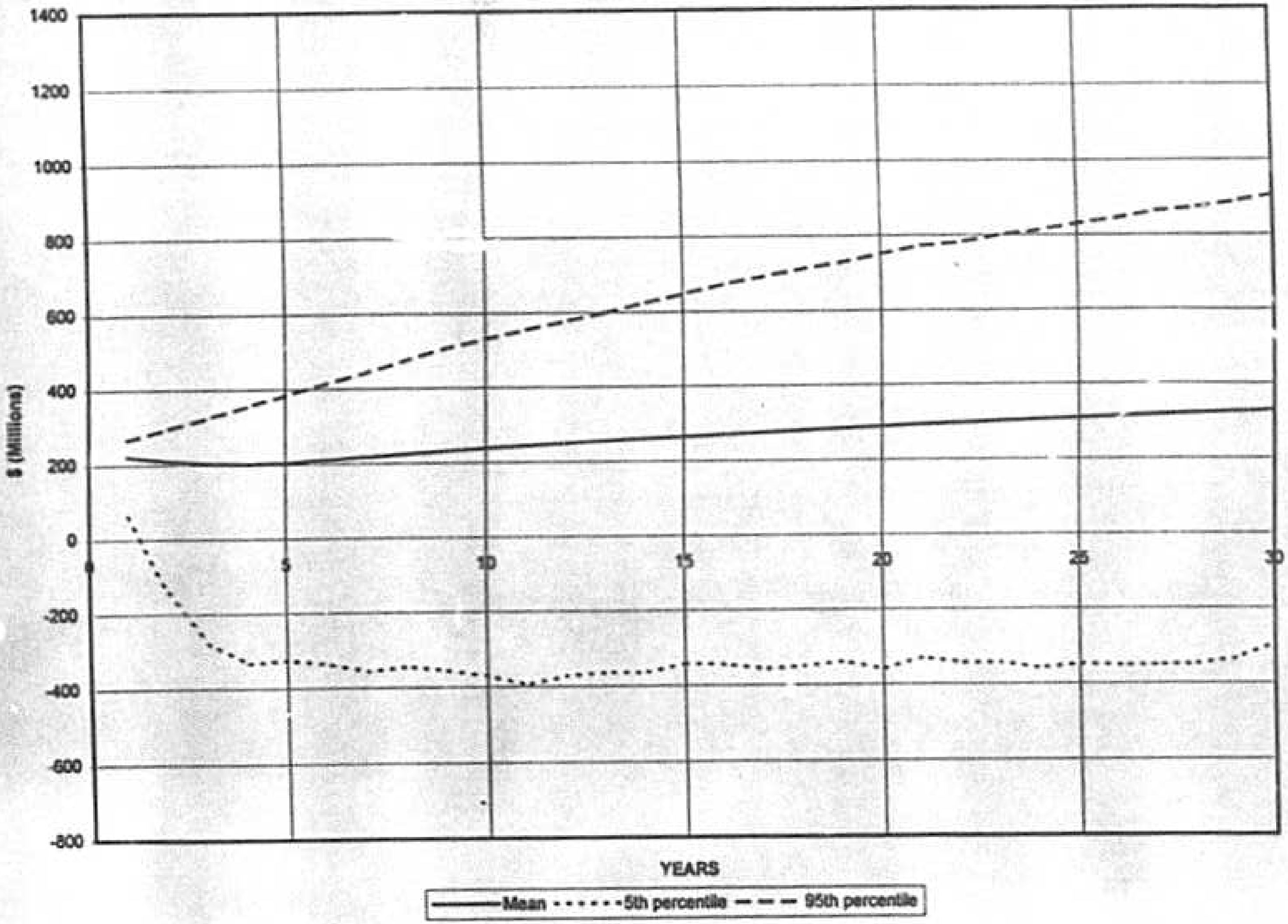
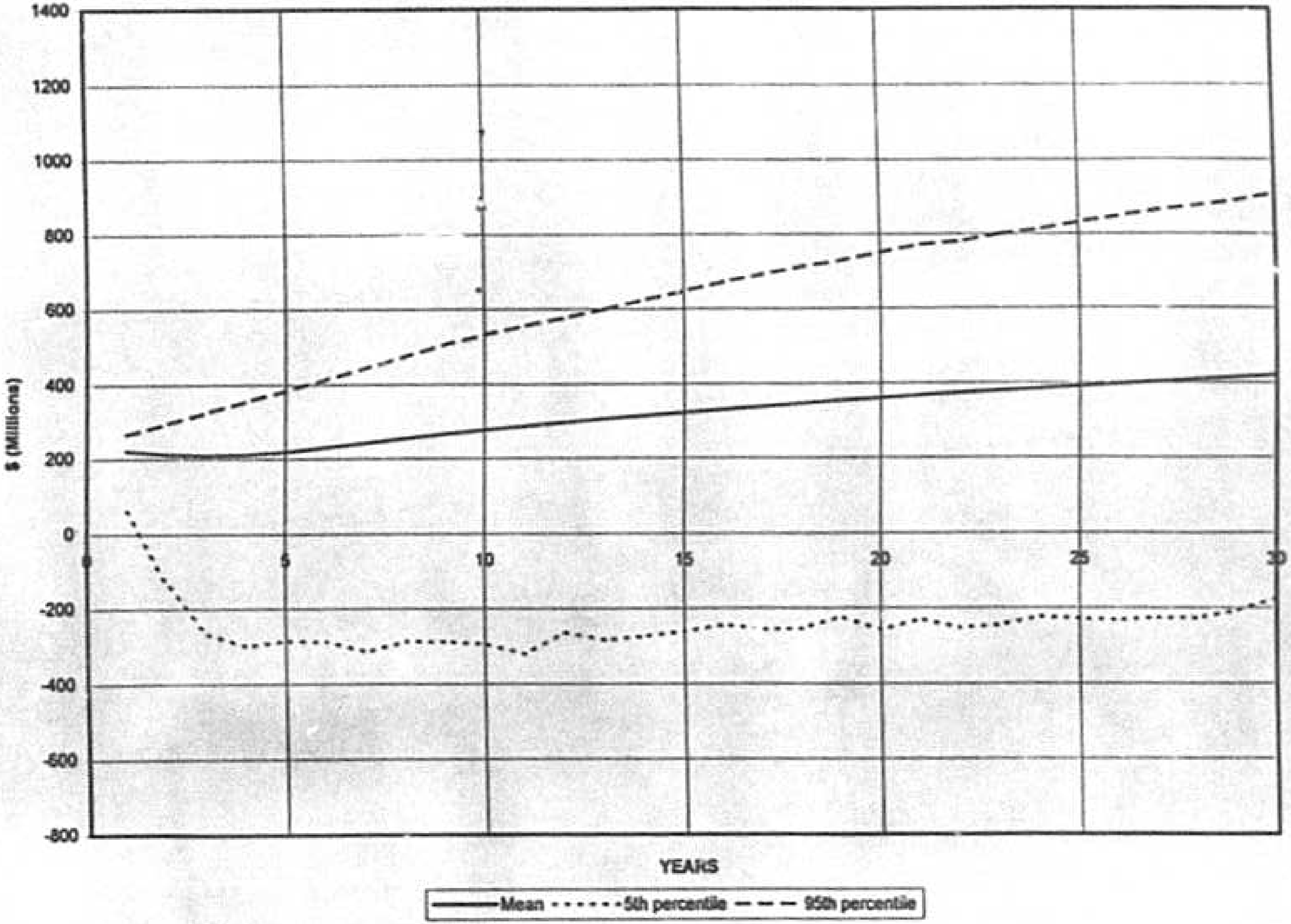
FLORIDA POWER & LIGHT - STORM FUND SOLVENCY ANALYSIS
Scenario: 20A0

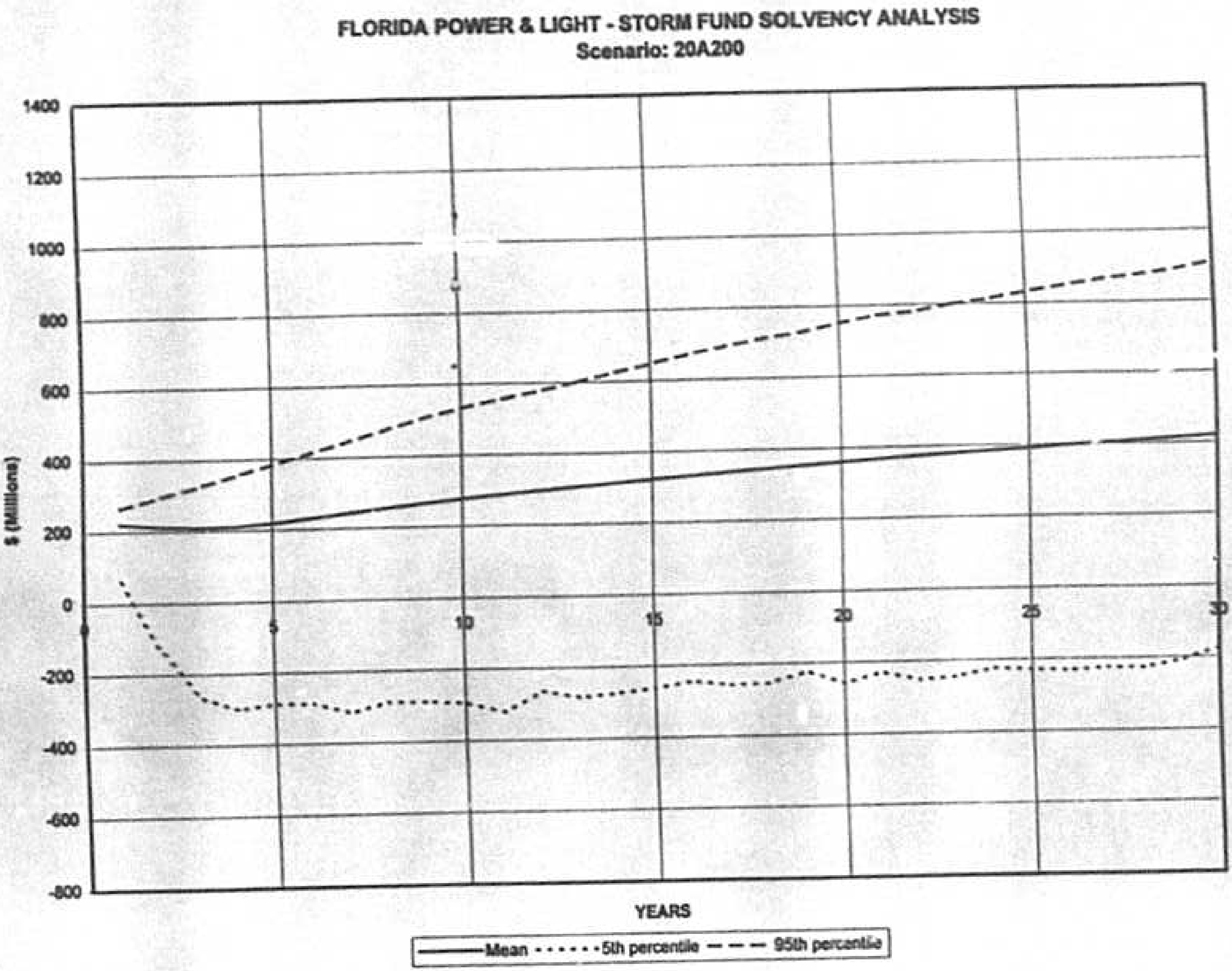


FLORIDA POWER & LIGHT - STORM FUND SOLVENCY ANALYSIS
Scenario: 20A100

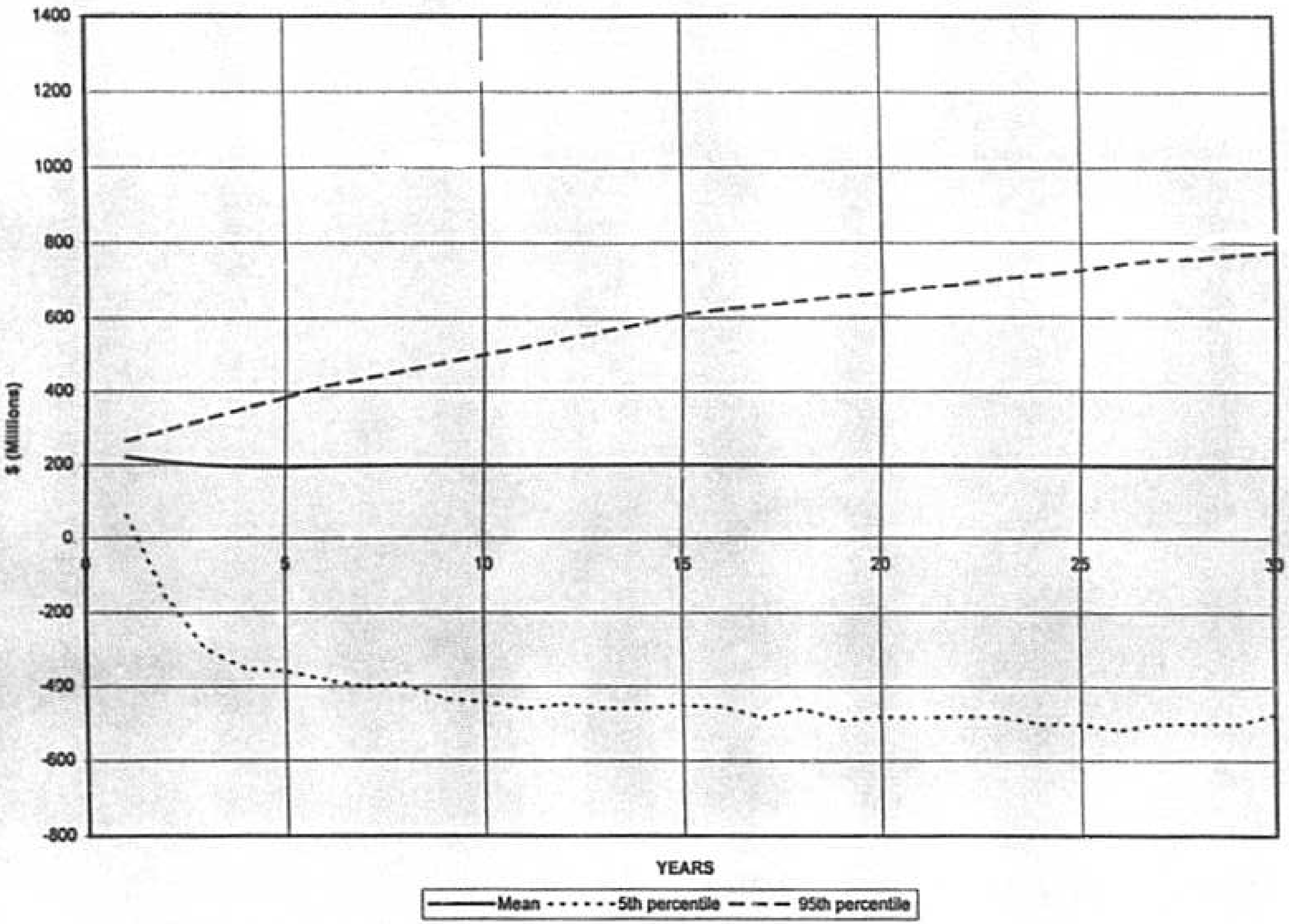


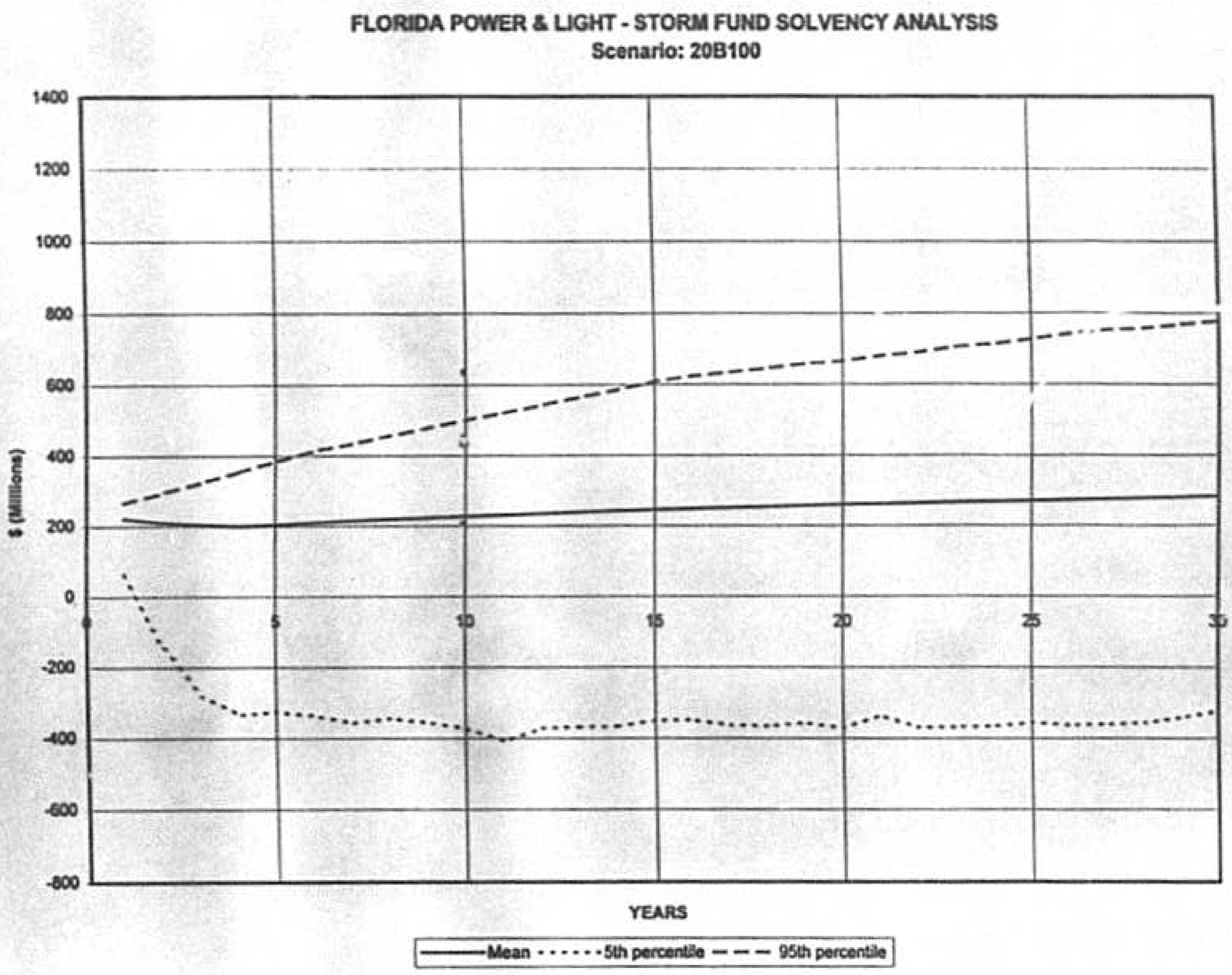
FLORIDA POWER & LIGHT - STORM FUND SOLVENCY ANALYSIS
Scenario: 20A200



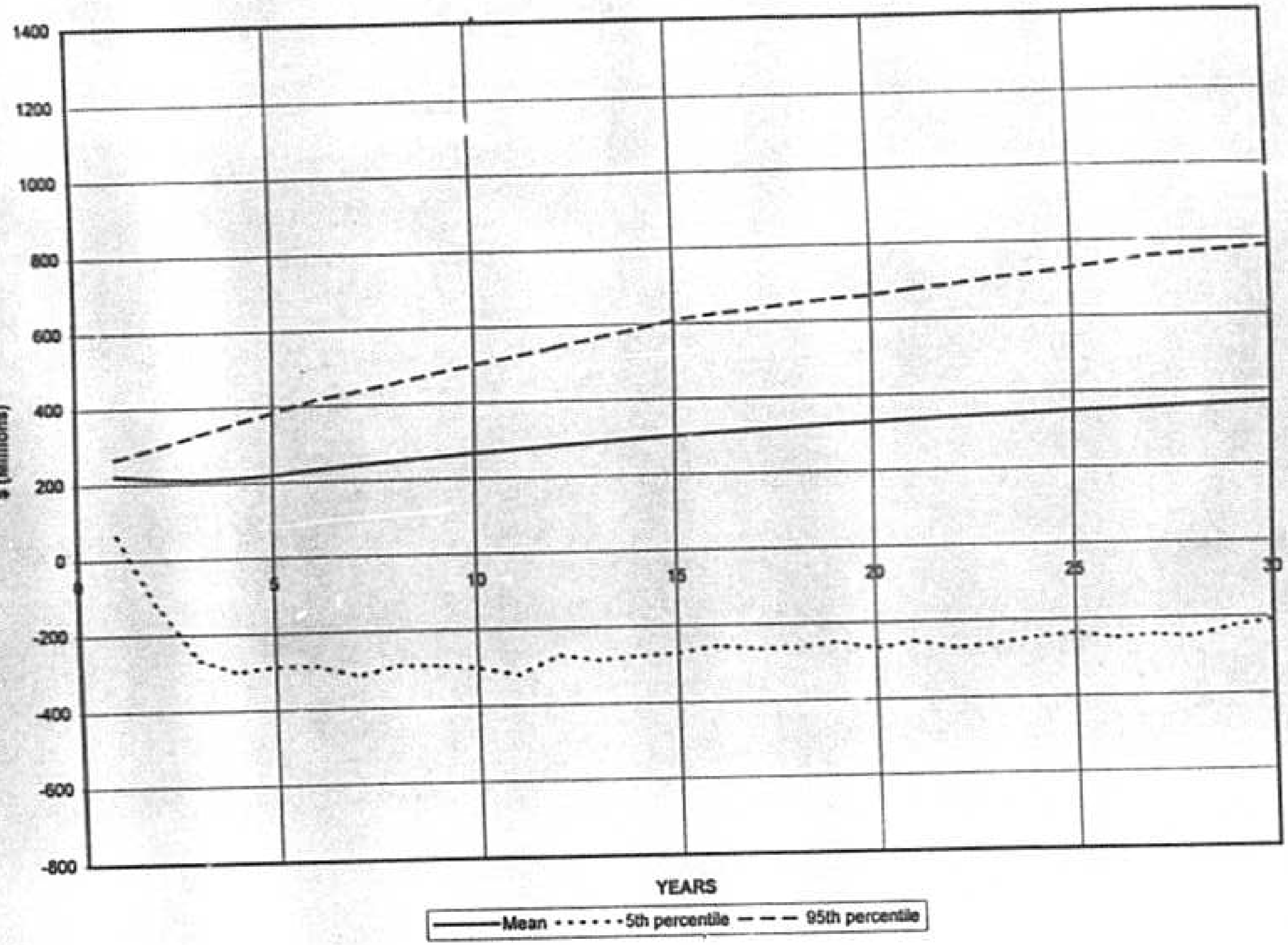

FLORIDA POWER & LIGHT - STORM FUND SOLVENCY ANALYSIS
Scenario: 20A200
1400
1200
1000
800
600
400
200
0
-200
-400
-600
-800
$ (Millions)
0
5
10
15
20
25
30
YEARS
Mean
5th percentile
95th percentile

FLORIDA POWER & LIGHT - STORM FUND SOLVENCY ANALYSIS
Scenario: 20B0

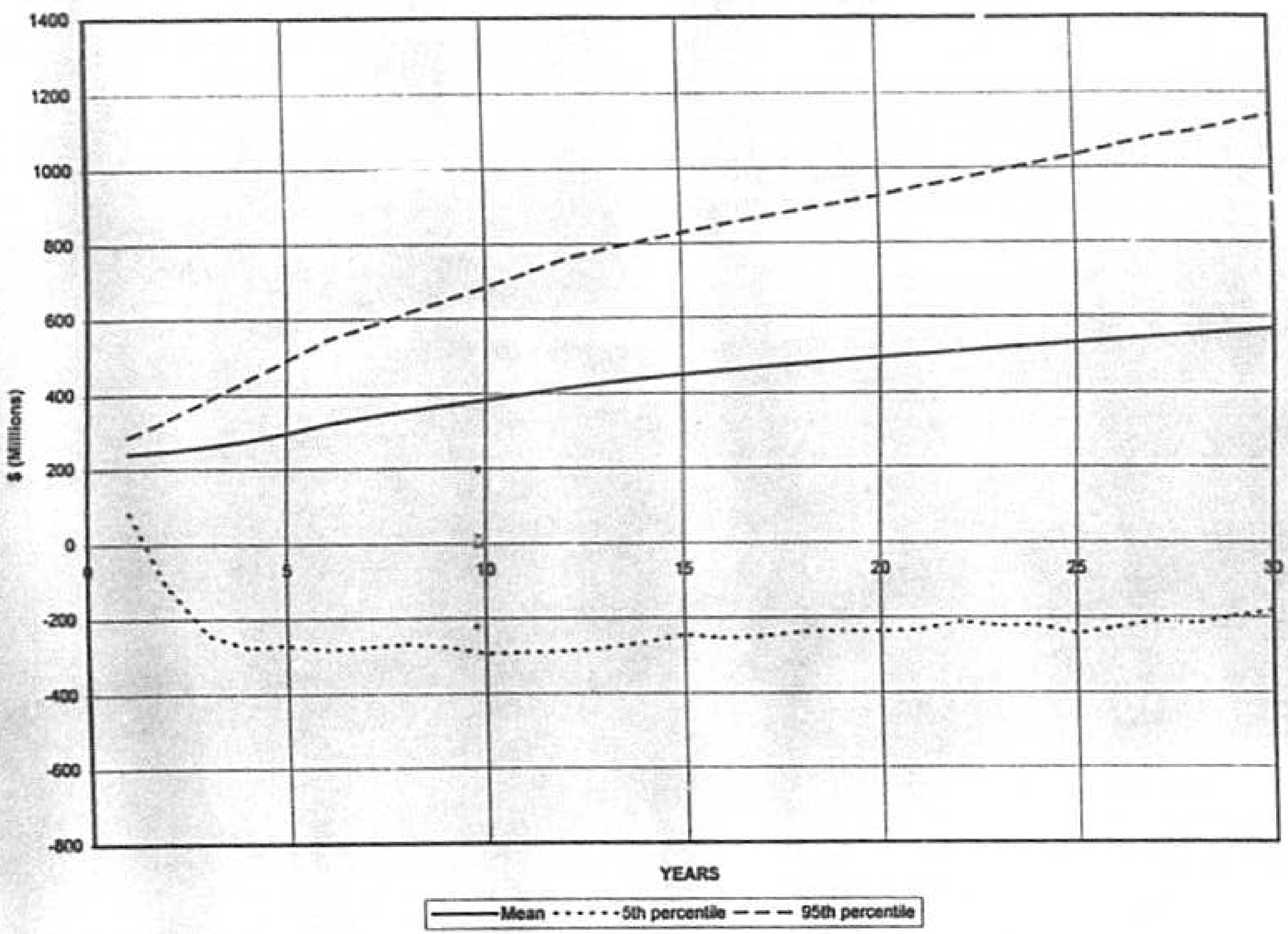



FLORIDA POWER & LIGHT - STORM FUND SOLVENCY ANALYSIS
Scenario: 20B100
$ (Millions)
1400
1200
1000
800
600
400
200
0
-200
-400
-600
-800
0
5
10
15
20
25
30
YEARS
Mean
5th percentile
95th percentile

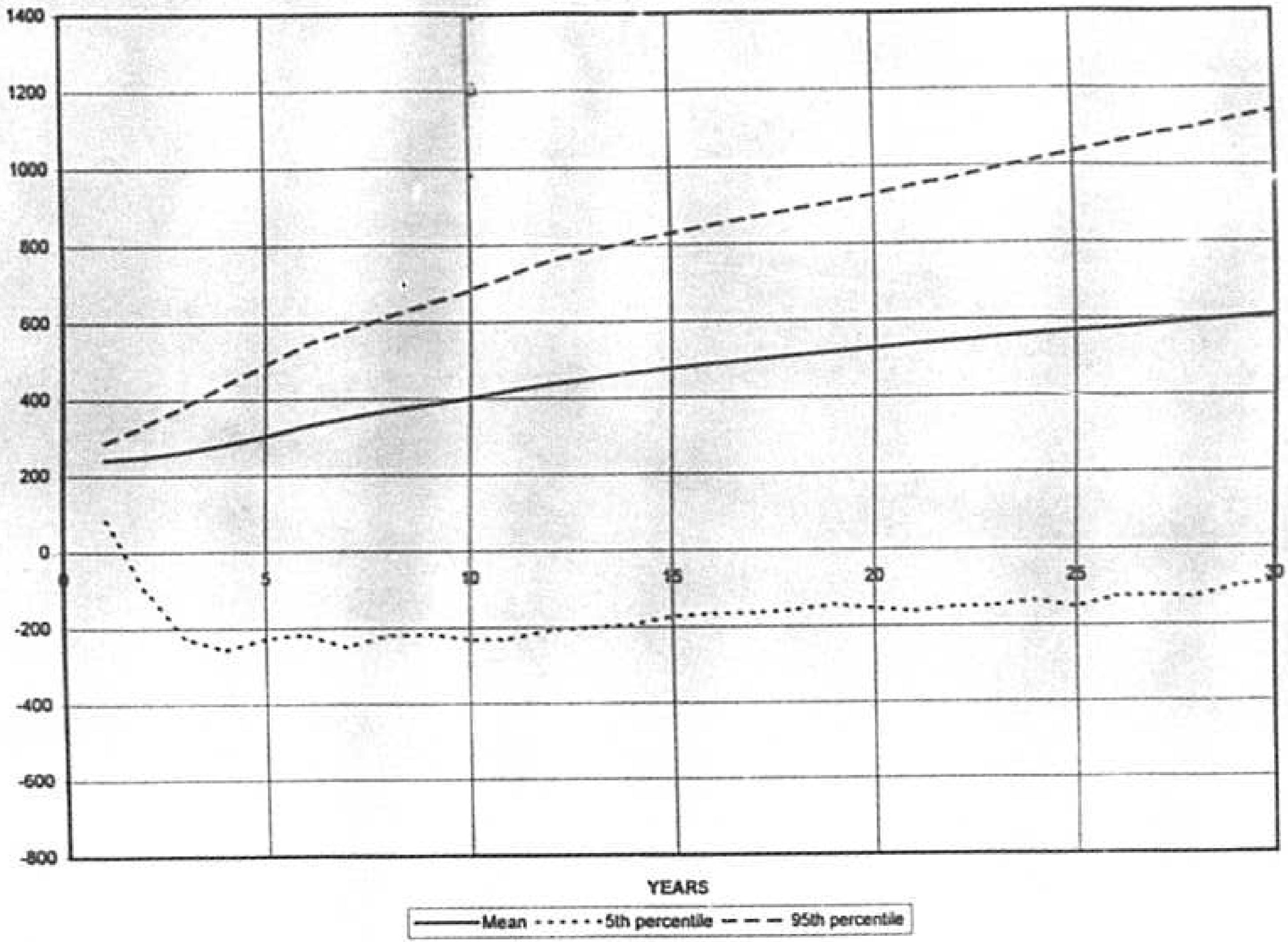
FLORIDA POWER & LIGHT - STORM FUND SOLVENCY ANALYSIS
Scenario: 20B200



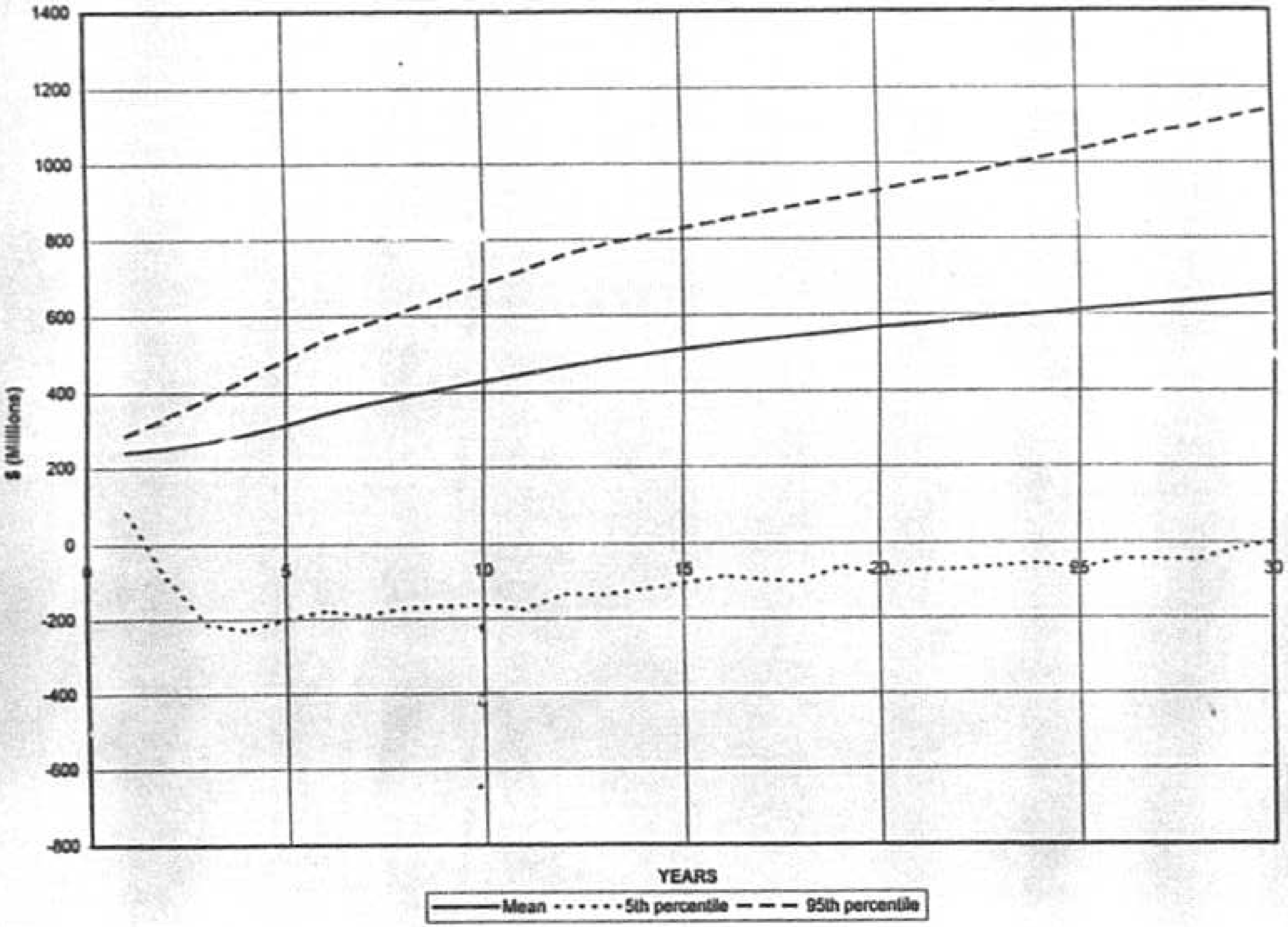
FLORIDA POWER & LIGHT - STORM FUND SOLVENCY ANALYSIS
Scenario: 40A0



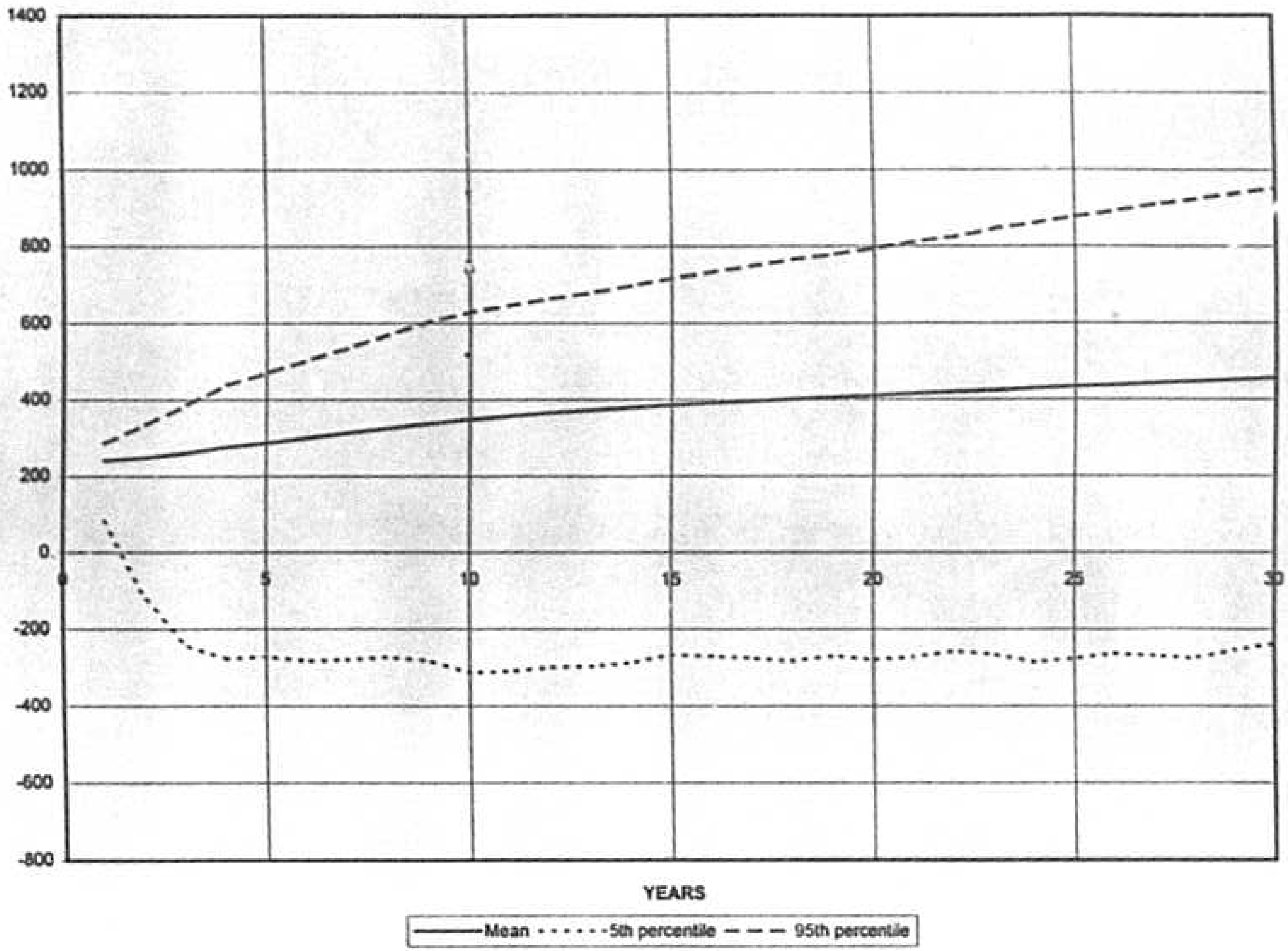
FLORIDA POWER & LIGHT - STORM FUND SOLVENCY ANALYSIS
Scenario: 40A100



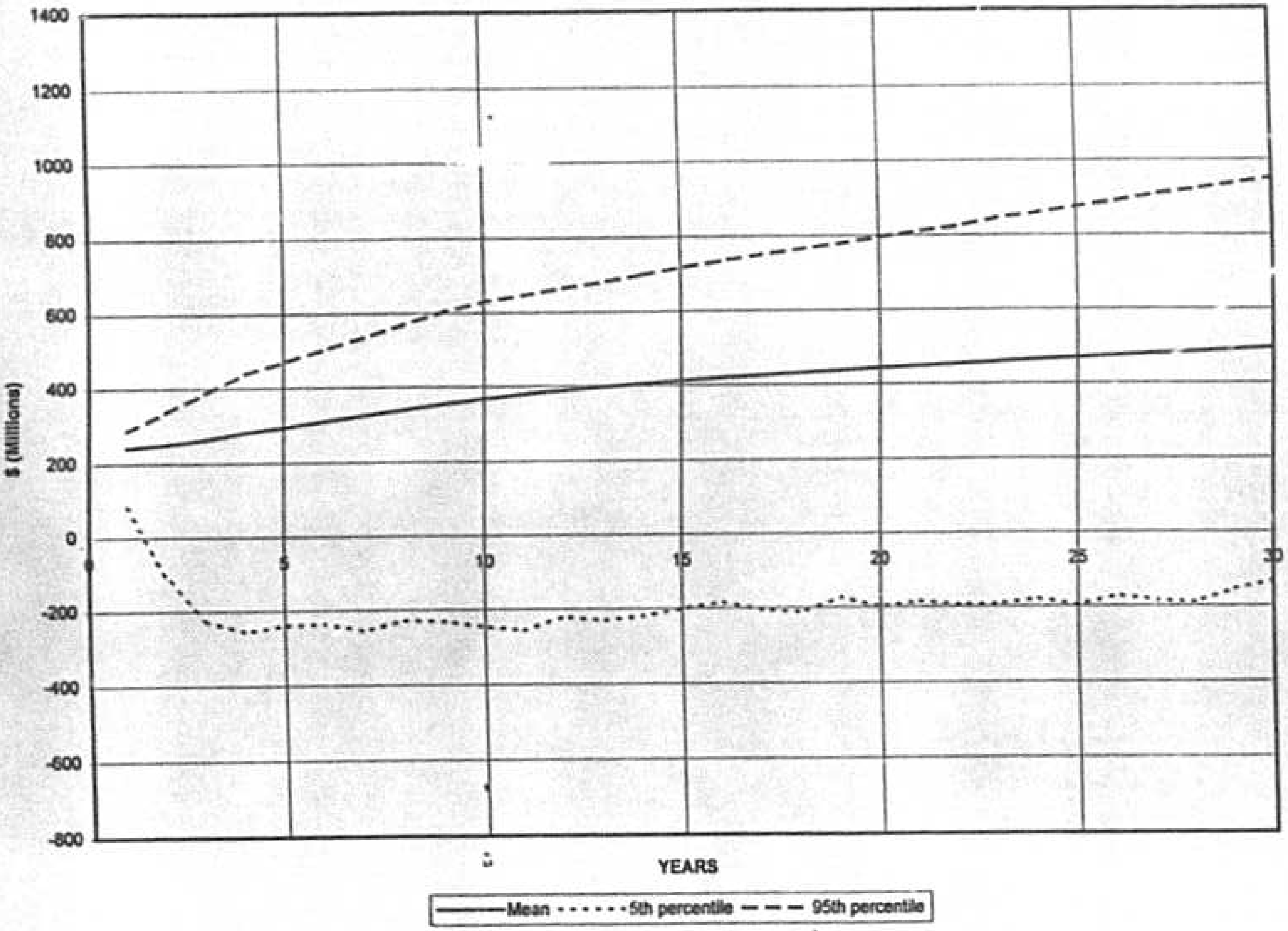
FLORIDA POWER & LIGHT - STORM FUND SOLVENCY ANALYSIS
Scenario: 40A200



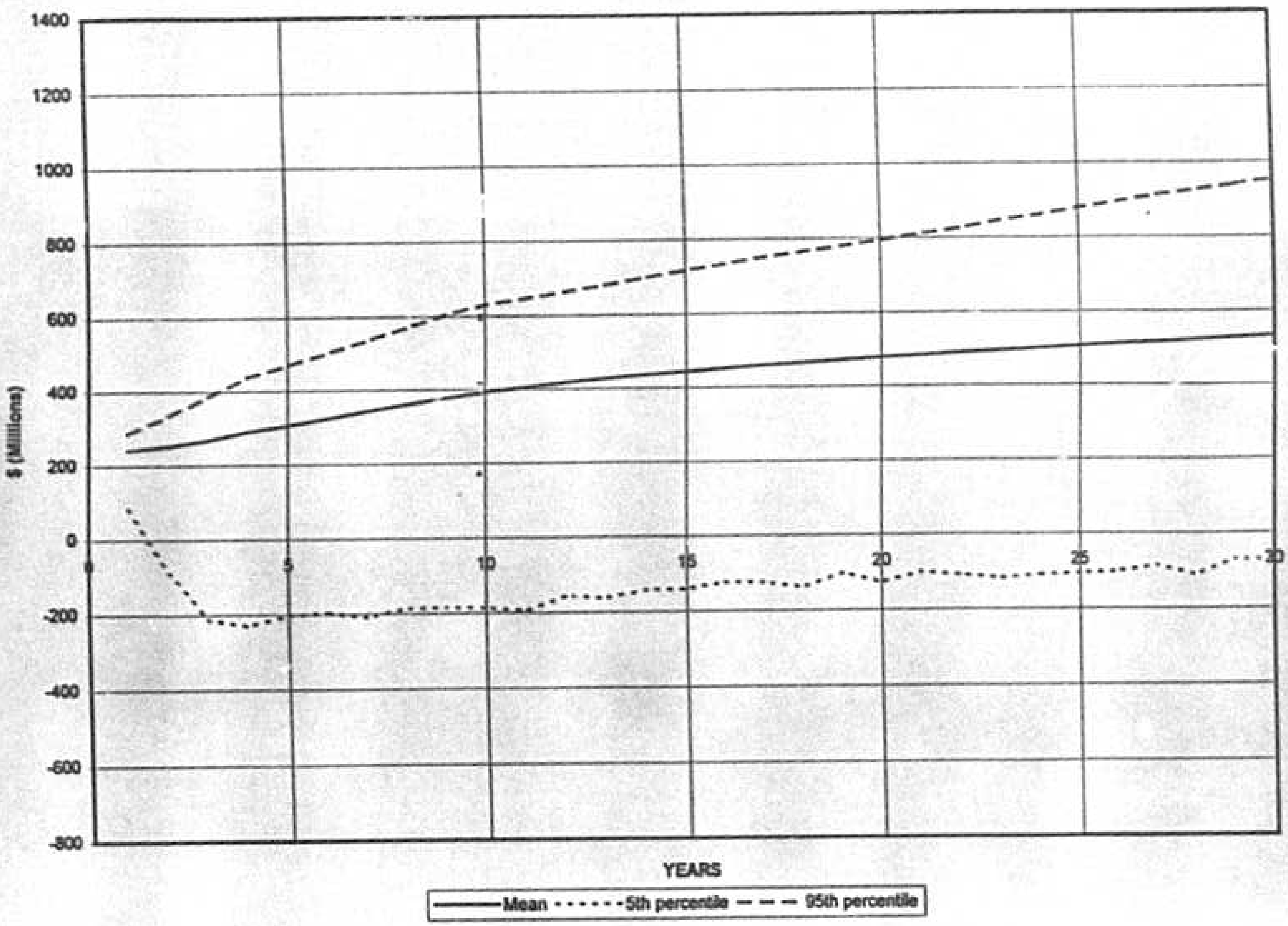
FLORIDA POWER & LIGHT - STORM FUND SOLVENCY ANALYSIS
Scenario: 40B0

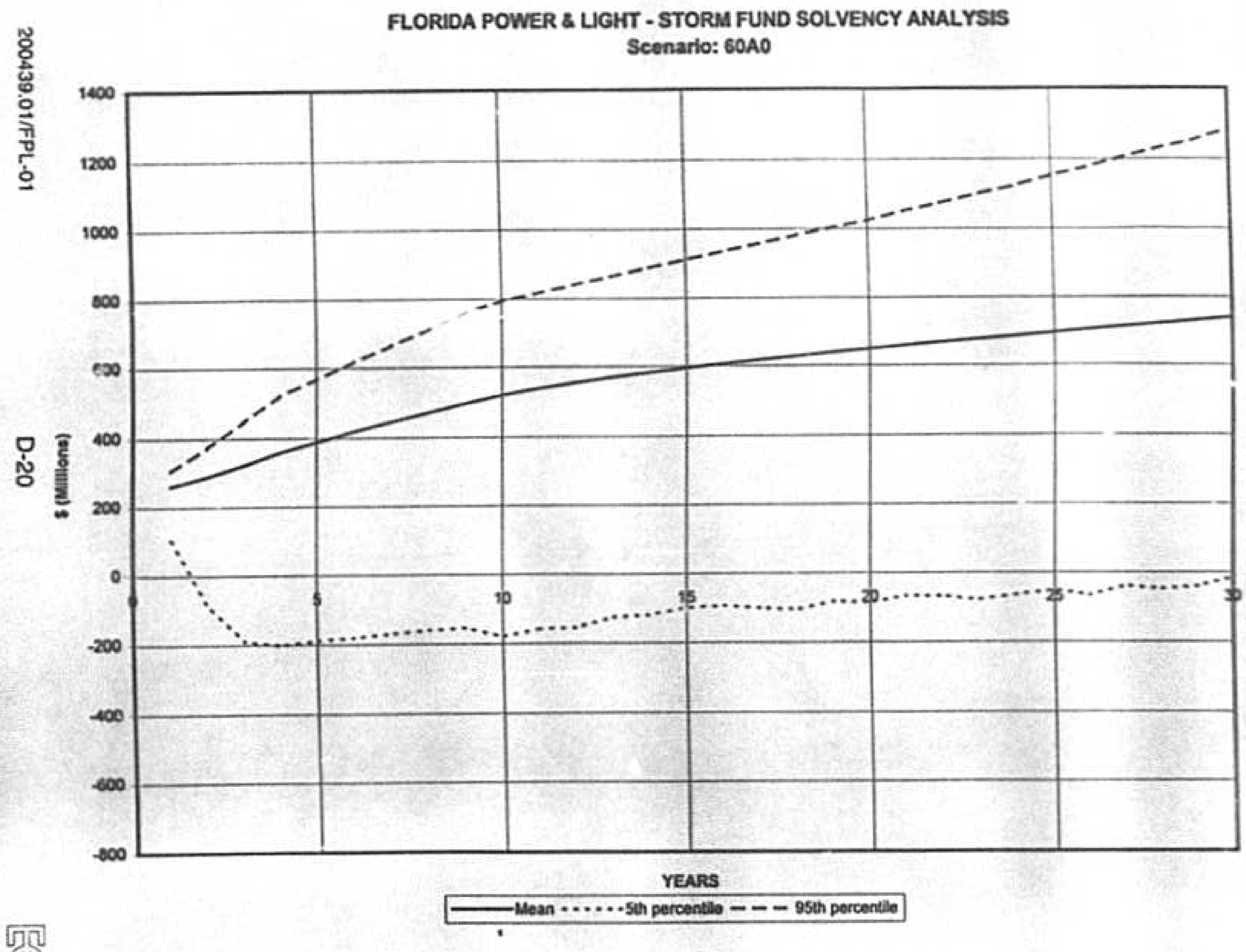


FLORIDA POWER & LIGHT - STORM FUND SOLVENCY ANALYSIS
Scenario: 40B100

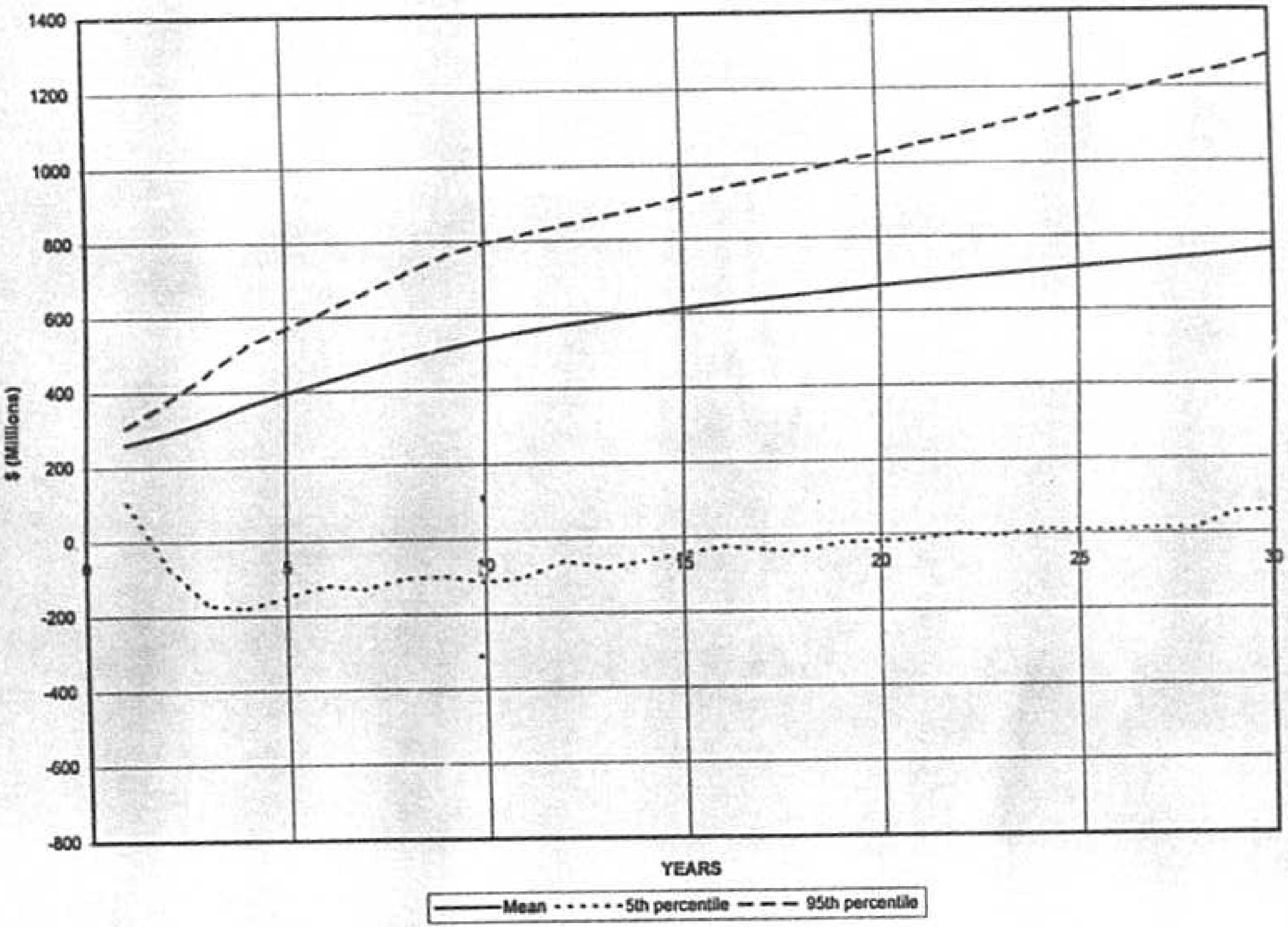


FLORIDA POWER & LIGHT - STORM FUND SOLVENCY ANALYSIS
Scenario: 40B200

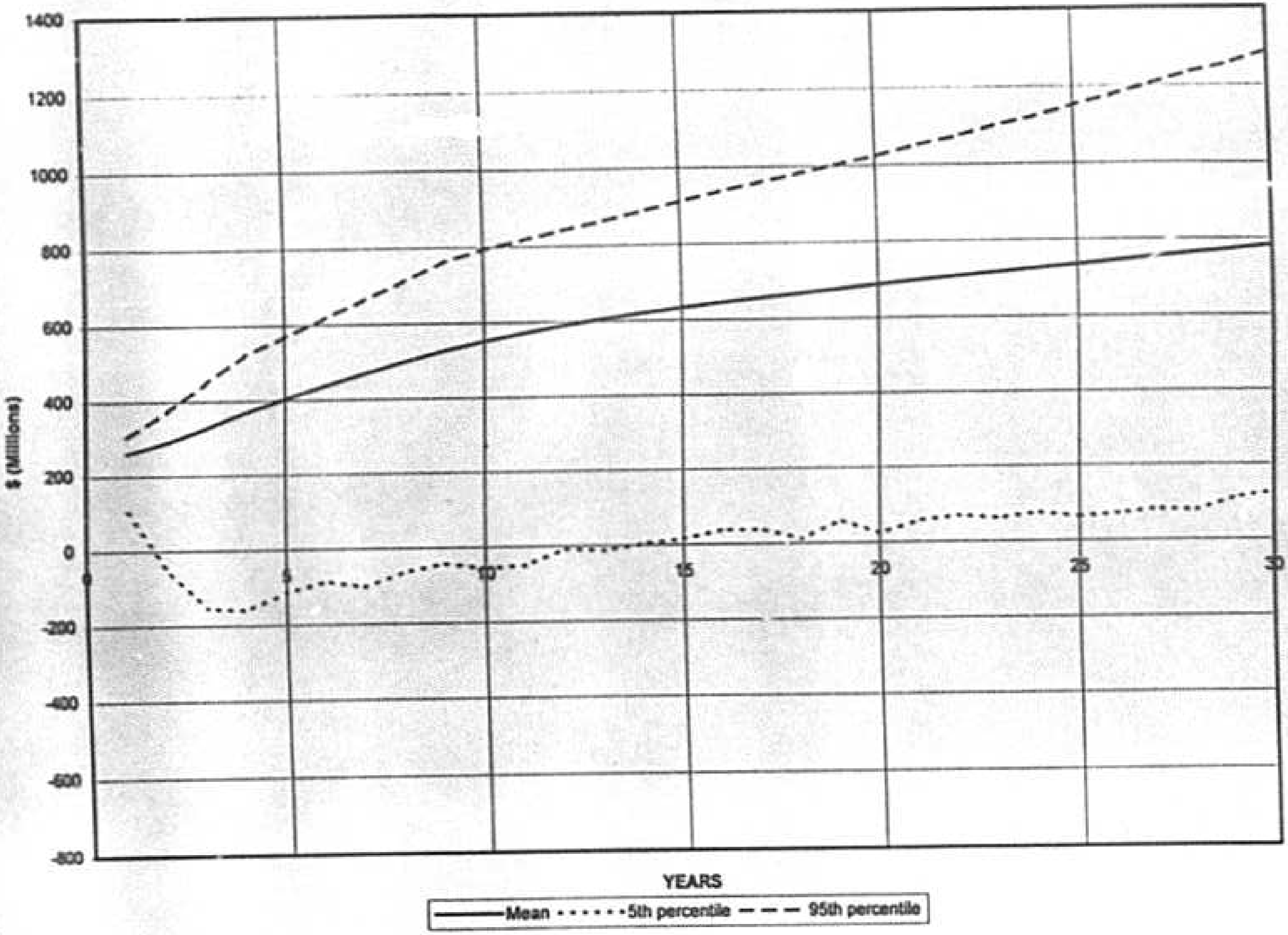



FLORIDA POWER & LIGHT - STORM FUND SOLVENCY ANALYSIS
Scenario: 60A0
$ (Millions)
1400
1200
1000
800
600
400
200
0
-200
-400
-600
-800
0
5
10
15
20
25
30
YEARS
Mean
5th percentile
95th percentile

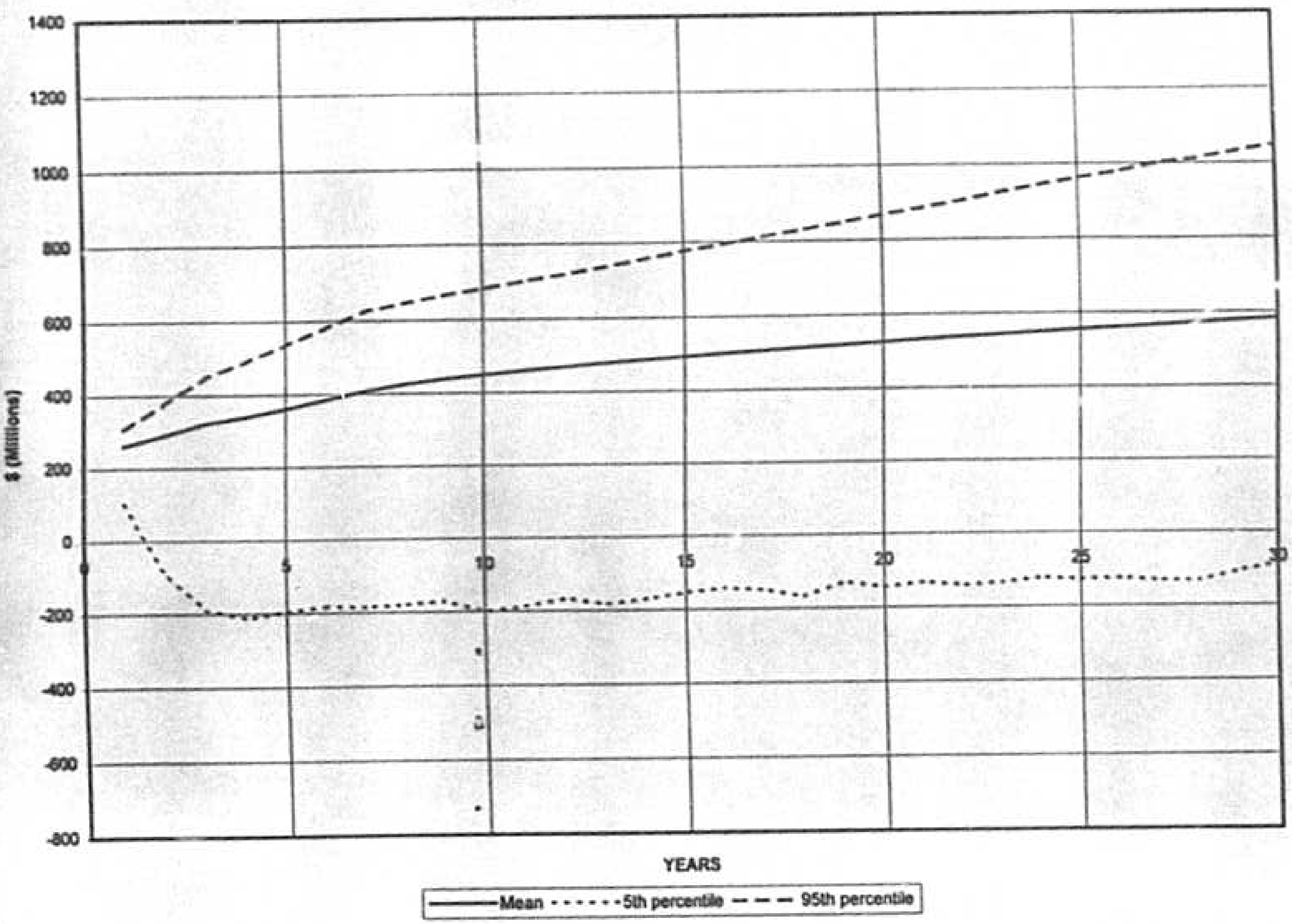
FLORIDA POWER & LIGHT - STORM FUND SOLVENCY ANALYSIS
Scenario: 60A100

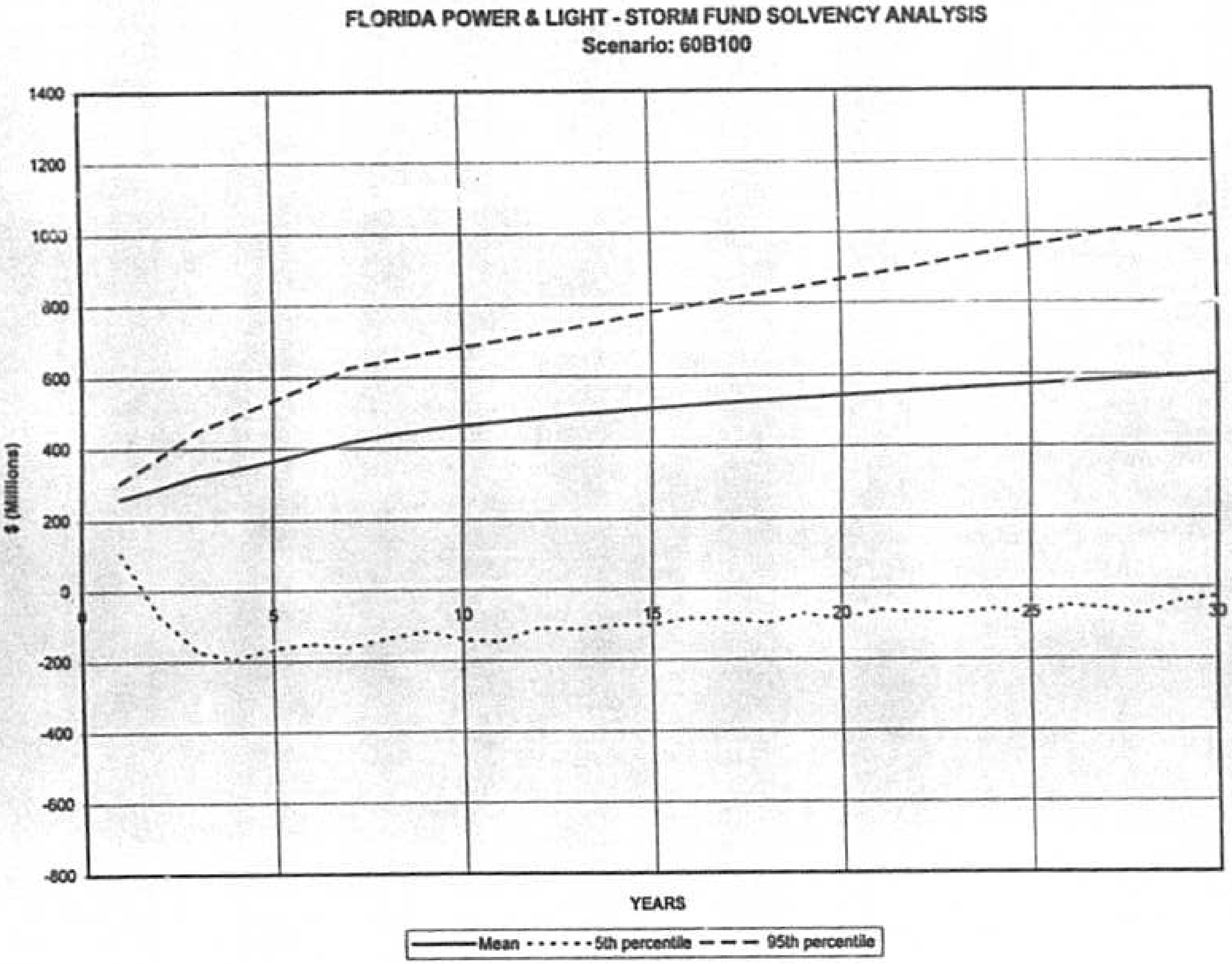


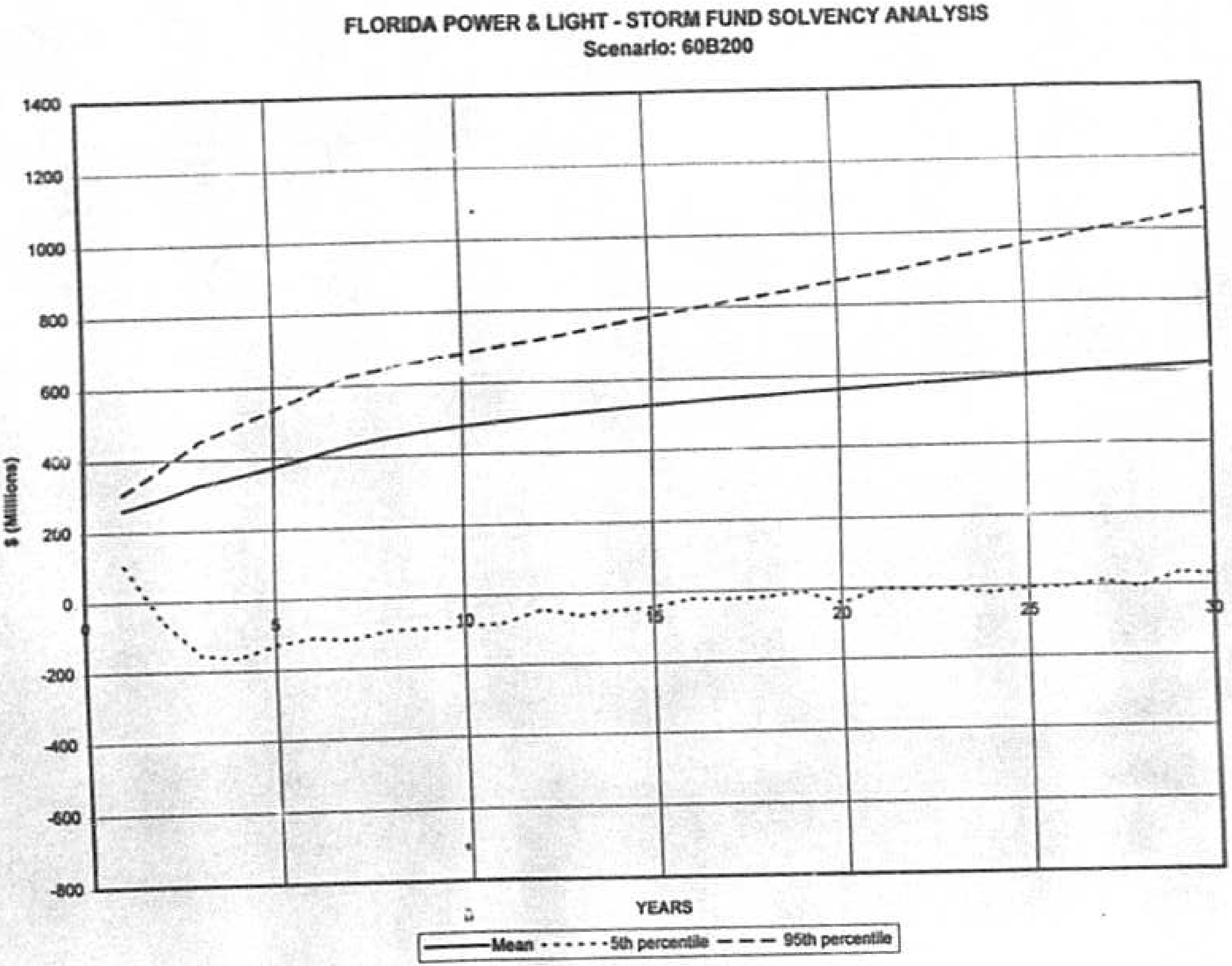
FLORIDA POWER & LIGHT - STORM FUND SOLVENCY ANALYSIS
Scenario: 60A200



FLORIDA POWER & LIGHT - STORM FUND SOLVENCY ANALYSIS
Scenario: 60B0




FLORIDA POWER & LIGHT - STORM FUND SOLVENCY ANALYSIS
Scenario: 60B100
$ (Millions)
1400
1200
1000
800
600
400
200
0
-200
-400
-600
-800
0
5
10
15
20
25
30
YEARS
Mean
5th percentile
95th percentile


FLORIDA POWER & LIGHT - STORM FUND SOLVENCY ANALYSIS
Scenario: 60B200
$ (Millions)
1400
1200
1000
800
600
400
200
0
-200
-400
-600
-800
0
5
10
15
20
25
30
YEARS
Mean
5th percentile
95th percentile

Appendix E

The first table in this section (Table E-1) summarizes the expected costs to customers on an annual basis toward the storm reserve. The total cost is separated out into the 'base' annual accrual amount and other assessments (i.e., minimum reserve assessments and special assessments).

Table E-2 shows the source of funds in each scenario, breaking out on a per customer basis, the annual accrual amount, the minimum reserve and special assessments, investment income to the storm reserve, and finally, the reserve deficit, i.e., expected draw-down on the reserve balance over the thirty-year period.

Figure E-1 shows the total costs to customers and the expected reserve balance at the end of thirty years, under different scenarios. The customer costs and end reserve balance are shown as ratios, to enable comparison of the two amounts on a consistent basis. The customer cost under each scenario is shown as a ratio of the expected cost under that scenario to the lowest cost for all scenarios (i.e., scenario 10B0). Thus all scenarios show customer costs of 1.0 or greater; a value of 1.5, for example, implies that the customer cost under that scenario is expected to be 1.5 times that of the lowest-cost scenario (10B0). The end reserve balance amount is shown as the ratio of the expected reserve balance at the end of thirty years to the initial reserve amount (i.e., $237 million). Any scenario showing end reserve balance less than 1.0 indicates a draw-down on the initial reserve to pay for hurricane losses over the thirty-year period. In other words, the initial reserve was tapped as a source of funds.

Figure E-2 gives a breakout of the total cost to the customer under the various scenarios, showing the relative amounts of the annual accrual amount and the two assessments (minimum reserve and special assessment). This chart indicates the level of volatility expected in customer payments with respect to assessments that might be necessary from time to time to cover hurricane losses. Thus, in comparing two alternatives with the same total cost to customer, the one with a greater proportion of normal accrual amounts in the total cost would be preferable to one with a greater reliance on special assessments.

Table E-3 shows the total hurricane damage and interest expenses under the different scenarios, and the ratio of total cost to replacement value of assets. This value represents, on a cost per thousand dollar basis, the total cost to self-insure the assets under the storm reserve, and may be used as a benchmark to evaluate alternatives such as purchase of insurance.

TABLE E-1
SOURCES OF FUNDS PER CUSTOMER
($ Thousands)

Scenario	ANNUAL ACCRUAL	TOTAL ASSESSMENTS	COMBINED TOTAL
10A0	9,715.6	24,069.9	33,785.5
10A100	9,715.3	26,318.9	36,034.2
10A200	9,667.3	28,184.9	37,852.2
10B0	9,373.1	24,162.2	33,535.3
10B1[illegible]	9,368.7	26,428.0	35,796.7
10B200	9,211.9	28,334.5	37,546.4
20A0	17,761.8	19,342.1	37,103.9
20A100	17,680.8	20,924.8	38,605.6
20A200	17,315.8	22,606.4	39,922.1
20B0	16,598.6	19,713.8	36,312.4
20B100	16,415.0	21,356.9	37,771.9
20B200	15,744.2	23,160.4	38,904.7
40A0	27,403.6	13,702.0	41,105.5
40A100	26,871.6	14,791.1	41,662.7
40A200	25,905.8	16,198.3	42,104.1
40B0	24,683.3	14,610.8	39,294.1
40B100	23,928.2	15,837.1	39,765.3
40B200	22,680.9	17,455.6	40,136.5
60A0	31,561.0	10,869.3	42,430.3
60A100	30,873.0	11,744.5	42,617.5
60A200	29,856.3	12,921.0	42,777.3
60B0	28,024.7	12,136.4	40,161.0
60B100	27,146.7	13,169.9	40,316.6
60B200	25,941.3	14,532.5	40,473.8

TABLE E-2

FLORIDA POWER AND LIGHT - STORM FUND SOLVENCY ANALYSIS

Source of Funds - Expected Annual Basis, Per Customer

Scenario	Special Assessment	Minimum Reserve Assessment	Annual Accrual	Investment Income	Reserve Deficit	Total
10A0	$6.78	$0.00	$2.74	$1.77	$2.20	$13.48
10A100	$5.97	$1.44	$2.74	$2.04	$0.98	$13.17
10A200	$5.19	$2.75	$2.72	$2.52	-$0.18	$13.01
10B0	$6.81	$0.00	$2.64	$1.73	$2.31	$13.48
10B100	$6.00	$1.45	$2.64	$2.00	$1.09	$13.17
10B200	$5.22	$2.76	$2.59	$2.48	-$0.05	$13.01
20A0	$5.45	$0.00	$5.00	$2.73	-$0.01	$13.18
20A100	$4.94	$0.95	$4.98	$2.99	-$0.85	$13.01
20A200	$4.43	$1.94	$4.88	$3.38	-$1.72	$12.91
20B0	$5.55	$0.00	$4.68	$2.57	$0.39	$13.19
20B100	$5.05	$0.97	$4.62	$2.82	-$0.43	$13.02
20B200	$4.54	$1.98	$4.43	$3.20	-$1.23	$12.92
40A0	$3.86	$0.00	$7.72	$4.42	-$3.10	$12.90
40A100	$3.65	$0.52	$7.57	$4.59	-$3.50	$12.83
40A200	$3.42	$1.14	$7.30	$4.83	-$3.90	$12.79
40B0	$4.12	$0.00	$6.95	$3.91	-$2.05	$12.93
40B100	$3.91	$0.56	$6.74	$4.07	-$2.41	$12.86
40B200	$3.68	$1.24	$6.39	$4.28	-$2.77	$12.81
60A0	$3.06	$0.00	$8.89	$5.55	-$4.73	$12.78
60A100	$2.96	$0.35	$8.70	$5.65	-$4.92	$12.74
60A200	$2.84	$0.80	$8.41	$5.79	-$5.12	$12.72
60B0	$3.42	$0.00	$7.89	$4.75	-$3.25	$12.81
60B100	$3.32	$0.39	$7.65	$4.84	-$3.42	$12.78
60B200	$3.20	$0.89	$7.31	$4.97	-$3.62	$12.75

FIGURE E-1

FLORIDA POWER & LIGHT - STORM FUND SOLVENCY ANALYSIS
Total Contributions and End Reserve Balance after 30 Years

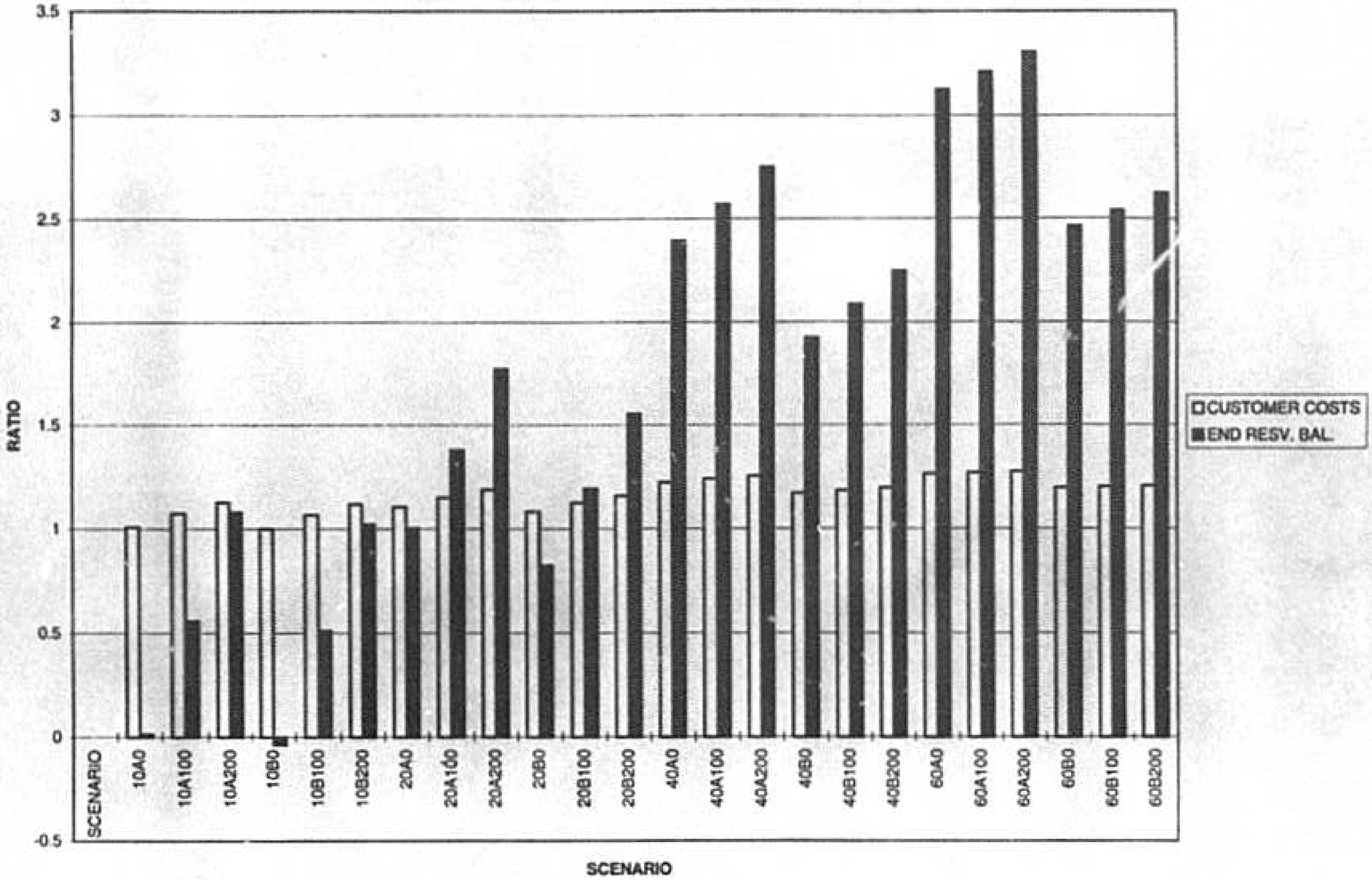


FIGURE E-2

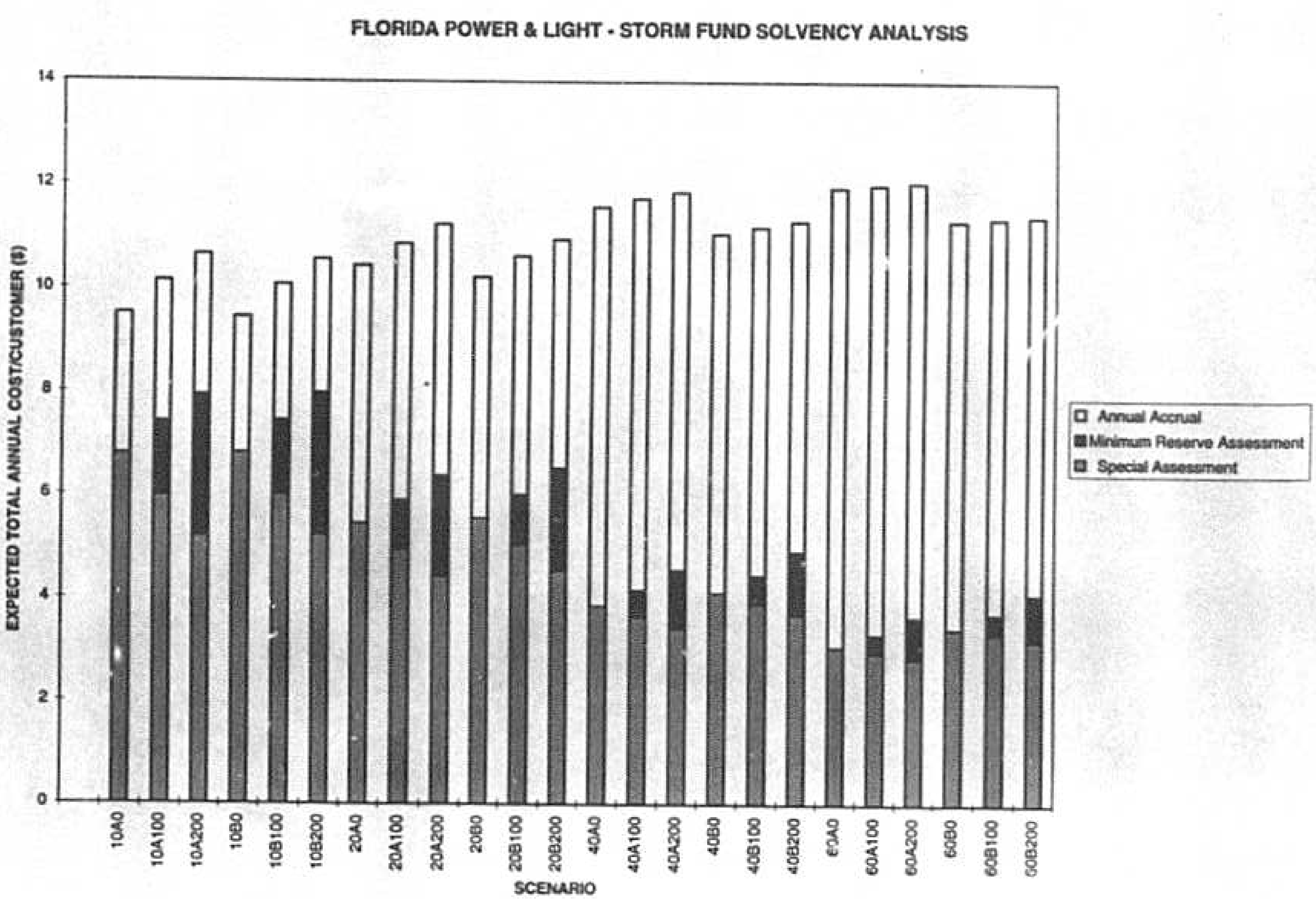

FLORIDA POWER & LIGHT - STORM FUND SOLVENCY ANALYSIS
EXPECTED TOTAL ANNUAL COST/CUSTOMER ($)
0
2
4
6
8
10
12
14
10A0
10A100
10A200
10B0
10B100
10B200
20A0
20A100
20A200
20B0
20B100
20B200
40A0
40A100
40A200
40B0
40B100
40B200
60A0
60A100
60A200
60B0
60B100
60B200
SCENARIO
Annual Accrual
Minimum Reserve Assessment
Special Assessment

TABLE E-3
Total Cost/Total Replacement Value
(Rate/$1,000)

SCENARIO	HURRICANE DAMAGE ($ Thousands)	INTEREST EXPENSE ($ Thousands)	TOTAL COST ($ Thousands)	COST/TOTAL REPLACEMENT VALUE (Rate/$1,000)
10A0	44,290.9	3,567.8	47,858.7	5.8152
10A100	44,290.9	2,459.2	46,750.1	5.6805
10A200	44,290.9	1,888.4	46,179.3	5.6111
10B0	44,290.9	3,580.3	47,871.2	5.8167
10B100	44,290.9	2,469.5	46,760.4	5.6817
10B200	44,290.9	1,898.7	46,189.6	5.6123
20A0	44,290.9	2,492.8	46,783.7	5.6845
20A100	44,290.9	1,904.3	46,195.2	5.6130
20A200	44,290.9	1,541.1	45,832.0	5.5689
20B0	44,290.9	2,537.8	46,828.7	5.6900
20B100	44,290.9	1,944.0	46,234.9	5.6178
20B200	44,290.9	1,580.1	45,871.0	5.5736
40A0	44,290.9	1,492.3	45,783.2	5.5630
40A100	44,290.9	1,266.7	45,557.6	5.5355
40A200	44,290.9	1,097.8	45,388.7	5.5150
40B0	44,290.9	1,593.5	45,884.4	5.5753
40B100	44,290.9	1,360.5	45,651.4	5.5470
40B200	44,290.9	1,186.9	45,477.8	5.5259
60A0	44,290.9	1,066.1	45,357.0	5.5112
60A100	44,290.9	949.5	45,240.4	5.4970
60A200	44,290.9	855.0	45,145.9	5.4855
60B0	44,290.9	1,194.0	45,484.9	5.5267
60B100	44,290.9	1,069.9	45,360.8	5.5116
60B200	44,290.9	967.9	45,258.8	5.4993