

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In Re: Petition for approval of)	DOCKET NO. 900731-EQ
cogeneration agreement between)	ORDER NO. 24065
FLORIDA POWER & LIGHT COMPANY)	ISSUED: 02/05/91
and INDIANTOWN COGENERATION, L.P.)	
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RECOMMENDED ORDER

Pursuant to notice, a formal hearing was held in this docket before the Florida Public Service Commission (Commission) by its duly designated Hearing Officer, Commissioner Michael McK. Wilson, on December 5, 1990, in Tallahassee, Florida.

APPEARANCES

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On behalf of Florida Power & Light Company

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On behalf of Indiantown Cogeneration, L.P.

VICKI GORDON KAUFMAN, Lawson, McWhirter, Grandoff and Reeves, 522 East Park Avenue, Suite 200, Tallahassee, Florida 32301 and C. M. NAEVE, Skadden, Arps, Slate, Meagher & Flom, 1440 New York Avenue N.W., Washington, D.C. 20005-2107
On behalf of Nassau Power Corporation

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DOCUMENT NUMBER-DATE

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FPC-RECORDS/REPORTING

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BACKGROUND

On August 21, 1990, Florida Power and Light Company (FPL) and Indiantown Cogeneration L.P. (ICL) filed a Joint Petition for a Determination of Need for a proposed electrical power plant and related facilities to be located in Martin County, Florida, pursuant to Section 403.519, Florida Statutes, and Rule 25-22.081, F.A.C. The proposed facility, known as the Indiantown Project, will be located near Indiantown, Florida and will be owned and operated by ICL. The net electrical power from the facility will be sold to FPL pursuant to an Agreement For The Purchase of Firm Capacity and Energy between Indiantown Cogeneration, L.P. and Florida Power & Light Company, dated May 21, 1990 and amended December 5, 1990 (the "Power Sales Agreement"). The proposed unit has a projected in-service date of December 1, 1995. On August 29, 1990, FPL filed a petition pursuant to Rules 25-17.080 through 25-17.091, Florida Administrative Code, seeking approval of the Power Sales Agreement. On October 25, 1990, ICL was granted permission to intervene in this docket. By Order, the two dockets were consolidated for purposes of discovery and hearing.

At the prehearing conference held pursuant to notice on November 27, 1990, Nassau Power Corporation (Nassau), a company which had tendered an executed standard offer power sales contract to FPL on June 13, 1990, was granted intervention in this docket. At the outset of the final hearing, Nassau withdrew its intervention.

At the final hearing, ICL presented the testimony of Joseph P. Kearney, President and Chief Executive Officer of ICL and of PG&E-Bechtel Generating Company; Stephen A. Sorrentino, Project Development Manager for PG&E-Bechtel Generating Company with overall responsibility for managing the development of the Indiantown Project; and John R. Cooper, Vice President -- Finance of PG&E-Bechtel Generating Company. FPL presented the testimony of G.R. Cepero, FPL's Director of Bulk Power Markets, and Samuel S. Waters, FPL's Manager of Power Supply Planning. No other party presented any testimony. Petitioners offered Exhibits 2 through 18, Exhibits 20 through 25, and Exhibits 27 through 30, which were received into evidence. The Commission Staff offered Exhibits 1 and 31, which were received into evidence. The Hearing Officer requested Late-Filed Exhibits 19 and 26, which were filed subsequent to the hearing and received into evidence without objection.

The transcript of the hearing (2 volumes) was filed on December 7, 1990. Florida Power and Light Company filed a Post-Hearing Statement and a Recommended Order on December 21, 1990. ICL filed

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a Proposed Recommended Order and a Post-Hearing Statement on December 21, 1990. A ruling on each proposed finding of fact in ICL's Proposed Recommended Order has been made in the Appendix attached to this Recommended Order.

ISSUES

The ultimate issue for determination in this docket is whether the Petition for Approval of the Agreement for the Purchase of Firm Capacity and Energy should be granted. Approval of the Agreement enables the utility to recover the costs from its ratepayers. Approval of such agreements are governed by the Commission's rules concerning cogeneration found in Chapter 25-17, Florida Administrative Code.

At the Prehearing Conference the parties identified eight issues for resolution in this proceeding. They are:

- ISSUE 1: Will the purchase of firm energy and capacity under the ICL/FPL contract result in the economic deferral or avoidance of capacity construction?
- ISSUE 2: Over the life of the ICL/FPL contract, will the cumulative present worth of the firm capacity and energy payments be equal to or less than the value of deferral of the capacity to be avoided or deferred by the contract?
- ISSUE 3: Does the ICL/FPL contract contain adequate security provisions to protect FPL's customers in the event ICL fails to perform?
- ISSUE 4: Is the ICL/FPL contract reasonable, prudent and in the best interest of FPL's ratepayers?
- ISSUE 5: Should FPL be allowed to recover from its customers all payments for energy and capacity in connection with the ICL/FPL contract?
- ISSUE 6: Should FPL be required to resell to another utility energy and capacity purchased under the ICL/FPL contract, if it is in the best of FPL's customers to retain the power?
- ISSUE 7: Should the cogeneration agreement between FPL and ICL be approved?

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ISSUE 8: In determining of contract prudence and cost recovery pursuant to Rule 25-17.083(2), Florida Administrative Code, may the Commission consider as the basis for comparison a utility specific unit or must it use the statewide avoided unit?

These issues encompass a somewhat greater range of topics than the explicit language of either Rule 25-17.083(2), Florida Administrative Code (the prior rule), or Rule 25-17.0832(2), Florida Administrative Code (effective 10/25/90). By addressing these issues the parties have provided the Hearing Officer with substantial competent evidence to make the following Findings of Fact.

FINDINGS OF FACT

1. FPL is a public utility regulated by the Commission. FPL's service area spans 35 Florida counties and contains approximately 27,650 square miles with a population of approximately 5.9 million.

2. (a) ICL is a limited partnership formed as the vehicle for PG&E-Bechtel Generating Company to construct, own and operate the Indiantown Project. ICL's general partners are Toyan Enterprises, a wholly-owned subsidiary of PG&E Generating Company, and Palm Power Corporation, a wholly-owned subsidiary of Bechtel Generating Company. PG&E Generating Company is also a limited partner of ICL. Additional limited partners may be admitted at a later date.

(b) PG&E-Bechtel Generating Company is a general partnership between PG&E Generating Company and Bechtel Generating Company. PG&E Generating Company is a subsidiary of PG&E Enterprises, which in turn is a subsidiary of Pacific Gas & Electric Company. Bechtel Generating Company is a subsidiary of Bechtel Enterprises, which in turn is a wholly-owned subsidiary of Bechtel Group, Inc., one of the largest engineering, construction and development companies in the world.

3. The planned Indiantown Project is to be a 270-330 MW, coal-fired cogeneration facility to be located in southwestern Martin County, Florida, about three miles northwest of Indiantown, Florida, nine miles east of Lake Okeechobee. The projected commercial operation date for the plant is December 1, 1995.

4. The plant site is adjacent to the Caulkins citrus processing plant, an abandoned Florida Steel facility, and vacant

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land zoned for industrial use. State Road 710 and the CSX Railroad line are adjacent to the northern boundary of the site.

5. The site for the Indiantown Project consists of two parcels of land totaling approximately 325 acres. ICL has exclusive three year options to purchase these parcels.

6. The site is adjacent to the project's proposed steam customer and has direct access to the CSX rail system and State Road 710.

7. FPL's existing Martin-Indiantown 230 kV transmission line traverses the plant site.

8. Load flow studies show that the plant can be efficiently integrated into the existing bulk power system by interconnection with that transmission line.

9. No new off-site transmission lines would be required to integrate this facility into FPL's system.

10. The site is located close to FPL's load center. Because of that location, it is not expected to experience any significant transmission losses.

11. The project's location will contribute to FPL's system reliability and integrity.

12. The project will have no negative impact on FPL's ability to obtain emergency assistance from the utilities with which it is interconnected.

13. There is no capacity penalty associated with the project's location. In other words, every 100 megawatts of capacity from the Indiantown Project will provide 100 megawatts of reliability benefit to FPL.

14. The facility will consist of a single pulverized coal boiler, a steam turbine generator, and associated equipment. This is a well established and reliable electric generating technology.

15. The plant will be designed to comply with all applicable environmental standards. The known provisions of the recently enacted Clean Air Act Amendments will have no significant impact on the facility. The facility is exempt from the acid deposition control provisions of these amendments because the Power Sales Agreement for the facility was signed on May 21, 1990, well in advance of the effective date of the law. The more stringent

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limitations established by the amendments for facilities located in "nonattainment areas" also will not apply to the Indiantown Project, since it is located in an area which is presently designated as an "attainment area" for all pollutants for which national ambient air quality standards have been established.

16. The amendments to the Clean Air Act contain provisions which confer additional rulemaking authority on the Federal Environmental Protection Agency and the State of Florida, Department of Environmental Regulation. To date, no rules have been adopted which would impact the proposed facility.

17. The plant will burn approximately one million tons per year of coal. Coal will be obtained from one or more coal suppliers in the Southern Appalachian coal region. Coal is a domestically-sourced, readily available fuel with a history of stable pricing. These factors reduce the potential of supply interruptions and significant fuel price increases, and result in a stable and secure fuel supply.

18. The contract requires that at least 50% of the plant's coal requirements be purchased under long term contracts, with the remainder to be obtained by either long term contracts or spot purchases.

19. ICL has obtained preliminary expressions of interest from a number of potential fuel suppliers, and ICL's affiliates have recent experience in coal acquisition for similar facilities.

20. ICL will maintain approximately a seven day fuel inventory in active storage, with an additional 30 days' supply in an emergency coal pile.

21. The site has the physical capability of accommodating a larger coal inventory if conditions warrant increasing the amount of coal stored on site.

22. The plant will use small quantities of natural gas or distillate fuel oil for start-up purposes. These fuels can also be used for supplemental firing in the main boiler during periods of peak demand, and may be used in an auxiliary boiler to meet steam requirements when the main boiler is out of service.

23. ICL has a letter of intent with Indiantown Gas Company to provide natural gas to the project for these purposes.

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24. Coal for the projected is expected to be transported by the CSX Railroad, which has an existing rail line adjacent to the site.

25. ICL has a letter of intent with CSX Transportation for transportation of both coal and limestone to the site, and for backhaul of ash.

26. FPL's system today relies on coal-fired generation, excluding coal-by-wire purchases, for approximately 2% of its energy requirements. The purchase of coal-fired power from ICL will contribute to maintaining or improving FPL's fuel diversity.

27. ICL has certified to the Federal Energy Regulatory Commission (FERC) that the project will be constructed and operated as a "qualifying facility" (QF) under the Public Utility and Regulatory Policies Act of 1978 and FERC's implementing regulations.

28. The steam customer for the facility will be Caulkins Indiantown Citrus Company. The Caulkins plant produces concentrates and extracts from the juice of citrus fruits. Caulkins uses steam in an evaporation process for producing citrus concentrate, and in a drying process in which pulp and peel are used to create cattle feed.

29. ICL has an Agreement in Principle with Caulkins under which ICL will provide all of Caulkins' steam requirements, up to a maximum of 215,000 pounds per hour.

30. Under the agreement Caulkins will, at a minimum, take the amount of steam necessary for ICL to maintain qualifying facility status.

31. Caulkins' current thermal energy requirements on an annualized basis are sufficient to support QF status for the Indiantown Project. If a planned expansion by Caulkins occurs, those requirements will be approximately double the required QF minimum.

32. Cooling and process water for the facility will be obtained from agricultural waste water in the Taylor Creek-Nubbin Slough, located approximately 20 miles north of the project site.

33. Transportation of this water from the Taylor Creek-Nubbin Slough will require construction of an approximate 20-mile water pipeline to be buried in the existing CSX Railroad right-of-way.

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34. The water pipeline is the only associated off-site facility required in connection with the project.

35. The estimated total capitalized cost for the facility is approximately \$600 million, or approximately \$2,000 per kW.

36. At a 5% escalation rate, this translates into approximately \$505 million, or \$1,683 per kW, in January 1991 dollars.

37. ICL bears the financial and other risks associated with construction of the project, including all cost escalation and interest rate risk.

38. Construction is scheduled to begin by July, 1992.

39. The construction start date could slip a few months without placing the December 1, 1995 in-service date in jeopardy.

40. PG&E-Bechtel Generating Company will have overall responsibility for managing the development, construction and operation of the project. PG&E-Bechtel Generating Company was organized in 1989 to be the exclusive vehicle for Pacific Gas & Electric Company and Bechtel Group, Inc. to participate in the non-utility power production business.

41. ICL expects that Bechtel Power Company will design and construct the Indiantown Project, although FPL's required approval of the architect/engineer has not yet been obtained. Financing for the plant will be arranged by PG&E-Bechtel Generating Company, and day-to-day operations will be the responsibility of PG&E Operating Services, a subsidiary of PG&E Enterprises.

42. ICL's access to the skill, experience and resources provided by PG&E and Bechtel, each of which has substantial long-term experience in the electrical power business, provide confidence that the project will be viable and reliable.

43. The sale of capacity and energy from the Indiantown Project is governed by the terms of the Power Sales Agreement between ICL and FPL, executed on May 21, 1990. The termination fee provisions of the Power Sales Agreement were modified by a contract amendment executed on December 5, 1990, to reflect FPL's 1996 avoided unit, a 768 MW IGCC facility.

44. The Power Sales Agreement has an initial term of 30 years. The plant has a nominal net electrical output of 300 MW.

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The actual committed capacity from the plant will be designated by ICL based on pre-operational tests, and must be in the 270 MW to 330 MW range, unless FPL agrees otherwise.

45. The Power Sales Agreement contains a number of provisions designed to provide reasonable assurance that the facility will be completed on-time, including:

(a) deadlines for the filing of need determination and sight certification applications;

(b) requiring construction loan closing within 36 months of execution of the agreement;

(c) beginning construction within 39 months of the execution of the agreement;

(d) the payment to FPL of a total \$9,000,000 of completion security within 15 days after the construction loan closing. This security is forfeited at the rate of \$750,000 per month for every month that the commercial operation date is delayed beyond December 1, 1995; and

(e) the rather narrow definition of a "force majeure" which would exclude ICL from meeting the scheduled completion date.

46. Should ICL complete the facility before September 1, 1995, FPL is obligated under the agreement to begin purchasing firm capacity and energy after that date. Thus, ICL has some significant additional incentive to bring the project on line before the scheduled completion date.

47. The Power Sales Agreement also contains a number of provisions intended to assure that the facility will be designed as a utility grade plant capable of reliable, high capacity factor operation including:

(a) granting FPL the right to approve the selection of the architect/engineer for the facility, who must be instructed to design and construct the facility to be capable of operating reliably with a capacity billing factor of at least 87% during the initial term of the Power Sales Agreement;

(b) requiring ICL to obtain a minimum \$60 million liquidated damages provision from its prime contractor to guarantee performance levels and completion date; and

(c) requiring ICL to arrange to have its lenders designate an independent engineering firm to review and evaluate the design of the facility, and to make any changes determined to be necessary by that firm unless FPL concurs with ICL that such changes are unnecessary.

48. The Power Sales Agreement also contains a number of provisions designed to assure that the facility will operate reliably throughout the term of the agreement. These include:

(a) the previously mentioned provision granting FPL the right to approve both the architect and engineer for the facility;

(b) ICL must arrange for review of the facility's operation and maintenance plan by an independent engineer (subject to FPL's approval) to determine that the plan is effective and that it will allow the facility to operate with a capacity billing factor of at least 87%;

(c) an independent review of the facility's operation and maintenance plan must be performed on a periodic, on-going basis;

(d) the parties must mutually develop written operating procedures to integrate the facility into FPL's electric system;

(e) ICL must enter into long-term fuel supply agreements, with market price reopener provisions, for at least 50% of the facility's fuel requirements; and

(f) ICL has agreed that the facility will be managed by PG&E-Bechtel Generating Company, or one of ICL's general partners.

49. The Power Sales Agreement also contains a number of provisions to assure the reliable operation of the facility during times of highest electrical demand. These include:

(a) that ICL may only schedule outages during periods approved by FPL;

(b) that ICL cannot schedule a maintenance shutdown of the facility during on-peak hours in December, January, February, June, July, August, or September 1 to September 15 of any year;

(c) that the facility is subject to dispatch by FPL; and

(d) the contract contains pay-for-performance provisions which give a financial incentive for high capacity factor performance during on-peak hours.

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50. The Power Sales Agreement allows FPL to economically dispatch the facility, to commit and decommit the facility, and to control both the real and reactive power from the facility. This provision allows the facility to be treated as if it were an FPL unit, thus creating the opportunity for FPL to reduce its system costs.

51. Under the Power Sales Agreement, capacity payments are on a pay-for-performance basis. The base capacity payment, assuming the plant operates in the 87% to 92% capacity billing factor range, is \$23,000 per MW/month (\$23 per kW/month) for the first twenty years of the contract. This base payment declines by 50% in the twenty-first year, and declines annually thereafter.

52. If the plant operates above the 92% capacity billing factor level, then there is a 2 percentage point bonus for every 1 percentage point increase in capacity billing factor up to 97%, where the capacity payments are capped. If the plant operates below the 87% capacity billing factor level, then there is a 2 percentage point penalty for every 1 percentage point decrease in capacity billing factor down to 55%. No capacity payment is made in any month in which the capacity billing factor is less than 55%.

53. The calculation of the capacity billing factor gives extra weight to performance during on-peak hours, which are noon to 9:00 p.m. from April 1 through October 31, and 6:00 a.m. to 10:00 a.m. and 6:00 p.m. to 10:00 p.m. from November 1 to March 31. The target level for performance during these hours is a 93% capacity factor, and on-peak performance above or below this level is given greater weight in calculation of the capacity billing factor. Thus ICL has significant financial incentives to produce energy during the on-peak periods when the capacity and energy are of greatest value of FPL and its customers.

54. Under the Power Sales Agreement, monthly energy payments are based on a target energy cost of \$23.20 per MWH, as adjusted quarterly from the first quarter of 1990 to track changes in the cost of coal, coal transportation, and lime and ash disposal. This base energy rate is premised on the cost of fuel for the St. Johns River Power Park (SJRPP) units, adjusted for a transportation differential to Indiantown and for ICL's expected consumption of lime and costs for ash disposal (backhaul). The monthly payments are further adjusted to reflect the hourly effect of changes in the efficiency of the facility caused by FPL dispatch. The contract permits FPL to negotiate to assume responsibility for the fuel supply in the future, if economies of scale (and savings to the ratepayers) would result.

55. Once a year, the actual energy cost for the facility is calculated (subject to audit by FPL), and ICL and FPL share in any difference between the actual energy cost and the target energy cost. Energy costs related to the production of steam for Caulkins Citrus (the steam host) are ICL's sole responsibility, and are excluded from the calculation. If the actual energy cost is less than the target, ICL and FPL share 50/50 in the energy cost savings. If the actual energy cost is greater than the target, ICL and FPL share the first 10% of additional energy cost on a 60/40 basis, and ICL bears all the additional energy cost above 110% of the target. This provision caps FPL's (and therefore the ratepayers') responsibility for energy costs at 104% of the target rate.

56. These energy payment provisions give ICL a substantial incentive to minimize the energy costs for the facility, and enable FPL's customers to share in any savings achieved while limiting their exposure to increased costs.

57. FPL's economic analysis shows that the Indiantown Project remains approximately \$76 million more cost-effective than FPL's own avoided unit even if FPL's share of the energy cost reaches the 104% cap permitted under the Power Sales Agreement.

58. The Power Sales Agreement also contains a number of provisions designed to protect FPL in the event that the facility fails to perform. These include:

(a) the previously mentioned \$9 million completion security against which FPL can draw \$750,000 per month as liquidated damages in the event the facility does not achieve its December 1, 1995 commercial operation date, except as the date may be extended for up to 5 months by the limited definition of force majeure. This monthly amount is representative of what it could cost FPL to make obtain replacement power on a short-term basis.

(b) that if the agreement is prematurely terminated, ICL is obligated to pay FPL a termination fee equal to the cumulative difference between payments to ICL under the agreement and FPL's avoided cost for an IGCC unit, calculated on a year-by-year value of deferral basis.

(c) This obligation is secured by (i) termination fee security in the form of cash or a letter of credit which starts at \$13 million in the first year of operation up to a maximum of \$50

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million in the fifth year of operation; (ii) a first lien on the QF status reserve fund described below; (iii) a second lien on the maintenance reserve fund; and (iv) a second mortgage on the facility.

59. The total security for payment of the termination fee exceeds the termination fee obligation in each year.

60. The termination fee payable under the Power Sales Agreement is greater than the termination fee liability which would be calculated if a statewide pulverized coal unit, rather than FPL's own IGCC unit, was used as the basis for calculating the termination fee liability.

61. ICL is required to maintain a QF status reserve fund which starts at \$500,000 during the first year of commercial operation and increases to a maximum of \$5 million by the tenth year of operation. This fund is available to ICL to take whatever action is necessary to maintain its qualifying facility status, including building or securing a new steam host. FPL has a first lien on this fund as additional security for payment of any termination fee liability.

62. ICL is required to maintain a maintenance reserve fund which starts at \$3 million in the first year of operation and increases to \$30 million in the tenth year of operation. The fund can be used for major maintenance or overhaul to the plant, but can never fall below \$10 million. This provision can be satisfied by a similar reserve fund required by ICL's lenders, including a debt service reserve fund. FPL has a second lien on such fund to secure all of ICL's obligations, including any termination fee liability, if ICL's lenders require a similar fund. FPL has a first lien on the fund if a similar fund is not required by ICL's lenders, or when ICL's project debt is fully paid.

63. FPL will hold a second mortgage on the facility to secure all of ICL's obligation to FPL, including any termination fee liability. The value of this second mortgage is protected by the requirement that ICL have a minimum 10% equity investment in the project; by a levelization formula which requires ICL's equity investment to increase over time, either through reduction in the project debt and/or appreciation in the fair market value of the facility; and by limits on distributions to ICL's partners during the period in which ICL may be liable for payment of a termination fee.

64. The estimated value of this second mortgage interest ranges from a minimum of \$ 102 million in the first year of

operation to over \$ 650 million by the nineteenth year of operation, which is projected to be the last year in which any termination fee liability exists.

65. FPL's capacity planning process has three basic steps: (i) quantification of the timing and amount of resources necessary to maintain an adequate level of system reliability; (ii) identification of available alternatives to meet the need and definition of an "avoided cost" basis against which the alternative can be compared, and (iii) optimization of the alternatives to identify a power supply plan that provides favorable economics while properly addressing risk and uncertainty.

66. The quantification of the timing and amount of capacity needs begins with the preparation of a forecast of FPL's demand and energy requirements. FPL presented a detailed 20-year forecast of customers, sales, and peak demand.

67. This load forecast includes the impact of FPL's conservation efforts. These efforts are projected to provide approximately 126 MW of incremental demand reductions from 1989 through 1997, for a total of 750 MW by 1997.

68. This forecast shows that FPL's summer peak demand is expected to grow from approximately 13,341 MW in 1990 to approximately 15,421 MW by 1996.

69. This same load forecast was reviewed by the Commission and found reasonable for planning purposes in the need determination proceedings for FPL's Lauderdale Repowering and Martin Expansion projects. (see Order No. 23079, p. 4 and Order No. 23080, p. 4)

70. The record contains no evidence that this load forecast is not reasonable for planning purposes in this docket.

71. The timing and amount of FPL's need is determined by comparing the forecast of demand to existing and committed resources to determine if FPL's reliability criteria are met.

72. For this purpose, the maximum cost effective level of demand side management reductions is taken into account. These reductions total 1,003 MW by 1997, including both residential load control and interruptible rates for larger customers. When these demand side management measures are considered together with the conservation measures enumerated in Finding of Fact No. 67, the record shows that FPL is expected to have over 1,750 MW of total demand side savings by 1997.

73. FPL uses two reliability criteria to determine the timing and amount of its capacity needs: summer reserve margin and loss of load probability (LOLP). FPL plans its system to maintain a minimum summer reserve margin of 15% and a maximum LOLP of 0.1 days/year. These criteria are commonly used in the utility industry, and were reviewed by the Commission and found reasonable for planning purposes in the need determination proceedings for FPL's Lauderdale Repowering and Martin Expansion projects. (see Order No. 23079, p. 4 and Order No. 23080, p. 4) The record is devoid of evidence suggesting these reliability criteria are not reasonable for planning purposes in this docket.

74. FPL's analysis of its additional capacity need takes into account FPL's existing generating capacity; the 515 MW of QFs which were under contract to FPL prior to the ICL contract; the additional capacity resulting from the repowering of Lauderdale Unit Nos. 4 and 5 in 1993 and the addition of Martin Unit Nos. 3 and 4 in 1994 and 1995; and the power purchases under FPL's 1982 and 1988 agreements with the Southern Companies. Through the use of the TIGER reliability model, the analysis also takes into account the availability of assistance from the other utilities with which FPL is interconnected.

75. FPL's analysis shows that it reaches undesirable levels of LOLP beginning in 1995, and therefore needs additional capacity beginning in that year.

76. The analysis shows that without any additional QF capacity not already under contract, FPL requires a total of approximately 900 MW of additional capacity by 1996 in order to meet the 0.1 day/year reliability target.

77. FPL's analysis then identifies the available utility construction alternatives to meet the capacity need. The economic analysis of these alternatives is based on a series of economic assumptions and on cost parameters for the various generating alternatives as shown on Exhibit 27, Documents 4 and 5.

78. The economic analysis of alternatives also makes use of FPL's May, 1989 most likely fuel forecast. This forecast, which is developed using a scenario approach, is a 30-year projection of the price and availability of fossil fuels. The fuel forecast, which is described in detail in Section III.B and Appendix D of Exhibit 3, and summarized on Exhibit 27, Document 2, was reviewed by the Commission and found reasonable for planning purposes in the need determination proceedings for FPL's Lauderdale Repowering and Martin Expansion projects. (see Order No. 23079, p. 6 and Order No. 23080, p. 6) The record is devoid of evidence suggesting that

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FPL's fuel forecast is not reasonable for planning purposes in this docket.

79. Based on these assumptions and forecasts, FPL's analysis shows that the most cost-effective utility construction alternative for meeting the 900 MW need in 1996 would be the construction of two 768 MW integrated gasification combined cycle (IGCC) units. Thus, an IGCC unit is FPL's "avoided unit" for 1996.

80. The Indiantown Project is a more cost-effective alternative for meeting a portion of FPL's 1996 capacity need than the IGCC unit. The Indiantown Project saves approximately \$90 million (1990\$) cumulative present value of revenue requirements (CPVRR) over a thirty year period compared to an equivalent amount of IGCC capacity. The Indiantown Project also saves approximately \$73 million over a thirty year period when compared to an equivalent amount of IGCC capacity on a year-by-year value of deferral basis.

81. The Indiantown Project is more expensive than 300 MW of standard offer capacity priced at 80% of the statewide avoided unit when just the present value of the payment stream for 300 MW of standard offer capacity is compared to just the present value of 300 MW of capacity under this Power Sales Agreement

82. This Agreement contains numerous provisions which are not found in the standard offer contract.

83. These include the previously mentioned provisions which will provide incentives to ICL to:

(a) assure that the unit will be completed prior to its December 1, 1995, commercial operating start up date;

(b) assure that the unit will operate reliably (and penalties if the unit fails to meet specified performance levels);

(c) assure that the unit will be available when most needed to minimize costs to FPL's ratepayers.

(d) assure the unit is operated in such a way to minimize FPL's production costs.

84. These guarantees of performance and high level of operational coordination and/or control must be considered in any cost-effectiveness analysis. While not readily quantifiable in dollar terms these do represent significant benefits to FPL and its ratepayers over the thirty year term of this agreement.

85. The record is devoid of evidence to support a finding that when considering this project with these benefits versus a discounted standard offer contract that the Indiantown Project is not cost effective.

86. The Indiantown Project will contribute 300 MW toward the total 900 MW of capacity needed by FPL in 1996 and is an integral part of meeting FPL's necessary reliability level.

87. Absent ICL's contribution toward meeting FPL's need, FPL's system reliability would degrade to unacceptable levels in 1996, increasing the likelihood of service interruptions.

88. FPL's need for additional capacity in 1996 is part of a statewide need for approximately 1,060 MW of new capacity in 1996.

89. The 300 MW to be provided by the ICL unit is also less than the cumulative Peninsular Florida need of 2,058 MW by 1996 which remains unsatisfied after all prior QFs and previously certified capacity additions are taken into account.

90. As a coal unit, the Indiantown Project is consistent with the type of capacity designated as the statewide avoided unit, and will help to maintain adequate fuel diversity on a Peninsular Florida basis.

91. The Indiantown Project is a cost-effective alternative for meeting the Peninsular Florida capacity need when compared to the statewide avoided unit, a 1996 pulverized coal unit. The Indiantown Project saves approximately \$67 million on a value of deferral basis when compared to such a unit.

CONCLUSIONS OF LAW

The Commission has jurisdiction over the parties and the subject matter of this docket pursuant to Chapters 120 and 366, Florida Statutes, and Chapters 25-17 and 25-22, Florida Administrative Code.

During the pendency of this proceeding and prior to the hearing, the Commission's cogeneration rules were amended. The criteria for evaluating a negotiated contract have changed. Both the Petitioner, Florida Power & Light, and Indiantown Cogeneration L.P. have alleged that the rule in effect at the time of the

execution of the contract (May 21, 1990) controls. I do not necessarily agree. However, as the following analysis shows, the proposed agreement meets the requirements of both the former and current rules. Therefore, the question is moot.

The prior version of the rule governing the approval of negotiated contracts is found in Rule 25-17.083(2), Florida Administrative Code. In pertinent part the rule states:

(2) Each utility may negotiate a contract for the purchase of firm energy and capacity from any qualifying facility. Generally, such contracts will be considered prudent for cost recovery purposes if the following criteria are met:

(a) it is demonstrated that the purchase of firm energy and capacity from the qualifying facility pursuant to the terms and conditions of the contract can reasonably be expected to result in the economic deferral or avoidance of additional capacity construction by Florida utilities from a statewide perspective; and

(b) the cumulative present worth of firm energy and capacity payments made to the qualifying facility over the term of the contract are to be no greater than the cumulative present worth of the value of a year-by-year deferral of the statewide avoided unit over the term of the contract; and

(c) to the extent that the annual firm energy and capacity payments made to the qualifying facility in any year exceed that year's annual value of deferring the statewide avoided unit, the contract contains adequate provisions to protect the utility's ratepayers in the event that the qualifying facility fails to perform pursuant to the terms and conditions of the contract. Such provisions may be in the form of a requirement for the repayment of firm energy and capacity payments made by the utility, a surety bond or equivalent assurance of performance of the contract by the qualifying facility, or payment of less than full avoided firm energy and capacity costs.

The current version of the applicable cogeneration rule (Rule 25-17.0832(2), Florida Administrative Code, is as follows:

(2) Negotiated Contracts. Utilities and qualifying facilities are encouraged to negotiate contracts for the

purchase of firm capacity and energy. Such contracts will be considered prudent for cost recovery purposes if it is demonstrated that the purchase of firm capacity and energy from the qualifying facility pursuant to the rates, terms, and other conditions of the contract can reasonably be expected to contribute towards the deferral or avoidance of additional capacity construction or other capacity-related costs by the purchasing utility at a cost to the utility's ratepayers which does not exceed full avoided costs, giving consideration to the characteristics of the capacity and energy to be delivered by the qualifying facility under the contract. Negotiated contracts shall not be evaluated against an avoided unit in a standard offer contract, thus preserving the standard offer for small qualifying facilities as described in subsection (3). In reviewing negotiated firm capacity and energy contracts for the purpose of cost recovery, the Commission shall consider factors relating to the contract that would impact the utility's general body of retail and wholesale customers including:

(a) whether additional firm capacity and energy is needed by the purchasing utility and by Florida utilities from a statewide perspective; and

(b) whether the cumulative present worth of firm capacity and energy payments made to the qualifying facility over the term of the contract are projected to be no greater than:

(1) the cumulative present worth of the value of a year-by-year deferral of the construction and operation of generation or parts thereof by the purchasing utility over the term of the contract; calculated in accordance with subsection (4) and paragraph (5)(a) of this rule, providing that the contract is designed to contribute towards the deferral or avoidance of such capacity; or

(2) the cumulative present worth of other capacity and energy related costs that the contract is designed to avoid such as fuel, operation and maintenance expenses or alternative purchases of capacity, providing that the contract is designed to avoid such costs; and

(c) to the extent that annual firm capacity and energy payments made to the qualifying facility in any year exceed that year's annual value of deferring the construction and operation of generation by the purchasing utility or other capacity and energy related costs, whether the contract contains provisions to ensure

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repayment of such payments exceeding that year's value of deferring that capacity in the event that the qualifying facility fails to deliver firm capacity and energy pursuant to the terms and conditions of the contract; provided, however, that provisions to ensure repayment may be based on forecasted data; and
(d) considering the technical reliability, viability and financial stability of the qualifying facility, whether the contract contains provisions to protect the purchasing utility's ratepayers in the event the qualifying facility fails to deliver firm capacity and energy in the amount and times specified in the contract.

Subsections 2(a)(b) and (c) of each rule are comparable, requiring evidence of need for the capacity, cost-effectiveness vs. a standard avoided unit and security for any payments in excess of each year's value of deferral in the event the qualifying facility fails to perform.

Rule 17.0832(2)(d), Florida Administrative Code, imposes additional requirements for greater protection of the ratepayers in the event that the QF fails to perform.

In its petition, FPL asked the Commission to make specific findings that:

- (1) the Agreement is reasonable, prudent and in the best interest of FPL's ratepayers; (2) the Agreement contains adequate security based on ICL's financial ability; (3) no costs in excess of FPL's full avoided costs are likely to be incurred by FPL over the initial term of the Agreement; (4) all payments for energy and capacity made by FPL pursuant to the Agreement may be recovered from FPL's customers; and (5) FPL shall not be required to resell the energy and capacity purchased pursuant to the Agreement to another electric utility so long as their retention is in the best interests of FPL's ratepayers.

Rule 25-17.083(2), Florida Administrative Code, requires that three criteria be met in order for payments made pursuant to negotiated agreements for the purchase of electricity from cogenerators to be recoverable through a utility's fuel adjustment clause. First, it must be demonstrated that the purchase of such firm energy and capacity from the QF pursuant to the terms and conditions of the contract can reasonably be expected to result in the economic deferral or avoidance of additional capacity construction by Florida utilities from a statewide perspective. Second, the cumulative present worth of firm energy and capacity

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payments made to the QF over the term of the contract are to be no greater than the cumulative present worth of the value of the year-by-year deferral of the statewide avoided unit over the term of the contract. Third, to the extent that the annual firm energy and capacity payments made to the QF in any year exceed that year's annual value of deferring the statewide avoided unit, the contract must contain adequate provisions to protect the utility's ratepayers in the event the QF fails to perform pursuant to the terms and conditions of the contract.

As to the first requirement the record evidence clearly demonstrates that FPL, Peninsular Florida and the State of Florida as a whole have a need for firm capacity and energy in 1996, in an amount greater than is represented by this project. The record reflects that this project is less expensive than FPL's own avoided unit. The record also shows that when the Indiantown project is compared to the 1996 statewide avoided unit, it is cost effective. Thus the purchase of firm capacity and energy pursuant to this agreement will result in the "economic deferral of capacity construction from a statewide perspective."

The second requirement is an easily calculable comparison. The evidence demonstrates that ICL project is approximately \$67 million less expensive on a cumulative net present value basis when compared to the 1996 statewide avoided unit.

The third requirement is also an easily calculable comparison. ICL is obligated under the agreement to pay a termination fee to FPL based on the utility's avoided IGCC unit. This fee is greater than the liability would be using the state-wide avoided unit as the basis for comparison. This obligation is well secured by a letter of credit, a first lien on the QF status reserve fund, a second lien on the maintenance reserve fund and a second mortgage on the facility.

Accordingly the contract contains "adequate provisions to protect the ratepayers in the event the QF fails to perform".

Rule 25-17.0832(2), Florida Administrative Code (effective 10-25-90) has four specific requirements.

The first requires a showing of the need for additional firm capacity and energy from the perspective of the purchasing utility and on a statewide basis. As previously stated, the record clearly demonstrates a need for firm capacity and energy in excess of the 330 MW maximum of the Indiantown project to meet both FPL's and the statewide aggregate needs.

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The second criteria is satisfied by a comparison of the cumulative net present value of the payments for firm capacity and energy to the utility's avoided generating alternative. The record clearly indicates that Indiantown project is approximately \$73 million less expensive than the equivalent amount of FPL constructed IGCC capacity.

In compliance with the rule, the contract is designed to avoid or defer the need for that construction.

Rule 25-17.0832(2)(c) requires a year by year analysis of the adequacy of the amount of and security for any repayment of payments made in excess of that years value of deferral for the utility's avoided unit. The termination fee payable pursuant to this agreement is equal to the difference between this contract and FPL's 1996 768 MW IGCC unit. The previously mentioned letter of credit, liens on maintenance and QF status funds reserve and second mortgage on the facility are sufficient to secure this obligation in satisfaction of this requirement.

The last substantive provision of Rule 25-17.0832(2), requires an evaluation of the protection afforded the utilities ratepayers in the event that qualifying facility fails to deliver firm capacity and energy in the amount and at the times specified by the agreement. Consideration is given to the technical reliability, viability and financial stability of the qualifying facility. By the previously detailed provisions permitting FPL to approve the architect/engineer, the requirement that ICL obtain a commitment from the prime contractor to provide security for \$60 million in liquidation damages, the time requirements for filing site certification application and construction loan closing, the completion security of \$9 million, and the opportunity for ICL to begin selling power three months before the scheduled completion date, the record contains clear evidence that the project will be available when promised. Ratepayers are adequately protected if the facility does not come on line as scheduled in late 1995.

The technology chosen (pulverized coal) is proven. The project sponsors parent organizations (the Bechtel Group Inc. and Pacific Gas and Electric Company) have the resources to complete this project on time and as specified.

The second mortgage which FPL will hold is available to secure all ICL's obligations under the agreement. ICL is required to have a minimum 10% equity in the project. The contract requires that the equity in the project must increase, either through reduction

in the principal and/or appreciation in fair market value. In any year which a termination fee could be due, the Agreement limits distributions to the partners of ICL.

Based on these considerations it is clear that the ratepayers are adequately protected in the event that ICL fails to deliver firm capacity and energy in the amounts and at the times specified as required by Rule 25-17.0832(2)(d).

SPECIFIC FINDINGS

Based on the Findings of Fact and Conclusions of Law, the following Specific Findings are made:

- (1) the Agreement is reasonable, prudent and in the best interest of FPL's ratepayers.
- (2) the Agreement contains adequate security based on ICL's financial stability.
- (3) no costs in excess of FPL's full avoided costs are likely to be incurred by FPL over the initial term of the Agreement.
- (4) all payments for energy and capacity made by FPL pursuant to the Agreement may be recovered from FPL's customers.

FPL asked for a finding that it "shall not be required to resell the energy and capacity purchased pursuant to the Agreement to another electric utility so long as their retention is in the best interests of FPL's ratepayers. The previous rule governing such sales included a requirement that the sales be at the utility's "original cost".

In prior proceedings FPL has maintained that this has at least two adverse effects on the ratepayers: 1. It deprives FPL of the benefit of its bargain when it negotiates for the purchase of power from a QF; and 2. In the event that payments for firm capacity and energy under a negotiated contract are "front-end" loaded selling power in the latter years results in a price that less than the true "original cost."

The rule governing such sales has been amended effective October 25, 1990. Rule 25-17.0832(5), Florida Administrative Code now states that:

"To the extent that firm energy and capacity...is not needed by a purchasing utility, these rules shall be construed to

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encourage the purchasing utility to sell all or of the energy and capacity...at a mutually agreed upon price which is cost effective to the ratepayers".

Under the new rule, FPL would not be required to sell this power unless it did not need it and the selling price was cost-effective. Absent these two prerequisites, it would not be reasonable for FPL to resell this power. Accordingly, FPL shall not be required to resell the firm energy and capacity purchased pursuant to this agreement to another utility so long as their retention is in the best interests of FPL's ratepayers.

RECOMMENDATION

Based on the foregoing, it is my recommendation that the Florida Public Service Commission enter a Final Order:

- (a) INCORPORATING the Findings of Fact, Conclusions of Law, and Specific Findings contained in this Recommended Order; and
- (b) GRANTING the Petition for Approval of Cogeneration Agreement with Indiantown Cogeneration L.P.

Respectfully submitted,



MICHAEL MCK. WILSON

Commissioner and Hearing Officer

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APPENDIX I

RULINGS ON PROPOSED FINDINGS OF FACT

Indiantown Cogeneration L. P. submitted some separate Findings of Fact in accordance with the requirements of Rule 22-25.056, F.A.C. In compliance with Section 120.59(2), Florida Statutes, I make the following rulings on each one:

(1-30) Accepted and Incorporated