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May 15, 2009

HAND DELIVERED

RECEIVED-FPSC  
09 MAY 15 PM 2:50  
COMMISSION  
CLERK

Ms. Ann Cole, Director  
Division of Commission Clerk  
Florida Public Service Commission  
2540 Shumard Oak Boulevard  
Tallahassee, Florida 32399-0850

Re: Petition by Tampa Electric Company for approval of extension of small power production agreement with City of Tampa; FPSC Docket No. 090146-EQ

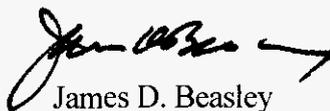
Dear Ms. Cole:

Enclosed for filing in the above docket are the original and five copies of Tampa Electric Company's answers to Staff's First Data Request dated April 30, 2009.

Please acknowledge receipt and filing of the above by stamping the duplicate copy of this letter and returning same to this writer.

Thank you for your assistance in connection with this matter.

Sincerely,



James D. Beasley

JDB/pp  
Enclosure

cc: Martha Brown (w/enc.)

CURR \_\_\_\_\_  
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DOCUMENT NUMBER-DATE

04756 MAY 15 8

FPSC-COMMISSION CLERK

TAMPA ELECTRIC COMPANY  
DOCKET NO. 090146-EQ  
STAFF'S FIRST DATA REQUEST  
REQUEST NO. 1  
PAGE 1 OF 74  
FILED: MAY 15, 2009

1. Please provide "type and strike" formatted and clean copies of the First Agreement and the 2006 Agreement.
  - A. The First Agreement, circa 1982, is only available in hard copy. Thus, Tampa Electric is unable to produce a "type and strike" version of the First Agreement and the 2006 Agreement. However, the 2006 Agreement, which was included in Tampa Electric's petition, acts as a "type and strike" because it identifies the differences between the two agreements by itemizing the additions, deletions and/or modifications to the First Agreement. A copy of the First Agreement is provided as an attachment to this response. The 2006 Agreement was previously provided as Exhibit A to the company's petition for approval of the agreement.

DOCUMENT NUMBER-DATE

1

04756 MAY 15 09

FPSC-COMMISSION CLERK

SMALL POWER PRODUCTION AGREEMENT

THIS AGREEMENT, made and entered into as of the 26th day of August, 1982, by and between the City of Tampa, a municipal corporation organized under the laws of the State of Florida, hereinafter referred to as "the City", and Tampa Electric Company, a private utility corporation organized under the laws of and authorized to do business within the State of Florida, hereinafter referred to as "Tampa Electric".

WITNESSETH:

WHEREAS, the City plans to rehabilitate the existing City of Tampa Incinerator and to operate the Incinerator as a refuse disposal/small power production facility, having a daily refuse incineration capacity of approximately 1,000 tons and an electrical generation capacity of approximately 20 megawatts ("the Facility"); and

WHEREAS, the Facility has been qualified by the Federal Energy Regulatory Commission as a small power production facility under the provisions of Section 201 and 210 of the Public Utility Regulatory Policies Act of 1978; and

WHEREAS, the City desires to utilize for its own consumption in the operation of the Facility and possibly in the operation of the Hooker's Point Advanced Wastewater Treatment Plant ("Treatment Plant") a portion of the electric power the City will generate at the Facility and to sell to Tampa Electric the portion of such electric power not so consumed by the Facility or the Treatment Plant; and

WHEREAS, Tampa Electric desires to purchase the electric power produced at the Facility and not consumed by the City in the operation of the Facility, when and if available for the term of this Agreement.

NOW, THEREFORE, in consideration of the premises, which shall be deemed integral parts of this Agreement, and of the mutual covenants and agreements set forth in this Agreement, the City and Tampa Electric, intending to be legally bound, agree as follows:

I. Basic Considerations.

The City plans to enter into an agreement with Waste Management, Incorporated (WMI), hereinafter referred to as "the Contractor", to design and construct the Facility. In conjunction therewith, the City intends to enter into another contract with the Contractor to operate and maintain the Facility for the City.

The Facility will be constructed by the rehabilitation of the existing City of Tampa Incinerator located on the northeast corner of the intersection of 34th Street and Clark Street, Tampa, Florida, which location is more specifically described in Exhibit T1 attached to, and hereby made a part of, this Agreement ("the Facility Site"). It is anticipated that the Facility will be operational on or about October 1, 1985. The City and Tampa Electric contemplate that Tampa Electric, acting pursuant to this Agreement and at the cost of the City, will design, construct, install, and operate the interconnection facilities and equipment, and perform or cause to be performed the related work necessary to transmit to Tampa Electric that portion of

electric power generated by the Facility that is not consumed in either the operation of the Facility or the Treatment Plant, which design, construction, installation, and other related work by Tampa Electric shall be completed according to the time frame specified in Section 3 of this Agreement. Additionally, the City and Tampa Electric contemplate that, acting pursuant to this Agreement, the City will sell to Tampa Electric and Tampa Electric will purchase from the City that portion of the electric power generated by the Facility that is not consumed in either the operation of the Facility or the Treatment Plant. Finally, the City and Tampa Electric contemplate that Tampa Electric, acting pursuant to this Agreement and at the cost of the City, will operate, maintain and repair the interconnection facilities and equipment designed, constructed, and installed by Tampa Electric on behalf of the City pursuant to this Agreement.

**2. Sale and Purchase of Electricity.**

Electricity shall be sold and purchased by the parties as follows:

**2.1 Sale of Electricity by the City.** The City agrees to sell and Tampa Electric agrees to purchase all of the Net Megawatt Hour Output of Electric Power, generated at the Facility and transmitted to Tampa Electric by the City in accordance with the terms and conditions set forth in Section 6.1 of this Agreement. For purposes of this Agreement, the term "Net Megawatt Hour (MWH) Output of Electric Power" means all of the electric power generated at the Facility minus the amount of electric power consumed in the operation of the Facility, and minus the electric power, if any, generated by the Facility and consumed by the Treatment Plant. The parties intend that the purchase and sale of electricity pursuant to this Agreement shall be construed as a "net billing" arrangement as opposed to a "simultaneous purchase and sale" arrangement, i.e., this Agreement does not require Tampa Electric to pay the City for any of the electric power produced by the Facility and consumed in the operation of the Facility. The City shall have the right in its sole discretion to utilize electricity generated by the Facility to operate the Treatment Plant. The City, however, may not utilize electricity generated by the Facility for any purposes other than the operation of the Facility and the operation of the Treatment Plant without the written consent of Tampa Electric. Additionally, the City shall not sell electricity generated by the Facility to any person or entity other than Tampa Electric without the written consent of Tampa Electric. The parties agree that the City's obligation to generate and sell electricity from the Facility is subject to both scheduled and unscheduled outages of the Facility and the equipment and facilities described in this Agreement. Except for any repayment of capacity credits which may be required under Subsections 6.3.2 and 6.3.3 of this Agreement, neither party shall be required to compensate the other party for electrical energy which from time to time may not be generated and sold by the City or received and purchased by Tampa Electric as a result of such scheduled and unscheduled outages. The parties agree to use best efforts to minimize the duration of any scheduled or unscheduled outages which from time to time may interrupt the purchase and sale of electricity under this Agreement.

**2.2 Purchase of Electricity by the City.** The City agrees to purchase from Tampa Electric all of the electric power requirements of the Facility to the extent

that such requirements from time to time are not satisfied by the operation of the Facility, and Tampa Electric will meet all such requirements in accordance with the terms and conditions of, and at the rates and charges specified in, applicable Tampa Electric tariffs filed with and approved by the Florida Public Service Commission. Tampa Electric will provide the class or classes of electric service requested by the City to the extent they are consistent with the applicable tariffs.

3. Term of the Agreement.

The term of this Agreement shall begin immediately upon the execution of this Agreement by the City and Tampa Electric, and the Agreement shall remain in effect for an initial term which shall end at 12:01 a.m., March 1, 2009. Upon the expiration of such initial term, the term of this Agreement shall be automatically extended for succeeding periods of five (5) years each, and continue in effect in such fashion until such time as the Agreement is terminated by one or both of the parties. Termination of the Agreement shall occur five (5) years after the date on which either party delivers to the other party written notice that the Agreement is to be terminated, but in no event may such termination occur prior to the expiration of the initial contract period. Should either party prefer that the Agreement not be automatically extended upon the expiration of the initial contract period, such party shall give written notice to the other party to that effect on or before March 1, 2004, whereupon the automatic extension provisions of this paragraph shall not apply.

Notwithstanding the foregoing, if construction and commercial operation of the Facility are not accomplished by March 1, 1989, this Agreement shall be rendered of no force and effect, except that the City shall be obligated to reimburse Tampa Electric for all interconnection costs associated with this Agreement and actually incurred between the date Tampa Electric receives the City's written instructions to proceed with the interconnection work and the date Tampa Electric receives any written instructions from the City to cease such interconnection work or the interconnection work is completed, whichever first occurs. The City shall provide Tampa Electric with written instructions to proceed with construction of the interconnection facilities as described in this Agreement at least 24 months prior to the date on which the facilities shall be completed. Tampa Electric agrees to complete the interconnection facilities as described in this Agreement within 24 months of receipt of written instructions to proceed.

4. Construction Activities.

Upon receipt of written instructions to proceed delivered by the City, Tampa Electric shall design and perform or cause to be performed all of the work necessary to interconnect the Facility with Tampa Electric's system. For the purposes of this Agreement, interconnection facilities shall mean those facilities located on the high side of the 69 KV bushing of the step-up transformer, as described in Exhibit T4.1, attached to, and made part of, this Agreement, which interconnection facilities are for the purpose of transmitting electricity from the Facility to the Tampa Electric Hooker's Point Substation or such other location Tampa Electric deems best suited for interconnection. Such interconnection facilities shall not include any interconnection requirements for any potential transmission of electric power to the Treatment Plant.

The City agrees to pay Tampa Electric all expenses incurred by Tampa Electric to design, construct, operate, maintain and repair the interconnection facilities necessary for integration of the Facility into Tampa Electric's electrical system. Such interconnection costs shall not include any costs which Tampa Electric would otherwise incur if it were not engaged in interconnected operations with the City, but instead simply provided the electric power requirements of the Facility with electricity either generated by Tampa Electric or purchased from another source. The City agrees to pay the costs for complete interconnection work within 30 days after receiving an invoice from Tampa Electric, as specified in Section 6.6 of this Agreement.

**4.1 Interconnection Specifications.** The parties agree that the facilities and equipment described in this Section 4.1 and in Exhibit T4.1, that are constructed and installed by Tampa Electric on behalf of the City shall be constructed and installed at the expense of the City in accordance with the provisions of Section 6.6 and shall be owned by the City unless otherwise indicated. Interconnection facilities shall be operated, maintained and repaired by Tampa Electric in accordance with the provisions of Section 5 of this Agreement. The parties further agree that if the interconnection point is at the Tampa Electric Hooker's Point Substation, the interconnection facilities to be required between the City and Tampa Electric shall include but not be limited to those described in Subsections 4.1.1 through 4.1.7 of this Agreement. If the interconnection point is not at the Tampa Electric Hooker's Point Substation, then interconnection facilities shall be in substantial compliance with those described in Subsections 4.1.1 through 4.1.7.

The City shall provide, install, operate and maintain, at its own expense, the 69KV Delta/13.8 KV Wye, 20/26.67 MVA transformer as indicated in Exhibit T4.1.

The interconnection facilities described in this Section, 4.1, include the following:

4.1.1 Construction of approximately 1.6 miles of dedicated 69 KV above ground transmission line from Tampa Electric's Hooker's Point Substation to the Facility, with transmission line support to be of armless type construction supporting three (3) separate 336 KCMIL ACSR conductors with double detented metering;

4.1.2 Rearrangement of existing Tampa Electric circuitry;

4.1.3 Completion of miscellaneous distribution work;

4.1.4 Installation of telemetering and communications equipment at the Facility;

4.1.5 Installation of supervisory control and system protection equipment at Tampa Electric's Hooker's Point Substation and the additional substation facilities required for interconnection; and

4.1.6 Construction and installation of the facilities and the equipment described in Exhibit T4.1.6, entitled "City of Tampa, Tampa Electric Proposed Electrical and Metering Details," attached to, and made a part of, this Agreement.

4.1.7 Tampa Electric shall provide, install, operate, maintain and repair at the City's expense, the high side power transformer circuit breaker designated 52 L in Exhibit T4.1. The switching of such circuit breaker, 52 L, shall be under the operating

direction and control of the Tampa Electric system dispatcher, but the intentional switching of the 52 L breaker and breakers on the low side of the 69 KV Delta/13.8 KV Wye, 20/26.67 MVA transformer shall be solely for the purposes of eliminating hazardous or unsafe conditions or for maintenance, and shall only be conducted following reasonable notice by either party.

**4.2 Additional Interconnection Considerations.**

4.2.1 Tampa Electric shall have the right to attach any of its additional facilities to the City's transmission line structures to the extent consistent with their safe and efficient use pursuant to this Agreement.

The City shall not permit the attachment of any other lines or equipment to its transmission poles which would interfere with such additional facilities or the attachment, operation, maintenance and repair of the interconnection facilities and such additional facilities. Tampa Electric shall have the right to refuse any such attachment of equipment or lines which would interfere with the attachment, operation, maintenance, or repair of said interconnection facilities and additional facilities.

4.2.2 The City shall not sell or otherwise convey ownership of the interconnection facilities installed by Tampa Electric to any person or entity other than Tampa Electric.

**4.3 Electrical and Metering Details.** The parties agree that interconnection will require electrical and metering details in substantial compliance with Exhibit T4.1.6 attached to, and made a part of, this Agreement.

Tampa Electric agrees to acquire and install any special metering equipment necessary in order to measure and make a monthly comparison of the Net MWH Output of Electric Power by the Facility during each hour of the month with Tampa Electric's 100 megawatt decremental block economic dispatch system quoted price applicable to such hour as described under Section 6.1 of this Agreement.

The Net MWH Output of Electric Power received from the Facility by Tampa Electric shall be measured in terms of both energy and demand by meters installed, maintained, operated, and repaired by Tampa Electric at the City's expense in accordance with the provisions of Section 6.6, which metering equipment shall be owned by Tampa Electric.

**5. Technical Requirements, Operations and Maintenance Conditions.**

The parties to this Agreement recognize that safety, the reliability of electric power supply, and the compatibility of the City's electric generation with Tampa Electric's generation, transmission and distribution system are of importance. To that end, the parties agree that the City's interconnection with, and delivery of electricity into, Tampa Electric's system must be accomplished in accordance with the provisions of Exhibit T5A, entitled "Technical Requirements for the Parallel Operation of Customer Generation on Tampa Electric Company's Transmission System," as revised on July 14, 1981, attached to, and made part of, this Agreement, and Exhibit T5B, entitled "General Standards for Safety and Interconnection of Cogeneration and Small Power Production Facilities to the Electric Utilities System", adopted by the Florida Public Service Commission in order #10943, attached to, and made a part of, this

Agreement. Additionally, Tampa Electric shall have the exclusive right to operate, maintain, and repair the interconnection facilities provided said exclusive right shall be exercised in accordance with generally accepted standards for operation, maintenance, and repair of electrical interconnection facilities. Payment for said operation, maintenance, and repair of interconnection facilities shall be in accordance with Section 6.5 of this Agreement.

In the event that future changes in the engineering or operating standards or practices in the electric utility industry, and Tampa Electric's corresponding standards or practices or changes in regulatory requirements, affect the design or operation of Tampa Electric's electrical system, and this in turn necessitates additions to or modifications of the equipment or facilities utilized to materially effect this Agreement so as to ensure the continued safe and reliable operations provided for in this Agreement, as well as the continued compatibility of the Facility with Tampa Electric's system, the City agrees to bear the cost of such additions or modifications which are directly attributable to the Facility. The costs of such additions or modifications shall not include any costs which Tampa Electric would otherwise incur if it were not engaged in interconnected operations with the Facility, but instead simply provided the Facility's electrical power requirements with electricity either generated by Tampa Electric or purchased from another source. In addition, the City agrees to require that the Facility operator immediately notify Tampa Electric's System Dispatcher by telephone in the event hazardous or unsafe conditions associated with the parties' parallel operations are discovered to exist. If such conditions are detected by Tampa Electric, then Tampa Electric will likewise immediately contact the operator of the Facility by telephone. Each party agrees to immediately take whatever appropriate corrective action is necessary to correct the hazardous or unsafe conditions.

**5.1. Maintenance.** The City shall be responsible for all expenses involved in the proper maintenance of the Facility and of the interconnection facilities.

**5.2 Site Access.** In order to help ensure the continuous, safe, reliable and compatible operation of the Facility with Tampa Electric's system, the City hereby grants to Tampa Electric for the term of this Agreement the reasonable right of ingress and egress, consistent with the safe operation of the Facility, over property owned by the City to the extent Tampa Electric deems such ingress and egress necessary in order to examine, test, calibrate, coordinate, operate, maintain or repair any interconnection equipment involved in the parallel operation of the Facility and Tampa Electric's system, including Tampa Electric's metering equipment.

**5.3. Electricity Production Schedule.** During the term of this Agreement, the City agrees to:

(a) Provide Tampa Electric prior to October 1 of each calendar year an estimate of the Net MWH Output of Electric Power generated at the Facility for each month of the following calendar year, including the time, duration and magnitude of any planned outages or reductions in capacity;

(b) Promptly update the yearly generation schedule as and when any changes may be determined necessary;

(c) To the extent Tampa Electric reasonably determines the same to be necessary to ensure the safe operation of the Facility or to protect the integrity of Tampa Electric's system, reduce power generation or take other appropriate actions;

(d) Coordinate its scheduled Facility outages with Tampa Electric; and

(e) Comply with reasonable requirements of Tampa Electric regarding day-to-day communications between the parties relative to the performance of this Agreement.

6. Payments by Tampa Electric for Electricity Generated by the Facility and City Payments to Tampa Electric.

6.1 Payment for Electricity Produced and Consumed. Tampa Electric agrees to make monthly payments to the City equal to the avoided fuel and purchased power costs per Net Megawatt Hour (MWH) Output of Electric Power generated by the Facility pursuant to this Agreement, together with appropriate monthly payments as credit for avoided line losses. Line loss payments will be added to the monthly Net Megawatt Hour (MWH) Output of Electric Power generated by the City pursuant to this Agreement and will be determined by multiplying Tampa Electric's percentage for Line Loss Factors, as approved by the Florida Public Service Commission for the applicable service level, by the monthly Net Megawatt Hour (MWH) Output of Electric Power generated by the Facility and purchased by Tampa Electric. In no case will the percentage Line Loss Factors so described be less than two percent (2%). Avoided fuel and purchased power costs will be determined on an hour-by-hour basis by reference to Tampa Electric's economic dispatch system for a 100 MW decremental block for each hour. The hourly determination of the 100 MW decremental block shall be made utilizing Tampa Electric's cost of generation, excluding Tampa Electric's cost of generating any electricity which is sold through the Florida Energy Broker System during the hour in question, and including the cost to Tampa Electric of any electricity which Tampa Electric purchases through the Florida Energy Broker System during the hour in question. An example of how this calculation is to be made when sales and purchases are made through the Florida Energy Broker System is attached hereto as Exhibit T6.1A and by this reference made a part of this Agreement. The monthly payment shall be promptly paid by Tampa Electric to the City, but in no event later than thirty (30) days after the end of the month to which such payment applies. Avoided fuel costs will be calculated as shown in Exhibit T6.1B attached to, and made part of, this Agreement.

6.2 Capacity Payments. Tampa Electric agrees to pay the City for generating capacity the City makes available to Tampa Electric's system, subject to the conditions of this Agreement, including all provisions of Section 5.3, and in accordance with the requirements described below:

6.2.1 The commencement and continuation of Tampa Electric's obligation to make capacity payments to the City shall be conditioned on Florida Public Service Commission approval of Tampa Electric's recovery from its customers of the amounts thus paid to the City for capacity.

6.2.2 In exchange for the capacity payments described herein, the City agrees to generate and make available to Tampa Electric's system the megawatts of

net capacity as provided for in Subsection 6.2.7. After the end of each month, Tampa Electric will calculate the capacity factor for such month utilizing the following formula:

$$\text{Capacity Factor Percentage} = \frac{\text{Net MWH Output of Electric Power}}{\text{MW} \times \text{Month Hours}} \times 100$$

In the above formula, "Net Megawatt Hour Output of Electric Power" means all of the electric power generated at the Facility minus the amount of electric power consumed in the operation of the Facility and minus the electric power, if any, consumed by the City's Hookers Point Advanced Wastewater Treatment Plant. "Month Hours" means the total number of hours of the month in question. "MW" means the megawatts of net capacity to be used in calculating capacity credit as provided for in Subsection 6.2.7.

6.2.3 The capacity factor for a given month, calculated in accordance with the preceding Subsection, must be at least 70% in order for the City to be entitled to a capacity credit for the month in question. If the capacity factor is equal to or greater than 70% for a particular month, Tampa Electric will calculate and agrees to pay the City a capacity credit equal to the amount which Tampa Electric would charge at the time the capacity credit is calculated, for Firm Schedule "B" Power under its interchange contracts filed in accordance with applicable rules of the Federal Energy Regulatory Commission, provided, however, that in no event shall a capacity factor percentage greater than 100% be utilized in calculating the capacity payment for any given month.

6.2.4 For purposes of illustrating the parties intent regarding the calculation of monthly capacity payments, and assuming the City agrees to furnish 12 megawatts of net capacity under this Agreement, if in Month "A", the City generates and makes available to Tampa Electric 8,450 megawatt hours of net electric energy, and Month "A" contains 730 hours, the City's capacity factor for Month "A" would be calculated as follows:

$$\text{Capacity Factor Percentage} = \frac{8,450 \text{ MWH}}{12 \text{ MW} \times 730} \times 100 = 96.46\%$$

Under this example, the City would qualify for a capacity payment in Month "A", in that its capacity factor would have equaled or exceeded 70%. Continuing this example, the average MW net output for Month "A" would be calculated as follows:

$$\text{Megawatts of Net Capacity as specified in Subsection 6.2.7} \times \text{Capacity Factor Percentage} = \text{Average Megawatt Net Output}$$

$$12 \text{ MW} \times 96.46\% = 11.575 \text{ MW}; 11.575 \text{ MW} \times 1000 \frac{\text{KW}}{\text{MW}} = 11,575 \text{ KW}$$

If the Firm Schedule "B" Power charge is assumed to be \$36.00 per KW year, the monthly capacity payment would be \$3.00 per KW month. The amount of the capacity payment would be calculated as follows:

$$11,575 \text{ KW} \times \$3.00 = \$34,725 \text{ capacity payment for Month "A"}$$

6.2.5 In the case of a cancellation of the Federal Energy Regulatory Commission annual filing requirements of Firm Schedule "B" Power calculation, Tampa

Electric will continue to calculate capacity payments in a manner which incorporates the same methodology presently used to determine the amount Tampa Electric charges for Firm Schedule "B" Power.

6.2.6 The capacity payment for a given month will be added to the energy payment applicable to such month and tendered by Tampa Electric to the City as a single payment, but in no event shall the capacity payment be made later than thirty (30) days after the end of the month to which such payment applies.

6.2.7 The provisions of these Subsections, 6.2.1 through 6.2.7, shall not take effect until such time as Tampa Electric receives written notice from the City to implement the provisions of Section 6.2 and shall extend for the period of 20 years from the date Section 6.2 is implemented after which time the parties agree to renegotiate the provisions of Section 6.2. The City reserves the right to finalize the number of megawatts of Net Capacity after Facility acceptance testing. Thereafter, the City shall notify Tampa Electric in writing as to the number of megawatts of net capacity to be used in calculating capacity payments under this Agreement. Tampa Electric shall commence calculating capacity payments in accordance with this Agreement 30 days after receipt of such written notice. If such commencement of calculating capacity payments occurs on other than the first day of the month in question, then for purposes of calculating any capacity payment due for that month only, it shall be assumed that such month contains the number of days remaining in that month, including the date on which the calculation is commenced.

**6.3 Non-Performance Provisions.**

6.3.1 If at any time during the first five years from the date Tampa Electric receives written notice from the City in accordance with Subsection 6.2.7 of this Agreement, the City's small power production facility either fails to generate and make available to the Tampa Electric system electric power for an aggregate period of time exceeding six (6) months in any consecutive twelve (12) month period, or fails to generate and make available to Tampa Electric's system the megawatts of net capacity as specified in Subsection 6.2.7 of this Agreement with a capacity factor percentage of at least 70% calculated for a period of twelve (12) consecutive months then Tampa Electric's obligation to calculate and pay the City monthly capacity payments shall not apply during the twelve (12) month period immediately following Tampa Electric's determination that either of the foregoing failures on the part of the City has occurred. If such failure on the part of the City occurs, Tampa Electric's obligations to calculate and pay capacity payments shall resume only with respect to those months after the twelve (12) months suspension period referred to above, and then only to the extent the capacity payments are earned by the City in accordance with this Agreement.

If at the conclusion of the twelve (12) month suspension period, capacity payments are not immediately earned by the City in the first month following the suspension period, in accordance with the terms of this Agreement, the City agrees to immediately begin making monthly payments to Tampa Electric equivalent to the monthly per KW rate Tampa Electric would charge for Firm Schedule "B" Power times the KW equivalent of the megawatts of net capacity which the City is obligated to provide under Subsection 6.2.7 of this Agreement.

Any such repayments shall be calculated on a month to month basis, with each monthly repayment being based on the then most current rate for Firm Schedule "B" Power, until either (1) the total of such monthly repayments equal the total number of months Tampa Electric paid capacity payments to the City during the first five years or (2) the City resumes earning capacity payments in accordance with the terms of this Agreement.

6.3.2 The same provisions set forth in Subsection 6.3.1 of this Agreement shall apply following the expiration of the five year period from the date Tampa Electric received written notice from the City in accordance with Subsection 6.2.7 of this Agreement, except that in the event the City is required to make repayments for failure to provide capacity as required under this Agreement, such repayments shall continue until the City resumes earning capacity payments in accordance with the terms of this Agreement, or Tampa Electric is repaid an amount produced by the lesser of (1) a total number of monthly repayments equal to the total number of monthly capacity credits Tampa Electric paid to the City during the three most recent years in which such payments were made, or (2) a total number of monthly repayments equal to the total number of monthly capacity payments made by Tampa Electric to the City after the expiration of the five year period following Tampa Electric's receipt of notice under Subsection 6.2.7 of this Agreement.

6.3.3 The repayment provision described in Subsections 6.3.1 and 6.3.2 shall be activated each time the City fails to begin earning capacity payments in accordance with the terms of this Agreement in the month immediately following a twelve month suspension period. At no time shall the total number of any monthly repayments which the City is required to make under Subsections 6.3.1 and 6.3.2 of this Agreement exceed the total number of monthly capacity payments previously paid to the City by Tampa Electric.

6.3.4 Any repayment of capacity payments required of the City under Subsections 6.3.1 or 6.3.2 of this Agreement shall be separately invoiced by Tampa Electric to the City after each month to which such repayment pertains and shall be paid by the City within 20 days after mailing of such invoice by Tampa Electric.

6.4 Payment for Electricity Purchased by the City from Tampa Electric. The City will pay Tampa Electric for electricity purchased by the City from Tampa Electric Company pursuant to Section 2.2 of this Agreement, the monthly charges in accordance with applicable Tampa Electric tariffs approved by the Public Service Commission for the class of service provided by Tampa Electric to the Facility. This monthly payment shall be due when rendered and delinquent within 20 days after mailing of the invoice by Tampa Electric.

6.5 Operation, Maintenance and Repair Payments. Tampa Electric will separately invoice the City monthly for all operation, maintenance and repair costs associated with the operation, maintenance and repair of the interconnection facilities. The City agrees to pay Tampa Electric within 30 days of receipt of each such invoice.

6.6 Interconnection and Metering Payments. Attached hereto as Exhibit T6.6 and incorporated herein by this reference, is a document entitled, "City of Tampa

Small Power Production Cost Estimates'. The parties agree that the cost of the interconnection work to be performed by Tampa Electric will amount to the costs identified in Exhibit T6.6 (\$408,953) and shall be paid by the City to Tampa Electric in accordance with this Agreement. The total amount of the estimated interconnection costs (\$408,953) shall be escalated at the simple annual rate of 8.5% with such escalation rate being applied to the period of time which transpires between: a) the date of this Agreement or January 1, 1983, whichever occurs first, and b) the date on which Tampa Electric receives written instructions from the City to proceed with the interconnection work, and the City agrees to pay the escalation amount thus calculated in addition to the total amount of interconnection costs stated above.

The cost of acquiring, installing, and testing metering equipment described in Section 4.3 of this Agreement is included as one component of the interconnection cost to be paid by the City in accordance with this Agreement.

7. General Provisions.

7.1. City Waiver. The City and Tampa Electric agree that the City is entering into and intends to perform this Agreement with civil liability for damages to Tampa Electric in the event the City breaches this Agreement. The City expressly disclaims, waives, and denies the applicability of any and all immunity or exemption from actions, lawsuits, third party claims, judgments or executions, judicial or administrative, brought by Tampa Electric which, by virtue of the City's sovereignty, might otherwise apply with regard to the City's rights, obligations, or actions as a party to this Agreement. The City, however, does not disclaim, waive, or deny the applicability of any such immunity or exemption which it may have by virtue of its sovereignty for actions, third party claims, lawsuits, judgements or executions, judicial or administrative, brought by any person or entity other than Tampa Electric.

7.2 Permits. The City hereby agrees to obtain any and all governmental permits, certifications, or other authority the City is required to obtain as a prerequisite to engaging in the activities provided for in this Agreement. Tampa Electric hereby agrees to obtain any and all governmental permits, certifications or other authority Tampa Electric is required to obtain as a prerequisite to engaging in the activities provided for in this Agreement.

7.3 Indemnification. The City agrees to indemnify and save harmless Tampa Electric against any and all liability, loss, damage, costs or expense which Tampa Electric may hereafter incur, suffer or be required to pay by reason of negligence on the part of the City in performing its obligations pursuant to this Agreement or the City's failure to abide by the provisions of this Agreement. Tampa Electric agrees to indemnify and save harmless the City against any and all liability, loss, damage, costs or expense which the City may hereafter incur, suffer, or be required to pay by reason of negligence on the part of Tampa Electric in performing its obligations pursuant to this Agreement or Tampa Electric's failure to abide by the provisions of this Agreement. The City agrees to include Tampa Electric as an additional insured in any liability insurance policy or policies the City obtains to protect the City's interests with respect to the City's indemnity and hold harmless assurances to Tampa Electric contained in this Section.

7.4 Renegotiations Due to Regulatory Changes. Anything in this Agreement to the contrary notwithstanding, should Tampa Electric at any time during the term of this Agreement fail to obtain or be denied the Florida Public Service Commission's authorization, or the authorization of any other regulatory body which now has or in the future may have jurisdiction over Tampa Electric's rates and charges, to recover from its customers all of the payments required to be made to the City under the terms of this Agreement or any subsequent amendment to this Agreement, the parties agree that, at Tampa Electric's option, they shall renegotiate this Agreement or any applicable amendment. If Tampa Electric exercises such option to renegotiate, Tampa Electric shall not thereafter be required to make such payments to the extent Tampa Electric's authorization to recover them from its customers is not obtained or is denied. It is the intent of the parties that Tampa Electric's payment obligations under this Agreement or any amendment hereto are conditioned upon Tampa Electric being fully reimbursed for such payments through fuel adjustment charges, conservation cost recovery charges or other authorized rates or charges.

7.5 Force Majeure. If either party shall be unable, by reason of force majeure, to carry out its obligations under this Agreement, either wholly or in part, the party so failing shall give written notice and full particulars of such cause or causes to the other party as soon as possible after the occurrence of any such cause; and such obligations shall be suspended during the continuance of such hindrance, which, however, shall be remedied with all possible dispatch; and the obligations, terms and conditions of this Agreement shall be extended for such period as may be necessary for the purpose of making good any suspension so caused. The term "force majeure" shall be taken to mean acts of God, strikes, lockouts or other industrial disturbances, wars, blockades, insurrections, riots, arrests and restraints of rules and people, environmental constraints lawfully imposed by federal, state or local governmental bodies, explosions, fires, floods, lightning, wind, perils of the sea, accidents to equipment or machinery or similar occurrences; provided, however, that no occurrences may be claimed to be a force majeure occurrence if it is caused by the negligence or lack of due diligence on the part of the party attempting to make such claim. The City agrees to pay the costs necessary to reactivate the Facility and/or the interconnection with Tampa Electric's system if the same are rendered inoperable due to actions of the City, its agents, or force majeure events affecting the Facility or the interconnection with Tampa Electric. Tampa Electric agrees to reactivate at its own cost the interconnection with the Facility in circumstances where any interruptions to such interconnections are caused by Tampa Electric or its agents.

7.6 Assignment. The City shall have the right, subject to Tampa Electric's approval, to assign this Agreement, and the City shall notify Tampa Electric sixty (60) days in advance of any proposed assignment. Tampa Electric shall provide its written approval or disapproval of said proposed assignment within sixty (60) days of receipt of notification of said proposed assignment. Prior to the effectiveness of any assignment, the proposed transferee shall agree in writing to assume all of the obligations undertaken by the City by virtue of this Agreement. Any Tampa Electric disapproval of such assignment shall be based upon Tampa Electric's reasonable

determination that any such transferee is incapable of carrying out the terms and conditions of this Agreement. Upon any such assignment and assumption, the City shall be under no further obligation, to Tampa Electric pursuant to this Agreement, except for Subsection 4.2 and Section 5 and for liabilities previously incurred.

7.7 Disclaimer. In executing this Agreement, Tampa Electric does not, nor should it be construed, to extend its credit or financial support for the benefit of any third parties lending money to or having other transactions with the City or any assignee of this Agreement.

7.8 Notification. For purposes of making any and all nonemergency oral and written notices, payments or the like required under the provisions of this Agreement, the parties designate the following to be notified or to whom payment shall be sent, until such time as either party furnishes the other party written instructions to contact another individual.

For the City:  
Urban Environmental Coordinator  
City of Tampa  
Fifth Floor, North Wing  
City Hall Plaza  
Tampa, FL 33602  
(813) 223-8216

For Tampa Electric:  
Assistant Director  
Conservation and Load Management  
Tampa Electric Company  
P.O. Box 111  
Tampa, FL 33601  
(813) 228-4111

7.9 Construction. This Agreement shall be governed by and construed in accordance with the laws of the State of Florida.

7.10 Severability. If any part of this Agreement, for any reason, be declared invalid, or unenforceable by a public authority of appropriate jurisdiction, then such decision shall not affect the validity of the remainder of the Agreement, which remainder shall remain in force and effect as if this Agreement had been executed without the invalid or unenforceable portion. It is hereby declared the intention of the City and Tampa Electric that they would have executed the remainder of this Agreement without including any portion that is subsequently declared invalid or unenforceable by a public authority of appropriate jurisdiction.

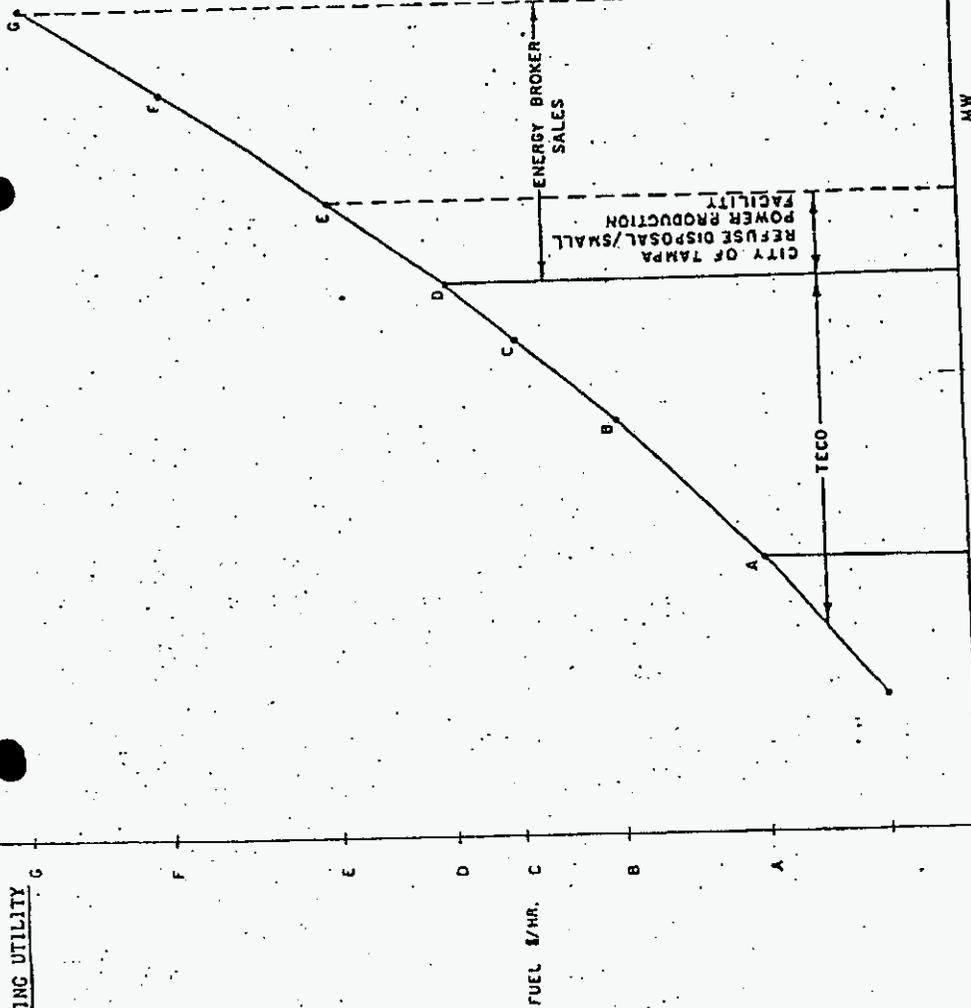
7.11 Complete Agreement and Amendments. All previous communications or agreements between the parties, whether verbal or written, with reference to the subject matter of this Agreement are hereby abrogated. No amendment or modification to this Agreement shall be binding unless it shall be contained in a duly authorized and executed writing.

DETERMINATION OF 100 MW DECREMENTAL BLOCK

EXAMPLE  
 SELLING UTILITY

NOTE:  
 CALCULATION BASED  
 ON ACTUAL COST  
 BEFORE THE BROKER.  
 EXAMPLE:

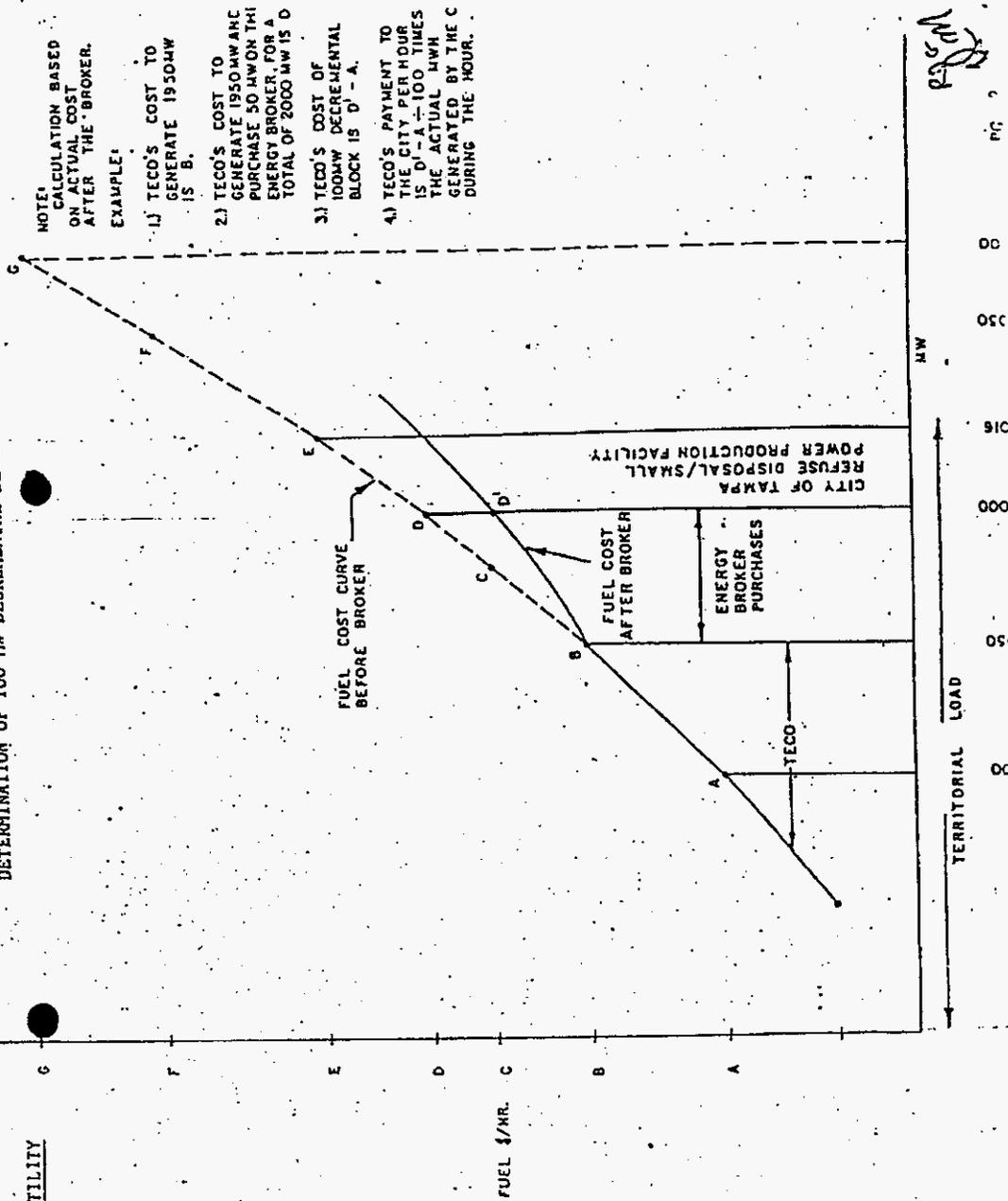
- 1) TECO'S COST TO GENERATE 2000MW IS D.
- 2) TECO'S COST TO GENERATE 1900MW IS A.
- 3) TECO'S COST OF 100MW DECREMENTAL BLOCK IS (D-A).
- 4) TECO'S PAYMENT TO THE CITY PER HOUR IS (D-A) x 100 TIMES THE ACTUAL MWH GENERATED BY THE CITY DURING THE HOUR.



*DM*  
*RDC*

DETERMINATION OF 100 MW DECREMENTAL BLOCK

EXAMPLE:  
 TECO: BUYING UTILITY



NOTE: CALCULATION BASED ON ACTUAL COST AFTER THE BROKER.

EXAMPLE:

- 1) TECO'S COST TO GENERATE 1950MW IS B.
- 2) TECO'S COST TO GENERATE 1950MW AND PURCHASE 50 MW ON THE ENERGY BROKER, FOR A TOTAL OF 2000 MW IS D.
- 3) TECO'S COST OF 100MW DECREMENTAL BLOCK IS D' - A.
- 4) TECO'S PAYMENT TO THE CITY PER HOUR IS D' - A - 100 TIMES THE ACTUAL MWH GENERATED BY THE C DURING THE HOUR.

EXHIBIT T6.1B

8/11/82

AVOIDED COST CALCULATION  
PRADS PROGRAM INPUT DATA  
FOR COGENERATION

INPUT DATA THAT DOESN'T CHANGE HOURLY

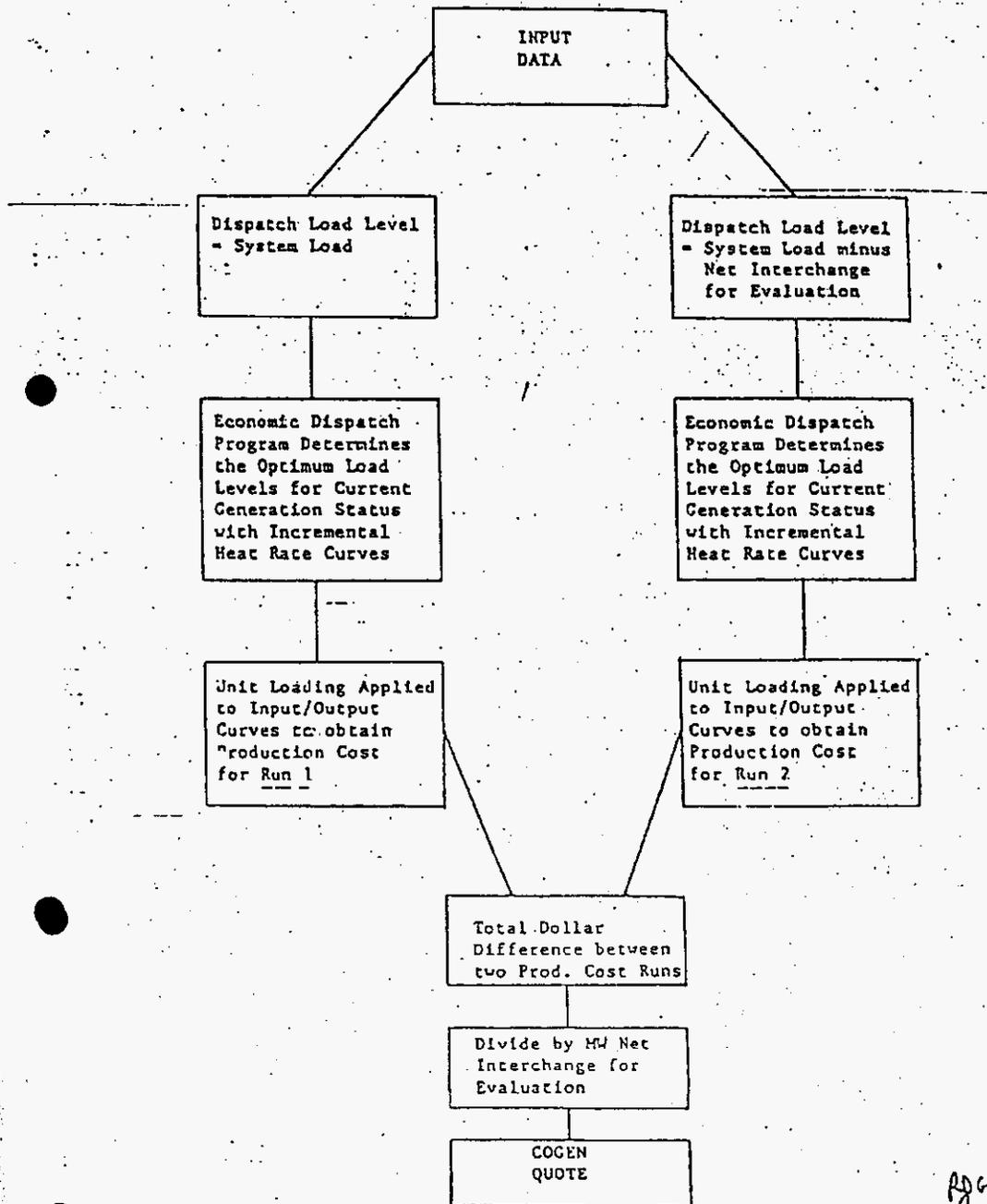
1. WEEKLY FUEL COST PER UNIT (once/week)
2. RUBBER LIMITS PER UNIT (annually)
3. INPUT/OUTPUT CURVES PER UNIT (annually)
4. INCREMENTAL CURVES PER UNIT (annually)
5. CIRCULATING WATER TEMPERATURE (6-10 times per year)

INPUT DATA THAT CHANGES HOURLY

1. LAST HOUR ACTUAL SYSTEM LOAD
2. CURRENT GENERATION STATUS
  - A. REGULATING MAX LIMIT
  - B. REGULATING MIN LIMIT
  - C. AGC CONTROL STATUS ON/OFF (affects calculated economic limits)
3. NET INTERCHANGE FOR EVALUATION
  - A. WHEN SELLING OR NO ECONOMY INTERCHANGE  
ENTER 100 MW DECREMENTAL BLOCK
  - B. WHEN BUYING ECONOMY INTERCHANGE; THIS  
DECREMENTAL BLOCK SIZE VARIES BETWEEN 1  
to 99 MW.
4. LAST HOUR ACTUAL COGEN OUTPUT
5. LAST HOUR ACTUAL FIRM INTERCHANGE

EXHIBIT T6.1B  
AVOIDED COST CALCULATION  
PRADS PROGRAM

8/11/82



ADG  
Q/M

EXHIBIT T6.1B  
AVOIDED COST CALCULATION  
EXAMPLE

RUN 11

TECO ECONOMIC INTERCHANGE COST FOR 151500:50 26-JUL-82 RUN# 537

SYSTEM LOAD IS 1551.00 MW  
NET INTERCHANGE IS -1.00 MW  
SR REQUIRED IS 0. MW  
SR ACTUAL IS 47. MW  
FIRM INT IS 0. MW

SYSTEM LAMBDA IS 56.01 \$/MWH  
GENERATION COST IS 27.08 \$/MWH

UNIT	GEN	COST	NEG LMS		ECON LMS		SPIN	RES
			MAX / MIN	HR / LK	HR / LK	RES		
HP 1	0.0	0.	0. / 0.	0. / 0.	0. / 0.	0.	0.	0.
HP 2C	24.2	1296.	35. / 12.	33. / 14.	33. / 14.	6.	6.	6.
HP 3	0.0	0.	0. / 0.	0. / 0.	0. / 0.	0.	0.	0.
HP 4	0.0	0.	0. / 0.	0. / 0.	0. / 0.	0.	0.	0.
HP 5	0.0	0.	0. / 0.	0. / 0.	0. / 0.	0.	0.	0.
GA 1C	101.9	4656.	110. / 46.	105. / 45.	105. / 45.	6.	6.	6.
GA 2	0.0	0.	0. / 0.	0. / 0.	0. / 0.	0.	0.	0.
GA 3C	153.0	6778.	160. / 80.	155. / 85.	155. / 85.	7.	7.	7.
GA 4C	175.0	7771.	160. / 80.	175. / 85.	175. / 85.	5.	5.	5.
GA 5	0.0	0.	0. / 0.	0. / 0.	0. / 0.	0.	0.	0.
GA 6C	343.0	7729.	350. / 175.	343. / 182.	343. / 182.	7.	7.	7.
BB 1C	373.0	4801.	380. / 170.	373. / 177.	373. / 177.	7.	7.	7.
BB 2C	368.0	6735.	375. / 160.	368. / 182.	368. / 182.	7.	7.	7.
BB 3	0.0	0.	0. / 0.	0. / 0.	0. / 0.	0.	0.	0.
GA71	0.0	0.	0. / 0.	0. / 0.	0. / 0.	0.	0.	0.
BB71	0.0	0.	0. / 0.	0. / 0.	0. / 0.	0.	0.	0.
BB72	0.0	0.	0. / 0.	0. / 0.	0. / 0.	0.	0.	0.
BB73	0.0	0.	0. / 0.	0. / 0.	0. / 0.	0.	0.	0.
COBEX	12.0	0.	12. / 12.	12. / 12.	12. / 12.	47.	47.	47.
TOTAL	1550.0	41967.	1602. / 709.	1564. / 747.	1564. / 747.	47.	47.	47.
ADDITIONAL FUEL FOR SALES		0. MW						

FUEL COST IN MILL/KWH  
COL1= 2.375 COL2= 2.375 COL3= 2.042 COL4= 2.042 COL5= 2.271  
COL6= 4.507 COL7= 6.843

THE PRADS PROGRAM OUTPUT DOES NOT PROVIDE THE RESULTS OF "RUN 1" BUT THIS SHEET SHOWS THE ECONOMIC DISPATCH AND PRODUCTION COST THAT "RUN 1" CALCULATES.

REMEMBER THE ONLY DIFFERENCE BETWEEN "RUN 1" & "RUN 2" IS THE DISPATCH LOAD LEVEL OBTAINED THIS OUTPUT BY ADDING 1 MW TO THE ACTUAL SYSTEM LOAD (1556 MW) AND A NET INTERCHANGE OF 1 MW DECREMENT. THIS RESULTS IN A DISPATCH LOAD LEVEL OF 1550 MW.

*DM*

EXHIBIT 16.1B  
 AVOIDED COST CALCULATION  
 EXAMPLE

RUN 12

IECG ECONOMIC INTERCHANGE COST FOR 10150116 10-JUL-02 RUM 842

NEGREA QUOTE IS -15.41 \$/MWH  
 COGEN QUOTE IS -45.36 \$/MWH

SYSTEM LOAD IS 1550. MW SR REQUIRED IS 0. MW  
 NET INTERCHANGE IS -100. MW SR ACTUAL IS 95. MW  
 FIRM INT IS 0. MW

SYSTEM LOAD IS 12.93 \$/MWH  
 GENERATION COST IS 25.81 \$/MWH

20

UNIT	GEN	COST	REG LATS MVA / MIN	EGCR LATS MVA / LRL	SPIN RES
RP 1	0.0	0.	0. / 0.	0. / 0.	0.
RP 2	14.0	623.	35. / 12.	33. / 14.	6.
RP 3	0.0	0.	0. / 0.	0. / 0.	0.
RP 4	0.0	0.	0. / 0.	0. / 0.	0.
RP 5	0.0	0.	0. / 0.	0. / 0.	0.
GA 1C	74.0	3405.	119. / 48.	103. / 49.	16.
GA 2	0.0	0.	0. / 0.	0. / 0.	0.
GA 3C	198.2	4941.	160. / 60.	153. / 65.	27.
GA 4C	157.2	6377.	186. / 60.	173. / 65.	23.
GA 5	0.0	0.	0. / 0.	0. / 0.	0.
GA 6C	343.0	7729.	350. / 175.	343. / 182.	7.
GA 1C	373.0	6501.	366. / 170.	373. / 177.	7.
BP 2C	348.0	6735.	375. / 180.	368. / 187.	7.
BP 3	0.0	0.	0. / 0.	0. / 0.	0.
GAP1	0.0	0.	0. / 0.	0. / 0.	0.
B5F1	0.0	0.	0. / 0.	0. / 0.	0.
B5F2	0.0	0.	0. / 0.	0. / 0.	0.
B5F3	0.0	0.	0. / 0.	0. / 0.	0.
COGEN	15.0	0.	12. / 12.	12. / 12.	6.
TOTAL	1450.0	37431.	1602. / 705.	1504. / 747.	95.
ADDITIONAL COAL FOR SALE:	0. MW				TEMP = 85

FUEL COST IN MILL/KWH  
 CUL1= 2.375 CUL2= 2.375 CUL3= 2.642 CUL4= 2.042 CUL5= 2.274  
 M3= 4.367 M2= 0.543  
 BASE-COST = 25.81 \$/MWH

*Handwritten signature*

EXHIBIT T6.1B  
AVOIDED COST CALCULATION  
EXAMPLE

Date 7-12-82

Customer City of Tampa

COGENERATION  
Customer Payment Form

Hour Ending	GENERATION MWH	COGEN QUOTE \$/MWH	LINE LOSS CREDIT \$/MWH	DOLLARS to be PAID \$
0100				
0200				
0300				
0400				
0500				
0600				
0700				
0800				
0900				
1000				
1100				
1200				
1300				
1400				
1500				
1600				
1700				
1800				
1900				
2000				
2100				
2200				
2300				
2400				

Daily Total \_\_\_\_\_

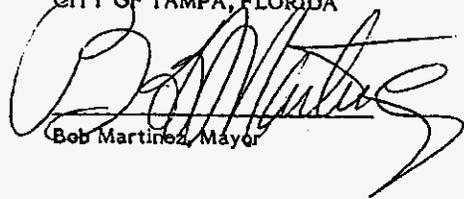
DAILY AVG \$/MWH = \_\_\_\_\_

DAILY CAPACITY FACTOR PERCENTAGE =  $\frac{\text{Net MWH Output of Electric Power}}{\text{Net Cap. X 24 Hrs X}} \times 100$

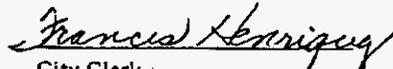
*RDG*

IN WITNESS WHEREOF, the City and Tampa Electric have executed this Agreement the day and year first above written.

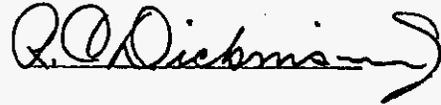
CITY OF TAMPA, FLORIDA

  
Bob Martinez, Mayor

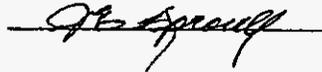
ATTEST:

  
City Clerk

TAMPA ELECTRIC COMPANY



WITNESSES:





Approved as to Form:

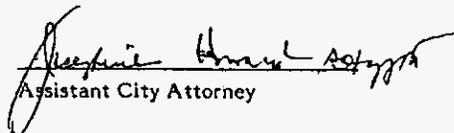
  
Assistant City Attorney

EXHIBIT T1  
CITY OF TAMPA, FLORIDA  
RIGHT OF WAY SECTION

DEPARTMENT OF HOUSING, INSPECTIONS AND COMMUNITY SERVICES

LEGAL DESCRIPTION

Type: PROPERTY

Location: Tampa Incinerator Convers  
property, NE 1/4 of Section

PARCEL NO. 1

Sheet: 1 of 1

By: *R. M. G. G.*

Date: 11-14-81

Sec. 20 T 29 S. R 19 E

Checked: *[Signature]*

Date: 11-16-81

Project (File) No.: 329.2

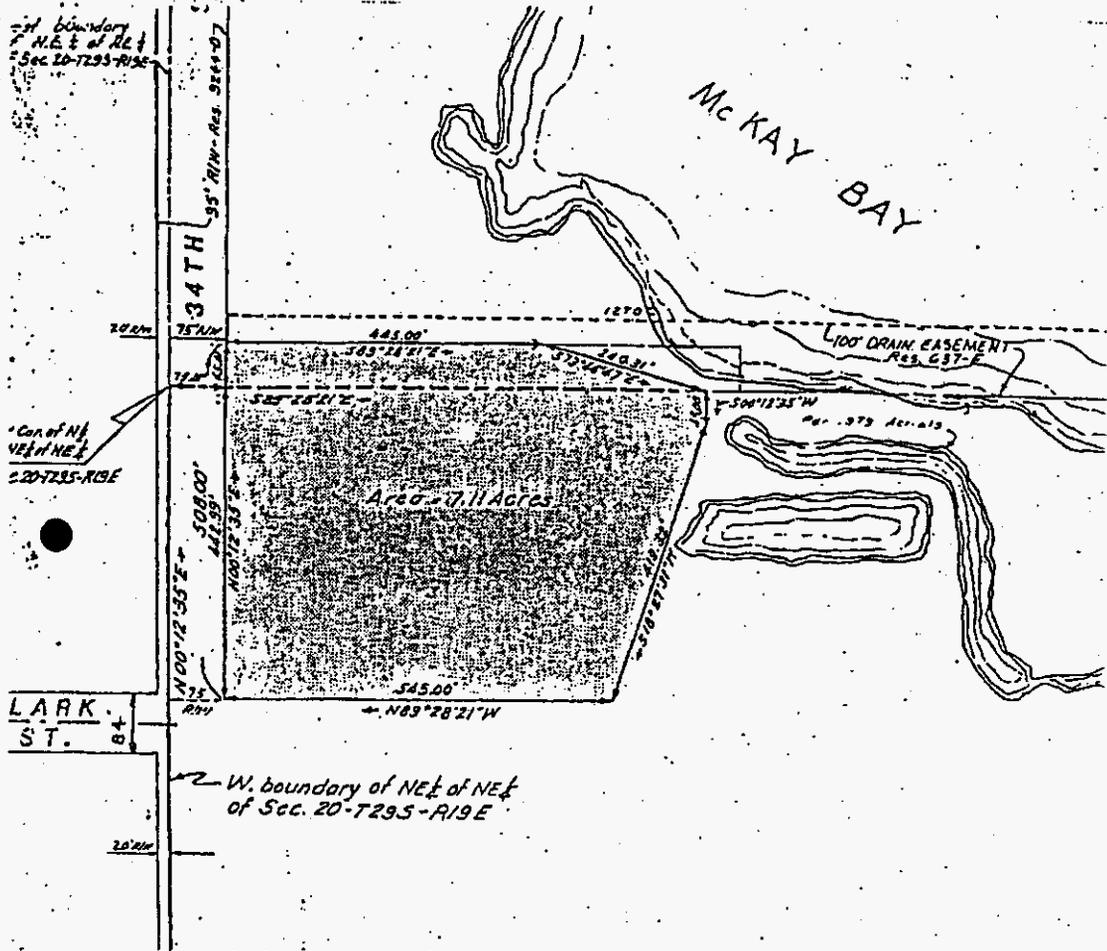
Title Information By: None

Parcel (File) No.: - - -

That parcel of land lying in the Northeast 1/4 of Section 20, Township 29 South, Range 19 East, more particularly described as follows, to wit:

Commence at the Southwest corner of the North 1/2 of the Northeast 1/4 of the Northeast 1/4 of said Section 20; run thence South 89°28'21" East 75.01 feet to the Point of Beginning of the parcel herein described; run thence North 00°12'35" East 65.01 feet; thence South 89°28'21" East 445.00 feet; thence South 73°46'47" East 240.31 feet; thence South 00°12'35" West 45.00 feet; thence South 18°27'31" West 418.32 feet; thence North 89°28'21" West 545.00 feet; run thence North 00°12'35" East 442.99 feet to the Point of Beginning.

Containing 309,830 Square Feet (7.11 Acres), more or less.



LARK ST. 8+

EC. 20-T29 S-R 19 E  
 Atlas Sheet T-14

Scale: 1"=200'

**NOTE:**  
 Bearings refer to the Standard Plane Rectangular (Traverse Mercator) Coordinate System for the West Zone of Florida.

**PROPERTY MAP**

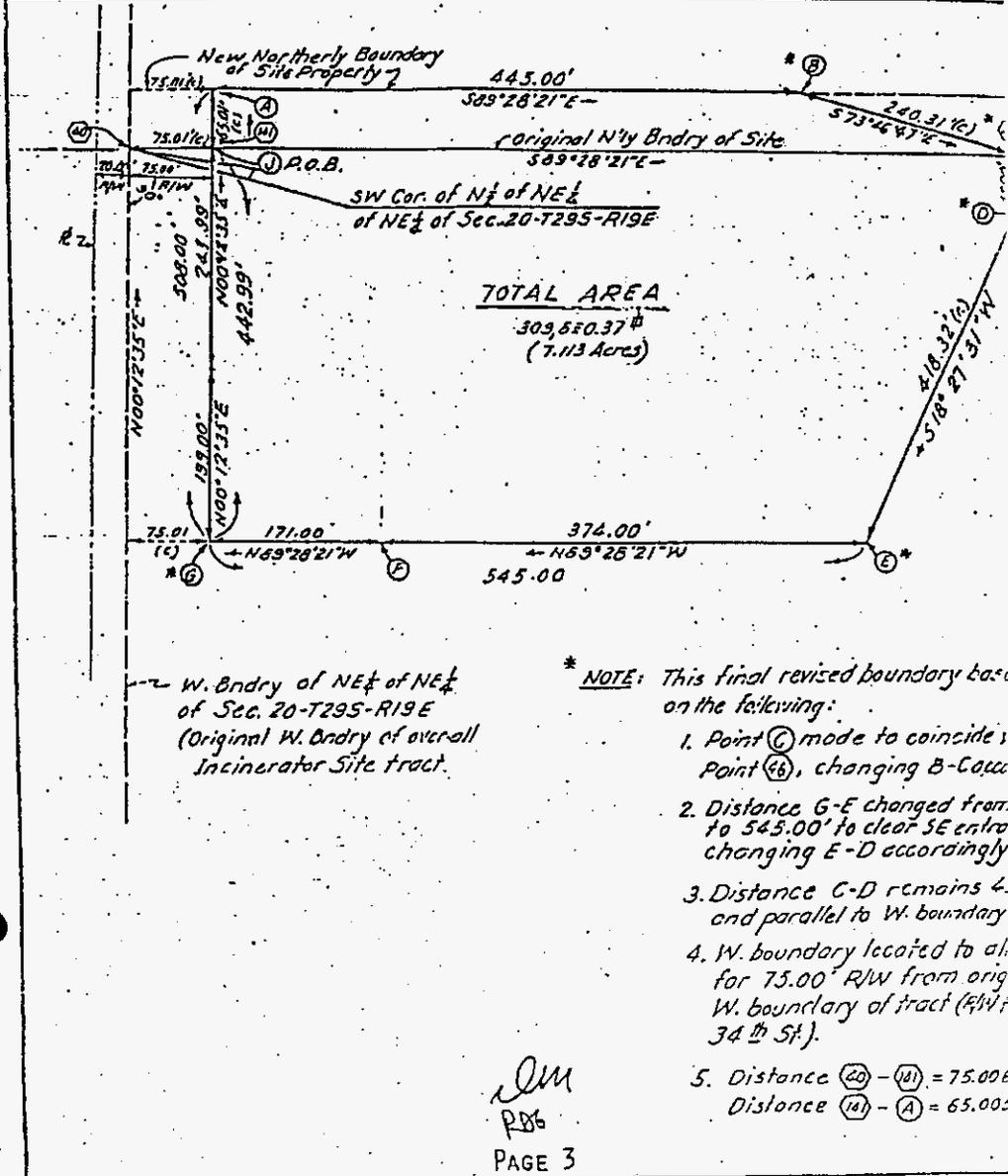
RIGHT OF WAY SECTION  
 HOUSING, INSPECTIONS AND  
 COMMUNITY SERVICES DEPARTMENT  
 CITY OF TAMPA, FLORIDA

**TAMPA INCINERATOR  
 CONVERSION PROPERTY**

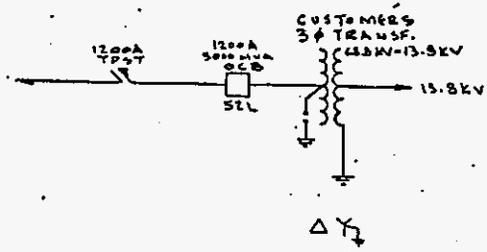
Drawn: <i>CAF</i>	Date: 11-2-81
Reviewed: <i>RL/S</i>	Date: 11-16-81
Approved: <i>RAF</i>	Date: 11-16-81
Field Book: -	Scale: 1"=200'
No. 1 of 1 Sheets	File No. 329.2

*RLM*  
 PAGE 2

DATE <i>11-13-81</i>	DEPT. OF HOUSING, INSPECTIONS, & COMMUNITY SERVICES RIGHT OF WAY & MAPPING DIVISION CITY OF TAMPA, FLORIDA	SHEET 3 of FILE NO. 329.2
CHECKED <i>FUE</i>	DATE 11-16-81	JOB DESCRIPTION Overall Boundary Corrections (Revised Base) TAMPA INCINERATOR CONVERSION PROPERTY



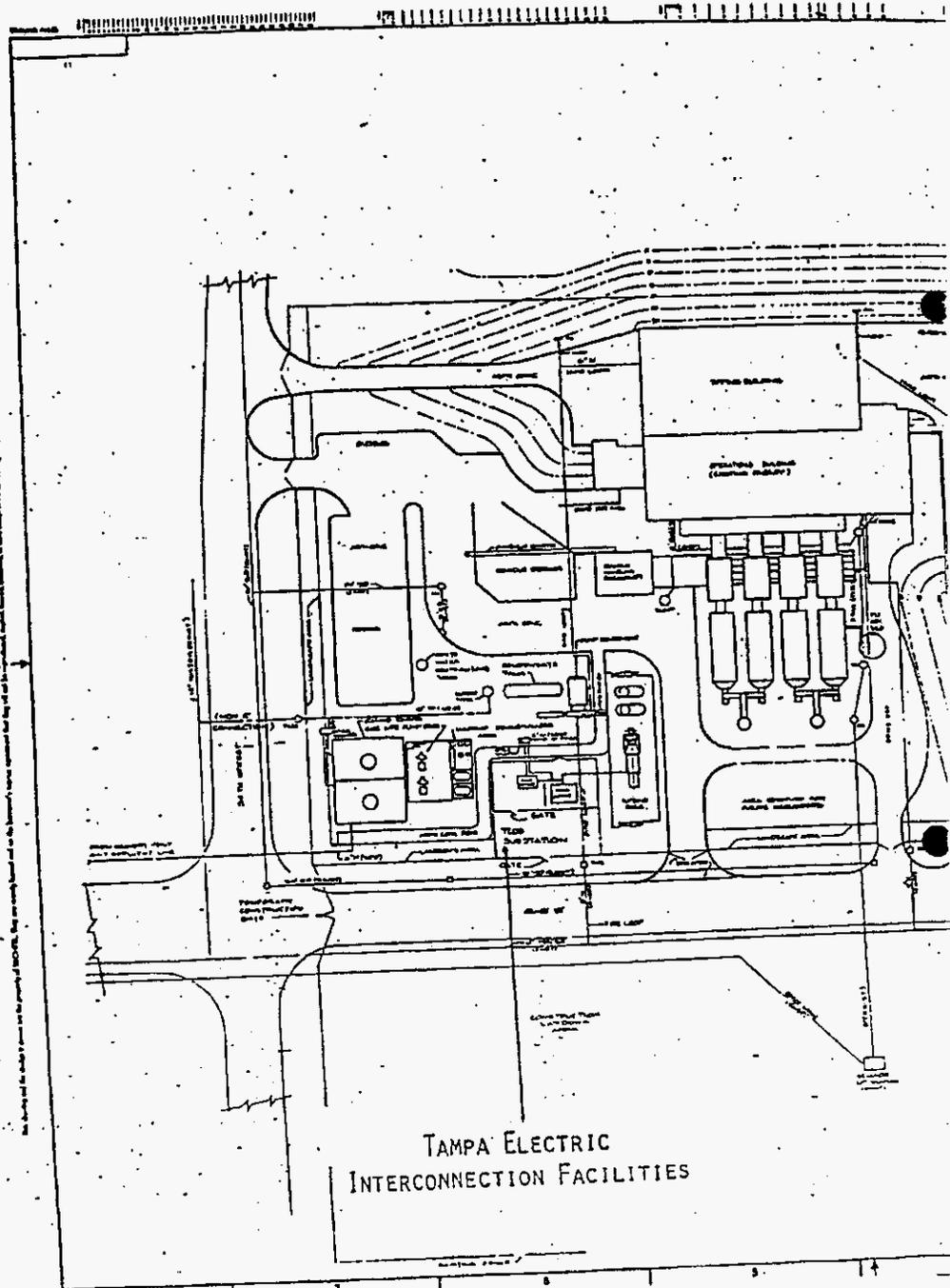




NE LINE DIAGRAM

EXHIBIT T4.1 *RG*  
 PAGE 1

DESIGNED BY: REM D	DATE: 1/19/22	TAMPA ELECTRIC CO. ENG. DEPT.	ELECTRICAL LAYOUT STATION FACILITIES REQUIRED FOR INTERCONNECTION - CITY OF TAMPA SUBSTATION	H-
DRAWN BY: E.G.	DATE: 1/19/22	SCALE: UNIFIED		
APPROVED BY: M.L.	DATE: 1/19/22	DESCRIPTION		



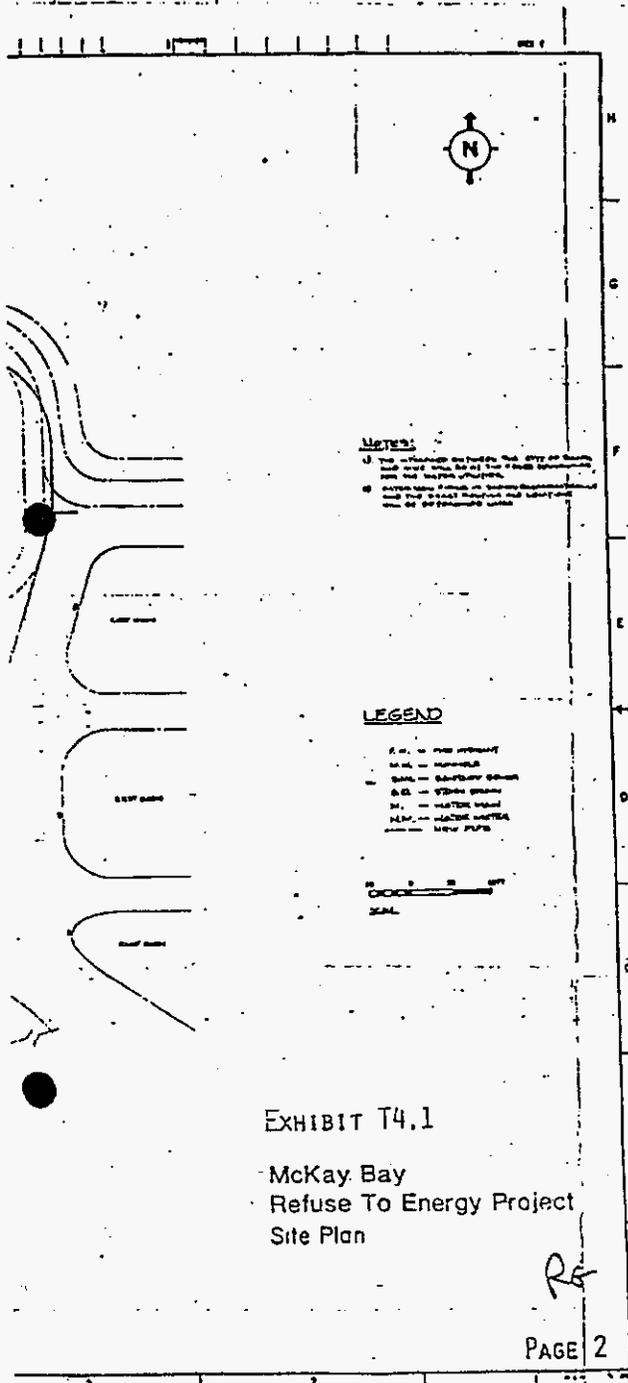
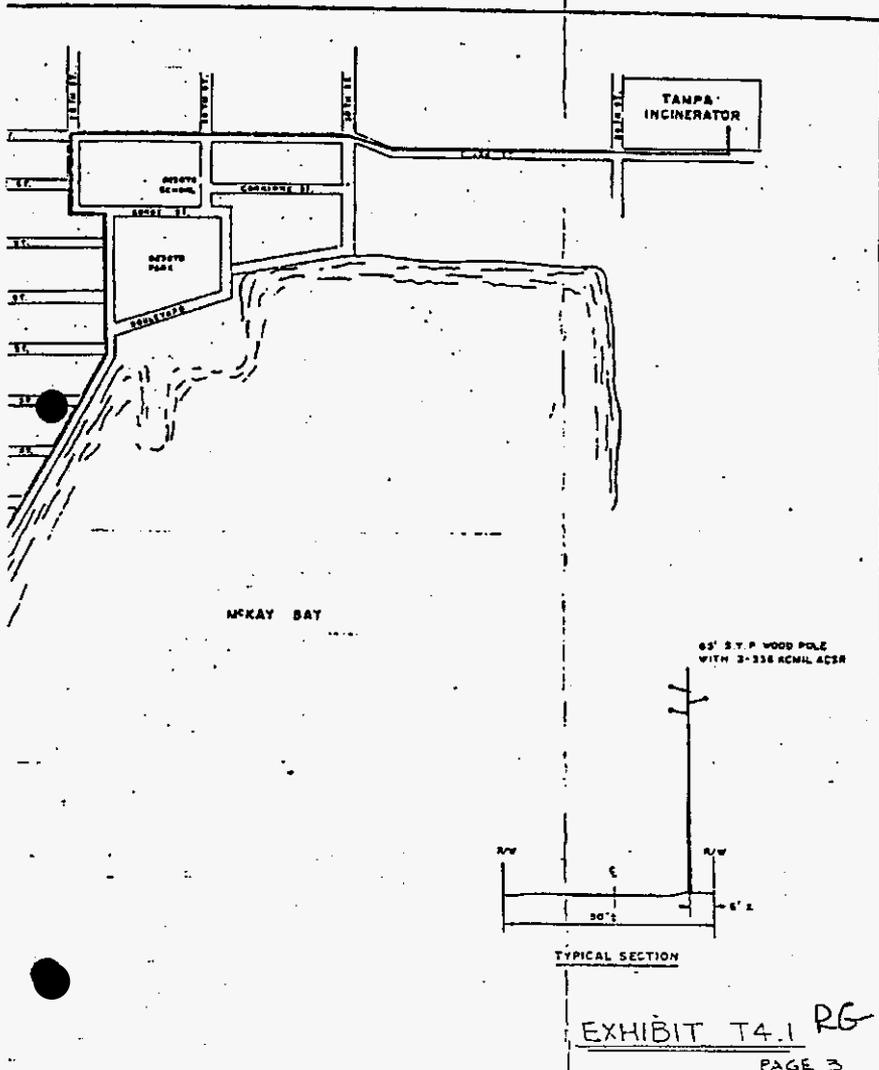


EXHIBIT T4.1

McKay Bay  
Refuse To Energy Project  
Site Plan

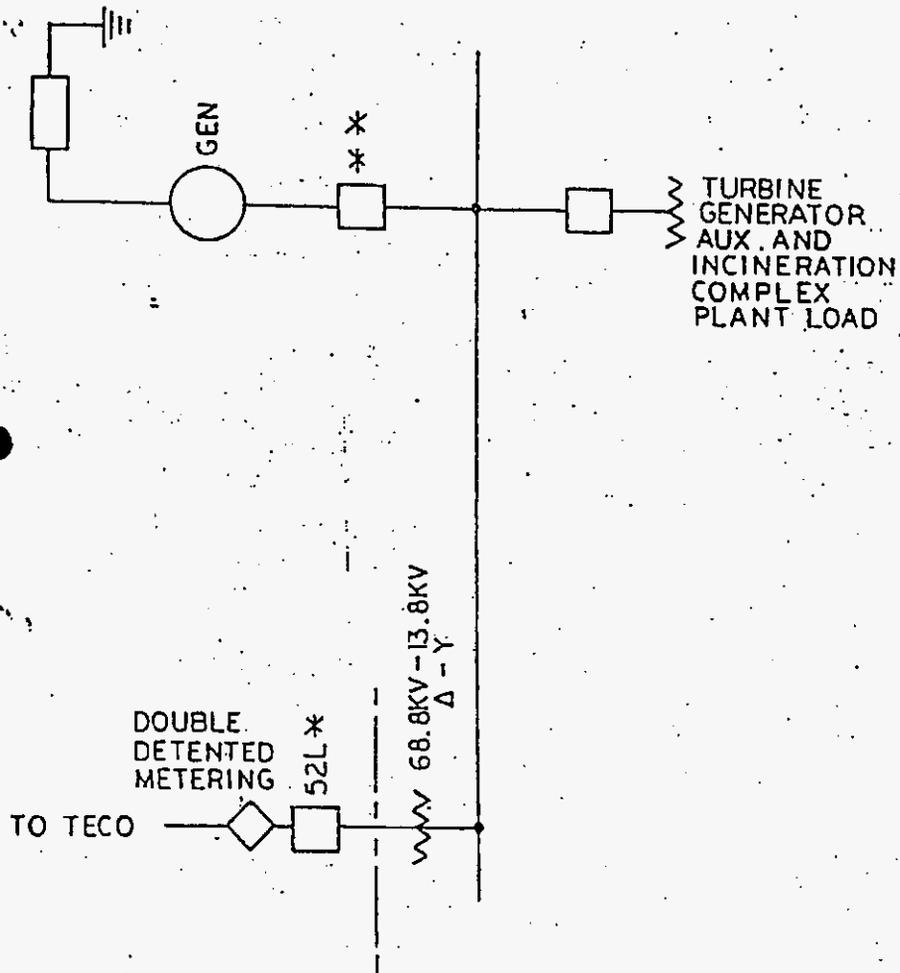
PAGE 2



TAMPA ELECTRIC CO. ENG. DEPT.		PROPOSED 69KV ROUTE TO TAMPA RESOURCE RECOVERY	
SCALE 1" = 400'	DATE 7-19-82		
DRAWN: H.C.	DATE 7-20-82		
APPR: [Signature]	DATE 7-20-82		
		PAGE 3	SH. 1 OF 1



EXHIBIT T.4.1.6



NOTE

- \* CIRCUIT BREAKER 52L TO BE ASSIGNED AN IDENTIFICATION NUMBER BY TAMPA ELECTRIC COMPANY
- \*\* SYNCHRONIZING TO BE PROVIDED ON CIRCUIT BREAKER.

*elm*  
*PSG*

CITY OF TAMPA  
 INCINERATOR

34TH ST.

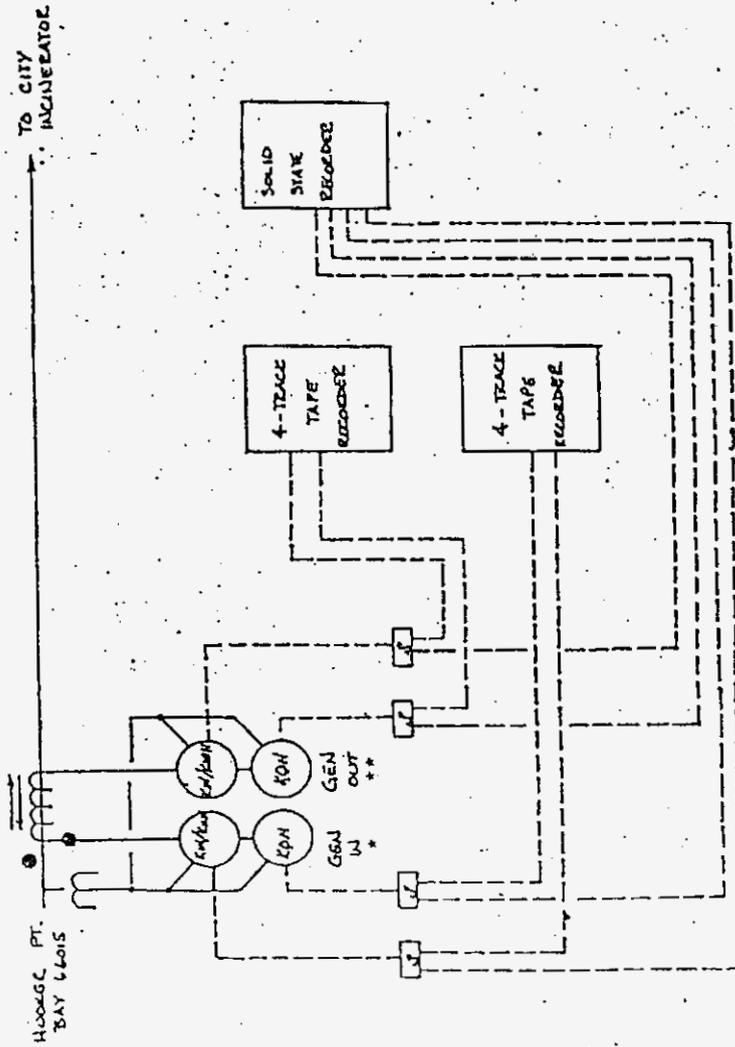
CLARK ST.

LOCATIC

PROPOSED INTERCONNECTION FOR CITY OF TAMPA  
 RESOURCE RECOVERY FACILITY

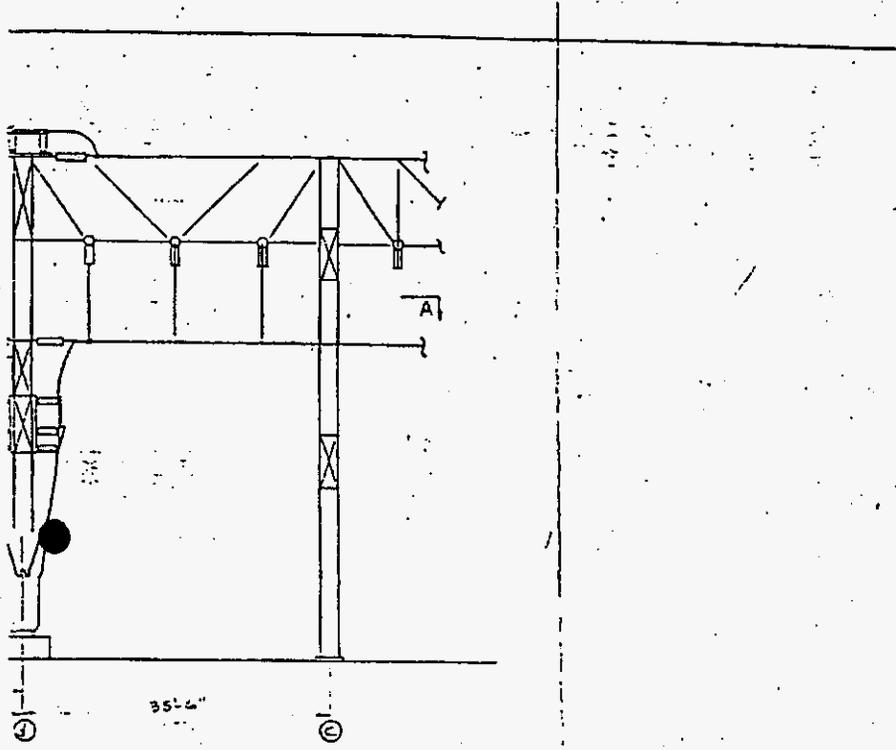
NMS 3/26/82

EXHIBIT T4.1.1.6  
 CITY OF TAMPA, TAMPA ELECTRIC PROPOSED ELECTRICAL AND METERING DETAILS



Metering

Gen. In: Net Megawatt Hour Output of Electric Power generated at the Facility and transmitted to Tampa Electric  
 Gen. Out: Electric power required by the Facility from Tampa Electric to the extent that such is not provided by the generation of the Facility.

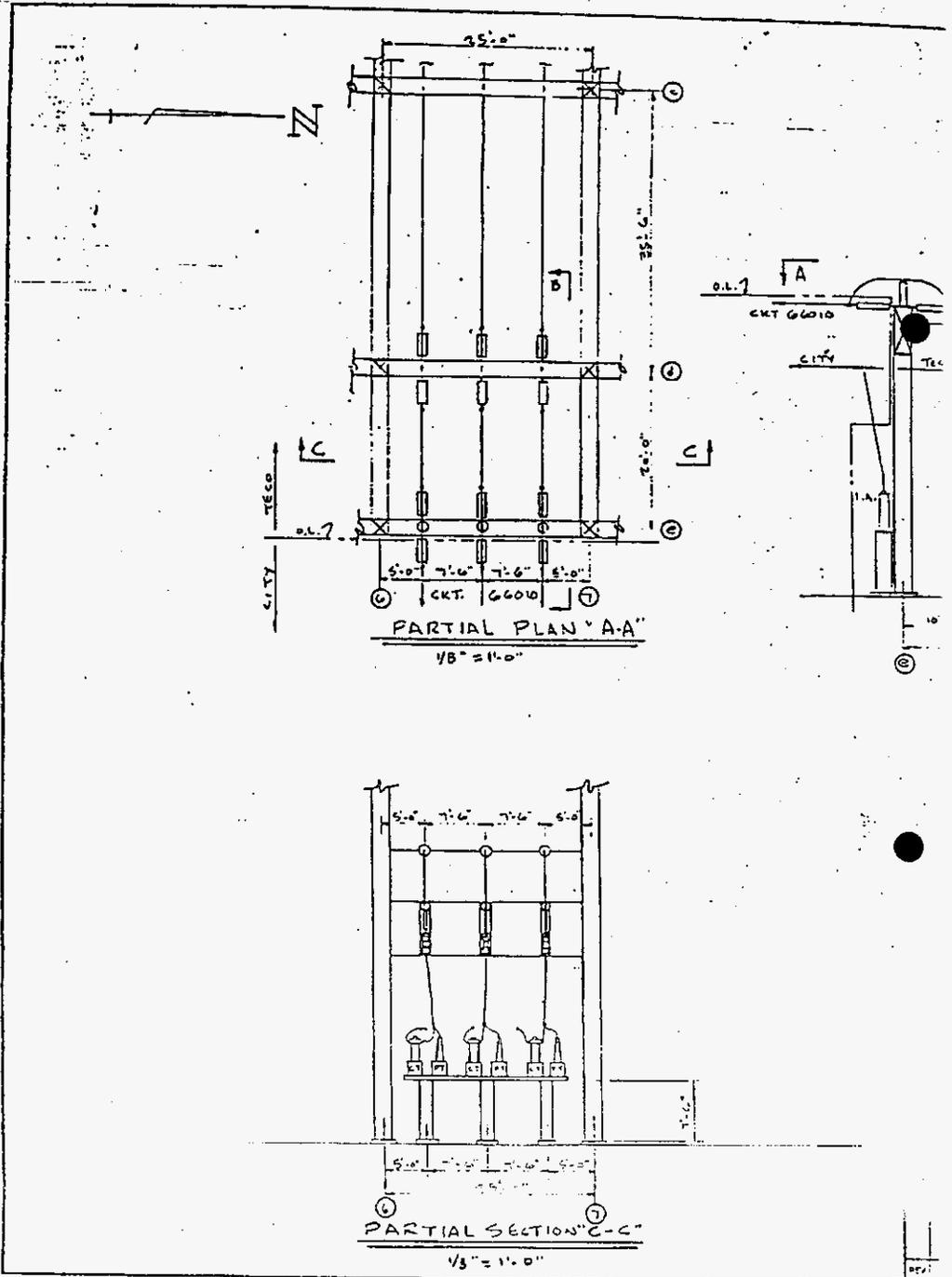


SECTION "3-B"  
 1/8" = 1'-0"

EXHIBIT T4.1.6 PG

PAGE 3

TAMPA ELECTRIC CO. ENG. DEPT.		60KV METERING FOR		H-
SCALE NOTED	DATE 7/19/82	CITY OF TAMPA FACILITY		
DESIGNATION	DATE	WORKERS POINT SUBSTA.		SH 1 OF 1



## EXHIBIT T5A

### TECHNICAL REQUIREMENTS FOR THE PARALLEL OPERATION OF CUSTOMER GENERATION ON TAMPA ELECTRIC COMPANY'S TRANSMISSION SYSTEM

(REVISED: July 14, 1981)

#### I. PURPOSE

It is the intent of Tampa Electric Company ("the Company") to permit any customer to operate his generating equipment in parallel with the Company's electric system whenever this can be done without adverse effects on the general public, other customers or to the Company's equipment or personnel. Certain protective devices (relays, circuit breakers, etc.), specified by the Company shall be installed by the customer at the location where the customer desires to operate generation in parallel with the Company's system. The purpose of these devices is to promptly remove the infeed from the customer's generation whenever a fault or abnormality occurs, so as to protect the general public, other customers and the Company's facilities and personnel from damage or injury.

These requirements establish minimum, reasonable and non-discriminatory guidelines designed to assure safe, reliable and compatible operation of a customer intertie and do not preclude the Company's prerogative to specify different cogeneration interconnection requirements for cogeneration facilities on a case-by-case basis, taking into account the unique characteristics of each such cogeneration facility.

The customer is solely responsible for protecting his equipment such that faults or other disturbances on the Company's system do not cause damage to the customer's equipment.

The customer shall bear all related costs resulting from the additional facility and equipment that is required to permit parallel operation.

#### II. GENERAL REQUIREMENTS

These general requirements apply to three-phase (3Ø) generators that may operate in parallel with the Company's system. Said generators shall be connected to the Company's system through sufficient transformers and circuit breakers to accommodate voltage levels, fault isolation and synchronization.

- A. Any protective relaying or equipment additions or changes on the Company's properties that are required because of interconnection with a customer's generator(s) shall be accomplished by the Company at the customer's expense.

- B. The Company may require, at the customer's expense, a dedicated circuit(s) or transformer(s) to serve said customer. The Company may also require substation additions and/or modification to accommodate the customer's generator.
- C. The customer shall be solely responsible for properly synchronizing his generator(s) with the Company's system and protecting his facility against loss of synchronism due to system conditions.
- D. The customer shall not energize a de-energized Company owned circuit or any portion thereof. The necessary control and protective devices shall be installed by the customer to prevent energization of such utility circuit.
- E. To prevent risk of damage to the customer's generator, the Company, at the customer's expense, shall provide "dead-line" closing of all source breakers of the intertie circuit(s).
- F. The electric service provided by the customer to the Company shall at all times comply with the standards set forth in the Florida Administrative Code Rules 25 - 6.45 and 25 - 6.46, as amended July 29, 1969.

The customer's generating equipment shall not cause objectionable interference with the electric service provided to other customers by the Company. In order to minimize the interference of the customer's parallel generation with the Company's electric service operation, the customer's generation shall meet the following criteria:

1. Voltage - The voltage at the synchronizing and metering bus shall not exceed 7½% above or below the standard voltage adopted. The customer shall operate his generating equipment in such manner that the maintained voltage levels are in the same range as if the generating equipment were not connected to the system. The customer shall provide an automatic method of disconnecting his generating equipment from the Company's facilities if the voltage cannot be maintained within acceptable tolerance. The customer shall not cause excessive voltage flicker on the Company's electric facilities. This flicker shall not exceed 2½% as measured on the primary side of the dedicated transformer(s).
2. Frequency - The operating frequency of the customer's generating equipment shall be maintained within +0.5 hertz of the nominal 60 hertz system frequency. The customer shall provide an automatic method of disconnecting his generating equipment from the Company's facilities within 0.2 seconds if the frequency cannot be maintained within tolerance.

3. Harmonics - The customer's generating equipment shall not introduce excessive distortion to the Company's sinusoidal voltage waves. The maximum allowable voltage distortion shall not exceed 5% of the fundamental 60 hertz frequency for the square root of the sum of the squares of the harmonics, and 2% of the fundamental 60 hertz frequency for any individual harmonic which shall be measured at the interconnection.
  4. Fault and Line Clearing - The customer shall be responsible for removing his generating equipment from connection with the Company's lines within 0.4 second of an outage of the interconnection.
  5. Power Factor - The customer load in conjunction with the generator shall not have a power factor less than 0.85 lagging.
- G. The Company may require that communication channels be installed, at customer expense. These channels would include the relay protection scheme, supervisory control and telemetering required. This channel may be a Company-owned pilot wire circuit, microwave, or other means to be determined by the Company.
- H. The selection and utilization of protective devices shall be coordinated through the Company's System Protection group.
1. All protective devices installed by the customer at his location to protect the Company's system from customer infeed shall be approved by the Company.
  2. The installation and check-out of these devices shall be supervised and approved by the Company.
  3. All device settings on the intertie shall be approved by the Company.
  4. The customer is responsible for supplying and properly maintaining a station battery system. The battery system shall be capable of operating all protective devices for 8 hours after loss of source power to the battery charger. Suitable alarm circuits must be provided to alert the customer if the charger fails or battery voltage falls below an acceptable level. The customer must maintain battery maintenance records which are available for Company review.

5. The Company reserves the right to verify, on demand, the calibration and operation of all protective devices at the intertie location. Verification may include the tripping of the tie breaker by the protective relays.

The customer has sole responsibility for the routine maintenance of his generating and protective equipment. Complete maintenance records shall be maintained by the customer and be available for Company review.

Failure of the customer to provide proper routine maintenance under circumstances, reasonably determined by the Company, to threaten the safety, reliability or compatibility of the parallel operation shall be grounds for suspending such parallel operation upon notice to the customer until such time as the operation deficiency has been corrected to the reasonable satisfaction of the Company.

6. The customer shall provide and install at his expense a Company approved circuit breaker, which shall be under the operating direction and control of the Tampa Electric System Dispatcher. The Company reserves the right to open the device for any of the following reasons:
- a) System emergency.
  - b) When inspection of the customer's generating equipment and protective devices reveal a hazardous condition, or a lack of maintenance which is reasonably determined by the Company to threaten the safety, reliability or compatibility of the parallel operation.
  - c) The customer's generating equipment or protective devices fail to comply with the standards contained in Paragraphs F and H of these technical requirements.
- I. The customer is here upon notified that certain conditions on the utility system may cause negative sequence currents to flow in the customer's generator. It is the sole responsibility of the customer to protect his equipment from excessive negative sequence currents.

- J. A voltage check scheme shall be installed on all Company source substation feeder breakers to which a cogenerating customer may be connected. This scheme shall be designed to inhibit manual and automatic reclosing until after the customer's generator has been disconnected. The addition of this voltage check scheme shall be at the customer's expense.
- K. In general, a customer that desires to sell power to the Company shall design his switchgear to accomodate sufficient metering to separately meter the power consumed and the net power generated.

EXHIBIT T5B

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GENERAL STANDARDS FOR  
SAFETY AND INTERCONNECTION  
OF COGENERATION AND SMALL POWER PRODUCTION FACILITIES  
TO THE ELECTRIC UTILITY SYSTEM

I. GENERAL

- I. A. PURPOSE. The purpose of these standards is to provide a fair and equitable method for qualifying facilities who have generators to interconnect with the utility and to promote the development and use of renewable resources in an economical manner. All interconnections are to comply with the statutes, ordinances, codes, rules and regulations of all Governmental units, bodies and agencies.
- These guidelines include the minimum engineering, operating, and protective requirements for safe and reliable operation of both the utility's system and the qualifying facility's system. These standards provide uniform policy to be used, but the utility will review each interconnection separately for specific needs according to the particular set of conditions and situations involved in each case.
- B. RESPONSIBILITY. It will be the responsibility of the qualifying facility requesting the interconnection to design and install adequate protection and control system to meet:
- (a) The requirements of this policy;
  - (b) All applicable electrical and safety standards and codes;
  - (c) The criteria of all licensing authorities.

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C. REQUIREMENTS. These standards include such items as:

- Personal Safety
- Responsibility and Liability
- Protection and Operation
- Quality of Service
- Metering
- Cost Responsibility

If an installation fails to meet any requirement herein, the utility may refuse to connect or reconnect the installation. The utility reserves the right to alter the requirements herein by special agreement to ensure safe and acceptable operation of its distribution and transmission system and service to other customers. A qualifying facility shall not operate electric generating equipment in parallel with the utility's electric system without the prior written consent of the utility.

D. APPLICATION FOR INTERCONNECTION. Formal application for interconnection shall be made by the qualifying facility prior to the installation of any generation related equipment. This application shall be accompanied by the following:

- (a) Physical layout drawings, including dimensions;
- (b) All associated equipment specifications and characteristics including, but not limited to, technical parameters, ratings, basic impulse levels, electrical main one-line diagrams, schematic diagrams, system protections, frequency, voltage, current and interconnection distance;
- (c) Functional and logic diagrams, control and meter diagrams, conductor sizes and length, and any other relevant data which might be necessary to

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- understand the proposed system and to be able to make a coordinated system;
- (d) Power requirements in watts and vars;
  - (e) Expected radio-noise, harmonic generation and telephone interference factor;
  - (f) Synchronizing methods; and
  - (g) Operating/Instruction Manuals.

Any subsequent change in the system must also be submitted for review and written approval prior to actual modification. The above mentioned review, recommendations and approval by the utility do not relieve the qualifying facility from the complete responsibility for the adequate engineering design, construction and operation of the qualifying facility's equipment and for any liability for injuries to property or persons associated with any failure to perform in a proper and safe manner for any reason.

#### II. PERSONNEL SAFETY

- II. A. GENERAL. The foremost concern is safety. It must be recognized that the utility's electrical system and the electrical system of the qualifying facility will interact through interconnection of the qualifying facility's generation system.
- Adequate protection and safe operational procedures must be followed by the joint system. The qualifying facility shall be required to furnish, install, operate and maintain in good order and repair, and be solely responsible for, without cost to the utility, all facilities required for the safe operation of the generation system in parallel with the utility's system. The qualifying facility shall permit the utility's employees to enter upon its property at any reasonable

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time for the purpose of inspection and/or testing the qualifying facility's equipment, facilities, or apparatus. Such inspections shall not relieve the qualifying facility from its obligation to maintain its equipment in safe and satisfactory operating condition. The utility's approval of isolating devices used by the qualifying facility will be required in order to ensure that these will comply with the utility's switching and tagging procedure for safe working clearances.

- B. DISCONNECT SWITCH. A manual disconnecting switch, of the visible load break type, to provide a separation point between the qualifying facility's generation system and the utility's system, shall be required. The utility will specify the location of the disconnect switch. The switch shall be mounted separate from the meter socket and shall be readily accessible to the utility and be capable of being locked in the open position with a utility padlock. The utility reserves the right to open the switch (i.e. isolating the qualifying facility's generation system) without prior notice to the qualifying facility.

Any of the following conditions shall be cause for disconnection:

- (a) Utility system emergencies and/or maintenance requirements;
- (b) Hazardous conditions existing on the qualifying facility's generating or protective equipment as determined by the utility;
- (c) Adverse effects of qualifying facility's generation to the utility's other electric consumers and/or system as determined by the utility:

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- (d) Failure of qualifying facility to maintain any required insurance, or;
  - (e) Failure of qualifying facility to comply with any existing or future regulations, rules, orders or decisions of any governmental or regulatory authority having jurisdiction over the qualifying facility's electric generating equipment or the operation of such equipment.
- C. RESPONSIBILITY AND LIABILITY. The utility shall be responsible for utility owned facilities. The qualifying facility shall likewise be responsible for the qualifying facility's entire system, ensuring adequate safeguards for other qualifying facilities, utility personnel and equipment and for the protection of his own generating system. The qualifying facility shall indemnify and save the utility harmless from any and all claims, demands, costs, or expenses for loss, damage, or injury to persons or property (including the qualifying facility's generation system and the utility's system) caused by, arising out of, or resulting from:
- (a) Any act or omission by the qualifying facility or qualifying facility's contractors, agents, servants and employees in connection with the installation or operation of the qualifying facility's generation system or the operation thereof in connection with the utility's system;
  - (b) Any defect in, failure of, or fault related to the qualifying facility's generation system;
  - (c) qualifying facility's negligence or negligence of qualifying facility's contractors, agents, servants and employees; or

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(d) Any other event or act that is the result of, or proximately caused by the qualifying facility or the qualifying facility's facilities.

D. INSURANCE. It is understood and agreed that the qualifying facility will deliver to the utility, at least fifteen days prior to the start of any interconnection work a certified copy or duplicate original of a liability insurance policy issued by a reputable insurance company authorized to do business in the State of Florida, jointly protecting and indemnifying the qualifying facility and the utility, its officers, employees, and representatives against all liability and expense on account of claims and suits for injuries or damages to persons or property arising out of the interconnection to the qualifying facility, or caused by operation of any of the qualifying facility's equipment or by the qualifying facility's failure to maintain the qualifying facility's equipment in satisfactory and safe operating condition.

The policy providing such coverage shall provide public liability insurance, including property damage, in an amount not less than \$300,000 for each occurrence. More insurance may be required as deemed necessary by the utility. In addition, the above required policy shall be endorsed with a provision whereby the insurance company will notify the utility thirty days prior to the effective date of cancellation or material change in the policy.

The qualifying facility agrees to pay all premiums and other charges due on said policy and keep said policy in force during the entire life of this contract.

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III. PROTECTION AND OPERATION

III. A. GENERAL. The protection and operation of the inter-connection between the qualifying facility's generation system and the utility's distribution and transmission system depends on the size, type and location of the facility within the utility's electric system. It will be the responsibility of the qualifying facility to provide all devices necessary to protect the qualifying facility's equipment from damage by the abnormal conditions and operations which occur on the utility system that result in interruptions and restorations of service by the utility's equipment and personnel. The qualifying facility shall protect its generator and associated equipment from:

- (a) Overvoltage;
- (b) Undervoltage;
- (c) Overload;
- (d) Short circuits (including ground fault condition);
- (e) Open circuits;
- (f) Phase unbalance and reversal;
- (g) Over or underfrequency condition;
- (h) Other injurious electrical conditions that may arise on the utility's system and;
- (i) Any reclose attempt by the utility.

The utility reserves the right to perform such tests as it deems necessary to ensure safe and efficient protection and operation of the qualifying facility's facilities.

B. LOSS OF SOURCE. The qualifying facility shall provide, or the utility will provide at the qualifying facility's expense, approved protective equipment necessary to immediately, completely, and automatically

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disconnect the qualifying facility-owned generation from the utility's system in the event of a fault on the utility's system, a fault of the qualifying facility's system, or loss of source on the utility's system. Disconnection must be completed within the time specified by the utility in its standard operating procedure for its electric system for loss of the utility's system.

This automatic disconnecting device may be of the manual or automatic reclose type and shall not be capable of reclosing until after service is restored by the utility. The type and size of the device shall be specified by the utility depending upon the installation. Adequate test data or technical proof that the device meets the above criteria must be supplied by the qualifying facility to the utility. The utility will endeavor to approve a device that will perform the above functions at minimal capital and operating costs to the qualifying facility.

- C. COORDINATION AND SYNCHRONIZATION. The qualifying facility shall be responsible for coordination and synchronization of the qualifying facility's equipment with the utility's electrical system, and assumes all responsibility for damage that may occur from improper coordination or synchronization of the generator with the utility's system. Details of frequency and voltage synchronization can be found in the Quality of Service section of these rules.
- D. ELECTRICAL CHARACTERISTIC. Single phase generator interconnections with the utility are permitted at power levels up to 20 KW. For power levels exceeding 20 KW, a three phase balanced interconnection will

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normally be required. For the purpose of calculating connected generation, 1 horsepower equals 1 kilowatt. The qualifying facility shall interconnect with the Company at the voltage of the available distribution or transmission line of the utility for the locality of the interconnection, and shall utilize one of the standard connections (single phase, three phase, wye, delta). The utility reserves the right to require a separate transformation and/or service for a qualifying facility's generation system, at the qualifying facility's expense. The qualifying facility shall bond all neutrals of the qualifying facility's system to the utility's neutral, and shall install a separate driven ground with a resistance value which should be determined by the utility and bond this ground to the qualifying facility's system neutral.

- E. EXCEPTIONS. Qualifying facility generators having capacity ratings that can:
- (1) Produce power in excess of 1/2 of the minimum qualifying facility requirements of the interconnected distribution or transmission circuit.
  - (2) Produce power flows approaching or exceeding the thermal capacity of the connected utility distribution and transmission lines, or transformers.
  - (3) Adversely affect the operation of the utility or other qualifying facility's voltage, frequency or overcurrent control and protection devices;
  - (4) Adversely affect the quality of service to other qualifying facilities;

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(5) Interconnect at voltage levels greater than distribution voltages; and will require more complex interconnection facilities as deemed necessary by the utility.

IV. QUALITY OF SERVICE

IV. A. GENERAL. It is the policy of the utility to allow only those interconnections which can be achieved without reducing the quality of service to other qualifying facilities and to disconnect such interconnections should unforeseen difficulties arise which impair quality of service.

The qualifying facility's generation system must be of sound engineering design, of quality workmanship, shall have safe and reliable operating characteristics, shall meet all applicable codes, and shall be approved by all Governmental authorities having jurisdiction. The system shall be designed or approved by a licensed and registered electrical engineer of the State of Florida. The qualifying facility reserves the right to perform such tests as it deems necessary to ensure the quality of service.

The quality of the qualifying facility's generated electricity shall meet the following minimum guidelines:

- B. FREQUENCY. The governor control on the prime mover shall be capable of maintaining the generator output frequency within limits for loads from no-loads up to rated output. The limits for frequency shall be 60 Hertz (cycles per second) plus or minus, an instantaneous variation of less than 1%.
- C. VOLTAGE. The regulator control shall be capable of maintaining the generator output voltage within limits for loads from no-load up to rated output. The limits

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for voltage shall be the nominal operating voltage level, plus or minus 5%.

- D. HARMONIC. The output sine wave distortion shall be deemed acceptable when it does not have a higher content (root mean square) of harmonics than the qualifying facility's normal harmonic content at the interconnection point.
- E. POWER FACTOR. The qualifying facility's generation system shall be designed, operated and controlled to provide reactive power requirements from 0.85 lagging to 0.85 leading power factor. Induction generators shall have static capacitors that provide at least 85% of the magnetizing current requirements of the induction generator field. (Capacitors shall not be so large as to permit self-excitation of qualifying facility's generator field).
- F. DC GENERATORS. Direct current generators may be operated in parallel with the qualifying facility's system through a synchronous inverter. The inverter must meet all criteria in these rules.

#### V. METERING

The actual metering equipment required, its voltage rating, number of phases, size, current transformers, potential transformers, number of inputs and associated memory is dependent on the type, size and location of the electric service provided. In situations where power may flow both in and out of the qualifying facility's system, power flowing into the qualifying facility's system will be measured separately from power flowing out of the qualifying facility's system. The utility will provide at no additional cost to the qualifying facility, the metering equipment necessary

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to measure capacity and energy deliveries to the qualifying facility. The utility will provide, at the qualifying facility's expense, the necessary additional metering equipment to measure energy deliveries by the qualifying facility to the utility.

VI. COST RESPONSIBILITY

The qualifying facility is required to bear all costs associated with protective devices, transformers, lines, services, meters, switches, and associated equipment and devices beyond that which would be required to provide normal service to the qualifying facility if no cogeneration were involved. These costs shall be paid by the qualifying facility to the utility for all material and labor that is required. The utility shall supply the qualifying facility with a written cost estimate of all its required materials and labor prior to any work being done. The utility shall also provide project timing and feasibility information to the qualifying facility. The cost of meters and metering equipment may be paid at the time of interconnection or through the monthly customer charge. Billing and/or payment for cogenerated electricity shall be in accordance with tariffs or contracts (as applicable) filed with and accepted by the FPSC. All such tariffs and contracts shall comply with the guidelines set forth by the FPSC in accordance with the requirements of the Public Utility Regulatory Policies Act.

October 8, 1981

EXHIBIT T6.6

CITY OF TAMPA SMALL POWER PRODUCTION COST ESTIMATES

A summary of the cost estimates to do the necessary work to interconnect the City of Tampa's Refuse disposal/small power production (RD/SPP) facility into our system is as follows:

Substation Costs:

Hookers Point Substation	
Protective Relaying	\$ 25,000
OCB-69 Kv (prorated)	\$ 18,178
City of Tampa Substation	
TECO Portion	\$125,000

Transmission Costs:

Dedicated Circuit	
1.6 Miles 69 Kv Line	\$125,000

Distribution Costs:

Cost incurred due to transmission circuit being constructed along the route of an existing distribution circuit.	\$7,500
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Communication & Control Costs:

Telemetering, RTU, Communication Circuit, Supervisory Control and Motor Mech.	\$101,775
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Primary Metering Costs:

\$6,500

TOTAL COST \$408,953

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CITY OF TAMPA SHALL POWER PRODUCTION COST ESTIMATES

ITEMIZATION

Substation Costs:

1. Hookers Point Substation	
Protective Relaying	\$ 25,000.00
OCB-69kV Incorporated	18,178.00
Subtotal:	\$ 43,178.00
2. City of Tampa Substation	
TECO's portion (Note: Relay	
protection provided by City)	
69kV CD	\$ 55,000.00
Metering Cts of Pts	20,000.00
Structure	7,000.00
Foundations	5,000.00
Fence	8,000.00
Miscellaneous Material	6,000.00
Engineering	3,000.00
Labor	18,000.00
Vehicle	3,000.00
Subtotal:	\$125,000.00

Transmission Costs:

to construct a 69kV line from Hookers Point	
Substation to the City of Tampa's Incinerator.	
Includes 1.6 miles of dedicated transmission	
line using arm's construction supporting	
136 KCMIL ACSR conductor, miscellaneous	
distribution work totaling \$6,487 is also	
included.	
Subtotal:	\$125,000.00

Distribution Costs:

Cost incurred due to transmission	
circuit being constructed along	
the route of an existing distribu-	
tion circuit.	
Subtotal:	7,500.00

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*RTC*

CITY OF TAMPA SMALL POWER PRODUCTION COST ESTIMATES

ITEMIZATION (continued)

Communications and Control Cost:

1. Analog Telemetering Includes: transducers, transmitters, receiver, tone equipment, recorders, etc.	\$ 7,475.00
2. KWH Telemetering Includes: transducers, accumulators, transmitters, receivers, tone equipment, read-out indicators, etc.	\$24,150.00
3. Remote Terminal Unit Includes: Control interpose relays, control circuitry, communications modem, battery and charger, etc.	\$28,750.00
4. Communications Cable Includes: installation of approximately one mile of cable, messenger, load coils, etc.	\$17,250.00
5. Pole Top Tap Switches Includes: installation of two motor mechanisms, control cable, power supply, etc.	\$24,150.00
Subtotal:	\$101,775.00

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CITY OF TAMPA SMALL POWER PRODUCTION COST ESTIMATES

ITEMIZATION (continued)

Primary Metering Cost:

Additional cost to normal metering service. Includes: 69kV, 3Ø, 4W, WYE, 3-element meters, magnetic tape installation and solid state recorder.

1) Material

3Ø, 4W, WYE, 3-element KWH w/initiator and demand register	\$ 350
3Ø, 4W, WYE, 3-element KQH w/initiator	250
Socket adapters and test blocks	225
Cabinet - 3' x 3'	250
Sentry 30 relays	300
Magnetic tape recorders	1,000
Solid State Recorder	1,500
Misc. conduit, wire, lugs, fittings	250
SUBTOTAL	\$4,125

2) Labor

Meterman time to build (8 hrs.), install (16 hrs.), and test (2 hrs.) @ \$25/hr.	\$ 650
Supervisor time: 8 hrs. @ \$25/hr.	200
Engineering time: 40 hrs. @ \$25/hr.	1,000
Technician time (drafting, assistance, etc.): 4 hrs. @ \$12.50/hr.	500
Light vehicle time: 8 hrs. @ 2.65/hr.	25
SUBTOTAL	\$2,375

Material and Labor Subtotal: \$6,500

*JMM*  
RDG 4

EXHIBIT T6.1B  
AVOIDED COST CALCULATION



ESTIMATES OF TAMPA ELECTRIC'S  
SCHEDULE "B" CAPACITY CHARGES

Year	Dollars/KW/Month
1982	\$ 3.72
1983	4.08
1984	4.67
1985	5.08
1986	8.17
1987	8.33
1988	8.50
1989	8.75
1990	9.00
1991	9.08
1992	15.42*
1993	15.58
1994	15.83
1995	19.50
1996	19.83
1997	20.00
1998	20.25
1999	24.58
2000	24.92

\* Based on prior assumption that MacInnes Unit No. 1 would be completed and on line in 1991.

MacInnes Unit No. 1 has now been deferred and these estimates do not take into consideration the impact from 1992 thru 2000 of this deferral.

D. M. Mestas  
8/6/82

AMENDMENT TO  
SMALL POWER PRODUCTION AGREEMENT

The City of Tampa, a municipal corporation organized under the laws of the State of Florida, hereinafter referred to as "the City" and Tampa Electric Company, a private utility corporation organized under the laws of and authorized to do business within the State of Florida, hereinafter referred to as "Tampa Electric," being parties to a Small Power Production Agreement dated August 26, 1982, hereinafter referred to as "the Agreement," execute this Amendment to the Agreement ("Amendment") on this the 25 day of May, 1989.

WITNESSETH:

WHEREAS, this Amendment to the Agreement is entered into in order to carry out the renegotiations contemplated in Chapter 88-130, Laws of Florida, as implemented by the Florida Public Service Commission ("FPSC") in Docket No. 881005-EG; and

WHEREAS, it is the intent of the parties that the provisions of the Agreement not hereby amended shall remain in full force and effect.

NOW, THEREFORE, for mutual considerations the parties hereby agree as follows:

1. Pursuant to subsection 6.2.7 of the Agreement, the City has finalized the number of megawatts of net capacity of the Facility and has notified Tampa Electric in writing to use 15.5 megawatts of net capacity in calculating capacity payments under the Agreement. In view of the City's commitment of 15.5 megawatts of capacity to Tampa Electric, the parties

agree that, in exchange for the capacity and energy payments described herein, all of the electric power generated at the facility, less the amount of electric power consumed in the operation of the facility, shall continue to be delivered to and purchased by Tampa Electric in accordance with this Amendment. The City agrees not to utilize any of the electric power generated at the existing facility in the operation of the Hookers Point Advanced Wastewater Treatment Plant or for any purpose other than the operation of the existing facility. The City shall not redesignate its capacity commitment or attempt to be compensated for capacity in excess of 15.5 MW absent some future physical modification or addition to the City's facilities which actually enables the City to derive increased generating capacity from its generating facilities over and above the generating capability of the existing facility. If such future modifications or additions (such as the installation of an additional generator or a solid waste treatment combustion line) are made (the "modified facility"), the City shall have an opportunity to demonstrate the increased generating capacity thus made available, after which the City and Tampa Electric may enter into a new agreement for Tampa Electric's purchase of additional generation from the City's generating facilities. Any such new contract or agreement may be based on the Commission designated avoided unit then in effect and shall not incorporate any of the energy or capacity pricing provisions hereof unless agreed to by both parties. In calculating monthly capacity payments to the City under such new contract or agreement, Tampa Electric will assume that the first 15.5 MW of power delivered at a 70% capacity factor on a 12-month rolling average basis is in satisfaction of the City's obligations pursuant to the August 26, 1982 Agreement, as

modified by this Amendment; provided, however, in the event the City utilizes the additional generation for any purpose other than a sale to Tampa Electric or for the operation of the existing or modified facility, such calculation shall not be applicable, in which case the additional capacity will be determined only after the 15.5 MW of committed capacity at 100% capacity factor has been satisfied. Additional capacity committed to and delivered for sale to Tampa Electric pursuant to a new contract or agreement, over and above the 15.5 MW at a 70% capacity factor, shall be deemed delivered pursuant to such new contract or agreement.

2. The following methodology for calculating energy payments by Tampa Electric to the City is substituted in lieu of the methodology described in subsection 6.1 of the Agreement and the exhibits described in that subsection:

Energy.

Tampa Electric agrees to purchase the energy produced by the Facility and delivered to Tampa Electric in accordance with the following provisions and beginning with the first full billing cycle immediately following the execution of this Amendment.

The calculation of energy payments to the City, for the energy delivered to and purchased by the company, shall be based on the sum, over all hours of the billing period, of the product of each hour's energy rate, as defined herein, times the purchase by the company for that hour.

Payments Prior to April 1, 1992: The energy rate in cents per kilowatt-hour (¢/KWH) shall be based on the Company's actual hourly avoided energy costs which are calculated by the Company

In accordance with FPSC Rule 25-17.0825, F.A.C., and Order No. 19548 issued June 21, 1988 in Docket No. 880001-EI. Avoided energy costs include incremental fuel, identifiable variable operation and maintenance expenses, and an adjustment for line losses. When economy transactions take place, the incremental costs are calculated after the purchase or before the sale of the economy energy.

Payments Starting on April 1, 1992: The energy rate in cents per kilowatt-hour ( $\$/KWH$ ), shall be the lesser of an hour-by-hour comparison of: a) the fuel component of the Company's avoided energy costs calculated in accordance with Rule 25-17.0825 F.A.C.; and b) the Statewide Avoided Unit fuel cost. The Statewide Avoided Unit Fuel Cost, in cents per kilowatt hour ( $\$/KWH$ ) shall be defined as the product of: a) the average monthly inventory charge out price of coal burned at Tampa Electric Company's Big Bend Unit No. 4, in cents per million Btu; and b) an average annual heat rate of .01050 million Btu per kilowatt hour.

3. The following methodology for calculating capacity payments by Tampa Electric to the City is substituted in lieu of the methodology set forth in Section 6.2 of the Agreement:

Capacity Payments.

In accordance with the amendments to Rule 25-17.091, Fla. Admin. Code voted on by the Commission at its March 21, 1989 Agenda Conference and embodied in Order No. 21053, issued April 14, 1989, the City chooses to receive capacity payments from

Tampa Electric under payment Option "A" of Rate Schedule COG-2 as outlined in First Revised Sheet No. 8.130 and 8.140 with the following exceptions:

- (1) The payment schedules that may be earned under this calculation are attached hereto as Appendix "A" and by reference made a part hereof and are based on the value of the year by year deferral of two 700 MW coal fired units with an in-service date of April 1, 1992 as detailed in Commission Order No. 13247 issued May 1, 1984 in Docket No. 830377-EU. The cost parameters to be utilized are those of the 500 MW coal fired unit with an in-service date of January 1, 1995, as designated in Order No. 17480 issued April 30, 1987 in Docket Nos. 860004-EU and 860004-EU-A. Such cost parameters are set forth in Appendix "B" to Tampa Electric's present rate schedule COG-2, at 1st Revised Sheet Nos. 8.340 and 8.350, copies of which are attached hereto as Appendix "B" and by reference made a part hereof.
- (2) The 20% risk related discount heretofore applied in calculating capacity payments to QFs shall not apply in the calculation of capacity payments for the City of Tampa.
- (3) The City hereby elects to receive early levelized capital payments.
- (4) The City hereby elects to receive early operation and maintenance payments.
- (5) The City shall not be required to provide surety bonds or equivalent assurances of repayment for any capital or operating and maintenance payments. Such payments are subject to being refunded pursuant to the provisions of §377.709(4), Fla. Stat. (Supp. 1988).

4. At the end of each billing cycle, beginning with the first full billing cycle immediately following the execution of this Amendment, Tampa Electric will calculate the most recent twelve month rolling average capacity factor, in accordance with its rate schedule COG-2, for such month

based on the City's Committed Capacity. If the capacity factor thus calculated is 70% or more, then Tampa Electric agrees to pay the City a capacity payment that is the product of the City's Committed Capacity (15,500 KW or 15.5 MW) and the applicable rate from the payment schedules previously identified as Appendix "A".

5. The capacity payment for a given month will be added to the energy payment for such month and tendered by Tampa Electric to the City as a single payment as promptly as possible, normally by the twentieth business day following the day the meter is read.

6. The parties agree to the following provisions relative to early capacity payments by Tampa Electric to the City:

City's Obligation Relative to Early Capacity Payments.

The City has elected to receive early capacity payments for capacity delivered prior to April 1, 1992. The parties recognize that capacity payments paid through March 31, 1992 are in the nature of "early payment" for a future capacity benefit to Tampa Electric. Such payments are subject to being refunded pursuant to the provisions of §377.709(4), Fla. Stat. (Supp. 1988). To ensure that Tampa Electric will receive a capacity benefit for which early capacity payments have been made, or alternatively, that the City will repay the amount of early payments received to the extent the capacity benefit has not been conferred, the following provisions will apply:

- (1) Tampa Electric shall establish a Capacity Account, a sample of which is attached hereto as Exhibit "D". An amount shall be added to the Capacity Account equal to the total of all payments made to the City under the 1982 Agreement together with interest at an annual

rate of 10.72% from the dates on which such payments were made to the City. Amounts shall be credited to the Capacity Account each month through March 1992, in the amount of Tampa Electric's capacity payments made to the City pursuant to the City's chosen payment option from Rate Schedule COG-2. The monthly balance in the Capacity Account shall accrue interest at an annual rate of 10.72%.

- (2) Commencing on April 1, 1992, there shall be deducted from the Capacity Account an Early Payment Offset Amount to reduce the balance in the Capacity Account. Such Early Payment Offset Amount shall be equal to that amount which Tampa Electric would have paid for capacity in that month if capacity payment had been calculated pursuant to Option A in Rate Schedule COG-2 and the City had elected to begin receiving payment on April 1, 1992 minus the monthly capacity payment Tampa Electric makes to the City pursuant to the capacity option chosen by the City and identified in this Amendment under the heading: Capacity Payments.
- (3) The City shall owe Tampa Electric and be liable for the balance in the Capacity Account; provided, however, the City shall not be required to pay the balance in the account except as provided herein. Tampa Electric agrees to notify the City monthly as to the current Capacity Account balance. The total Capacity Account shall immediately become due and payable in the event of default by the City. The City's obligation to pay the balance in the Capacity Account shall survive termination of this Agreement.

7. The parties agree to substitute the following nonperformance provisions in lieu of those set forth in Section 6.3 of the Agreement:

Nonperformance Provisions.

The City shall not receive a capacity payment during any month in which the twelve months rolling average of the City's capacity factor does not equal or exceed 70% as defined in Tampa Electric's Rate Schedule COG-2. In addition, if for any month

after April 1, 1992, the City fails to achieve a 70% capacity factor on a 12-month rolling average basis and the City has received capacity payments prior to April 1, 1992, the City shall be liable for and shall pay Tampa Electric an amount equal to the Early Payment Offset Amount for the month, an example of which is attached hereto as Appendix "E"; provided, however, that such calculation shall assume that the City achieved a 70% capacity factor. Any payments thus required of the City shall be separately invoiced by Tampa Electric to the City after each month for which such repayment is due and shall be paid by the City within 20 business days after receipt of such invoice by the City. Such repayment shall be deducted from the Capacity Account as an Early Payment Offset Amount.

) In no event shall the City repay to Tampa Electric for nonperformance such amounts which exceed the current balance in the Capacity Account.

8. The parties agree to add the following default provisions to their Agreement:

Default

Mandatory Default. The City shall be in default under this Agreement if: (1) the City voluntarily declares bankruptcy, or (2) the City ceases all electric generation for 12 consecutive months, unless the generation failure is attributable to a Force Majeure event and Tampa Electric establishes a reasonable period of time within which the City is allowed to cure the cause of the generation failure.

Optional Default. Tampa Electric may declare the City to be in default: (1) if at any time prior to April 1, 1992, and after capacity payments have begun, Tampa Electric has sufficient reason to believe that the City is unable to deliver its Committed Capacity, or (2) after April 1, 1992 the City fails to maintain a 70% capacity factor on a 12-month rolling average basis for 24 consecutive months, or (3) because of the City's refusal, inability or anticipatory breach of obligation to deliver its Committed Capacity after April 1, 1992.

Default Remedy. Once this contract is declared to be in default, upon written notice to the City, the then current balance of the Capacity Account shall be paid to Tampa Electric.

9. The parties agree that the automatic extension provision contained in the second sentence of paragraph 3 of the Agreement shall not operate. Instead, the term of the Agreement shall end at 12:01 a.m. March 1, 2009 unless the parties extend the term of the Agreement to a later date, not to exceed March 1, 2022, upon written agreement of the parties executed not later than March 1, 2004, with payments for capacity during the extension period to be as indicated on Appendix "C", attached hereto and by reference made a part hereof.

10. To the extent of any conflict between this Amendment and the Agreement, the parties intend for this Amendment to control. All provisions of the Agreement not hereby amended shall remain in full force and effect.

FPSC Approval

11. Tampa Electric's obligation to make payments to the City as prescribed herein is contingent on Tampa Electric obtaining the continuing approval of the Florida Public Service Commission to fully recover such payments from Tampa Electric's Customers.

IN WITNESS WHEREOF, the City and Tampa Electric have executed this Agreement the day and year first above written.

ATTEST:

CITY OF TAMPA

FRANCES HENRIQUEZ, CITY CLERK  
By: Frances Henriquez  
Deputy City Clerk

By: Sanford J. Jacobs  
Mayor

\_\_\_\_\_  
City Clerk

Witnesses:

TAMPA ELECTRIC COMPANY

Suzanne C. Deffen  
W.M. Mestres, Jr.

By: W. A. Cantor  
Vice President  
Regulatory Affairs

Approved as to Form:

Gene R. Sims  
Assistant City Attorney

April 28, 1989

APPENDIX - "A"

Early Capacity Payment Schedule

City of Tampa Refuse-to-Energy Facility  
1992 Statewide Avoided Unit  
w/ 1995 parameters &  
w/o Risk Factor

Year	Capital Payments (\$/KW/Mo)	Early Capital Payments (\$/KW/Mo)	Levelized Capital Payments (\$/KW/Mo)	O&M Payments (\$/KW/Mo)	Early O&M Payments (\$/KW/Mo)	Total Capacity Payments (\$/KW/Mo)
Apr 1 '86-Mar 31 '87		\$5.31				
Apr 1 '87-Mar 31 '88		\$5.66				
Apr 1 '88-Mar 31 '89		\$6.03				
Apr 1 '89-Mar 31 '90		\$6.43	\$10.23		\$3.14	\$13.37
Apr 1 '90-Mar 31 '91		\$6.86	\$10.23		\$3.32	\$13.55
Apr 1 '91-Mar 31 '92		\$7.31	\$10.23		\$3.50	\$13.73
Apr 1 '92-Mar 31 '93	\$11.98	\$7.79	\$10.23	\$4.71	\$3.70	\$13.93
Apr 1 '93-Mar 31 '94	\$12.77	\$8.31	\$10.23	\$4.97	\$3.90	\$14.14
Apr 1 '94-Mar 31 '95	\$13.62	\$8.85	\$10.23	\$5.25	\$4.12	\$14.36
Apr 1 '95-Mar 31 '96	\$14.52	\$9.44	\$10.23	\$5.55	\$4.35	\$14.59
Apr 1 '96-Mar 31 '97	\$15.47	\$10.06	\$10.23	\$5.86	\$4.60	\$14.83
Apr 1 '97-Mar 31 '98	\$16.50	\$10.73	\$10.23	\$6.19	\$4.86	\$15.09
Apr 1 '98-Mar 31 '99	\$17.58	\$11.43	\$10.23	\$6.53	\$5.13	\$15.36
Apr 1 '99-Mar 31 '00	\$18.75	\$12.19	\$10.23	\$6.90	\$5.41	\$15.65
Apr 1 '00-Mar 31 '01	\$19.98	\$12.99	\$10.23	\$7.28	\$5.72	\$15.95
Apr 1 '01-Mar 31 '02	\$21.30	\$13.85	\$10.23	\$7.69	\$6.04	\$16.27
Apr 1 '02-Mar 31 '03	\$22.71	\$14.76	\$10.23	\$8.12	\$6.38	\$16.61
Apr 1 '03-Mar 31 '04	\$24.21	\$15.74	\$10.23	\$8.58	\$6.73	\$16.97
Apr 1 '04-Mar 31 '05	\$25.80	\$16.78	\$10.23	\$9.06	\$7.11	\$17.34
Apr 1 '05-Mar 31 '06	\$27.51	\$17.88	\$10.23	\$9.57	\$7.51	\$17.74
Apr 1 '06-Mar 31 '07	\$29.32	\$19.07	\$10.23	\$10.10	\$7.93	\$18.16
Apr 1 '07-Mar 31 '08	\$31.26	\$20.32	\$10.23	\$10.67	\$8.37	\$18.60
Apr 1 '08-Mar 31 '09	\$33.32	\$21.66	\$10.23	\$11.26	\$8.84	\$19.07
NPV (86-09)	\$75.02	\$75.01		\$27.61	\$27.66	
NPV (89-09)		\$82.99	\$82.99		\$37.54	\$120.53

Note: Early Levelized Capital & Early O&M Capacity Payment

TAMPA ELECTRIC COMPANY

FIRST REVISED SHEET NO. 8.350  
CANCELS ORIGINAL SHEET NO. 8.350

STATEWIDE AVOIDED UNIT  
PARAMETERS FOR AVOIDED CAPACITY COSTS  
SCHEDULE COG-2  
APPENDIX B

	<u>Value</u>
$A_m$ = monthly avoided capital cost component of capacity payments to be made to the Qualifying Facility starting as early as seven years prior to the anticipated in-service date of statewide avoided unit, in dollars per kilowatt per month:	<u>3.78</u>
$i_p$ = annual escalation rate associated with the plant cost of the statewide avoided unit;	<u>6.6%</u>
$n$ = year for which early capacity payments to a qualifying facility are made;	<u>1988</u>
$F$ = assuming the seven year early payment option (1988), the cumulative present value of the avoided capital cost component of capacity payments which would have been paid had capacity payments commenced with the anticipated in-service date of the statewide avoided unit. Other option years will change the value of $F$ (1988 \$);	<u>579.18</u>
$r$ = annual discount rate, defined as the utility's incremental after-tax cost of capital; and	<u>10.72%</u>
$t$ = the minimum term, in years, of the contract for the purchase of firm capacity commencing prior to the in-service date of the statewide avoided unit, and commencing with the year in which the Qualifying Facility elects to receive early capacity payments.	<u>17</u>

APPENDIX "B"

FIRST REVISED SHEET NO. 8.340  
CANCELS ORIGINAL SHEET NO. 8.340

TAMPA ELECTRIC COMPANY

STATEWIDE AVOIDED UNIT  
PARAMETERS FOR AVOIDED CAPACITY COSTS  
SCHEDULE COG-2  
APPENDIX B

	<u>Value</u>
Where, for one year deferral:	
$VAC_m$ = utility's value of avoided capacity, in dollars per kilowatt per month, during month m;	<u>16.04</u>
$C$ = a constant risk multiplier for the purpose of the utility's standard offer contract;	<u>0.8</u>
$K$ = present value of carrying charge for one dollar of investment over $L$ years with carrying charges assumed to be paid at the end of each year;	<u>1.4885</u>
$J_n$ = total direct and indirect costs, in dollars per kilowatt including AFUDC but excluding CWIP, of the statewide avoided unit with an in-service date of year $n$ ;	<u>2137</u>
$O_n$ = total first year's fixed and variable operating and maintenance expenses, less fuel in dollars per kilowatt per year, of the statewide avoided unit deflated to the beginning of year $n$ by $i_o$ ;	<u>69.70</u>
$i_p$ = annual escalation rate associated with the plant cost of the statewide avoided unit;	<u>6.6%</u>
$i_o$ = annual escalation rate associated with the operation and maintenance expenses of the statewide avoided unit;	<u>5.6%</u>
$r$ = annual discount rate, defined as the utility's incremental after tax cost of capital;	<u>10.72%</u>
$L$ = expected life of the statewide avoided unit; and	<u>30</u>
$n$ = year for which the statewide avoided unit is deferred starting with its originally anticipated in-service date and ending with the termination of the contract for the purchase of firm energy and capacity;	<u>1995</u>

April 28, 1989

APPENDIX - "C"

Extended Capacity Payment Schedule

City of Tampa Refuse-to-Energy Facility  
1992 Statewide Avoided Unit  
w/ 1995 parameters &  
w/o Risk Factor

Year	Capital Payments (\$/KW/Mo)	Early Capital Payments (\$/KW/Mo)	Levelized Capital Payments (\$/KW/Mo)	O&M Payments (\$/KW/Mo)	Early O&M Payments (\$/KW/Mo)	Total Capacity Payments (\$/KW/Mo)
Apr 1 '86-Mar 31 '87		\$5.31				
Apr 1 '87-Mar 31 '88		\$5.66				
Apr 1 '88-Mar 31 '89		\$6.03				
Apr 1 '89-Mar 31 '90		\$6.43	\$10.23		\$3.14	\$13.37
Apr 1 '90-Mar 31 '91		\$6.86	\$10.23		\$3.32	\$13.55
Apr 1 '91-Mar 31 '92		\$7.31	\$10.23		\$3.50	\$13.73
Apr 1 '92-Mar 31 '93	\$11.98	\$7.79	\$10.23	\$4.71	\$3.70	\$13.93
Apr 1 '93-Mar 31 '94	\$12.77	\$8.31	\$10.23	\$4.97	\$3.90	\$14.14
Apr 1 '94-Mar 31 '95	\$13.62	\$8.85	\$10.23	\$5.25	\$4.12	\$14.36
Apr 1 '95-Mar 31 '96	\$14.52	\$9.44	\$10.23	\$5.55	\$4.35	\$14.59
Apr 1 '96-Mar 31 '97	\$15.47	\$10.06	\$10.23	\$5.86	\$4.60	\$14.83
Apr 1 '97-Mar 31 '98	\$16.50	\$10.73	\$10.23	\$6.19	\$4.86	\$15.09
Apr 1 '98-Mar 31 '99	\$17.58	\$11.43	\$10.23	\$6.53	\$5.13	\$15.36
Apr 1 '99-Mar 31 '00	\$18.75	\$12.19	\$10.23	\$6.90	\$5.41	\$15.65
Apr 1 '00-Mar 31 '01	\$19.98	\$12.99	\$10.23	\$7.28	\$5.72	\$15.95
Apr 1 '01-Mar 31 '02	\$21.30	\$13.85	\$10.23	\$7.69	\$6.04	\$16.27
Apr 1 '02-Mar 31 '03	\$22.71	\$14.76	\$10.23	\$8.12	\$6.38	\$16.61
Apr 1 '03-Mar 31 '04	\$24.21	\$15.74	\$10.23	\$8.58	\$6.73	\$16.97
Apr 1 '04-Mar 31 '05	\$25.80	\$16.78	\$10.23	\$9.06	\$7.11	\$17.34
Apr 1 '05-Mar 31 '06	\$27.51	\$17.88	\$10.23	\$9.57	\$7.51	\$17.74
Apr 1 '06-Mar 31 '07	\$29.32	\$19.07	\$10.23	\$10.10	\$7.93	\$18.16
Apr 1 '07-Mar 31 '08	\$31.26	\$20.32	\$10.23	\$10.67	\$8.37	\$18.60
Apr 1 '08-Mar 31 '09	\$33.32	\$21.66	\$10.23	\$11.26	\$8.84	\$19.07
Apr 1 '09-Mar 31 '10	\$35.52			\$11.89		\$47.41
Apr 1 '10-Mar 31 '11	\$37.86			\$12.56		\$50.42
Apr 1 '11-Mar 31 '12	\$40.36			\$13.26		\$53.62
Apr 1 '12-Mar 31 '13	\$43.03			\$14.00		\$57.03
Apr 1 '13-Mar 31 '14	\$45.87			\$14.79		\$60.65
Apr 1 '14-Mar 31 '15	\$48.89			\$15.61		\$64.51
Apr 1 '15-Mar 31 '16	\$52.12			\$16.49		\$68.61
Apr 1 '16-Mar 31 '17	\$55.56			\$17.41		\$72.97
Apr 1 '17-Mar 31 '18	\$59.23			\$18.39		\$77.61
Apr 1 '18-Mar 31 '19	\$63.14			\$19.42		\$82.55
Apr 1 '19-Mar 31 '20	\$67.30			\$20.50		\$87.81
Apr 1 '20-Mar 31 '21	\$71.74			\$21.65		\$93.40
Apr 1 '21-Mar 31 '22	\$76.48			\$22.85		\$99.33

May 9,  
 Page 10

APPENDIX - "H"

Example Capacity Account

(1992 Statewide Avoided Unit)

of Tampa Refuse-to-Energy Facility  
 Hall Plaza 5N  
 Tampa, Florida 33602

Date zip

ing Month June  
 Year 1989  
 Interest Rate (%) 10.720x  
 of Contract (Yrs) 21  
 Y Committed (KW) 15,500

Year	1	2	3	4	5	6	7	8	9	10	11	12
Capacity Payment (\$/KW/Mo) =	\$13.37	\$13.55	\$13.73	\$13.93	\$17.74	\$18.87	\$20.07	\$21.33	\$22.69	\$24.11	\$25.65	\$27.26
Capacity Payment (\$/KW/Mo) =					\$16.14	\$16.36	\$16.59	\$16.83	\$15.09	\$15.36	\$15.65	\$15.95
January Interest	43,013	43,013	71,430	103,362	117,672	125,022	131,643	137,344	141,928	145,145	146,740	146,377
Capacity Payment	207,235	210,025	212,815	215,605	218,395	221,185	223,975	226,765	229,555	232,345	235,135	237,925
Balance	5,065,120	8,277,358	11,846,555	13,247,186	14,064,268	14,797,930	15,426,710	15,928,684	16,274,959	16,437,206	16,376,860	16,146,300
February Interest	45,248	45,248	73,944	106,187	118,342	125,643	132,195	137,812	142,296	145,390	146,839	146,300
Capacity Payment	207,235	210,025	212,815	215,605	218,395	221,185	223,975	226,765	229,555	232,345	235,135	237,925
Balance	5,317,604	8,561,327	12,205,556	13,322,747	14,134,109	14,660,220	15,179,581	15,670,230	16,130,548	16,448,420	16,368,160	16,046,222
March Interest	47,504	47,504	76,481	109,036	119,017	126,265	132,751	138,284	142,667	145,636	146,939	146,222
Capacity Payment	207,235	210,025	212,815	215,605	218,395	221,185	223,975	226,765	229,555	232,345	235,135	237,925
Balance	5,572,343	8,847,833	12,527,607	13,398,984	14,204,574	14,823,066	15,332,926	15,812,147	16,260,385	16,559,735	16,359,383	15,900,000
April Interest	49,780	49,780	79,041	111,912	119,698	126,892	133,313	138,761	143,042	146,088	146,840	146,144
Capacity Payment	207,235	210,025	212,815	215,605	218,395	221,185	223,975	226,765	229,555	232,345	235,135	237,925
Balance	5,832,147	9,139,689	12,596,539	13,462,882	14,261,563	14,971,439	15,570,937	16,037,369	16,340,644	16,451,775	16,330,221	15,820,000
May Interest	52,101	52,101	81,648	112,529	120,268	127,403	133,745	139,100	143,267	146,176	146,969	145,883
Capacity Payment	207,235	210,025	212,815	215,605	218,395	221,185	223,975	226,765	229,555	232,345	235,135	237,925
Balance	6,094,273	9,434,152	12,666,288	13,527,350	14,319,061	14,920,243	15,409,287	15,780,996	16,062,857	16,250,996	16,443,744	16,300,800
June Interest	54,442	54,442	84,278	113,152	120,844	127,917	134,181	139,443	143,495	146,069	146,897	145,620
Capacity Payment	207,235	210,025	212,815	215,605	218,395	221,185	223,975	226,765	229,555	232,345	235,135	237,925
Balance	6,358,740	9,731,245	12,736,660	13,592,394	14,377,073	15,069,484	15,647,980	16,088,552	16,361,440	16,435,642	16,271,115	15,680,000
July Interest	56,805	56,805	86,932	113,761	121,425	128,535	134,621	139,789	143,724	146,162	146,825	145,335
Capacity Payment	207,235	210,025	212,815	215,605	218,395	221,185	223,975	226,765	229,555	232,345	235,135	237,925
Balance	6,625,570	10,030,993	12,807,661	13,658,020	14,435,602	15,119,165	15,687,016	16,144,476	16,477,977	16,627,467	16,241,166	15,520,000
August Interest	59,188	59,188	89,610	114,415	122,012	128,958	134,865	140,137	144,495	147,256	146,752	145,068
Capacity Payment	207,235	210,025	212,815	215,605	218,395	221,185	223,975	226,765	229,555	232,345	235,135	237,925
Balance	6,894,783	10,333,418	12,879,296	13,724,231	14,494,656	15,169,290	15,726,406	16,140,632	16,382,608	16,419,219	16,210,948	15,400,000
September Interest	61,593	61,593	92,312	115,055	122,603	129,486	135,512	140,489	144,190	146,351	146,678	144,818
Capacity Payment	207,235	210,025	212,815	215,605	218,395	221,185	223,975	226,765	229,555	232,345	235,135	237,925
Balance	7,168,402	10,638,545	12,911,571	13,791,034	14,554,237	15,219,862	15,766,145	16,167,022	16,393,334	16,410,897	16,180,461	15,280,000
October Interest	64,024	64,024	95,038	117,701	125,200	131,918	137,844	142,844	146,425	148,447	146,604	144,545
Capacity Payment	207,235	210,025	212,815	215,605	218,395	221,185	223,975	226,765	229,555	232,345	235,135	237,925
Balance	7,440,466	10,946,397	13,024,492	13,858,434	14,614,350	15,270,866	15,806,239	16,193,647	16,404,157	16,402,501	16,149,702	15,140,000
November Interest	66,468	66,468	97,768	119,352	126,780	133,500	139,464	144,544	148,229	149,544	146,529	144,271
Capacity Payment	207,235	210,025	212,815	215,605	218,395	221,185	223,975	226,765	229,555	232,345	235,135	237,925
Balance	7,716,939	11,257,000	13,098,064	13,926,436	14,675,000	15,322,366	15,846,692	16,220,510	16,415,075	16,394,030	16,118,667	15,000,000
December Interest	40,797	40,797	68,938	100,563	117,009	124,409	131,097	136,880	141,584	144,903	146,441	144,993
Capacity Payment	207,235	210,025	212,815	215,605	218,395	221,185	223,975	226,765	229,555	232,345	235,135	237,925
Balance	7,995,902	11,570,378	13,172,293	13,995,046	14,736,191	15,374,306	15,887,505	16,247,613	16,426,092	16,388,483	16,087,356	14,880,000
Interest Accrued	240,136	669,100	1,029,065	1,348,491	1,631,292	1,874,691	2,074,770	2,228,538	2,338,538	2,401,503	2,424,267	2,401,617
Capacity Payment	1,450,645	2,511,930	2,545,410	253,425	(630,340)	(796,345)	(974,175)	(1,161,570)	(1,362,450)	(1,574,025)	(1,801,875)	(2,042,745)

(1) Capacity Payments plus Interest (at 10.72%) accrued under "Schedule 8" Capacity Payment Account.

APPENDIX - "H" Contin

Example Capacity Account

(1992 Statewide Avoided Unit)

of Tampa  
 (L.P.)  
 June 1989  
 10.720X  
 21  
 15,500

Year	2001	2002	2003	2004	2005	2006	2007	2008	2009
Capacity Payment (\$/KW/Hr) =	\$28.99	\$30.83	\$32.79	\$34.86	\$37.08	\$39.42	\$41.93	\$44.58	\$47.41
Capacity Payment (\$/KW/Hr) *	\$16.27	\$16.61	\$16.97	\$17.34	\$17.76	\$18.16	\$18.60	\$19.07	\$19.61
January Interest	143,714	138,334	129,772	117,497	100,917	79,347	52,041	18,115	0
Capacity Payment	(175,305)	(197,160)	(220,410)	(245,210)	(271,560)	(299,770)	(329,530)	(361,615)	0
Balance	16,035,764	15,426,370	14,436,028	13,024,883	11,126,001	8,661,678	5,548,011	1,684,253	0
February Interest	143,431	137,809	128,962	116,356	99,392	77,378	49,562	15,046	0
Capacity Payment	(175,305)	(197,160)	(220,410)	(245,210)	(271,560)	(299,770)	(329,530)	(361,615)	0
Balance	16,023,891	15,367,019	14,364,580	12,896,029	10,953,833	8,439,266	5,268,043	1,337,684	0
March Interest	143,147	137,279	128,145	115,205	97,854	75,391	47,061	11,950	0
Capacity Payment	(175,305)	(197,160)	(220,410)	(245,210)	(271,560)	(299,770)	(329,530)	(361,615)	0
Balance	15,991,733	15,307,138	14,252,315	12,766,023	10,780,127	8,214,907	4,985,574	988,019	0
April Interest	142,859	136,744	127,321	114,043	96,302	73,387	44,538	8,826	0
Capacity Payment	(197,160)	(220,410)	(245,210)	(271,560)	(299,770)	(329,530)	(361,615)	(395,405)	0
Balance	15,937,432	15,223,472	14,134,425	12,408,506	10,576,640	7,958,764	4,668,497	601,440	0
May Interest	142,374	135,996	126,268	112,636	94,485	71,098	41,705	5,373	0
Capacity Payment	(197,160)	(220,410)	(245,210)	(271,560)	(299,770)	(329,530)	(361,615)	(395,405)	0
Balance	15,882,666	15,139,058	14,015,483	12,449,582	10,371,374	7,700,332	4,348,587	211,408	0
June Interest	141,885	135,242	125,205	111,218	92,651	68,790	38,847	1,489	0
Capacity Payment	(197,160)	(220,410)	(245,210)	(271,560)	(299,770)	(329,530)	(361,615)	(395,405)	0
Balance	15,827,371	15,053,890	13,895,478	12,289,239	10,164,255	7,439,592	4,025,820	(182,109)	0
July Interest	141,391	134,481	124,133	109,764	90,801	66,460	35,964	0	0
Capacity Payment	(197,160)	(220,410)	(245,210)	(271,560)	(299,770)	(329,530)	(361,615)	0	0
Balance	15,771,603	14,967,962	13,774,401	12,127,462	9,955,286	7,176,522	3,700,169	0	0
August Interest	140,893	133,714	123,051	108,339	88,934	64,110	33,055	0	0
Capacity Payment	(197,160)	(220,410)	(245,210)	(271,560)	(299,770)	(329,530)	(361,615)	0	0
Balance	15,715,316	14,881,266	13,652,242	11,964,241	9,764,430	6,911,102	3,371,608	0	0
September Interest	140,398	132,939	121,960	106,881	87,050	61,739	30,120	0	0
Capacity Payment	(197,160)	(220,410)	(245,210)	(271,560)	(299,770)	(329,530)	(361,615)	0	0
Balance	15,658,566	14,793,795	13,528,992	11,799,562	9,531,730	6,643,311	3,040,113	0	0
October Interest	139,883	132,158	120,659	105,409	85,150	59,347	27,158	0	0
Capacity Payment	(197,160)	(220,410)	(245,210)	(271,560)	(299,770)	(329,530)	(361,615)	0	0
Balance	15,601,289	14,705,543	13,404,641	11,633,411	9,317,110	6,373,128	2,705,656	0	0
November Interest	139,372	131,370	119,748	103,925	83,233	56,933	24,171	0	0
Capacity Payment	(197,160)	(220,410)	(245,210)	(271,560)	(299,770)	(329,530)	(361,615)	0	0
Balance	15,543,301	14,616,502	13,279,179	11,465,776	9,100,573	6,100,532	2,368,212	0	0
December Interest	138,855	130,574	118,627	102,428	81,298	54,498	21,156	0	0
Capacity Payment	(197,160)	(220,410)	(245,210)	(271,560)	(299,770)	(329,530)	(361,615)	0	0
Balance	15,485,196	14,526,666	13,152,597	11,296,644	8,882,102	5,825,500	2,027,753	0	0
Interest Accrued	1,698,195	1,616,640	1,494,050	1,323,717	1,098,068	808,478	445,378	61,198	0
Capacity Payment	(2,300,355)	(2,575,170)	(2,868,120)	(3,179,670)	(3,512,610)	(3,865,080)	(4,243,125)	(4,621,271)	(5,060,000)

9, 1989

APPENDIX - "E"

Page 1 of 1

Example Early Payment Offset Amount

City of Tampa Refuse-to-Energy Facility  
1992 Statewide Avoided Unit  
w/ 1995 parameters &  
w/o Risk Factor

Year	Total Normal			Levelized Capital Payments (\$/KW/Mo)	Early O&M Payments (\$/KW/Mo)	Total Levelized Capital & Early O&M Payments (\$/KW/Mo)	Early Payment Offset Amount (\$/KW/Mo)
	Normal Capital Payments (\$/KW/Mo)	Normal O&M Payments (\$/KW/Mo)	Normal Capital & O&M Payments (\$/KW/Mo)				
Apr 1 '89-Mar 31 '90				\$10.23	\$3.14	\$13.37	
Apr 1 '90-Mar 31 '91				\$10.23	\$3.32	\$13.55	
Apr 1 '91-Mar 31 '92				\$10.23	\$3.50	\$13.73	
Apr 1 '92-Mar 31 '93	\$11.98	\$4.71	\$16.69	\$10.23	\$3.70	\$13.93	\$2.76
Apr 1 '93-Mar 31 '94	\$12.77	\$4.97	\$17.74	\$10.23	\$3.90	\$14.13	\$3.61
Apr 1 '94-Mar 31 '95	\$13.62	\$5.25	\$18.87	\$10.23	\$4.12	\$14.35	\$4.52
Apr 1 '95-Mar 31 '96	\$14.52	\$5.55	\$20.07	\$10.23	\$4.35	\$14.58	\$5.49
Apr 1 '96-Mar 31 '97	\$15.47	\$5.86	\$21.33	\$10.23	\$4.60	\$14.83	\$6.50
Apr 1 '97-Mar 31 '98	\$16.50	\$6.19	\$22.69	\$10.23	\$4.86	\$15.09	\$7.60
Apr 1 '98-Mar 31 '99	\$17.58	\$6.53	\$24.11	\$10.23	\$5.13	\$15.36	\$8.75
Apr 1 '99-Mar 31 '00	\$18.75	\$6.90	\$25.65	\$10.23	\$5.41	\$15.64	\$10.01
Apr 1 '00-Mar 31 '01	\$19.98	\$7.28	\$27.26	\$10.23	\$5.72	\$15.95	\$11.31
Apr 1 '01-Mar 31 '02	\$21.30	\$7.69	\$28.99	\$10.23	\$6.04	\$16.27	\$12.72
Apr 1 '02-Mar 31 '03	\$22.71	\$8.12	\$30.83	\$10.23	\$6.38	\$16.61	\$14.22
Apr 1 '03-Mar 31 '04	\$24.21	\$8.58	\$32.79	\$10.23	\$6.73	\$16.96	\$15.83
Apr 1 '04-Mar 31 '05	\$25.80	\$9.06	\$34.86	\$10.23	\$7.11	\$17.34	\$17.52
Apr 1 '05-Mar 31 '06	\$27.51	\$9.57	\$37.08	\$10.23	\$7.51	\$17.74	\$19.34
Apr 1 '06-Mar 31 '07	\$29.32	\$10.10	\$39.42	\$10.23	\$7.93	\$18.16	\$21.26
Apr 1 '07-Mar 31 '08	\$31.26	\$10.67	\$41.93	\$10.23	\$8.37	\$18.60	\$23.33
Apr 1 '08-Mar 31 '09	\$33.32	\$11.26	\$44.58	\$10.23	\$8.84	\$19.07	\$25.51
Apr 1 '09-Mar 31 '10	\$35.52	\$11.89	\$47.41	\$35.52	\$11.89	\$47.41	\$0.00
Apr 1 '10-Mar 31 '11	\$37.86	\$12.56	\$50.42	\$37.86	\$12.56	\$50.42	\$0.00
Apr 1 '11-Mar 31 '12	\$40.36	\$13.26	\$53.62	\$40.36	\$13.26	\$53.62	\$0.00
Apr 1 '12-Mar 31 '13	\$43.03	\$14.00	\$57.03	\$43.03	\$14.00	\$57.03	\$0.00
Apr 1 '13-Mar 31 '14	\$45.87	\$14.79	\$60.65	\$45.87	\$14.79	\$60.65	\$0.00
Apr 1 '14-Mar 31 '15	\$48.89	\$15.61	\$64.51	\$48.89	\$15.61	\$64.51	\$0.00
Apr 1 '15-Mar 31 '16	\$52.12	\$16.49	\$68.61	\$52.12	\$16.49	\$68.61	\$0.00
Apr 1 '16-Mar 31 '17	\$55.56	\$17.41	\$72.97	\$55.56	\$17.41	\$72.97	\$0.00
Apr 1 '17-Mar 31 '18	\$59.23	\$18.39	\$77.61	\$59.23	\$18.39	\$77.61	\$0.00
Apr 1 '18-Mar 31 '19	\$63.14	\$19.42	\$82.55	\$63.14	\$19.42	\$82.55	\$0.00
Apr 1 '19-Mar 31 '20	\$67.30	\$20.50	\$87.81	\$67.30	\$20.50	\$87.81	\$0.00
Apr 1 '20-Mar 31 '21	\$71.74	\$21.65	\$93.40	\$71.74	\$21.65	\$93.40	\$0.00
Apr 1 '21-Mar 31 '22	\$76.48	\$22.86	\$99.35	\$76.48	\$22.86	\$99.35	\$0.00

**TAMPA ELECTRIC COMPANY  
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2. Paragraph 11 of the Petition states that the Extension "reduces fuel price volatility through coal unit energy pricing..." Given that TECO has no new coal-fired generation included in its 2009 Ten Year Site Plan, please explain this comment.
  - A. Consistent with the First Agreement, the 2006 Agreement caps the energy price at the cost of coal generation, specifically that of Big Bend Unit 4.

**TAMPA ELECTRIC COMPANY  
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3. Paragraph 8 of the Petition states that "The City has increased the electrical generating capability of the Facility to more than 19.0 megawatts..." Please provide the Facility's current gross and net capacity.
  - A. The current gross capacity of the facility is 23.182 MW, and its current net capacity is 20.182 MW.

**TAMPA ELECTRIC COMPANY  
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4. Please describe how energy payments will be determined under the Extension
  - A. The 2006 Agreement energy price is the lesser of Tampa Electric's hour-by-hour avoided cost and the energy price for Big Bend Unit 4. The avoided cost is calculated by a computer model using generation, load, fuel cost, and purchased power data to calculate the system production cost with and without the City of Tampa energy. For a given hour, the dollar difference between these two cases is divided by the facility's delivered energy, resulting in the per-MWH avoided cost. Tampa Electric calculates the energy price of Big Bend Unit 4 by taking the unit's coal price and multiplying it by the 0.01050 mmBtu per kilowatt-hour heat rate. The contract energy price for a given hour is the lesser of these two calculations.

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5. Section 6 of Appendix A establishes a first right of refusal for TECO of the Facility's Renewable Energy Credits (RECs), including those RECs that might arise from "increases in capacity and energy generation at the Facility due to expansion of the Facility or modifications to the Facility." Does TECO anticipate any expansion or modification to the Facility during the duration of the Extension? If so, please describe. Please discuss any obligation TECO might have to purchase any additional capacity and energy produced following any expansion or modification to the Facility.
  - A. Exhibit A, Section 6 of Tampa Electric's petition for approval of the agreement contains new provisions concerning the company's right of first refusal. This provision gives Tampa Electric the option, *i.e.*, the right but not the obligation, to purchase increased RECs resulting from an increase in capacity and energy from the facility. So, it is at the company's discretion to purchase the additional RECs or decline them without penalty.

Tampa Electric is not aware of any plans to modify or expand the facility.

**TAMPA ELECTRIC COMPANY  
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PAGE 1 OF 1  
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6. Section 8 of Appendix A establishes a one time option to accept a standard offer contract for the Facility. Please compare the savings to ratepayers under the Extension and under TECO's most recent standard offer contract.
  
- A. Tampa Electric calculated the City of Tampa contract assuming the City selected the company's most recent standard offer, Sheet Numbers 8.422-8.460, dated July 28, 2008. Compared to the 2006 Agreement, the standard offer options have lower capacity payments but higher energy payment thresholds. The 2006 Agreement caps the energy price at the cost of Big Bend Unit 4 generation. In contrast, the standard offers increase that threshold to the energy cost of the avoided resource, which is either a natural gas-fired combustion turbine ("CT") or combined cycle unit ("CC").

The results of the requested analysis show that the standard offer 2012 avoided CT non-levelized early payment option would have resulted in an estimated \$17.4 million cost to customers. Similarly, the standard offer 2017 avoided CC non-levelized early payment option would have resulted in an estimated \$8.2 million cost to customers. The 2006 Agreement provides an estimated \$2.2 million savings to customers.

**TAMPA ELECTRIC COMPANY  
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7. According to Section 8 of Appendix A, the City has 90 days following the FPSC's final order approving the standard offer contract under Docket No. 080184-EQ to exercise a one-time option to adopt a standard offer contract in lieu of the existing contract. However, Order No. PSC-08-0547-TRF-EQ approving the standard offer contract was issued on August 19, 2008, and Consummating Order No. PSC-08-0612-CO-EQ was issued on September 23, 2008, which invalidates this option. Please explain this apparent discrepancy.
  - A. Tampa Electric and the City of Tampa worked on this extension of the Agreement throughout the summer and fall of 2008. At the time the document was finalized, the agreement had not yet gone to the City Council for approval. The approval process took several months and was approved in early December 2008. The City of Tampa was aware of the 90-day option period expiration and decided not to pursue the standard offer contract option. Therefore, an extension of the 90-day option period was not necessary.

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- 8.** Exhibit B contains a reference to "Page 2 of 2" that is not provided to explain the calculation of the annual rates shown in the table. Please provide this document.
  
- A:** Page 1 of 2 and Page 2 of 2 of Exhibit B are provided as an attachment to this response. Since the first page contained the savings dollars, Tampa Electric submitted the first page alone as Exhibit B, which caused the software to repaginate it as Page 1 of 1 during printing. Page 2 of 2 is the calculation of the annual capacity rates in \$/KW-mo.

Fuels Management Cover Letter for Resource Planning Analysis

**Introduction – Content Overview**

Final savings calculations by Benjamin Smith based on the final rates within the City of Tampa agreement finalized August 11, 2008 and an analysis summary memo provided by Resource Planning.

**Summary**

The final NPWRR customer savings for the City of Tampa PPA is \$2,202,284 (in 2008 dollars).

**NPWRR Calculation**

2011 (Aug-Dec)	25.37	23.80	(1.57)	(149,150)	(118,796)
2012	26.00	24.10	(1.90)	(434,150)	(320,535)
2013	26.65	24.82	(1.83)	(417,620)	(285,809)
2014	27.32	25.57	(1.75)	(399,760)	(253,603)
2015	28.00	26.34	(1.67)	(379,620)	(223,235)
2016	28.70	27.12	(1.58)	(359,480)	(195,951)
2017	29.42	27.94	(1.48)	(338,390)	(170,981)
2018	30.15	28.77	(1.38)	(313,690)	(146,924)
2019	30.91	29.64	(1.27)	(290,320)	(126,045)
2020	31.68	30.53	(1.15)	(263,340)	(105,980)
2021	32.47	31.44	(1.03)	(234,460)	(87,465)
2022	33.28	32.39	(0.89)	(203,870)	(70,499)
2023	34.11	33.35	(0.76)	(172,710)	(55,361)
2024 (Jan-July)	34.97	33.93	(1.04)	(138,320)	(41,099)

Note 1: Actual contracted rates are valid for the period of August of the current year through July of following year. Page 2 of 2 displays the calculation of the annual rates shown in this table.

Note 2: Discount rate is 7.88%.

Respectfully Yours,

Benjamin F. Smith II, PE, CEM  
Manager, Strategic Fuels and Power Services  
Tampa Electric Company  
(813) 228-1373  
bfsmith@tecoenergy.com

Fuels Management Cover Letter for Resource Planning Analysis

**Final Rate**  
**Average of Monthly Rates**  
**(Units: \$/kw-mo)**

2011 (Aug-Dec)								23.80	23.80	23.80	23.80	23.80
2012	23.80	23.80	23.80	23.80	23.80	23.80	23.80	24.51	24.51	24.51	24.51	24.51
2013	24.51	24.51	24.51	24.51	24.51	24.51	24.51	25.25	25.25	25.25	25.25	25.25
2014	25.25	25.25	25.25	25.25	25.25	25.25	25.25	26.01	26.01	26.01	26.01	26.01
2015	26.01	26.01	26.01	26.01	26.01	26.01	26.01	26.79	26.79	26.79	26.79	26.79
2016	26.79	26.79	26.79	26.79	26.79	26.79	26.79	27.59	27.59	27.59	27.59	27.59
2017	27.59	27.59	27.59	27.59	27.59	27.59	27.59	28.42	28.42	28.42	28.42	28.42
2018	28.42	28.42	28.42	28.42	28.42	28.42	28.42	29.27	29.27	29.27	29.27	29.27
2019	29.27	29.27	29.27	29.27	29.27	29.27	29.27	30.15	30.15	30.15	30.15	30.15
2020	30.15	30.15	30.15	30.15	30.15	30.15	30.15	31.05	31.05	31.05	31.05	31.05
2021	31.05	31.05	31.05	31.05	31.05	31.05	31.05	31.99	31.99	31.99	31.99	31.99
2022	31.99	31.99	31.99	31.99	31.99	31.99	31.99	32.94	32.94	32.94	32.94	32.94
2023	32.94	32.94	32.94	32.94	32.94	32.94	32.94	33.93	33.93	33.93	33.93	33.93
2024 (Jan-July)	33.93	33.93	33.93	33.93	33.93	33.93	33.93					

**TAMPA ELECTRIC COMPANY  
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- 9.** Paragraph 12 of the Petition states that approval of the Extension has been obtained by both the City Council of Tampa and the Board of Directors of Tampa Electric. Please provide documentation of these approvals including meeting minutes, presentations, and any other pertinent documents.
  
- A.** The statement in Paragraph 12 of the Petition that approval had been obtained from the Board of Directors was an error. Board of Directors approval was not necessary, and the agreement was not brought before the Board of Directors. The 2006 Agreement was brought before the Tampa City Council and approved on December 4, 2008. Documentation of the resolution is attached.

RESOLUTION NO. 2008- 1362

A RESOLUTION APPROVING AN EXTENSION OF SMALL POWER PRODUCTION AGREEMENT BETWEEN THE CITY OF TAMPA AND TAMPA ELECTRIC COMPANY; AUTHORIZING EXECUTION THEREOF BY THE MAYOR OF THE CITY OF TAMPA; PROVIDING AN EFFECTIVE DATE.

**WHEREAS**, the City of Tampa ("City") owns the McKay Bay Refuse-to-Energy facility ("Facility") which produces electricity as a by-product of the disposal of a renewable energy resource - municipal solid waste; and,

**WHEREAS**, the Facility is a producer of renewable energy as that term is defined under applicable law; and,

**WHEREAS**, the City and Tampa Electric Company ("Tampa Electric") are parties to a Small Power Production Agreement dated August 26, 1982 ("1982 Agreement") and are parties to a May 25, 1989 Amendment to Small Power Production Agreement ("1989 Amendment") which amended the 1982 Agreement. The 1982 Agreement and the 1989 Amendment may hereinafter be collectively referred to as the "First Agreement"; and,

**WHEREAS**, the City and Tampa Electric are also Parties to a Small Power Production Agreement dated August 22, 2006 ("2006 Agreement"); and,

**WHEREAS**, it is the intent of the Parties to amend the First Agreement for purposes of, among other things, increasing the Committed Capacity, modifying the capacity payment schedule, and extending its term; and,

**WHEREAS**, it is the intent of the Parties that nothing contained in this Extension shall amend, modify or terminate any provision of the First Agreement or the 2006 Agreement except as specifically provided for in this Extension; and,

**WHEREAS**, under the First Agreement, the City is committed to sell and Tampa Electric is obligated to purchase 15.5 megawatts of firm capacity ("First Committed Capacity") and associated energy produced by the Facility; and,

**WHEREAS**, the City has increased the electrical generating capability of the Facility to more than 19.0 megawatts subsequent to entering into the First Agreement and, pursuant to the 2006 Agreement, the City is committed to sell and Tampa Electric is obligated to purchase 3.5 megawatts of firm capacity ("2006 Committed Capacity") and associated energy produced by the Facility; and,

**WHEREAS**, the City desires to sell and Tampa Electric desires to purchase from the City, commencing upon the expiration date of the First Agreement and the 2006 Agreement (currently 12:01

A.M., August 1, 2011), 19.0 megawatts of firm capacity (replacing the total of the First Committed Capacity plus the 2006 Committed Capacity) and associated energy pursuant to the terms of this Extension; and,

**WHEREAS**, the Parties agree that electric energy produced by the Facility that is in excess of the total amount of energy necessary to deliver 19.0 megawatts to Tampa Electric at a monthly capacity factor of 100% during each calendar month during the term of this Extension ("Excess Energy") may be sold by the City to Tampa Electric; or the City may sell such Excess Energy to third-parties pursuant to separate power sale agreement(s); however, it shall be the responsibility of the City, or the purchasing third-party, to secure the Tampa Electric transmission and ancillary services and third-party transmission and ancillary services required to conduct all such third-party transactions; and,

**WHEREAS**, it is the intent of the Parties to extend the First Agreement, as modified herein, for a period of 13 years beyond the expiration date of the initial term.

**NOW, THEREFORE,**

**BE IT RESOLVED BY THE CITY COUNCIL  
OF THE CITY OF TAMPA, FLORIDA, THAT:**

Section 1. The Agreement between the City of Tampa and Tampa Electric Company, in substantially the form attached hereto and made a part hereof, is hereby approved in its entirety.

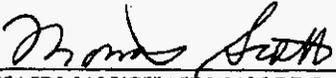
Section 2. All revenues generated as a result of this Extension shall be deposited into Account No. SN0144A01-343112.

Section 3. The Mayor is authorized and empowered to execute, and the City Clerk to attest and affix the official seal of the City of Tampa to, said Agreement on behalf of the City of Tampa.

Section 4. Other proper officers of the City of Tampa are authorized to do all things necessary and proper to carry out and make effective the provisions of this Resolution, which shall take effect immediately upon its adoption.

PASSED AND ADOPTED BY THE CITY COUNCIL OF THE CITY OF TAMPA, FLORIDA,  
ON DEC 04 2008.

ATTEST:

  
\_\_\_\_\_  
CHAIRMAN/~~CHAIRMAN PRO-TEM~~,  
CITY COUNCIL

  
\_\_\_\_\_  
CITY CLERK/~~DEPUTY CITY CLERK~~

PREPARED BY AND APPROVED  
AS TO LEGAL SUFFICIENCY:

E/S/ Chip Fletcher, City Attorney

**EXTENSION OF  
SMALL POWER PRODUCTION AGREEMENT**

The City of Tampa, a municipal corporation organized under the laws of the state of Florida, hereinafter referred to as "the City" and Tampa Electric Company, a private utility corporation organized under the laws of and authorized to do business within the state of Florida, hereinafter referred to as "Tampa Electric," enter into this Extension Of Small Power Production Agreement ("Extension") on this \_\_\_\_ day of \_\_\_\_\_, 2008. The City and Tampa Electric may hereinafter in this Extension be referred to individually as a "Party", or collectively as the "Parties".

**WITNESSETH:**

**WHEREAS**, the City owns the McKay Bay Refuse-to-Energy facility ("Facility") which produces electricity as a by-product of the disposal of a renewable energy resource - municipal solid waste; and,

**WHEREAS**, the Facility is a producer of renewable energy as that term is defined under applicable law; and,

**WHEREAS**, the City and Tampa Electric are parties to a Small Power Production Agreement dated August 26, 1982 ("1982 Agreement") and are parties to a May 25, 1989 Amendment to Small Power Production Agreement ("1989 Amendment") which amended the 1982 Agreement. The 1982 Agreement and the 1989 Amendment may hereinafter be collectively referred to as the "First Agreement"; and,

**WHEREAS**, the City and Tampa Electric are also Parties to a Small Power Production Agreement dated August 22, 2006 ("2006 Agreement"); and,

**WHEREAS**, it is the intent of the Parties to amend and extend the provisions of the First Agreement in accordance with the terms of this Extension, but the Parties do not intend to amend or extend the 2006 Agreement beyond 12:01 A.M. August 1, 2011, notwithstanding paragraph 7 of the 2006 Agreement; and,

**WHEREAS**, it is the intent of the Parties to amend the First Agreement for purposes of, among other things, increasing the Committed Capacity, modifying the capacity payment schedule, and extending its term; and,

**WHEREAS**, it is the intent of the Parties that nothing contained in this Extension shall amend, modify or terminate any provision of the First Agreement or the 2006 Agreement except as specifically provided for herein; and,

**WHEREAS**, it is the intent of the parties that any amendments to the First Agreement effected by this Extension shall become effective only upon the expiration of the First Agreement and that the First Agreement shall continue to operate unchanged until that date; and,

**WHEREAS**, under the First Agreement, the City is committed to sell and Tampa Electric is obligated to purchase 15.5 megawatts of firm capacity ("First Committed Capacity") and associated energy produced by the Facility; and,

**WHEREAS**, the City has increased the electrical generating capability of the Facility to more than 19.0 megawatts subsequent to entering into the First Agreement and, pursuant to the 2006 Agreement, the City is committed to sell and Tampa Electric is obligated to purchase 3.5 megawatts of firm capacity ("2006 Committed Capacity") and associated energy produced by the Facility; and,

**WHEREAS**, the City desires to sell and Tampa Electric desires to purchase from the City, commencing upon the expiration date of the First Agreement and the 2006 Agreement

(currently 12:01 A.M., August 1, 2011), 19.0 megawatts of firm capacity (replacing the total of the First Committed Capacity plus the 2006 Committed Capacity) and associated energy pursuant to the terms of this Extension; and,

**WHEREAS**, the Parties agree that electric energy produced by the Facility that is in excess of the total amount of energy necessary to deliver 19.0 megawatts to Tampa Electric at a monthly capacity factor of 100% during each calendar month during the term of this Extension ("Excess Energy") may be sold by the City to Tampa Electric; or the City may sell such Excess Energy to third-parties pursuant to separate power sale agreement(s); however, it shall be the responsibility of the City, or the purchasing third-party, to secure the Tampa Electric transmission and ancillary services and third-party transmission and ancillary services required to conduct all such third-party transactions; and,

**WHEREAS**, it is the intent of the Parties to extend the First Agreement, as modified herein, for a period of 13 years beyond the expiration date of the initial term.

**NOW, THEREFORE**, in consideration of the premises, which shall be deemed integral parts of this Extension, and of the mutual covenants and agreements set forth in this Extension, the City and Tampa Electric, intending to be legally bound, agree as follows:

1. Effective on the expiration date of the First Agreement Section 1 of the 1989 Amendment shall be deleted in its entirety and replaced with the following:

*"Pursuant to Section 6.2.7 of the [1982] Agreement, the City and Tampa Electric agree that effective as of the expiration of the First Agreement (currently 12:01 A.M., August 1, 2011), the Net Capacity of the Facility shall be 19.0 megawatts of firm capacity (replacing the total of the First Committed Capacity plus the 2006 Committed Capacity) and which hereinafter shall be referred to as "Committed Capacity." Except for*

*potential sales of Excess Energy to third parties as contemplated herein, the City agrees not to utilize any of the electric power generated at the Existing Facility in the operation of the Hookers Point Advanced Wastewater Treatment Plant or for any purpose other than the operation of the existing Facility throughout the term of this Extension."*

2. Effective on the expiration date of the First Agreement Appendix C to the 1989 Amendment shall be amended by deletion of the last 13 lines beginning with the line that starts with "Apr 1 '09-Mar 31 '10" and ending with the line that starts with "Apr 1 '21-Mar 31 '22" and substitution therefore of the following new 13 lines:

Contract Year	Capacity Payment Rates Applicable to 19 MW (\$/kW per Month)
1. August 1, 2011 - July 31, 2012	23.80
2. August 1, 2012 - July 31, 2013	24.51
3. August 1, 2013 - July 31, 2014	25.25
4. August 1, 2014 - July 31, 2015	26.01
5. August 1, 2015 - July 31, 2016	26.79
6. August 1, 2016 - July 31, 2017	27.59
7. August 1, 2017 - July 31, 2018	28.42
8. August 1, 2018 - July 31, 2019	29.27
9. August 1, 2019 - July 31, 2020	30.15
10. August 1, 2020 - July 31, 2021	31.05
11. August 1, 2021 - July 31, 2022	31.99
12. August 1, 2022 - July 31, 2023	32.94
13. August 1, 2023 - July 31, 2024	33.93

3. Effective on the expiration date of the First Agreement Sections 6 and 7 of the 1989 Amendment shall be modified so that commencing on the upon expiration of the First Agreement (currently 12:01 A.M., August 1, 2011 unless such date occurs later by reason of Force Majeure) and continuing for the entire term of the Extension, Section 6 of the 1989

Amendment shall be rendered null and void, as shall all provisions of Section 7 of the 1989 Amendment after the first full sentence under the heading, "Nonperformance Provision."

4. The following new provision defining the extended term of the First Agreement is hereby added:

*"The term of the First Agreement shall be extended for an additional period of 13 (thirteen) years beginning at the expiration of the First Agreement (currently set at 12:01 A.M., August 1, 2011), unless such date occurs later by reason of Force Majeure, in which case the extended term shall begin upon such later date and continue for a period of 13 years, unless earlier terminated pursuant to the provisions of this Extension."*

5. The following new provisions relating to termination of the Extension by the City or Tampa Electric are hereby added:

*"Commencing August 1, 2011, the City and Tampa Electric shall each have the right in its sole and absolute discretion to terminate the Agreement effective August 1, 2014, August 1, 2017 or August 1, 2020, by providing 18 (eighteen) months prior written notice of such termination, and thereupon the Parties shall be fully relieved of any and all liability or responsibility of any kind to one another arising out of or relating to this Extension and the City shall be free to sell, consume or otherwise dispose of the electric capacity and/or energy produced by the Facility without encumbrance, restraint or restriction."*

6. The following new provisions concerning Tampa Electric's right of first refusal are hereby added:

*"(a) Tampa Electric shall have the right of first refusal, as specifically set forth below, for the purchase of the City's Renewable Energy Credits, including Renewable Energy*

*Credits associated with increases in capacity and energy generation at the Facility due to expansion of the Facility or modifications to the Facility. For purposes of this Paragraph 8., Renewable Energy Credits ("RECs") shall mean those tradable or transferable attributes arising by virtue of a Florida or Federal renewable energy portfolio standard ("RPS") applicable to Tampa Electric, and associated with each kWh of renewable energy sold by the City from the Facility.*

*(b) Subsequent to the effective date of such RPS, in the event that the City receives a bona-fide third party offer to purchase some or all of the aforementioned RECs, the City shall notify Tampa Electric of such offer, describing the quantity of RECs the City proposes to sell as well as the proposed price and payment terms ("Offer Notice"). Tampa Electric shall have the right to purchase the RECs identified in the Offer Notice at the same price, payment and other material terms offered to the City by the third party by tendering a notice to the City ("Purchase Exercise Notice") not later than fifteen (15) business days from receipt of the Offer Notice.*

*(c) If Tampa Electric does not timely tender a Purchase Exercise Notice, the City shall be free to enter into a binding agreement with the third party for the sale of the same RECs on the terms offered to it, but if the City does not do so on such terms by the date sixty (60) business days from receipt by Tampa Electric of the Offer Notice ("City's Acceptance Deadline Date"), the foregoing right of first refusal shall be reinstated effective on the City's Acceptance Deadline Date as if such date were the date of receipt of the Offer Notice.*

*(d) If any terms or conditions contained in the third party offer are specifically prohibited by or violative of then current regulations of the Florida Public Service*

*Commission ("FPSC") or the Federal Energy Regulatory Commission ("FERC") Tampa Electric shall notify the City of such prohibition or violation within five (5) days, and provide alternative provisions or other means to overcome such prohibition or violation.*

*(e) Except to the extent of the aforementioned RECs, the City shall at all times retain its sole and exclusive ownership of any and all other types of non-energy attributes associated with the electricity produced by the City, regardless of location, and the right of first refusal granted to Tampa Electric pursuant to this Paragraph 8. shall have no legal force or effect with respect to such attributes as they may now exist or be identified or as they may exist or be identified in the future, and nothing contained herein shall be deemed in any way to modify or diminish such ownership by the City. The term non-energy attributes generally includes but is not limited to any and all environmental, energy source or emission attributes of any sort, including, but not limited to, any credits, benefits, emissions reductions, offsets, allowances, renewable energy certificates, renewable energy credits, green tags or other interests, of any description, howsoever entitled, attributable to the generation of electricity from the Facility, and its displacement of electricity generated by fossil fuels or via other non-renewable production methods.*

*(f) Prior to the effective date of any RPS applicable to Tampa Electric, the City may, without regard to any provisions of this Paragraph 8., sell RECs (or equivalent attributes) to a third party purchaser provided such sales are terminable upon thirty (30) day unilateral notice by the City. Upon the written request of Tampa Electric to exercise its right of first refusal, the City shall timely terminate any such sales of RECs to any third parties effective upon commencement of sales of such RECs to Tampa Electric."*

8. The following new provision concerning the City's one time option to accept a standard offer contract is hereby added:

*"Tampa Electric has pending before the Florida Public Service Commission ("FPSC") in Docket No. 080184-EQ its March 31, 2008 petition for approval of a standard offer contract for small qualifying facilities and producers of renewable energy ("Standard Offer Contract") and its April 22, 2008 supplement to such petition. The FPSC on July 29, 2008, voted to approve Tampa Electric's proposal. Commencing on the date that the FPSC's final order approving a standard offer contract for Tampa Electric in Docket No. 080184-EQ becomes final, effective and non-appealable ("Option State Date"), the City shall have a period of ninety consecutive (90) calendar days within which to exercise a one-time option to sign and deliver to Tampa Electric an open Tampa Electric Standard Offer Contract for the sale to Tampa Electric of the same level of capacity and associated energy the City is obligated to sell to Tampa Electric under the Existing Agreement and this Extension, whereupon Tampa Electric will follow applicable FPSC approved procedures for responding to Standard Offer Contract proposals. If the 90<sup>th</sup> day following the Option Start Date falls on a Saturday, Sunday or a paid holiday as defined in Section 110.117, Florida Statutes, the City shall have until 5:00 P.M. EPT on the next business day that Tampa Electric's principal headquarters offices are open for business within which to exercise its option.*

*If the City timely selects the above-referenced Standard Offer Contract option, the parties shall continue operating under the Existing Agreement and this Extension until the date on which the City's proposed Standard Offer Contract becomes effective or the termination date of the Existing Agreement as extended hereby, whichever first occurs,*

*whereupon the Existing Agreement and this Extension shall be rendered of no further force or effect, except as stated below. If the Existing Agreement and this Extension are rendered of no further force or effect prior to their termination date as a result of the City's selection of the above-referenced Standard Offer Contract option, either Party nevertheless shall have the right to pursue against the other Party any claims, debts or other remedies if the basis for such claim, debt or other remedy had occurred, accrued or matured under the Existing Agreement or this Extension on or before the date on which the Existing Agreement and this Extension were rendered of no further force or effect."*

9. This Extension is subject to the approval of the FPSC and shall become effective on the date the FPSC's order approving this Extension becomes final and non-appealable. The provisions of Section 7.4 of the 1982 Agreement and Section 11 of the 1989 Agreement are among those provisions of the Existing Agreement that are not amended, modified or terminated by this Extension and which shall continue in full force and effect for the duration of the Existing Agreement and this Extension. This Extension is also subject to approval by both the City Council and the Board of Directors of Tampa Electric.

11. This Extension may be simultaneously executed by the Parties in up to four duplicate copies, each of which shall be considered an original.

12. Upon the expiration of the term of the First Agreement, Appendices A, B, C, D and E of the 1989 Amendment shall have no further force or effect.

13. In the event the City elects to sell any Excess Energy to any third parties as contemplated in this Extension, it shall be the responsibility of the City, or the purchasing third party, to secure the Tampa Electric and/or third party transmission and ancillary services required to conduct all such third party sales.

IN WITNESS WHEREOF, the City and Tampa Electric have executed this Extension  
on the day and year first written above.

ATTEST:

CITY OF TAMPA

\_\_\_\_\_  
City Clerk

By: \_\_\_\_\_  
Pam Iorio  
Mayor

Witnesses:

Marsha Milburn  
Bill Dreggers

TAMPA ELECTRIC COMPANY

By: \_\_\_\_\_  
Charles R. Black  
President, Tampa Electric Company

Approved as to Legal Sufficiency

\_\_\_\_\_  
Charles Fletcher  
City Attorney

**TAMPA ELECTRIC COMPANY  
DOCKET NO. 090146-EQ  
STAFF'S FIRST DATA REQUEST  
REQUEST NO. 10  
PAGE 1 OF 2  
FILED: MAY 15, 2009**

- 10.** Please complete the attached table labeled "Avoided Cost Analysis."
- A.** The completed table is attached.

Avoided Cost Analysis

Dollars in \$000

Payments to Facility	NPV	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	
Months																			
Capacity (MW)																			
Energy (MWh)																			
Capacity Factor (%)																			
Heat Rate (BTU/kWh)																			
Capacity (\$/kW-mo)																			
Energy (\$/MWh)																			
Total																			
Capacity Payments (\$)																			
Energy Payments (\$)																			
Total Payments (\$)																			
Avoided Unit Costs																			
Months																			
Capacity (MW)																			
Energy (MWh)																			
Capacity Factor (%)																			
Heat Rate (BTU/kWh)																			
Capacity (\$/kW-mo)																			
Energy (\$/MWh)																			
Total																			
Capacity Payments (\$)																			
Energy Payments (\$)																			
Total Payments (\$)																			
Net Benefit Analysis																			
NPV																			
Net Benefit (\$)																			
Payments to Facility																			
Annual NPV (\$)																			
Cumulative NPV (\$)																			
Avoided Unit Costs																			
Annual NPV (\$)																			
Cumulative NPV (\$)																			
Net Benefits																			
Annual NPV (\$)																			
Cumulative NPV (\$)																			

Note:  
\* The heat rate for the City of Tampa analysis would be the Avoided Unit's heat rate  
\*\* The total in \$/MWh would be the same as the energy in \$/MWh, since the capacity payment converted into \$/MWh would be different depending on the month.