

## FLORIDA ELECTRICAL POWER PLANT SITING ACT APPLICABILITY DETERMINATION

### CPV Atlantic Power Generating Facility

The meaning of electrical power plant, for the purpose of certification under the act “does not include any steam or solar electrical generating facility of less than 75 megawatts in capacity unless the applicant for such a facility elects to apply for certification under this act.” [403.503(13), F.S.]

The provisions of the act shall apply to any electrical power plant as defined herein, except that the provisions of this act shall not apply to any electrical power plant or steam generating plant of less than 75 megawatts in capacity .....” [403.506(1), F.S.]

A combined cycle plant consists of two cycles. The first is the gas turbine cycle, also known as the *Brayton Cycle*. The second is the steam turbine or *Rankine Cycle*. [Steam, its Generation and Use, Babcock & Wilcox, 1992]

For combined cycles, the Department considers the act to apply only to electricity generated from the electrical generator operated on the Rankine cycle and not the separate electrical generator operated on the Brayton cycle.

In past permitting actions, the Department has accepted operational limitations on the gross electrical output from the steam turbine-electrical generator as the measure of capacity. [Okeelanta Cogeneration, Destec Tiger Bay]

The Department requires a clear description of the manner by which electrical power from the steam turbine-electrical generator will be limited to less than 75 MW (gross) on a 1-hour average.

In its application received by the Department on December 29, 2000, CPV stated the following:

*“The steam turbine generator (STG) output will be limited to less than 75 MW. Control of STG output will be monitored and controlled to ensure the 75 MW output limit is not exceeded. A number of control options have been investigated and the most probable are described below.*

*“When ambient temperature is at 59 °F or greater, excess steam generated in the HRSG will be extracted from the HRSG, bypassing the steam turbine, and injected into the CTG. This mode of operation is referred to as power augmentation. Since there is a limit on the quantity of steam that may be injected into the CTG, it may be necessary to further reduce flow to the STG to limit output or to reduce steam turbine output by other means.*

*“Bypass of a portion of heat exchanger surface in the HRSG is an effective method of reducing steam production by reducing the heat recovered from the combustion turbine flue gas. The proposed design will make use of a low temperature economizer bypass to limit steam production by allowing more of the heat generated by the combustion turbine to be discharged to the atmosphere with the flue gas. This will limit STG output.*

*“In many cases, application of both of these control modes will reduce steam output to the turbine to the required quantity. If additional reduction in STG output is required, raising STG discharge pressure by raising the condenser operating temperature will reduce turbine efficiency, reducing electrical*

output. Output of the STG may be tuned to the desired value by turning cooling tower cells on and off as necessary.

*"When ambient temperature falls below 59 °F the manufacturer does not recommend injection of steam into the combustion turbine. If the low temperature economizer bypass combined with an increase cooling water temperature does not reduce STG output sufficiently, excess steam may bypass the steam turbine and be sent directly to the condenser.*

*"Output of the STG will be controlled automatically utilizing the methods described above to ensure that the electrical power produced from steam does not exceed 74.9 MW".*

By memorandum to the Department on April 26, 2001, CPV appended the following to the above description:

*"This will be accomplished through a digital control system (DCS) that will be programmed by the Engineering Procurement Construction (EPC) engineer to limit the steam turbine output to 74.9 MW. The 74.9 MW limit on electrical power production from steam will be maintained on a rolling one hour average basis. The necessary logic to automatically control steam injection to the gas turbine, cooling tower fan speed, HRSG economizer bypass control, steam bypass control, or reduce gas turbine load will be incorporated in the DCS.*

*"The DCS will also be programmed to monitor and store hourly average steam injection rates and/or electrical power produced. The plant operator can manually lower the steam turbine output value but cannot raise the number beyond the programmed set point limit or alter the DCS logic. Depending on the DCS platform purchased, the logic and set point will either be protected by password or keylock. If the logic or set point must be changed after the plant is in commercial operation, only an authorized DCS representative or a qualified DCS engineer can make the modifications. These modifications can be made using the DCS engineering work station, which will be located in the plant control room. A shutdown of the facility is not required since the changes can be made while the plant is on-line".*

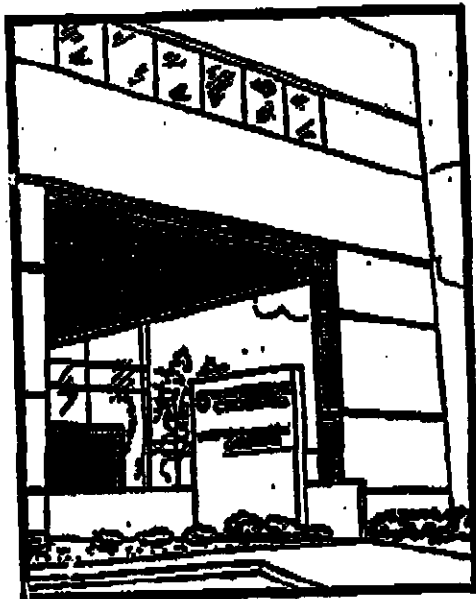
The Department accepts CPV's operational description and concludes that the project is not subject to the Florida Electrical Power Plant Siting Act.

*A. A. Linero 1/25*

A. A. Linero, P.E. Administrator  
New Source Review Section

*Hamilton S. Owen*

Hamilton Owen, P.E. Administrator  
Power Plant Siting Office

**FAX COVER SHEET**TO: AL LincroFAX NUMBER: 850-922-6979COMPANY: Florida DEPADDRESS: Tallahassee, FloridaFROM: Mike AndersonCHARGE NUMBER: 28365-0030-00600NUMBER OF PAGES  
(including this one)10DATE: 4/20/01 TIME: 6:15 PM

## COMMENTS:

CPV Atlantic's responses to EPA Region IV's  
comments on the CPV Atlantic draft  
air permit.

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April 20, 2001

**RECEIVED**  
APR 30 2001  
BUREAU OF AIR REGULATION

Mr. Alvaro Linero  
Administrator, New Source Review Section  
Bureau of Air Regulation  
Florida Department of Environmental Protection  
2600 Blairstone Road  
Tallahassee, FL 32399

Re: Response to Comments Submitted by U.S. Environmental Protection Agency,  
Region IV, on CPV Atlantic PSD Permit, DEP File No. 1110101-001-AC (PSD-FL-312).

Dear Mr. Linero:

This letter is provided in response to the comments dated March 21, 2001 submitted by the U.S. Environmental Protection Agency (EPA) Region IV to the Florida Department of Environmental Protection, Bureau of Air Regulation, on the draft Prevention of Significant Deterioration (PSD) Air Construction Permit proposed to be issued for the CPV Atlantic electrical power plant, DEP File No. 1110101-001-AC (PSD-FL-312). Specifically, this is provided in response to Comment No. 3 a. through e. of EPA's letter.

Comment 3.a.

EPA requested CPV Atlantic to perform a SCONOx cost-effectiveness analysis for a controlled nitrogen oxides (NOx) emission level of 2 ppmvd. Please find attached as Table E-2 (Exhibit 1A to this letter) the cost-effectiveness analyses for SCONOx at the 2 ppmvd level, performed using EPA's assumptions. Additionally, the original determination of the cost-effectiveness of SCR at 3.5 ppmvd is attached as Table E-1 (Exhibit 1B to this letter). Note: using EPA's assumptions for determining the cost-effectiveness of SCONOx is conservative, in that it projects the lowest cost for SCONOx. Using EPA's assumptions for calculating cost-effectiveness, the cost per ton of NOx removed by SCONOx at 2 ppmvd is \$15,702 per ton. In comparison, the originally calculated cost per ton of NOx removed by SCR at 3.5 ppmvd is \$2,835 per ton. Even when using EPA's

conservative assumptions for calculating the cost-effectiveness for SCONOx, and using less conservative assumptions for calculating the cost-effectiveness for SCR, the use of SCR for this project clearly is more cost-effective than the use of SCONOx.

Comment 3.b. through 3.e.

In comments 3.b through 3.e., EPA requested that CPV Atlantic revise its cost-effectiveness calculations for the use of an oxidation catalyst to control carbon monoxide (CO) emissions. In comment 3.b., EPA requested CPV Atlantic to revise the capital recovery cost analysis for the oxidation catalyst to deduct catalyst cost from the Total Capital Investment when calculating capital recovery. CPV Atlantic concurs with EPA's request regarding the capital recovery cost analysis. The results of the implementation of all of EPA's comments are depicted on Table E-3 (Exhibit 2 to this letter). The environmental basis (cost per ton of CO removed) using all of EPA's requests, including the revised capital recovery cost analysis method, is \$2,856 per ton to remove CO using an oxidation catalyst. This table demonstrates that the requirement for use of an oxidation catalyst for CPV Atlantic is not cost-effective.

Comment 3.c.

EPA requested CPV Atlantic to use a 3% contingency fee, rather than a 20% contingency fee, for the determination of cost-effectiveness for the use of an oxidation catalyst, unless the use of a 20% contingency could be justified. In Table E-3, attached as Exhibit 3, all of EPA's comments have been incorporated into the cost-effectiveness calculations for the oxidation catalyst, except that CPV Atlantic has retained the 20% contingency, because CPV Atlantic believes this level of contingency is appropriate given the level of activity and uncertainty in the generating industry at this time. The revised calculations result in a \$3,107 per ton cost for CO removal using an oxidation catalyst (see Table E-3, attached as Exhibit 3). This table demonstrates that the use of an oxidation catalyst is not cost-effective for this project.

Comment 3.d.

EPA requested CPV Atlantic to omit the "Pressure Drop Derate" from the cost analysis for the oxidation catalyst to control CO emissions, on the grounds that lost revenue should not be included in the cost analysis. CPV Atlantic disagrees with this position. Determination of BACT, by definition, takes into account energy, environmental, and economic factors. Lost revenues due to

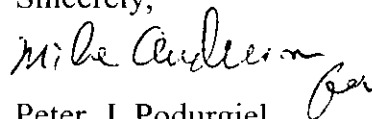
pressure drop resulting from the use of an oxidation catalyst are an appropriate economic consideration in the determination of the cost-effectiveness of a given control technology. Accordingly, in Table E-3, Exhibit 4 to this letter, all of EPA's comments concerning the oxidation catalyst have been incorporated, but the Pressure Drop Derate has been retained. This results in a cost estimate of \$3,576 per ton to remove CO using an oxidation catalyst. This table demonstrates that the requirement for use of an oxidation catalyst is not cost-effective for this project.

Comment 3.e.

EPA requested CPV Atlantic to use a 7% interest rate, rather than an 8% interest rate, in calculating the cost-effectiveness of the use of an oxidation catalyst to control CO emissions. All of EPA's comments have been incorporated into the determination of the cost-effectiveness depicted on Table E-3, Exhibit 5 to this letter, except that the 8% interest rate has been retained because CPV Atlantic believes this is an appropriate representation of the rates available to merchant generating facilities. The revised calculations result in a cost estimate of \$2,904 per ton of CO removed using an oxidation catalyst. This table demonstrates that the requirement for use of an oxidation catalyst is not cost-effective for this project.

We appreciate the opportunity to submit these comments. If FDEP has any questions regarding these revisions, please do not hesitate to contact me at (781) 848-0253.

Sincerely,



Peter J. Podurgiel  
Director, Project Development  
CPV Atlantic, Ltd.

Cc: Teresa Heron, DEP  
Cathy Sellers, Moyle, Flanigan  
Mike Anderson, TRC

## Exhibit 1A

Table E-2. CPV Atlantic SCONOX to achieve 2 ppm NOx		
COST COMPONENT		COST
<b>DIRECT COSTS</b>		
<i>Purchased Equipment Costs</i>		
SCONOX System		14,000,000
Sales Tax (6% of equipment costs)		840,000
Freight (4% of equipment costs)		560,000
<i>Subtotal-Purchased Equipment Costs (PEC)</i>		15,400,000
<i>Direct Installation Costs</i>		
Construction		1,700,000
<b>TOTAL DIRECT COSTS (TDC)</b>		17,100,000
<b>INDIRECT INSTALLATION COSTS</b>		
Engineering Costs		200,000
<b>CONTINGENCY (3% of PEC)</b>		462,000
<b>TOTAL CAPITAL INVESTMENT (TCI)</b>		<b>17,762,000</b>
<b>DIRECT ANNUAL COSTS</b>		
Maintenance Materials and Labor		331,400
Regeneration Natural Gas and Steam		406,400
Catalyst Pressure Derate		0
Catalyst Replacement (assume 3 year service life)		190,000
<b>TOTAL ANNUAL DIRECT COSTS</b>		927,800
<b>INDIRECT ANNUAL COSTS</b>		
Overhead (60% of maintenance materials and labor)		198,840
Property Tax (1% of TCI)		177,620
Insurance (1% of TCI)		177,620
Administration (2% of TCI)		355,240
<b>TOTAL INDIRECT ANNUAL COSTS</b>		909,320
<b>TOTAL ANNUAL INVESTMENT</b>		<b>1,837,120</b>
<b>CAPITAL RECOVERY FACTOR, <math>CFR = (i * (1+i)^n) / ((1+i)^n - 1)</math></b>		
10 Equipment Life (years)		
7% Interest Rate		
0.1424 Capital Recovery Factor		
<b>CAPITAL RECOVERY COSTS</b>		
<b>TOTAL CAPITAL REQUIREMENT</b>		<b>17,762,000</b>
<b>MINUS CATALYST COST</b>		<b>-498,620</b>
<b>TOTAL CAPITAL REQUIREMENT MINUS CATALYST COST</b>		<b>17,263,380</b>
<b>TOTAL ANNUAL CAPITAL REQUIREMENT</b>		<b>2,528,909</b>
<b>TOTAL ANNUALIZED COST</b> (Total annual O&M cost and annualized capital cost)		<b>4,366,029</b>
<b>BASELINE POTENTIAL NO<sub>x</sub> EMISSIONS (TPY) FROM TURBINE</b> (emissions based on 100% load at 72°F)		
	Uncontrolled	345
	Controlled (Based on 2 ppmvd NO <sub>x</sub> )	67
<b>ANNUAL TONS OF NO<sub>x</sub> REMOVED</b>		<b>278</b>
<b>COST-EFFECTIVENESS</b>		
<b>ENVIRONMENTAL BASIS</b> (\$ per ton of NO <sub>x</sub> removed)		<b>15,702</b>

Exhibit 1B

Table E-1. CPV Atlantic SCR to achieve 3.5 ppm NO <sub>x</sub>		
<b>DIRECT COSTS</b>		
<i>Purchased Equipment Costs</i>		
SCR Catalyst System		950,000
Sales Tax (6% of equipment costs)		57,000
Freight (4% of equipment costs)		38,000
<i>Subtotal-Purchased Equipment Costs (PEC)</i>		1,045,000
<b>TOTAL DIRECT COSTS (TDC)</b>		1,045,000
<b>INDIRECT INSTALLATION COSTS</b>		
Engineering Costs (5% of PEC)		52,250
<b>CONTINGENCY (20% of Direct and Indirect Costs)</b>		219,450
<b>TOTAL CAPITAL INVESTMENT (TCI)</b>		1,316,700
<b>DIRECT ANNUAL COSTS</b>		
Maintenance Materials and Labor (2% of TCI)		26,334
Ammonia Cost		27,763
Catalyst Pressure Derate		145,697
Catalyst Replacement (based on total SCR catalyst replacement cost every 3 years)		173,333
Catalyst Disposal (Amortized Over 5 Year Period)		8,333
<b>TOTAL ANNUAL DIRECT COSTS</b>		381,460
<b>INDIRECT ANNUAL COSTS</b>		
Overhead (60% of maintenance materials and labor)		15,800
Property Tax (1% of TCI)		13,167
Insurance (1% of TCI)		13,167
Administration (2% of TCI)		26,334
<b>TOTAL INDIRECT ANNUAL COSTS</b>		68,468
<b>TOTAL ANNUAL INVESTMENT</b>		449,929
<b>CAPITAL RECOVERY FACTOR, <math>CFR = (1 * (1+i)^n) / ((1+i)^n - 1)</math></b>		
Equipment Life (years) = 10		
Interest Rate (%) = 8		
Capital Recovery Factor		0.1490
<b>CAPITAL RECOVERY COSTS</b>		
<b>TOTAL CAPITAL REQUIREMENT</b>		1,316,700
<b>TOTAL ANNUAL CAPITAL REQUIREMENT</b>		196,227
<b>TOTAL ANNUALIZED COST</b> (Total annual O&M cost and annualized capital cost)		648,156
<b>BASELINE POTENTIAL NO<sub>x</sub> EMISSIONS (TPY) FROM TURBINE</b> (emissions based on 100% load at 72°F)		
	Uncontrolled	345
	Controlled	117
<b>ANNUAL TONS OF NO<sub>x</sub> REMOVED</b>		228
<b>COST-EFFECTIVENESS</b>		
<b>ENVIRONMENTAL BASIS</b> (\$ per ton of NO <sub>x</sub> removed)		2,835



**Exhibit 2**

<b>Table E-3. CPV Atlantic CO Catalyst</b>	
<b>COST COMPONENT:</b>	<b>COST</b>
<b>DIRECT COSTS</b>	
Purchased Equipment Costs	
CO Catalyst (Engelhard Budgetary Quote)	\$560,000
Sales Tax (6% of purchased equipment costs)	\$33,600
Freight (4% of purchased equipment costs)	\$22,400
Subtotal-Purchased Equipment Costs (PEC)	\$616,000
Direct Installation Costs	
Installation/Foundation (35% of Catalyst Capital Cost)	\$196,000
Subtotal-Direct Installation Costs	\$196,000
<b>TOTAL DIRECT COSTS (TDC)</b>	<b>\$812,000</b>
<b>INDIRECT INSTALLATION COSTS</b>	
Engineering Costs (5% of PEC)	\$30,800
Contingency (3% of PEC per pg 3-50 of EPA 453/B-96-001)	\$18,480
<b>TOTAL INDIRECT COSTS</b>	<b>\$49,280</b>
<b>TOTAL CAPITAL INVESTMENT (TCI)</b>	<b>\$861,280</b>
<b>DIRECT ANNUAL COSTS</b>	
100% Capacity factor	
8,760 Equivalent Operating Hours per Year (per CTG)	
720 Oil-Fired operating hours/year	
Maintenance Materials and Labor (2% of TCI)	\$17,226
Replacement Catalyst (3 Year Service Life)	\$182,905
\$ 480,000 Replacement catalyst	
3 Guaranteed catalyst life	
7% Interest rate	
0.381 Capital recovery factor	
Pressure Drop Derate (Lost Revenue From Sale Of Power)	\$0
Fuel Penalty (Increase Fuel Consumption due to back pressure heat rate impact)	\$36,596
1 807E+09 Annual CTG output, kW-hr	
9 Btu/kW-hr	
16,265 mmBtu/yr natural gas	
2.25 \$/mmBtu natural gas	
Catalyst Disposal	\$16,667
\$ 50,000 at the end of catalyst guaranteed life	
<b>TOTAL DIRECT ANNUAL COSTS</b>	<b>\$253,393</b>
<b>INDIRECT ANNUAL COSTS</b>	
Overhead (60% of labor and maintenance materials)	\$10,335
Property Tax (1% of TCI)	\$8,613
Insurance (1% of TCI)	\$8,613
Administration (2% of TCI)	\$17,226
<b>TOTAL INDIRECT ANNUAL COSTS</b>	<b>\$44,787</b>
<b>TOTAL ANNUAL COSTS</b>	<b>\$298,179</b>
10 Equipment Life (years)	
7% Interest Rate	
0.142 Capital Recovery Factor	
<b>CAPITAL RECOVERY COSTS (Catalyst replaced cost subtracted)</b>	
<b>TOTAL CAPITAL REQUIREMENT</b>	<b>\$861,280</b>
<b>CATALYST REPLACEMENT COST</b>	<b>-\$480,000</b>
<b>TOTAL CAPITAL REQUIREMENT MINUS CATALYST REPLACEMENT COST</b>	<b>\$381,280</b>
<b>TOTAL ANNUALIZED CAPITAL REQUIREMENT</b>	<b>\$54,286</b>
<b>TOTAL ANNUALIZED COST</b> (Total annual O&M cost and annualized capital cost)	<b>\$352,465</b>
<b>BASELINE POTENTIAL CO EMISSIONS (TPY) FROM TURBINE</b>	<b>154</b>
Uncontrolled General Electric 7FA Turbine Emissions = 9 ppm on gas for 6,040 hr/yr (no power augmentation)/ 15 ppm on gas for 2,000 hr/yr (power augmentation)/20 ppm on oil for 720 hr/yr	
<b>TONS OF CO REMOVED PER YEAR</b>	<b>123</b>
Controlled General Electric 7FA Turbine Emissions = assume 80% control efficiency	
<b>COST-EFFECTIVENESS</b>	
<b>ENVIRONMENTAL BASIS</b> (\$ per ton of CO removed)	<b>\$2,856</b>

## Exhibit 3

Table E-3. CPV Atlantic CO Catalyst	
COST COMPONENT:	COST
<b>DIRECT COSTS</b>	
Purchased Equipment Costs	
CO Catalyst (Engelhard Budgetary Quote)	\$560,000
Sales Tax (6% of purchased equipment costs)	\$33,600
Freight (4% of purchased equipment costs)	\$22,400
Subtotal-Purchased Equipment Costs (PEC)	\$616,000
Direct Installation Costs	
Installation/Foundation (35% of Catalyst Capital Cost)	\$196,000
Subtotal-Direct Installation Costs	\$196,000
<b>TOTAL DIRECT COSTS (TDC)</b>	<b>\$812,000</b>
<b>INDIRECT INSTALLATION COSTS</b>	
Engineering Costs (5% of PEC)	\$30,800
Contingency (20% of TDC)	\$162,400
<b>TOTAL INDIRECT COSTS</b>	<b>\$193,200</b>
<b>TOTAL CAPITAL INVESTMENT (TCI)</b>	<b>\$1,005,200</b>
<b>DIRECT ANNUAL COSTS</b>	
100% Capacity factor	
8,760 Equivalent Operating Hours per Year (per CTG)	
720 Oil-Fired operating hours/year	
Maintenance Materials and Labor (2% of TCI)	\$20,104
Replacement Catalyst (3 Year Service Life)	\$182,905
\$ 480,000 Replacement catalyst	
3 Guaranteed catalyst life	
7% Interest rate	
0.381 Capital recovery factor	
Pressure Drop Derate (Lost Revenue From Sale Of Power)	\$0
Fuel Penalty (Increase Fuel Consumption due to back pressure heat rate impact)	\$36,596
1.807E+09 Annual CTG output, kW-hr	
9 Btu/kW-hr	
18,265 mmBtu/yr natural gas	
2.25 \$/mmBtu natural gas	
Catalyst Disposal	\$16,667
\$ 50,000 at the end of catalyst guaranteed life	
<b>TOTAL DIRECT ANNUAL COSTS</b>	<b>\$256,271</b>
<b>INDIRECT ANNUAL COSTS</b>	
Overhead (60% of labor and maintenance materials)	\$12,062
Property Tax (1% of TCI)	\$10,052
Insurance (1% of TCI)	\$10,052
Administration (2% of TCI)	\$20,104
<b>TOTAL INDIRECT ANNUAL COSTS</b>	<b>\$52,270</b>
<b>TOTAL ANNUAL COSTS</b>	<b>\$308,541</b>
10 Equipment Life (years)	
7% Interest Rate	
0.142 Capital Recovery Factor	
<b>CAPITAL RECOVERY COSTS (Catalyst replaced cost subtracted)</b>	
<b>TOTAL CAPITAL REQUIREMENT</b>	<b>\$1,005,200</b>
<b>CATALYST REPLACEMENT COST</b>	<b>-480,000</b>
<b>TOTAL CAPITAL REQUIREMENT MINUS CATALYST REPLACEMENT COST</b>	<b>\$525,200</b>
<b>TOTAL ANNUALIZED CAPITAL REQUIREMENT</b>	<b>\$74,777</b>
<b>TOTAL ANNUALIZED COST</b> (Total annual O&M cost and annualized capital cost)	<b>\$383,318</b>
<b>BASELINE POTENTIAL CO EMISSIONS (TPY) FROM TURBINE</b>	<b>154</b>
Uncontrolled General Electric 7FA Turbine Emissions = 9 ppm on gas for 6,040 hr/yr (no power augmentation)/ 15 ppm on gas for 2,000 hr/yr (power augmentation)/20 ppm on oil for 720 hr/yr	
<b>TONS OF CO REMOVED PER YEAR</b>	<b>123</b>
Controlled General Electric 7FA Turbine Emissions = assume 80% control efficiency	
<b>COST-EFFECTIVENESS</b>	
<b>ENVIRONMENTAL BASIS</b> (\$ per ton of CO removed)	<b>\$3,107</b>

## Exhibit 4

Table E-3. CPV Atlantic CO Catalyst	
COST COMPONENT:	COST
<b>DIRECT COSTS</b>	
Purchased Equipment Costs	
CO Catalyst (Engelhard Budgetary Quote)	\$560,000
Sales Tax (6% of purchased equipment costs)	\$33,600
Freight (4% of purchased equipment costs)	\$22,400
Subtotal-Purchased Equipment Costs (PEC)	\$616,000
Direct Installation Costs	
Installation/Foundation (35% of Catalyst Capital Cost)	\$196,000
Subtotal-Direct Installation Costs	\$196,000
<b>TOTAL DIRECT COSTS (TDC)</b>	<b>\$812,000</b>
<b>INDIRECT INSTALLATION COSTS</b>	
Engineering Costs (5% of PEC)	\$30,800
Contingency (3% of PEC per pg 3-50 of EPA 453/B-96-001)	\$18,480
<b>TOTAL INDIRECT COSTS</b>	<b>\$49,280</b>
<b>TOTAL CAPITAL INVESTMENT (TCI)</b>	<b>\$861,280</b>
<b>DIRECT ANNUAL COSTS</b>	
100% Capacity factor	
8,760 Equivalent Operating Hours per Year (per CTG)	
720 Oil-Fired operating hours/year	
Maintenance Materials and Labor (2% of TCI)	\$17,226
Replacement Catalyst (3 Year Service Life)	\$182,905
\$ 480,000 Replacement catalyst	
3 Guaranteed catalyst life	
7% Interest rate	
0.381 Capital recovery factor	
Pressure Drop Derate (Lost Revenue From Sale Of Power)	\$101,178
0.7 Pressure drop across catalyst, inches H2O	
206,300 Full load CTG output (annual average), kW	
275 Output reduction for pressure drop, kW/inch H2O	
193 kW derate	
1,686,300 kW-hr output lost per year	
6 cents per kW-hr	
Fuel Penalty (Increase Fuel Consumption due to back pressure heat rate impact)	\$36,596
1.807E+09 Annual CTG output, kW-hr	
9 Btu/kW-hr	
16,265 mmBtu/yr natural gas	
2.25 \$/mmBtu natural gas	
Catalyst Disposal	\$16,667
\$ 50,000 at the end of catalyst guaranteed life	
<b>TOTAL DIRECT ANNUAL COSTS</b>	<b>\$354,571</b>
<b>INDIRECT ANNUAL COSTS</b>	
Overhead (60% of labor and maintenance materials)	\$10,335
Property Tax (1% of TCI)	\$8,613
Insurance (1% of TCI)	\$8,613
Administration (2% of TCI)	\$17,226
<b>TOTAL INDIRECT ANNUAL COSTS</b>	<b>\$44,787</b>
<b>TOTAL ANNUAL COSTS</b>	<b>\$399,357</b>
10 Equipment Life (years)	
7% Interest Rate	
0.142 Capital Recovery Factor	
<b>CAPITAL RECOVERY COSTS (Catalyst replaced cost subtracted)</b>	
<b>TOTAL CAPITAL REQUIREMENT</b>	<b>\$861,280</b>
<b>CATALYST REPLACEMENT COST</b>	<b>-\$480,000</b>
<b>TOTAL CAPITAL REQUIREMENT MINUS CATALYST REPLACEMENT COST</b>	<b>\$381,280</b>
<b>TOTAL ANNUALIZED CAPITAL REQUIREMENT</b>	<b>\$54,286</b>
<b>TOTAL ANNUALIZED COST</b> (Total annual O&M cost and annualized capital cost)	<b>\$453,643</b>
<b>BASELINE POTENTIAL CO EMISSIONS (TPY) FROM TURBINE</b>	<b>154</b>
Uncontrolled General Electric 7FA Turbine Emissions = 9 ppm on gas for 6,040 hr/yr (no power augmentation)/ 15 ppm on gas for 2,000 hr/yr (power augmentation)/20 ppm on oil for 720 hr/yr	
<b>TONS OF CO REMOVED PER YEAR</b>	<b>123</b>
Controlled General Electric 7FA Turbine Emissions = assume 80% control efficiency	
<b>COST-EFFECTIVENESS</b> <b>ENVIRONMENTAL BASIS</b> (\$ per ton of CO removed)	<b>\$3,676</b>

## Exhibit 5

Table E-3. CPV Atlantic CO Catalyst	
COST COMPONENT:	COST
<b>DIRECT COSTS</b>	
Purchased Equipment Costs	
CO Catalyst (Engelhard Budgetary Quote)	\$560,000
Sales Tax (6% of purchased equipment costs)	\$33,600
Freight (4% of purchased equipment costs)	\$22,400
Subtotal-Purchased Equipment Costs (PEC)	\$616,000
Direct Installation Costs	
Installation/Foundation (35% of Catalyst Capital Cost)	\$196,000
Subtotal-Direct Installation Costs	\$196,000
<b>TOTAL DIRECT COSTS (TDC)</b>	<b>\$812,000</b>
<b>INDIRECT INSTALLATION COSTS</b>	
Engineering Costs (5% of PEC)	\$30,800
Contingency (3% of PEC per pg 3-50 of EPA 453/B-96-001)	\$18,480
<b>TOTAL INDIRECT COSTS</b>	<b>\$49,280</b>
<b>TOTAL CAPITAL INVESTMENT (TCI)</b>	<b>\$861,280</b>
<b>DIRECT ANNUAL COSTS</b>	
100% Capacity factor	
8,760 Equivalent Operating Hours per Year (per CTG)	
720 Oil-Fired operating hours/year	
Maintenance Materials and Labor (2% of TCI)	\$17,226
Replacement Catalyst (3 Year Service Life)	\$186,256
\$ 480,000 Replacement catalyst	
3 Guaranteed catalyst life	
8% Interest rate	
0.388 Capital recovery factor	
Pressure Drop Derate (Lost Revenue From Sale Of Power)	\$0
Fuel Penalty (Increase Fuel Consumption due to back pressure heat rate impact)	\$36,596
1.807E+09 Annual CTG output, kW-hr	
9 Btu/kW-hr	
16,265 mmBtu/yr natural gas	
2.25 \$/mmBtu natural gas	
Catalyst Disposal	\$16,667
\$ 50,000 at the end of catalyst guaranteed life	
<b>TOTAL DIRECT ANNUAL COSTS</b>	<b>\$256,744</b>
<b>INDIRECT ANNUAL COSTS</b>	
Overhead (60% of labor and maintenance materials)	\$10,335
Property Tax (1% of TCI)	\$8,613
Insurance (1% of TCI)	\$8,613
Administration (2% of TCI)	\$17,226
<b>TOTAL INDIRECT ANNUAL COSTS</b>	<b>\$44,787</b>
<b>TOTAL ANNUAL COSTS</b>	<b>\$301,530</b>
10 Equipment Life (years)	
8% Interest Rate	
0.149 Capital Recovery Factor	
<b>CAPITAL RECOVERY COSTS (Catalyst replaced cost subtracted)</b>	
<b>TOTAL CAPITAL REQUIREMENT</b>	<b>\$861,280</b>
<b>CATALYST REPLACEMENT COST</b>	<b>-480,000</b>
<b>TOTAL CAPITAL REQUIREMENT MINUS CATALYST REPLACEMENT COST</b>	<b>\$381,280</b>
<b>TOTAL ANNUALIZED CAPITAL REQUIREMENT</b>	<b>\$56,822</b>
<b>TOTAL ANNUALIZED COST</b> (Total annual O&M cost and annualized capital cost)	<b>\$358,352</b>
<b>BASLINE POTENTIAL CO EMISSIONS (TPY) FROM TURBINE</b>	<b>154</b>
Uncontrolled General Electric 7FA Turbine Emissions = 9 ppm on gas for 6,040 hr/yr (no power augmentation)/ 15 ppm on gas for 2,000 hr/yr (power augmentation)/20 ppm on oil for 720 hr/yr	
<b>TONS OF CO REMOVED PER YEAR</b>	<b>123</b>
Controlled General Electric 7FA Turbine Emissions = assume 80% control efficiency	
<b>COST-EFFECTIVENESS</b> <b>ENVIRONMENTAL BASIS</b> (\$ per ton of CO removed)	<b>\$2,904</b>

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FLANIGAN  
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RAYMOND  
& SHEEHAN  
P.A.**

**THE PERKINS HOUSE  
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ROBERT J. SNIFFEN  
MARTA M. SUAREZ-MURIAS  
WILTON L. WHITE  
BRIAN L. WOLINETZ**

**OF COUNSEL:  
THOMAS A. HICKEY  
WILLIAM J. PAYNE**

April 2, 2001

Mr. Alvaro Linero, P.E.  
Administrator, New Source Review  
Bureau of Air Regulation  
Department of Environmental Protection  
111 South Magnolia Drive, Suite 4  
Tallahassee, FL 32399

Re: Comments on Draft PSD Permit for CPV Atlantic Power Generating Facility, DEP  
File No.1110101-001-AC and PSD-FL-312

Dear Mr. Linero:

Pursuant to the Public Notice of Intent for the above-referenced matter, the permit applicant, CPV Atlantic, Ltd., submits the following comments on the draft PSD permit for the CPV Atlantic Power Generating Facility.

1. On page 1 of 19 of the draft Permit and on Page TE-2 of the Technical Evaluation, the facility UTM zone 17 location coordinates are incorrect. The correct location UTM coordinates are Zone 17, 558.2 km E; 3,026.2 km N. The draft Permit should be revised to contain the correct location coordinates.

2. On page 2 of 19 of the draft Permit, the Facility Description section, the stack height should be corrected to two hundred (200) feet, from one hundred fifty (150) feet, as currently stated in the Permit.

3. On page 9 of 19 of the draft Permit, Condition No. 7 requires the applicant to install, calibrate, tune, operate, and maintain a Speedtronic Mark VI automated gas turbine control system

for the combined cycle unit. However, page BD-13 of the draft BACT Determination states that the Mark V control system will be used for the combined cycle unit. Accordingly, Page BD-13 should be revised to reference the Speedtronic Mark VI, consistent with the permit condition.

4. On page 9 of 19 of the draft Permit, Condition No. 10, the permit condition states that there will be an anhydrous ammonia storage system for the project. However, CPV Atlantic is not going to use anhydrous ammonia or store it onsite. Instead, CPV Atlantic will use and store 19% aqueous ammonia. The draft Permit accordingly should be revised to correct this condition.

5. On page 9 of 19 of the draft Permit, Condition No. 6, regarding Hours of Operation, CPV Atlantic requests that the provision stating "[d]istillate oil firing shall not exceed 720 hours during any consecutive 12 months" be revised to state: "distillate oil firing shall not exceed 720 hours per year," consistent with the PSD permit issued for CPV Gulfcoast.

6. On page 10 of 19 of the draft Permit, Condition No. 13a., dealing with Performance Tests, the CO emissions rate limit for natural gas firing should be 31.0 pounds per hour, based on the air permit application, instead of 26.0 pounds per hour, as stated in the first paragraph of Condition 13.a. of the draft Permit. Also, based on the information submitted in the air permit application, the CO emissions rate limit for distillate oil firing in the third paragraph of Condition 13.a. should be 83.0 pounds per hour, rather than 70.0 pounds per hour, as stated in the draft Permit.

7. On page 13 of 19 of the draft Permit, Condition No. 22 requires annual compliance tests for CO, NOx, ammonia slip, and visible emissions for gas and oil firing. However, Condition No. 20 states that CEM system data may be used to demonstrate compliance with all CO and NOx standards. In order to make clear that additional annual compliance testing is not required for CO and NOx in addition to the CEM system testing, CPV Atlantic requests that Condition No. 22 be clarified to include the sentence: "RATA data can substitute for annual compliance testing for CO and NOx."

8. On pages 17 and 18 of the draft Permit, Condition No. 31.g., concerning data availability, requires a 95% NOx and CO monitoring data availability per quarter. CPV Atlantic requests that this condition be revised to include the following sentence: "The NOx and CO monitor availability threshold shall not be less than 95% in any calendar quarter. The report required by this section shall be used to demonstrate monitor availability. In the event 95% availability is not achieved, the owner or operator shall provide the Department with a report identifying the problems

in achieving 95% availability and a plan of corrective actions that will be taken to achieve 95% availability. The owner or operator shall implement the reported corrective actions within the next calendar quarter."

9. On page BD-1 of the draft BACT Determination, in the paragraph entitled "Background," the reference to Piney Point should be deleted, and the term "Port St. Lucie" inserted.

10. On page BD-1 of the draft BACT Determination, in the paragraph entitled "BACT Application," the date on which the application was received was December 29, 2000, rather than December 29, 2001, as stated in the draft.

11. On page BD-3 of the draft BACT Determination, the value for capacity in megawatts for the FPC Hines II power generating facility in the table is missing and should be included.

12. On page BD-4 of the draft BACT Determination, on the third line after the table, the word "feet" should be inserted after "100 cubic."

13. On page BD-8 of the draft BACT Determination, in the last paragraph on that page, last sentence, in the parenthetical, substitute the word "production" for "combustion."

14. On page BD-16 of the draft BACT Determination, in the section entitled "BACT Excess Emissions Approval", the reference to "simple cycle" in hot start should be deleted, since this is a combined cycle facility. The sentence should read "One hour following a shutdown less than or equal to 8 hours.

15. On page BD-16 of the draft BACT Determination, in the section entitled "BACT Excess Emissions Approval," in the second sentence of that section, the word "included" should be corrected to "include."

16. On page 1 of 4 of Appendix GG, 40 CFR 60 NSPS Requirements for Gas Turbines, in the paragraph numbered 11(a), the second line refers to the owner or operator being subject to the provisions of this subpart as provided "as specified in paragraph (b) section" and then there is

no section number referenced, so that CPV Atlantic cannot determine the applicable regulation section to which it is subject. This provision should be modified to specify the applicable regulation section so that CPV can determine the regulations with which it must comply.

17. On page TE-3 of the Technical Evaluation, in the second paragraph, the last sentence states: "Because present emissions are greater than 100 TPY for CO and NO<sub>x</sub>, the facility also is a Major Facility with respect to Section 62-212.400, Prevention of Significant Deterioration." Because this is not an existing facility, there are no present emissions. Furthermore, in addition to CO and NO<sub>x</sub>, the emissions for PM/PM<sub>10</sub> emissions also will exceed 100 TPY. Accordingly, this sentence should be revised to read as follows: "Because **proposed** emissions are greater than 100 TPY for **PM/PM<sub>10</sub>**, CO and NO<sub>x</sub>, the facility also is a Major Facility with respect to Section 62-212.400, Prevention of Significant Deterioration."

18. On page TE-3 of the Technical Evaluation, in the "Project Description" section, first paragraph following the table, the word "combined" should be inserted before "cycle."

19. On page TE-5 of the Technical Evaluation, the third paragraph refers to "peaking" and the last sentence in that paragraph states that peaking is simply running the unit at greater than design fuel output. Since the CPV Atlantic facility will not be a peaking facility, these references are not relevant to the CPV Atlantic air permit application, and, accordingly, CPV Atlantic suggests they be deleted.

20. On page TE-7 of the Technical Evaluation, in the table entitled "Facility Emissions (Total TPY) and PSD Applicability," the superscript for the "Oil Firing" column header should be 2 rather than 3, and the superscript for the "Total" column should be 3 rather than 2.

21. On page TE-7 of the Technical Evaluation, in the table entitled "Facility Emissions (Total TPY) and PSD Applicability," in the "PSD Significance" column, the value for PM/PM<sub>10</sub> should be corrected to "25/15," rather than only "25," as currently stated in the table.

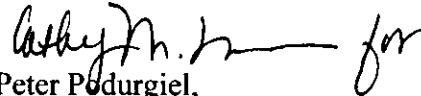
22. At the bottom of each page of Appendix GC, the reference to CPV Gulfcoast and the DEP File No. needs to be corrected to reference CPV Atlantic, Ltd. and the DEP Permit File No. 1110101-001-AC (PSD 312), St. Lucie County.



Mr. Alvaro Linero  
April 2, 2001  
Page 5

We appreciate your consideration of these comments and inclusion of the requested revisions in the draft permit.

Sincerely,

A handwritten signature in black ink, appearing to read "Peter Podurgiel", followed by a horizontal line and the word "for" in cursive.

Peter Podurgiel,  
Director, Project Development  
CPV Atlantic, Ltd.

cc: Michael Anderson, TRC Solutions  
Cathy M. Sellers, Esq.

## Linero, Alvaro

---

**From:** Cathy M. Sellers [csellers@moylelaw.com]  
**Sent:** Monday, April 02, 2001 11:31 AM  
**To:** Linero, Alvaro  
**Cc:** Mike Anderson; Peter Podurgiel  
**Subject:** Issues for Today's Conference Call at 2 pm on CPV Atlantic Draft PSD Permit

Al -- per our discussion on Friday afternoon, following are the issues we would like to discuss on today's conference call at 2 pm on the CPV Atlantic draft PSD Permit.

We look forward to talking to you. Again, the call in number is 1-800-427-0014 and the participant code is 716621.

Thank you!

1. On page 9 of 19 of the draft Permit, Condition No. 6, regarding Hours of Operation, states "[d]istillate oil firing shall not exceed 720 hours during any consecutive 12 months." CPV Atlantic would like to have this revised, if possible, to state: "distillate oil firing shall not exceed 720 hours per year," which is consistent with the PSD permit issued for CPV Gulfcoast.

2. On page 13 of 19 of the draft Permit, Condition No. 22 requires annual compliance tests for CO, NOx, ammonia slip, and visible emissions for gas and oil firing. In light of the requirement to initially test for these emissions in Condition No. 20, dealing with Initial Compliance Tests, CPV Atlantic questions the need for expensive, redundant annual testing, and would request the Department to consider deleting this requirement.

3. On pages 17 and 18 of the draft Permit, Condition No. 31.g., concerning data availability, requires a 95% NOx and CO monitoring data availability per quarter. CPV Atlantic believes this standard is too stringent, and wishes to explore other data availability scenarios with the Department.

4. On page GC-2 of Appendix GC, General Condition No. G.13. refers to "(X)" after Determination of Best Available Control Technology, Determination of Prevention of Significant Deterioration, and Compliance with New Source Performance Standards. CPV Atlantic seeks clarification on these references.

\*\*\*\*\*

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 4  
ATLANTA FEDERAL CENTER  
61 FORSYTH STREET  
ATLANTA, GEORGIA 30303-8960

REC

MAR 21 2001

MAR 26 2001

4 APT-ARB

BUREAU OF AIR REGULATION

A. A. Linero, P.E.  
FL Department of Environmental Protection  
Mail Station 5500  
2600 Blair Stone Road  
Tallahassee, Florida 32399-2400

SUBJ: Preliminary Determination and Draft PSD Permit for CPV-Atlantic, Ltd.  
(PSD-FL-312) located in St. Lucie County, Florida

Dear Mr. Linero:

Thank you for sending the preliminary determination and draft prevention of significant deterioration (PSD) permit for CPV-Atlantic dated February 19, 2001. The preliminary determination is for the proposed construction and operation of one combined cycle combustion turbine (CT) with an unfired heat recovery steam generator and a total nominal generating capacity of 250 MW to be located near Port St. Lucie, FL. The combustion turbine proposed for the facility is a General Electric (GE), frame 7FA unit. The CT will primarily combust pipeline quality natural gas with No. 2 fuel oil combusted as backup fuel. As proposed, the CT will be allowed to fire natural gas up to 8,760 hours per year and fire No. 2 fuel oil a maximum of 720 hours per year. The CT will be allowed to operate in power augmentation mode for a maximum of 2,000 hours per year. Total emissions from the proposed project are above the thresholds requiring PSD review for nitrogen oxides (NO<sub>x</sub>), carbon monoxide (CO), sulfur dioxide (SO<sub>2</sub>), and particulate matter (PM/PM<sub>10</sub>).

Based on our review of the preliminary determination and draft PSD permit, we have the following comments:

1. Condition 31, part d of the draft PSD permit indicates that certain data may be excluded because of startup and shutdown from the block average calculated to demonstrate compliance with the emission standards. Since periods of startup and shutdown are part of normal source operation, we recommend that the Florida Department of Environmental Protection (FDEP) also consider best available control technology (BACT) emission limits taking into account startup and shutdown emissions. Options for such limits include (but are not limited to) maximum NO<sub>x</sub> and CO mass emissions in a 24-hour period and future establishment of startup and shutdown emission limits for NO<sub>x</sub> and CO derived from monitoring results during the first few months of commercial operation. We further recommend that FDEP include definitions of what constitutes episodes of startup and shutdown as referenced in Condition 31.

- f. The SCONOx<sup>TM</sup> vendor quote provided by Alstom Power indicates a direct capital cost of \$14,000,000 for a SCONOx<sup>TM</sup> system. Table E-2 uses a direct capital cost of \$16,000,000 for a SCONOx<sup>TM</sup> system. The vendor quote should be used to determine the cost effectiveness value unless the need for a higher capital cost can be documented.

Thank you for the opportunity to comment on the CPV-Atlantic preliminary determination and draft PSD permit. If you have any questions regarding these comments, please direct them to either Katy Forney at 404-562-9130 or Jim Little at 404-562-9118.

Sincerely,



R. Douglas Neeley  
Chief  
Air and Radiation Technology Branch  
Air, Pesticides and Toxics  
Management Division

cc: J. Dixon  
C. Halladay  
J. Goldman, SED  
C. Sellers, Mary Olanow  
NPS  
B. Yambert, CPV Atlantic

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THOMAS A. SHEEHAN, III  
ROBERT J. SNIFFEN  
MARTA M. SUAREZ-MURIAS  
WILTON L. WHITE  
BRIAN L. WOLINETZ**

**OF COUNSEL:  
THOMAS A. HICKEY  
WILLIAM J. PAYNE**

**BY HAND DELIVERY**

March 9, 2001

**RECEIVED**

MAR 09 2001

Mr. Alvaro Linero, P.E.  
Administrator,  
New Source Review Section  
Bureau of Air Regulation  
Department of Environmental Protection

BUREAU OF AIR REGULATION

Re: Proof of Publication of Public Notice of Intent to Issue Air Construction Permit  
for CPV Atlantic Power Generating Facility, DEP File No. 1110101-001-AC,  
PSD-FL-312

Dear Mr. Linero:

Please find attached the Affidavit of Publication for the Public Notice of Intent to Issue Air Construction Permit for the CPV Atlantic Power Generating Facility, DEP File No. 1110101-001-AC, PSD-FL-312, which was published in the The Tribune, St. Lucie County, Florida, on March 3, 2001.

Please call me if you have any questions. Thank you.

Sincerely,

  
Cathy M. Sellers

cc: Peter Podurgiel, CPV Atlantic

*J. Hren*  
*C. Mulligan*  
*J. Goldman, SED*  
*D. Cinetti, DEP St. Lucie County*  
EPA  
NPS



THE TRIBUNE  
ST. LUCIE COUNTY, FLORIDA  
P.O. Box 69, Fort Pierce, FL 34954-0069

## AFFIDAVIT OF PUBLICATION

STATE OF FLORIDA  
COUNTY OF ST. LUCIE

Before the undersigned authority personally appeared, Lynn Ferraro, General Manager, Kathy LeClair, Business Manager or Dorothy Oaks, Advertising Manager of The Tribune, a daily newspaper published at

Fort Pierce in St. Lucie County, Florida, that the attached copy of advertisement was published in The Tribune in the following issues below. Affiant further says that the said Tribune is a newspaper published at Fort Pierce in said St. Lucie County, Florida and that the said newspaper has heretofore been continuously published in said St. Lucie County, Florida daily and distributed in St. Lucie County, Florida, for a period of one year next preceding the first publication of attached copy of advertisement; and affiant further says that he/she has neither paid nor promised any person, firm or corporation any discount, rebate, commission or refund for the purpose of securing this advertisement for publication in the said newspaper. The Tribune has been entered as second class matter at the Post Office in Fort Pierce, St. Lucie County, Florida and has been for a period of one year next preceding the first publication of the attached copy of advertisement

Ad #	Name	Date	Price Per Day	PO #
2097758	RICHARD V. NEILL, JR.	03/03/2001		
	RICHARD V. NEILL, JR.	03/03/2001	\$473 48	
			Total \$473 48	

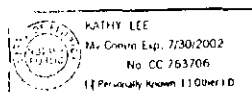
PUBLIC NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMIT  
STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
DEP File No. 1110101-001-AC, PSD-FL-312  
CPV Atlantic Power Generating Facility  
Combined Cycle Power Project  
St. Lucie County

Subscribed and sworn to me before this day

03/05/2001

*Kathy LeClair*

*Kathy LeClair*  
Notary Public



The Department of Environmental Protection (Department) gives notice of its intent to issue an air construction permit to CPV Atlantic Ltd. The permit is to construct a combined cycle electrical power generating plant near Port St. Lucie in St. Lucie County. A Best Available Control Technology (BACT) determination was required pursuant to Rule 62-212.400, F.A.C., Prevention of Significant Deterioration of Air Quality (PSD), for emissions of particulate matter (PM/PM10), carbon monoxide (CO), sulfur dioxide (SO2), sulfuric acid mist, and nitrogen oxides (NOx). A maximum achievable control technology (MACT) determination for hazardous air pollutants was not required. The applicant's name and address are CPV Atlantic Ltd., 35 Braintree Hill Office Park, Suite 107, Braintree, Massachusetts 02184.

The project consists of: a nominal 170 megawatt General Electric 7FA combustion turbine-electrical generator, an unfired recovery steam generator, a separate steam-electrical generator, a 200-foot stack, a mechanical draft cooling tower, a 1.0 million gallon fuel oil storage tank, and other ancillary equipment. Back-up distillate fuel oil will be burned for a maximum of 720 hours per year.

NOx emissions will be controlled by selective catalytic reduction (SCR) to achieve 3.5 parts per million by volume, dry, at 15 percent oxygen (ppmv) while burning gas and 10 ppmv while burning low sulfur distillate fuel oil. Emissions of CO will be controlled to 9 and 20 ppmv while burning gas and fuel oil respectively. Emissions of PM/PM10, SO2, sulfuric acid mist, volatile organic compounds, and hazardous air pollutants (HAP) will be controlled to very low levels by good combustion and use of inherently clean pipeline quality natural gas and low sulfur (0.05 percent) distillate fuel oil. Ammonia emissions (NH3) generated due to NOx control will be limited to 5 ppmv.

The following table summarizes the maximum emissions (in tons per year) of regulated air pollutants as a result of this project.

Pollutants	Maximum Potential Emissions	PSD Significant Emission Rate
PM/PM10	102	25/15
Sulfuric acid mist	12	7
SO2	76	40
NOx	126	100
VOC	15	40
CO	222	100
NH3 (non-regulated)	52	NA
HAP	8	NA

An air quality impact analysis was conducted. Maximum impacts due to proposed emissions from the project are less than the applicable PSD Class II significant impact levels for all applicable pollutants. Therefore no increment consumption analysis was required. Emissions from the facility will not cause or contribute to a violation of any state or federal ambient air quality standards. The project has no significant impact on the PSD Class I Everglades National Park.

The Department will issue the FINAL permit with the attached conditions unless a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions.

The Department will accept written comments and requests for a public meeting concerning the proposed permit issuance action for a period of thirty (30) days from the date of publication of "Public Notice of Intent to Issue Air Construction Permit." Written comments should be provided to the Department's Bureau of Air Regulation at 2600 Blair Stone Road, Mail Station #5505, Tallahassee, FL 32399-2400. Any written comments filed shall be made available for public inspection. If written comments received result in a significant change in the proposed agency action, the Department shall revise the proposed permit and require, if applicable, another Public Notice.

The Department will issue the permit with the attached conditions unless a timely petition for an administrative hearing is filed pursuant to Section 120.569 and 120.57 F.S., before the deadline for filing a petition. The procedures for petitioning for a hearing are set forth below. Mediation is not available in this proceeding.

A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative proceeding (hearing) under sections 120.569 and 120.57 of the Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida, 32399-3000. Petitions filed by the permit applicant or any of the parties listed below must be filed within fourteen days of receipt of this notice of intent. Petitions filed by any persons other than those entitled to written notice under section 120.60(3) of the Florida Statutes must be filed within fourteen days of publication of the public notice or within fourteen days of receipt of this notice of intent, whichever occurs first. Under section 120.60(3), however, any person who asked the Department for notice of agency action may file a petition within fourteen days of receipt of that notice, regardless of the date of publication. A petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under sections 120.569 and 120.57 F.S. or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205 of the Florida Administrative Code.

A petition that disputes the material facts on which the Department's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address, and telephone number of the petitioner, the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination; (c) A statement of how and when petitioner received notice of the agency action or proposed action; (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate; (e) A concise statement of the ultimate facts alleged, as well as the rules and statutes which entitle the petitioner to relief; (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action; and (g) A statement of the relief sought by the petitioner, stating precisely the action petitioner wishes the agency to take with respect to the agency's proposed action.

A petition that does not dispute the material facts upon which the Department's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth

Ad #	Name	Date	Price Per Day	PQ #
2097758	RICHARD V. NEILL, JR.	03/03/2001	\$473.48	
	RICHARD V. NEILL, JR.	03/03/2001		
			Total \$473.48	

**PUBLIC NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMIT**  
**STATE OF FLORIDA**  
**DEPARTMENT OF ENVIRONMENTAL PROTECTION**  
 DEP File No. 1110101-001-AC, PSD-FL-312  
 CPV Atlantic Power Generating Facility  
 Combined Cycle Power Project  
 St. Lucie County

The Department of Environmental Protection (Department) gives notice of its intent to issue an air construction permit to CPV Atlantic Ltd. The permit is to construct a combined cycle electrical power generating plant near Port St. Lucie in St. Lucie County. A Best Available Control Technology (BACT) determination was required pursuant to Rule 62-212.400, F.A.C., Prevention of Significant Deterioration of Air Quality (PSD), for emissions of particulate matter (PM/PM10), carbon monoxide (CO), sulfur dioxide (SO2), sulfuric acid mist, and nitrogen oxides (NOx). A maximum achievable control technology (MACT) determination for hazardous air pollutants was not required. The applicant's name and address are CPV Atlantic Ltd., 35 Braintree Hill Office Park, Suite 107, Braintree, Massachusetts 02184.

The project consists of a nominal 170 megawatt General Electric 7FA combustion turbine-electrical generator, an unfired recovery steam generator, a separate steam-electrical generator, a 200-foot stack, a mechanical draft cooling tower, a 10 million gallon fuel oil storage tank, and other ancillary equipment. Back-up distillate fuel oil will be burned for a maximum of 720 hours per year.

NOx emissions will be controlled by selective catalytic reduction (SCR) to achieve 3.5 parts per million by volume, dry, at 15 percent oxygen (ppmv) while burning gas and 10 ppmv while burning low sulfur distillate fuel oil. Emissions of CO will be controlled to 9 and 20 ppmv while burning gas and fuel oil respectively. Emissions of PM/PM10, SO2, sulfuric acid mist, volatile organic compounds, and hazardous air pollutants (HAP) will be controlled to very low levels by good combustion and use of inherently clean pipeline quality natural gas and low sulfur (0.05 percent) distillate fuel oil. Ammonia emissions (NH3) generated due to NOx control will be limited to 5 ppmv.

The following table summarizes the maximum emissions (in tons per year) of regulated air pollutants as a result of this project.

Pollutants	Maximum Potential Emissions	PSD Significant Emission Rate
PM/PM10	102	25/15
Sulfuric acid mist	12	7
SO2	76	40
NOx	126	100
VOC	15	40
CO	222	100
NH3 (non-regulated)	52	NA
HAP	8	NA

An air quality impact analysis was conducted. Maximum impacts due to proposed emissions from the project are less than the applicable PSD Class II significant impact levels for all applicable pollutants. Therefore no increment consumption analysis was required. Emissions from the facility will not cause or contribute to a violation of any state or federal ambient air quality standards. The project has no significant impact on the PSD Class I Everglades National Park.

The Department will issue the FINAL permit with the attached conditions unless a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions.

The Department will accept written comments and requests for a public meeting concerning the proposed permit issuance action for a period of thirty (30) days from the date of publication of "Public Notice of Intent to Issue Air Construction Permit." Written comments should be provided to the Department's Bureau of Air Regulation at 2600 Blair Stone Road, Mail Station #5505, Tallahassee, FL 32399-2400. Any written comments filed shall be made available for public inspection. If written comments received result in a significant change in the proposed agency action, the Department shall revise the proposed permit and require, if applicable, another Public Notice.

The Department will issue the permit with the attached conditions unless a timely petition for an administrative hearing is filed pursuant to Section 120.569 and 120.57 F.S., before the deadline for filing a petition. The procedures for petitioning for a hearing are set forth below. Mediation is not available in this proceeding.

A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative proceeding (hearing) under sections 120.569 and 120.57 of the Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida, 32399-3000. Petitions filed by the permit applicant or any of the parties listed below must be filed within fourteen days of receipt of this notice of intent. Petitions filed by any persons other than those entitled to written notice under section 120.60(3) of the Florida Statutes must be filed within fourteen days of publication of the public notice or within fourteen days of receipt of this notice of intent, whichever occurs first. Under section 120.60(3), however, any person who asked the Department for notice of agency action may file a petition within fourteen days of receipt of that notice, regardless of the date of publication. A petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under sections 120.569 and 120.57 F.S. or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205 of the Florida Administrative Code.

A petition that disputes the material facts on which the Department's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address, and telephone number of the petitioner, the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination; (c) A statement of how and when petitioner received notice of the agency action or proposed action; (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate; (e) A concise statement of the ultimate facts alleged, as well as the rules and statutes which entitle the petitioner to relief; (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action; and (g) A statement of the relief sought by the petitioner, stating precisely the action petitioner wishes the agency to take with respect to the agency's proposed action.

A petition that does not dispute the material facts upon which the Department's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by rule 28-106.301.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department's final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by any such final decision of the Department on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

A complete project file is available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m. Monday through Friday, except legal holidays at:

Dept. of Environmental Protection Bureau of Air Regulation 111 S. Magnolia Drive, Suite 4 Tallahassee, Florida 32301 Telephone: 850/488-0114 Fax: 850/922-6979	Dept. of Environmental Protection Southeast District Office 400 North Congress Avenue West Palm Beach, Florida 33416-5425 Telephone: 561/681-6600 Fax: 561/681-6755	Dept. of Environmental Protection Port St. Lucie Branch Office 1801 S.E. Hillmoor Dr., C 204 Port St. Lucie, Florida 34952 Telephone: 561/398-2806 Fax: 561/398-2815
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The complete project file includes the application, technical evaluations, Draft permit, and the information submitted by the responsible official, exclusive of confidential records under Section 403.111, F.S. Interested persons may contact the Administrator, New Resource Review Section at 111 South Magnolia Drive, Suite 4, Tallahassee, Florida 32301 or call 850/488-0114, for additional information. The Department's technical evaluations and Draft Permit can be viewed at [www.dep.state.fl.us/air/permitting.htm](http://www.dep.state.fl.us/air/permitting.htm) by clicking on Utility and Other Facility Permits.

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