1	BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION
2	FLORIDA POWER & LIGHT COMPANY
3	REBUTTAL TESTIMONY OF KEITH FERGUSON
4	DOCKET NOS. 160021-EI; 160062-EI
5	AUGUST 1, 2016
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1	TABLE OF CONTENTS
2	I. INTRODUCTION
3	II. DISMANTLEMENT ACCRUAL 5
4	III. DEPRECIATION STUDY ACCRUAL 12
5	IV. CAPITAL RECOVERY SCHEDULE AMORTIZATION PERIOD 13
6	V. EOL M&S AND LAST CORE NUCLEAR FUEL 15
7	
8	
9	
10	
11	
12	
13	
14	
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16	
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1		I. INTRODUCTION
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3	Q.	Please state your name and business address.
4	A.	My name is Keith Ferguson, and my business address is Florida Power &
5		Light Company, 700 Universe Boulevard, Juno Beach, Florida 33408.
6	Q.	Did you previously submit testimony in the proceeding?
7	A.	Yes.
8	Q.	Are you sponsoring or co-sponsoring any exhibits as part of your rebuttal
9		testimony?
10	A.	Yes. I am sponsoring the following exhibits:
11		• KF-2 (Updated) - Proposed Depreciation Company Adjustments by
12		Year for Base vs. Clause for 2017 and 2018
13		• KF-7 – Dismantlement Reserve - Company Adj Impact – Rate Base
14		Only
15		• KF-8 – Order Approving Capital Recovery of Port Everglades ESPs
16		I am co-sponsoring the following exhibit:
17		• KF-4 (Corrected) – FPL 2016 Dismantlement Study filed on May 3,
18		2016 with FPL's First Notice of Identified Adjustments
19	Q.	What is the purpose of your rebuttal testimony?
20	A.	The purpose of my rebuttal testimony is to demonstrate that certain
21		recommendations in the testimony of the South Florida Hospitals and Health
22		Care Association ("SFHHA") witness Kollen are incorrect and should be
23		rejected. Specifically I will address the following topics:

1		<ul> <li>Dismantlement accrual</li> </ul>
2		<ul> <li>Depreciation study accrual</li> </ul>
3		<ul> <li>Amortization period recommended for the capital recovery schedule</li> </ul>
4		<ul> <li>End of life materials and supplies and last core nuclear fuel accruals</li> </ul>
5	Q.	Please summarize your rebuttal testimony.
6	A.	My rebuttal testimony will demonstrate that the Company's request on the
7		topics identified above is reasonable and that the intervenor recommendations
8		are flawed and should be rejected by the Commission. Specifically, I will
9		demonstrate that:
10		• Witness Kollen's recommendation to apply either zero or at best, 10%
11		contingency is unsupported and unreasonable.
12		• Witness Kollen mischaracterized the dismantlement accrual
13		calculation.
14		• Witness Kollen's proposed life spans suggested for Scherer Unit 4 and
15		St. Johns River Power Park ("SJRPP") are not reasonable.
16		• Contrary to statements of witness Kollen, the Second Notice of
17		Identified Adjustments filed by the Company applied the proposed
18		depreciation rates to plant and reserve balances as of December 31,
19		2016.
20		• Commission precedent supports FPL's recommended four-year
21		amortization period for its capital recovery schedule and there is no
22		basis for the 10-year recovery period recommended by witness Kollen.

Witness Kollen's proposal to eliminate the end of life ("EOL")
materials and supplies ("M&S") and last core nuclear fuel accruals and
flow back of these reserves to customers over a four-year period is not
consistent with Commission precedent.

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#### II. DISMANTLEMENT ACCRUAL

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#### **Application of a Contingency Factor**

Q. Do you agree with page 32, line 16 of witness Kollen's testimony that the contingency reflected in the Company's estimated dismantlement costs are excessive?

No, I do not agree. FPL has always included contingency as a part of the estimation for future dismantlement and the Commission has previously approved the use of FPL's proposed contingency percentage. Historical dismantlement activities by FPL have resulted in costs that exceed the estimate even including the contingency. The estimates that Burns & McDonnell ("BMcD") developed reflect the Company's best estimates to dismantle each of FPL's fossil and solar generating facilities and were prepared in accordance with Rule 25-6.04364, Electric Utilities Dismantlement Studies, Florida Administrative Code ("F.A.C."). BMcD's experience led to the recommendation to increase the FPL contingency factor from 16% to 20%. FPL witness Kopp of BMcD explains the basis for the 20% contingency factor in greater detail.

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2	Q.	Does FPL's recent experience relative to dismantling generating facilities
3		demonstrate the need for a contingency adjustment factor?
4	A.	Yes. Since the 2009 Dismantlement Study was prepared, FPL has dismantled
5		generating facilities at multiple sites. At several of these sites, FPL
6		encountered conditions that were unknown at the time the estimates were
7		prepared which resulted in additional costs being incurred that contributed to
8		the total dismantlement costs being above the costs estimates in the 2009
9		Dismantlement Study, including the 16% contingency factor. For example,
10		during dismantlement of the Cutler plant, FPL identified additional soil
11		contamination, which will result in remediation costs in excess of the amount
12		estimated in the 2009 Dismantlement Study.
13	Q.	Are you aware of this Commission ordering any investor-owned utility to
14		apply a zero percent contingency factor to its dismantlement cost
15		estimates as recommended by witness Kollen?
16	A.	No. That would be completely unreasonable and inconsistent with the
17		Commission's dismantlement study rule.
18	Q.	Are you aware of this Commission approving a 20% contingency factor
19		consistent with FPL's 2016 Dismantlement Study?
20	A.	Yes. In Order No. PSC-10-0131-FOF-EI, Docket No. 090079-EI, the
21		Commission approved a 20% contingency factor for Duke Energy Florida's

most recently filed dismantlement study, which was also prepared by BMcD.

In that Order the Commission stated, "[f]irst, dismantlement studies typically

include a contingency factor. A contingency factor is designed to account for unknown expenses at the time the estimate is prepared, but expected to be expended on the project."

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#### **Calculation of Dismantlement Accrual**

Q. Witness Kollen contends on page 36, lines 1 through 6, that FPL's methodology for calculating the dismantlement accrual is inappropriate.

Do you agree?

No. FPL's calculation methodology for the dismantlement accrual is fully compliant with Subsection (4) of Rule 25-6.04364 which states that "[t]he dismantlement annual accrual shall be calculated using the current cost estimates escalated to the expected dates of actual dismantlement. The future costs less amounts recovered to date shall then be discounted in a manner that accrues the costs over the remaining life span of the unit." In addition, Subsection (7) of the same rule states that "[t]he annual dismantlement accrual shall be a fixed dollar amount and shall be based on a 4-year average of the accruals related to the years between the dismantlement study reviews." FPL's approach in its 2016 Dismantlement Study is consistent with these two subsections of Rule 25-6.04364 as well as the approach applied in FPL's last dismantlement study approved by this Commission in in Order No. PSC-10-0153-FOF-EI, Docket Nos. 080677-EI and 090130-EI.

1	Q.	Do you agree with witness Kollen on page 36, lines 1 through 2, that FPL
2		failed to reflect the increase in the accumulated dismantlement reserve
3		over the four-year period?
4	A.	No. FPL appropriately captured the effect of the change related to the
5		dismantlement reserve in FPL's Company adjustment as reflected on MFR B-
6		2. This can be seen on page 3 of 8, line 12 for both the 2017 Test Year and
7		2018 Subsequent Year, which reflects the 13-month average change in rate
8		base associated with this adjustment. Additionally, when FPL filed its First
9		Notice of Identified Adjustments on May 3, 2016, it provided a corrected
10		2016 Dismantlement Study and its associated Company adjustments,
11		including the impact on the dismantlement reserve; refer to my Exhibit KF-7.
12	Q.	Is there anything else about witness Kollen's testimony on FPL's 2016
13		Dismantlement Study which you would like to address?
14	A.	Yes. The exhibits provided by witness Kollen make it clear that he performed
15		his dismantlement analysis on the Company's originally filed dismantlement
16		study and not the corrected 2016 Dismantlement Study submitted in
17		conjunction with the Company's First Notice of Identified Adjustments filed
18		on May 3, 2016. Additionally, please refer to Exhibit KF-4 (Corrected),
19		which reflects the corrected 2016 Dismantlement Study.
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#### Life Spans for Scherer Unit 4 and SJRPP

- Q. Witness Kollen argues FPL should use a 63 year estimated life span for Scherer Unit 4 (page 31, lines 17 through 18) and a 65 year estimated life span for SJRPP (page 32, lines 6 through 8). Do you agree with such a significant change in plant life for these two plants as it relates to both the 2016 Depreciation and Dismantlement studies?
- A. No. Not only do I disagree with his conclusion, I am concerned with the flawed logic and misrepresentation of facts related to Scherer, the lack of evidence presented by SFHHA related to SJRPP and the disregard for FPL witness Allis's life span recommendations for those two plants.

#### 11 Q. Could you please elaborate?

First, in his argument for longer lives, witness Kollen disregards the fact that the current authorized life span for these units is 50 years, as approved by the Commission in Order No. PSC-10-0153-FOF-EI, and he offers absolutely no critiques to the merits of FPL witness Allis's findings that a 50-year life continues to be accurate for Scherer and SJRPP. Witness Kollen also misconstrues FPL's response to SFHHA's Seventh Set of Interrogatories No. 162. He implies that the 65-year life referenced in that response relates to the probable retirement date assumed by Georgia Power Company ("GPC") for *Scherer 4* (page 31, Lines 2 through 4) when in fact SFHHA's Seventh Set of Interrogatories No. 162 is clearly addressing "Scherer and SJRPP *common facilities*." [Emphasis added]

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1		Next, witness Kollen tries to justify longer lives by asserting that "[i]t is
2		highly unlikely that Scherer 4 will be dismantled before the other three
3		units at the site" (page 31, lines 21 through 22 and page 32 line 1). This
4		statement lacks any validating evidence and is in direct contradiction to FPL's
5		recent dismantlement experience with Sanford Unit 3 and Turkey Point Units
6		1 and 2, all of which had dismantlement activities commence prior to the
7		retirement of all of the units at each site. Retired units pose a safety hazard if
8		they are left in place and not maintained; therefore, they are typically
9		dismantled upon retirement.
10	Q.	Witness Kollen states FPL is a "minority owner" in Scherer to support
11		his assertion that GPC's asset life should be used in the Depreciation and
12		Dismantlement studies. Is this an accurate characterization?
12 13	A.	Dismantlement studies. Is this an accurate characterization?  No. Although FPL is a minority owner from the perspective of the entire
	A.	
13	A.	No. Although FPL is a minority owner from the perspective of the entire
13 14	A.	No. Although FPL is a minority owner from the perspective of the entire Scherer plant, it overlooks the fact that FPL is the majority owner (76.36%)
<ul><li>13</li><li>14</li><li>15</li></ul>	A.	No. Although FPL is a minority owner from the perspective of the entire Scherer plant, it overlooks the fact that FPL is the majority owner (76.36% ownership) of Unit 4, as to which GPC is simply the plant <i>operator</i> and has no
<ul><li>13</li><li>14</li><li>15</li><li>16</li></ul>	A.	No. Although FPL is a minority owner from the perspective of the entire Scherer plant, it overlooks the fact that FPL is the majority owner (76.36% ownership) of Unit 4, as to which GPC is simply the plant <i>operator</i> and has no ownership interest. Witness Kollen further clouds the facts by not disclosing
13 14 15 16 17	A.	No. Although FPL is a minority owner from the perspective of the entire Scherer plant, it overlooks the fact that FPL is the majority owner (76.36% ownership) of Unit 4, as to which GPC is simply the plant <i>operator</i> and has no ownership interest. Witness Kollen further clouds the facts by not disclosing the various other ownership interest in Plant Scherer, and using the all-
13 14 15 16 17	A.	No. Although FPL is a minority owner from the perspective of the entire Scherer plant, it overlooks the fact that FPL is the majority owner (76.36% ownership) of Unit 4, as to which GPC is simply the plant <i>operator</i> and has no ownership interest. Witness Kollen further clouds the facts by not disclosing the various other ownership interest in Plant Scherer, and using the all-
13 14 15 16 17 18	A.	No. Although FPL is a minority owner from the perspective of the entire Scherer plant, it overlooks the fact that FPL is the majority owner (76.36% ownership) of Unit 4, as to which GPC is simply the plant <i>operator</i> and has no ownership interest. Witness Kollen further clouds the facts by not disclosing the various other ownership interest in Plant Scherer, and using the all-

1	Q.	Witness Kollen implies (page 31, lines 6 through 9 and page 32, lines 2
2		through 5) that because FPL and GPC have "spent significant sums to
3		achieve compliance with continually evolving environmental
4		requirements," both companies would be inclined to run the plant longer.
5		Is that necessarily the case?
6	A.	No. On the contrary, costs that have already been incurred to comply with
7		environmental regulations are sunk costs that should not influence future
8		decisions on the when it is economically justified to retire a unit. Moreover,
9		environmental compliance costs often do not increase plant life or efficiency.
10		In fact, as compliance requirements "continually evolve," the economics of
11		the plant begin to favor earlier retirement because advanced generation
12		technology tends to become a more attractive compliance alternative. In
13		addition, the U.S. Environmental Protection Agency ("EPA") has issued or
14		implemented numerous regulations targeting coal-fired generating facilities
15		and the general trend over time has been for even more stringent
16		environmental regulations. Those regulations have resulted in a significant
17		number of plant retirements across the industry in the last several years.
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19		Exhibit KF-8 contains an excerpt from Order No. PSC-12-0613-FOF-EI,
20		Docket No. 120007-EI, in which the Commission granted FPL the ability to
21		collect the remaining unamortized costs associated with its Electrostatic
22		Precipitators ("ESPs") installed during the period of April 2005 through May
23		2007 at Port Everglades within a four-year capital recovery period after FPL

1		retired the plant in the fourth quarter of 2012 to modernize the plant into a
2		high-efficiency combined cycle natural gas energy center. These investments
3		enabled Port Everglades to continue to operate through its useful life rather
4		than being forced into early retirement.
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6		III. DEPRECIATION STUDY ACCRUAL
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8	Q.	Witness Kollen objects to FPL's use of 2017 year-end plant balances in the
9		2016 Depreciation Study. Is the Company opposed to using year-end 2016
10		plant and reserve balances instead for the purpose of setting depreciation
11		rates and determining FPL's base rates in this proceeding?
12	A.	No. While FPL continues to believe that the use of year-end 2017 plant and
13		reserve balances provides a good match with FPL's 2017 Test Year and 2018
14		Subsequent Year, FPL has no objection in using the results for year-end 2016
15		plant and reserve balances to set depreciation rates and determining FPL's base
16		rates in this proceeding.
17	Q.	Do you agree with witness Kollen's recommendation on page 22, lines 20
18		through 21, of his testimony that FPL's 2016 Depreciation Study should be
19		rejected because it reflects year-end 2017 rather than year-end 2016
20		balances?
21	A.	No. The Company's Second Notice of Identified Adjustments filed with the
22		Commission on June 16, 2016, provided supplemental versions of Tables 1
23		through 8 that appear in Part VI of the 2016 Depreciation Study, which reflect

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all of the changes in parameters and depreciation rates resulting from the use of

the year-end 2016 plant and reserve balances. In addition, the Company contemporaneously provided all workpapers and supporting schedules for the supplemental tables as part of the supplemental response to OPC's Tenth Request for Production of Document No. 124. The parties have had more than ample time to evaluate the results of the 2016 Depreciation Study using the 2016 year-end balances; refer to Exhibit KF-2 (Updated) for the computation of the related Company adjustment.

#### IV. CAPITAL RECOVERY SCHEDULE AMORTIZATION PERIOD

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Q. Do you agree with witness Kollen's recommendation on pages 39 through 40 of his testimony to use a ten-year amortization period for capital recovery of assets retired or nearing retirement?

No. FPL has requested a four-year amortization period related to the capital recovery schedule, which is based on and consistent with past Company practice and Commission precedent. For the last ten years, FPL has consistently requested, received and applied four-year amortization periods that coincide with either the setting of FPL's new base rates and/or the effective date of depreciation studies. While it may technically be the case the Commission "has greater discretion to determine the appropriate amortization and recovery period" (Kollen page 39, lines 10 through 11), the Company's request for a four-year amortization period in this instant case is reasonable, appropriate, and consistent with prior practice for FPL.

1	Q.	What is the Commission's practice with respect to the recovery period on
2		capital recovery schedules for assets that have been retired?

In Docket Nos. 080677-EI and 090130-EI, the Commission stated that its practice with respect to capital recovery schedules for assets that have been retired has been to provide for recovery as "fast as practicable to remedy the existing intergenerational inequity." (See page 23, Order No. PSC-10-0153-FOF-EI). That being said, the Commission has balanced the need to provide recovery as fast as practicable with the potential impact on rates over the short term. For instance, in Order No. PSC-93-1808-FOF-EI, Gulf Power had assets that were being retired in the next year and the Commission stated, "[w]hile, theoretically, these assets should be recovered over their associated remaining period in service, we find that a four year recovery period is appropriate in this instance as an effort to smooth the related expense impact."

# Q. Has this Commission ever approved a ten-year amortization period for capital recovery schedules?

FPL is not aware of this Commission ever approving a ten-year amortization period for capital recovery schedules. Doing so would be inconsistent with the principle of intergenerational equity, especially as it relates to retired assets. In Order No. PSC-10-0153-FOF-EI, on page 23, the Commission stated "deferring recovery is simply mortgaging the future."

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- Q. What is witness Kollen proposing for the currently Commission approved
- 4 EOL M&S and last core nuclear fuel accruals?
- 5 A. On pages 15 through 19 of his testimony, witness Kollen is asking the
- 6 Commission to subsume the two accruals into FPL's nuclear
- decommissioning liability and, concurrently, return the entire balance of the
- 8 unfunded reserves for those costs to customers over a period of four years.

#### Q. Do you agree with this proposal?

- 10 A. No. It is inconsistent with Commission precedent. In Order No. PSC-02-
- 11 0055-PAA-EI, the Commission stated that, "[b]ecause nuclear M&S
- inventories represent unrecovered costs remaining at the end of the nuclear
- site's life, we agree with FPL that these costs should be amortized over the
- remaining life span of each site to ratably allocate the costs to those receiving
- the benefit of the generated power. However, these costs do not relate to the
- 16 removal or disposal of the nuclear plant. For this reason, the Commission
- finds that the amortization expense associated with the EOL M&S inventories
- be accounted for as a debit to nuclear maintenance expense with a credit to an
- unfunded Account 228 reserve." [Emphasis added]

- 21 Similarly, concerning the last core nuclear fuel the Commission stated that
- 22 "[w]e believe that the Last Core is similar to nuclear decommissioning in that
- both represent estimates of a future obligation that will not be incurred until

1	the nuclear unit ceases operation. However, the cost of the Last Core does not
2	meet the intent of nuclear decommissioning because it does not involve the
3	removal of the plant facility. As with EOL M&S inventories addressed in VI,
4	we believe that EOL nuclear fuel is unique to the nuclear unit and represents

- 5 costs remaining at the time of shut down." [Emphasis added]
- 6 Q. Has the Commission previously considered the funded status of the 7 nuclear decommissioning reserve in determining proper recovery for
- 8 EOL M&S and last core nuclear fuel?
- 9 A. No. As explained by this Commission in Order No. PSC-02-0055-PAA-EI,
  10 these two items are not considered part of the cost of nuclear
  11 decommissioning. These are distinct future obligations.
- Q. Has the Commission approved the accruals proposed in this proceedingfor EOL M&S and last core nuclear fuel?
- 14 A. Yes. The Commission approved FPL's proposed accruals for EOL M&S and last core nuclear fuel in Order No. PSC-16-0293-CO-EI, Docket No. 150265
  EI.
- 17 Q. Does this conclude your rebuttal testimony?
- 18 A. Yes.

Docket No. 160021-EI Proposed Depreciation Company Adjustment by Year for Base vs. Clause Updated Exhibit KF-2, Page 1 of 4

#### DEPRECIATION RECONCILIATION FROM FPL'S 2017 FORECAST TO PROPOSED DEPRECIATION EXPENSE (\$000)

Line No.	Function	2017 Forecast (1)	1	2017 Depreciation Expense Related to Clauses (2)	Subtotal (1) + (2) = (3)	Us	2017 Calculated Expense sing Proposed Rates (4)		Calc Exp sing l Rates to C	UPDAT 017 ulated ense Proposed Related lauses (5)	2017 Total Expense 4) + (5) = (6)	2017 Updated Company Adjustment (6) - (3) = (7)
1	STEAM	\$ 79,410	\$	(22,971)	\$ 56,439	\$	117,441	\$		(36,604)	\$ 80,838	\$ 24,399
3	NUCLEAR	159,482		(2,984)	156,498		311,380			(5,664)	305,716	149,218
5	OTHER PRODUCTION	453,064		(21,428)	431,636		498,196			(20,031)	478,165	46,529
6 7	TRANSMISSION	143,028		(235)	142,793		134,580			(238)	134,342	(8,451)
9	DISTRIBUTION	510,866		(3,559)	507,308		482,419			(575)	481,844	(25,463)
10 11	GENERAL	36,257		(717)	35,540		32,791	_		(254)	 32,537	(3,003)
12 13	TOTAL	\$ 1,382,107	\$	(51,894)	\$ 1,330,213	\$	1,576,807	\$		(63,365)	\$ 1,513,442	\$ 183,229
14 15 16 17		(A)					(B)					

Notes:

(A) Excludes amounts related to asset retirement obligations, acquisition adjustment, dismantlement and amortizable property which are included in the total amount forecasted for depreciation expense.

(B) Calculated amounts are based on FPL's proposed depreciation rates utilizing December 31, 2016 balances as included in FPL's Second Notice of Identified Adjustments file

(C) After-tax amount of \$126,550 is reflected as a Per Book company adjustment on MFR C-3 for the 2017 Test Year.

Docket No. 160021-EI Proposed Depreciation Company Adjustment by Year for Base vs. Clause Updated Exhibit KF-2, Page 2 of 4

### DEPRECIATION RECONCILIATION FROM FPL'S 2018 FORECAST TO PROPOSED DEPRECIATION EXPENSE (\$000)

Line No.	e Function	2018 Forecast (1)	2018 Depreciation Expense Related to Clauses (2)	Subtotal (1) + (2) = (3)	Cal Ex Using	2018 Iculated tpense Proposed Rates (4)	Using Rate	UPDAT 2018 Ilculated xpense g Proposed ss Related Clauses (5)	ı	2018 Total Expense + (5) = (6)	U <sub>l</sub> Co Adj	2018 pdated ompany ustment · (3) = (7)	2018 As Filed Company Adjustment <sup>(D)</sup> (8)	ence <sup>(E)</sup> 8) = (9)
1	STEAM	\$ 80,593	\$ (23,247)	\$ 57,345	\$	119,198	\$	(36,985)	\$	82,214	\$	24,868	\$ 28,060	\$ (3,191)
3	NUCLEAR	160,939	(3,403)	157,537		315,780		(6,471)		309,310		151,773	159,593	(7,820)
5	OTHER PRODUCTION	472,410	(21,430)	450,980		517,113		(20,033)		497,080		46,100	51,924	(5,824)
7 8	TRANSMISSION	154,627	(238)	154,389		144,100		(240)		143,859		(10,530)	(9,874)	(656)
9 10	DISTRIBUTION	559,878	(5,677)	554,201		530,312		(825)		529,487		(24,713)	(18,265)	(6,448)
11	GENERAL	38,938	(719)	38,219		35,277		(255)		35,022		(3,197)	(2,572)	(624)
12 13	TOTAL	\$ 1,467,385	\$ (54,714)	\$ 1,412,671	\$	1,661,780	\$	(64,807)	\$	1,596,972	\$	184,302	\$ 208,865	\$ (24,564)
14 15		(A)				(B)							(C)	
16 17 18 19 20 21 22 23 24 25	(A) Excludes amounts rel forecasted for depreci (B) Calculated amounts a (C) After-tax amount of \$ (D) Represents "as filed"	lated to asset retirer ation expense. are based on FPL's 128,296 is reflected amounts per origina	proposed depreciation as a Per Book Com al Exhibit KF-2, colum	on rates utilizing De pany adjustment or nn (7).	, dismant cember : n MFR C-	tlement and a 31, 2016 bala -3 for the 2018	nces as in 3 Subsequ	cluded in FPL's sent Year.	Second N	lotice of Identi	fied Adji			

Docket Nos. 160021-El & 160062-El Proposed Depreciation Company Adjustment by Year for Base vs. Clause Updated Exhibit KF-2, Page 3 of 4

CHANGE IN FORECASTED ACCUMULATED DEPRECIATION
RESULTING FROM FPL'S PROPOSED CHANGE IN BASE DEPRECIATION EXPENSE
(\$000)

2017 - As Filed	,	100	, c	200		i cu	i de	i da	, c	i i i	z i ci	, ic	i de la composition della comp	Month
Line No. Function	Balance 12/31/2016	Balance 1/31/2017	Balance 2/28/2017	Balance 3/31/2017	Balance 4/30/2017	Balance 5/31/2017	Balance 6/30/2017	Balance 7/31/2017	Balance 8/31/2017	Balance 9/30/2017	Balance 10/31/2017	Balance 11/30/2017	Balance 12/31/2017	Average 2017
1 STEAM		\$ (2,284)	\$ (4,568) \$	(6,854) \$	(9,143) \$	(11,435) \$	(13,731) \$	(16,032) \$	(18,335) \$	(20,642) \$	(22,951) \$	(25,262) \$	(27,574) \$	(13,755)
3 NUCLEAR	٠	(13,244)	(26,488)	(39,731)	(52,978)	(66,231)	(79,488)	(92,748)	(106,009)	(119,270)	(132,537)	(145,810)	(159,092)	(79,510)
5 OTHER PRODUCTION	٠	(4,275)	(8,531)	(12,803)	(17,092)	(21,414)	(25,773)	(30,131)	(34,477)	(38,811)	(43,136)	(47,451)	(51,786)	(25,822)
7 TRANSMISSION	٠	612	1,234	1,864	2,502	3,148	3,802	4,464	5,132	5,808	6,490	7,179	7,896	3,856
9 DISTRIBUTION	٠	1,951	3,882	5,790	7,675	9,535	11,372	13,186	14,975	16,738	18,475	20,187	21,875	11,203
11 GENERAL		225	449	673	968	1,118	1,339	1,560	1,781	2,000	2,220	2,439	2,657	1,335
12 13 TOTAL	\$	\$ (17,015)	\$ (34,022) \$	(51,062) \$	(68,141) \$	(85,279) \$	(102,477) \$	(119,700) \$	(136,933) \$	(154,177) \$	(171,439) \$	(188,717) \$	(206,023) \$	(102,691)
14 15 2017 - Updated - June 2016 17 18 19 20 Function	016 Ending Balance 12/31/2016	Ending Balance 1/31/2017	Ending Balance 2/28/2017	Ending Balance 3/3/1/2017	Ending Balance 4/30/2017	Ending Balance 5/31/2017	Ending Balance 6/30/2017	Ending Balance 7/31/2017	Ending Balance 8/31/2017	Ending Balance 9/30/2017	Ending Balance 10/31/2017	Ending Balance 11/30/2017	Ending Balance 1 <i>2</i> /31/2017	(A) 13-Month Average 2017
		\$ (2,020)	\$ (4,041) \$	\$ (6,063) \$	(8,088)	(10,117) \$	(12,149) \$	(14,185) \$	(16,223) \$	(18,265) \$	(20,308) \$	(22,353) \$	(24,399) \$	(12,170)
23 24 NUCLEAR	•	(12,387)	(24,774)	(37,163)	(49,566)	(61,985)	(74,417)	(86,862)	(99,311)	(111,766)	(124,233)	(136,713)	(149,218)	(74,492)
25 26 OTHER PRODUCTION	٠	(3,877)	(7,733)	(11,596)	(15,464)	(19,357)	(23,278)	(27,192)	(31,086)	(34,960)	(38,820)	(42,666)	(46,529)	(23,274)
28 TRANSMISSION		929	1,322	1,997	2,680	3,372	4,072	4,780	5,495	6,218	6,948	7,685	8,451	4,129
30 DISTRIBUTION		2,148	4,290	6,428	8,561	10,689	12,813	14,935	17,051	19,162	21,268	23,368	25,463	12,783
32 GENERAL		242	486	732	626	1,227	1,476	1,727	1,979	2,233	2,488	2,745	3,003	1,486
33 34 TOTAL	· •	\$ (15,237)	\$ (30,449) \$	(45,665) \$	\$ (668'09)	(76,171) \$	(91,482) \$	(106,796) \$	(122,095) \$	(137,378) \$	(152,658) \$	(167,935) \$	(183,229) \$	(91,538)
35 36 Difference 38 39 Function	Ending Balance 12/31/2016	Ending Balance 1/31/2017	Ending Balance 2/28/2017	Ending Balance 3/31/2017	Ending Balance 4/30/2017	Ending Balance 5/31/2017	Ending Balance 6/30/2017	Ending Balance 7/31/2017	Ending Balance 8/31/2017	Ending Balance 9/30/2017	Ending Balance 10/31/2017	Ending Balance 11/30/2017	Ending Balance 12/31/2017	13-Month Average 2017
41 42 STEAM	٠	\$ 264	\$ 527	\$ 791 \$	1,054 \$	1,318 \$	1,582 \$	1,847 \$	2,112 \$	2,377 \$	2,643 \$	2,909 \$	3,175 \$	1,585
43 44 NUCLEAR 45		858	1,714	2,568	3,412	4,246	5,071	5,886	869'9	7,504	8,303	260'6	9,874	5,018
45 46 OTHER PRODUCTION 47	•	399	798	1,207	1,628	2,057	2,495	2,939	3,391	3,851	4,317	4,785	5,258	2,548
48 TRANSMISSION	•	44	88	133	178	224	270	316	363	410	458	202	255	273
50 DISTRIBUTION	•	196	409	629	887	1,154	1,441	1,749	2,076	2,424	2,793	3,181	3,588	1,580
52 GENERAL		17	37	59	83	109	137	167	199	232	268	306	346	151
53 54 TOTAL 55	&	\$ 1,778	\$ 3,573 \$	5,397 \$	7,242 \$	9,107 \$	10,996 \$	12,904 \$	14,839 \$	16,798 \$	18,781 \$	20,782 \$	22,794 \$	11,153

Docket Nos. 160021-EI & 160062-EI Proposed Depreciation Company Adjustment by Year for Base vs. Clause Updated Exhibit KF-2, Page 4 of 4

2018 - As Filad									UF	Updated Exhibit KF-2, Page 4 of 4	2, Page 4 of 4			
	Ending Balance	Ending Balance	Ending Balance	Ending Balance	Ending Balance	Ending Balance	Ending Balance	Ending Balance	Ending Balance	Ending Balance	Ending Balance	Ending Balance	Ending Balance	13-Month Average
Line No. Function	12/31/2017	1/31/2018	2/28/2018	3/31/2018	4/30/2018	5/31/2018	6/30/2018	7/31/2018	8/31/2018	9/30/2018	10/31/2018	11/30/2018	12/31/2018	2018
2 STEAM \$	(27,574) \$	\$ (29,886)	(32,200) \$	(34,515) \$	(36,835) \$	(39,163) \$	(41,499) \$	(43,843) \$	(46,193) \$	(48,548) \$	\$ (806,05)	(53,269) \$	(55,633) \$	(41,544)
4 NUCLEAR	(159,092)	(172,384)	(185,678)	(198,974)	(212,272)	(225,573)	(238,874)	(252,175)	(265,476)	(278,777)	(292,080)	(305,382)	(318,686)	(238,879)
6 OTHER PRODUCTION	(51,786)	(56,135)	(60,486)	(64,832)	(69,159)	(73,487)	(77,809)	(82,125)	(86,439)	(90,757)	(95,083)	(668'66)	(103,710)	(77,785)
8 TRANSMISSION	7,896	8,641	9,392	10,151	10,917	11,716	12,555	13,407	14,265	15,130	16,001	16,878	17,770	12,671
10 DISTRIBUTION	21,875	23,540	25,181	26,798	28,389	29,952	31,489	32,998	34,481	35,937	37,365	38,766	40,141	31,301
112 GENERAL	2,657	2,875	3,093	3,310	3,527	3,742	3,957	4,171	4,385	4,597	4,809	5,020	5,230	3,952
13 14 TOTAL \$	(206,023) \$	(223,349) \$	(240,698) \$	(258,062) \$	(275,433) \$	(292,812) \$	(310,181) \$	(327,567) \$	(344,978) \$	(362,419) \$	(379,896)	(397,387) \$	(414,888) \$	(310,284)
16 16 17 2018 - Hadated - June 2016	ď													<u>a</u> )
	Ending Balance 12/31/2017	Ending Balance 1/31/2018	Ending Balance 2/28/2018	Ending Balance 3/31/2018	Ending Balance 4/30/2018	Ending Balance 5/31/2018	Ending Balance 6/30/2018	Ending Balance 7/31/2018	Ending Balance 8/31/2018	Ending Balance 9/30/2018	Ending Balance 10/31/2018	Ending Balance 11/30/2018	Ending Balance 12/31/2018	13-Month Average 2018
22 23 STEAM \$	(24,399) \$	(26,446) \$	(28,493) \$	(30,542) \$	(32,597) \$	(34,660) \$	(36,730) \$	\$ (38,808)	(40,893) \$	(42,982) \$	(45,074) \$	(47,170) \$	(49,267) \$	(36,774)
25 NUCLEAR	(149,218)	(161,749)	(174,287)	(186,832)	(199,383)	(211,943)	(224,513)	(237,093)	(249,678)	(262,269)	(274,873)	(287,777)	(300,992)	(224,662)
27 OTHER PRODUCTION	(46,529)	(50,401)	(54,274)	(58,140)	(61,985)	(65,830)	(69,667)	(73,497)	(77,325)	(81,153)	(84,987)	(88,810)	(92,629)	(69,633)
29 TRANSMISSION	8,451	9,246	10,049	10,859	11,676	12,529	13,423	14,331	15,246	16,168	17,096	18,031	18,981	13,545
31 DISTRIBUTION	25,463	27,553	29,637	31,716	33,789	35,857	37,918	39,975	42,026	44,073	46,113	48,148	50,177	37,880
33 GENERAL	3,003	3,263	3,524	3,786	4,050	4,315	4,581	4,848	5,116	5,385	5,656	5,927	6,200	4,589
34 35 TOTAL \$	(183,229) \$	(198,534) \$	(213,844) \$	(229,153) \$	(244,450) \$	(259,732) \$	(274,988) \$	(290,245) \$	(305,507) \$	(320,778) \$	(336,070) \$	(351,651) \$	(367,531) \$	(275,055)
36 37 Difference 38 39 41 Function	Ending Balance 12/31/2017	Ending Balance 1/31/2018	Ending Balance 2/28/2018	Ending Balance 3/31/2018	Ending Balance 4/30/2018	Ending Balance 5/31/2018	Ending Balance 6/30/2018	Ending Balance 7/31/2018	Ending Balance 8/31/2018	Ending Balance 9/30/2018	Ending Balance 10/31/2018	Ending Balance 11/30/2018	Ending Balance 12/31/2018	13-Month Average 2018
	3,175 \$	3,441 \$	\$ 3,706 \$	3,972 \$	4,238 \$	4,504 \$	4,769 \$	5,035 \$	5,301 \$	5,567 \$	5,833 \$	6,100 \$	8 998'9	4,770
44 45 NUCLEAR	9,874	10,635	11,391	12,143	12,889	13,630	14,361	15,082	15,798	16,509	17,207	17,606	17,694	14,217
47 OTHER PRODUCTION	5,258	5,734	6,213	6,692	7,173	7,657	8,142	8,627	9,115	9,605	10,096	10,589	11,081	8,152
49 TRANSMISSION	255	909	929	708	759	813	898	924	981	1,038	1,095	1,152	1,211	874
51 DISTRIBUTION	3,588	4,013	4,456	4,918	5,401	5,904	6,430	6,977	7,545	8,135	8,748	9,382	10,036	6,579
53 GENERAL	346	387	431	476	524	573	624	229	732	788	847	806	970	637
54 55 TOTAL \$	22,794 \$	24,815 \$	26,853 \$	28,909 \$	30,984 \$	33,081 \$	35,194 \$	37,322 \$	39,471 \$	41,641 \$	43,826 \$	45,736 \$	47,358 \$	35,229

### Florida Power & Light Company

# 2016 Dismantlement Study (Corrected)

Babcock Ranch Solar Martin Solar Cape Canaveral Okeechobee

Cedar Bay Port Everglades Citrus Solar Riviera Beach

DeSoto Solar Sanford Ft. Myers Scherer

LauderdaleSpace Coast SolarManateeSt. Johns RiverManatee SolarTurkey PointMartinWest County

### Table of Contents

### Section

Section
1. Executive Summary
2. Drivers of Change in Dismantlement Accrual
3. Comparison of Current Accruals and Proposed Accruals (By Site)
4. Calculation of Current and Future Jurisdictional Dismantlement Costs (By Unit)
5. Escalation Rates Used to Calculate Future Dismantlement Costs
6. Annual Accrual Calculation (By Unit)
7. Future Expenditures by Year
8. Dismantlement Cost Analysis Prepared by Burns & McDonnell
9. Dismantlement Cost Analysis for Cedar Bay Prepared by NorthStar Demolition & Remediation, LP

**Executive Summary** 

#### FLORIDA POWER & LIGHT COMPANY 2016 DISMANTLEMENT STUDY EXECUTIVE SUMMARY

Florida Power & Light Company ("FPL") engaged Burns & McDonnell Engineering Company, Inc. ("BMcD") to perform a site specific fossil plant dismantlement cost study in 2015, which estimated the cost to dismantle FPL's fossil and solar plants to be approximately \$467.2 million in 2015 dollars. BMcD's study included all of FPL's existing plants as well as plants that FPL is projected to place in service through 2020, with the exception of the Cedar Bay cogeneration facility. FPL acquired the Cedar Bay cogeneration facility in September 2015 and engaged NorthStar Demolition and Remediation LP as part of the due diligence in that transaction to provide an estimate to dismantle the facility (which was approximately \$4.5 million). That estimate did not provide a breakdown of the component costs. The total amount of FPL's dismantlement costs, including the Cedar Bay cogeneration facility, escalated through 2016 is \$478.3 million, as follows:

	(in millions) 2016 \$	% of Total
Material & Equipment	\$ 298	62%
Labor	286	60%
Burial	26	5%
Cedar Bay	5	1%
Salvage	(137)	(28)%
Total	\$ 478	100%

FPL's previous dismantlement study was filed in 2009 and was approved by the Florida Public Service Commission ("FPSC") in Order No. PSC-10-0153-FOF-EI (Docket No. 090130-EI). The current dismantlement study reflects the impact of the updated cost estimates, retirement and additions of several units since the last study and the amortization of a portion of the dismantlement reserve as approved by the FPSC as part of FPL's 2012 Rate Settlement in Order No. PSC-13-0023-S-EI (Docket No. 120015-EI). A comparative analysis of significant drivers of the change in the resulting accrual since the previous study is contained in Section 2.

Executive Summary

#### **PLANT RETIREMENTS**

FPL has retired and dismantled the following generating units since the 2009 dismantlement study:

	Retirement
<b>Generating Unit</b>	<u>Date</u>
Repowered Units – Partial Dismantlement	
Cape Canaveral Unit 1	2010
Cape Canaveral Unit 2	2010
Pt. Everglades Unit 1	2012
Pt. Everglades Unit 2	2012
Pt. Everglades Unit 3	2013
Pt. Everglades Unit 4	2013
Riviera Unit 3	2011
Riviera Unit 4	2011
Final Retirement – Full Dismantlement	
Cutler Unit 5	2012
Cutler Unit 6	2012
Putnam Unit 1	2014
Putnam Unit 2	2014
Sanford Unit 3	2012

In addition, FPL plans to retire the following units during 2016 and begin dismantlement in 2017:

	<b>Retirement</b>
<b>Generating Unit</b>	<b>Date</b>
Cedar Bay	2016
Fort Myers Gas Turbines	2016
Lauderdale Gas Turbines	2016
Pt. Everglades Gas Turbines	2016

FPL has also converted Turkey Point Units 1 and 2 from steam generating units to synchronous condensers in 2016 and 2013, respectively. As part of the conversion, FPL has and will incur costs to partially dismantle these units, but ultimate dismantlement is assumed to occur following the retirement of Turkey Point Unit 5 estimated to be in 2047.

Executive Summary

#### **PLANT ADDITIONS**

FPL has added or will add by 2020 the following generating units since the 2009 dismantlement study.

<b>Generating Unit</b>	<b>In-Service</b>
Babcock Ranch Solar	2016
Cape Canaveral Clean Energy Center	2012
Cedar Bay (purchase date)	2015
Citrus Solar	2016
Fort Myers Peaking Units	2016
Lauderdale Peaking Units	2016
Manatee Solar	2016
Okeechobee Clean Energy Center	2019
Pt. Everglades Clean Energy Center	2016
Riviera Clean Energy Center	2014

#### DISMANTLEMENT RESERVE AMORTIZATION

As part of the 2012 Rate Settlement approved by the FPSC in Order No. PSC-13-0023-S-EI (Docket No. 120015-EI), FPL was authorized to amortize up to \$176 million of the dismantlement reserve, subject to certain conditions. This amount was reduced to \$146 million as part of the Cedar Bay settlement approved by the FPSC in Order No. PSC-15-0401-AS-EI (Docket No. 150075-EI). The utilization of the entire \$146 million of dismantlement reserve amortization has been reflected in the current dismantlement study.

#### RETIREMENT DATES

The estimated retirements dates contained in the current dismantlement study are based on the retirement dates estimated in the 2016 depreciation study prepared by Gannett Fleming, which has also been filed in this docket.

#### **ESCALATION RATES**

The future cost of dismantlement is forecast by analyzing the individual cost categories from BMcD's cost study as described above. The 2015 cost of each category is divided into components of labor, material and equipment, disposal and salvage. These components are escalated by the estimated inflationary rates for compensation per hour, Producer Price Index (Intermediate Material), Gross Domestic Product (Implicit Price Deflator) and Metal and Metal Products. Section 5 contains a schedule of the applicable escalation rates for each category. FPL used the same data vendor, Global Insight, to obtain the inflation forecast as was used in the previous study. Global Insight, a division of IHS Inc., is an economics organization and considered a leading provider of economic data and analytics, and serves over 3,800 clients in industry, finance and

Docket No. 160021-EI FPL 2016 Dismantlement Study (Corrected) Exhibit KF-4. Page 6 of 127

#### Section 1

Executive Summary

government, employing more than 600 staff in 23 offices in 13 countries.

The cost estimate obtained by applying Global Insight rates yields the future cost of dismantlement using currently available technologies and procedures, as shown in Section 4. The methodology used to determine the escalation rate for converting the current estimated dismantlement cost to future estimated dismantlement cost is consistent with the guidance set out in FPSC Rule 25-6.04364 and that used in the preparation of the prior dismantlement.

#### **CONTINGENCY ALLOWANCE**

The overall contingency allowance of 16% used by the Company in its prior study and approved in Order No. PSC-10-0153-FOF-EI (Docket 090130-EI) was increased by BMcD to 20% in the 2016 study, which is consistent with BMcD's experience with actual costs relative to estimated costs.

#### **CONCLUSION**

The annual dismantlement accrual for FPL is \$26.2 million, based on total dismantlement cost in 2016 dollars of \$478.3 million. FPL requests that the annual accrual be effective January 1, 2017. Section 6 of this report provides the calculation of the annual accrual.

## Section 2 Drivers of Change in Dismantlement Accrual

	20	09 Study		<u>Plant</u>				Reserve	Upe	dated Costs and		2016 Study	
	Annı	ıal Accrual 1	Ret	irements/Adj 1	1	New Plants	An	nortization <sup>2</sup>	Esc	calation Rates <sup>3</sup>	An	nual Accrual	dif
Clause	\$	453,816	\$	-	\$	-	\$	-	\$	339,786	\$	793,602	\$ 339,786
Steam		9,711,696		(3,258,085)		1,130,063		2,736,264		2,384,534		12,704,472	2,992,776
Other		8,302,875		(769,136)		3,932,512		1,630,900		(414,006)		12,683,144	4,380,269
	\$	18,468,387	\$	(4,027,222)	\$	5,062,574	\$	4,367,164	\$	2,310,315	\$	26,181,218	\$ 7,712,832

#### **Notes:**

<sup>&</sup>lt;sup>1</sup> Includes St. Lucie Wind which was not constructed

<sup>&</sup>lt;sup>2</sup> Reflects amortization of \$146 million of dismantlement reserve enabled by Order No. PSC-13-0023-S-EI (Docket No. 120015-EI).

<sup>&</sup>lt;sup>3</sup> Includes \$52 million reallocation of theoretical dismantlement reserve surplus

**Section 3** *Comparison of Current Accruals and Proposed Accruals* 

Plant Site	Order No. I	set No. 090130-EI PSC-10-0153-FOF-EI nual Accrual	Proposed Annual Accrual Effective 1/1/2017	rease / (Decrease) in Annual Dismantlement Accrual
Babcock Ranch Solar <sup>1</sup>	\$	0	\$ 380,369	\$ 380,369
Cape Canaveral <sup>2</sup>		252,203	826,866	574,663
Cedar Bay <sup>1</sup>		0	1,130,063	1,130,063
Citrus Solar <sup>1</sup>		0	380,369	380,369
Cutler <sup>2</sup>		333,801	0	(333,801)
Desoto Solar		72,712	146,241	73,529
Ft. Myers		1,317,305	1,488,098	170,792
Lauderdale		1,251,191	2,261,757	1,010,566
Manatee		2,559,415	3,125,649	566,235
Manatee Solar <sup>1</sup>		0	380,369	380,369
Martin		2,533,098	3,614,148	1,081,050
Martin Solar		346,160	594,662	248,502
Okeechobee <sup>1</sup>		0	312,960	312,960
Port Everglades <sup>2</sup>		2,802,360	1,058,639	(1,743,721)
Putnam <sup>2</sup>		405,297	0	(405,297)
Riviera <sup>2</sup>		89,182	695,313	606,131
$Sanford^2$		1,493,396	1,020,440	(472,956)
Scherer		1,634,157	2,317,556	683,399
Space Coast Solar		34,944	52,699	17,754
St. Johns River		869,586	958,937	89,351
St. Lucie Wind <sup>3</sup>		30,038	0	(30,038)
Turkey Point <sup>2</sup>		1,111,193	3,258,891	2,147,698
West County		1,332,348	2,177,193	844,845
Total	\$	18,468,387	\$ 26,181,218	\$ 7,712,832
ncrease in dismantlement accrual d for solar units (DeSoto, Martin an	d Space Coast) recovere	d through clause		\$ 7,712,832 339,785
base rate dismantlement accrual	•	-		\$ 7,373,047

#### Notes

<sup>&</sup>lt;sup>1</sup> Added since 2009 Dismantlement Study

<sup>&</sup>lt;sup>2</sup> Plant was partially dismantled or fully dismantled since 2009 Dismantlement Study as a result of a repowering, final retirement of a unit or conversion to synchronous condenser (Turkey Point)

<sup>&</sup>lt;sup>3</sup> Plant was not constructed

<sup>&</sup>lt;sup>4</sup> After-tax amount is \$4,528,894. This corrected amount is different than the after-tax amount of \$5,419,038 reflected as a Per Book Company Adjustment on MFR C-3 for both the 2017 Test Year and 2018 Subsequent Year.

**Section 4** *Calculation of Current and Future Jurisdictional Dismantlement Costs* 

		Jurisdiction		ictional
Site/Unit	Dismantlement Cost in	Dismantlement Cost in	Dismantlement Cost in	Dismantlement Cost i
	2016 Dollars	Future Dollars	2016 Dollars	Future Dollars
Babcock Ranch Solar	\$ 6,601,101	\$ 17,928,699	\$ 6,274,973	\$ 17,042,93
Cape Canaveral	0.545.000	20.044.054	0.040.046	25 425 62
Common Unit 1	8,745,382 7,122,444	28,861,856 28,452,355	8,313,316 6,770,560	27,435,93 27,046,66
		20,132,333	0,770,200	27,010,00
Cedar Bay	4,520,250	4,520,250	4,296,927	4,296,92
Citrus Solar	6,601,101	17,928,699	6,274,973	17,042,93
DeSoto Solar	2,338,490	5,108,176	2,222,957	4,855,80
	2,330,470	3,100,170	2,222,731	4,055,00
Ft. Myers Common	19,702,679	48,380,642	18,729,268	45,990,39
Unit 2	9,039,546	26,346,751	8,592,947	25,045,08
Unit 3	1,568,707	4,498,227	1,491,205	4,275,99
Unit 4 (Combustion Turbine Peakers)	1,727,318	7,691,861	1,641,980	7,311,84
Gas Turbines	297,386	1,522,405	282,694	1,447,19
Lauderdale				
Common	19,099,027	34,238,552	18,155,439	32,546,99
Unit 4	4,346,178	8,578,351	4,131,455	8,154,53
Unit 5	4,340,750	8,569,391	4,126,295	8,146,02
Unit 6 (Combustion Turbine Peakers) Gas Turbines	4,226,112 281,335	18,894,765 1,458,950	4,017,320 267,435	17,961,26 1,386,87
Gas Turbnies	201,333	1,436,930	207,433	1,300,07
Manatee				
Common Unit 1	31,234,151 10,574,637	50,931,140	29,691,028 10,052,197	48,414,88 17 148 74
Unit 1 Unit 2	10,574,637	18,040,007 18,040,007	10,052,197 10,052,197	17,148,74 17,148,74
Unit 3	6,732,122	20,971,186	6,399,522	19,935,10
Manatee Solar	6 601 101	17.928.699	6 274 072	17.042.03
Manatee Solar	6,601,101	17,928,699	6,274,973	17,042,93
<u>Martin</u>				
Common	46,459,059	80,096,302	44,163,749	76,139,14
Unit 1 Unit 2	10,112,774 10,112,774	19,210,487 19,210,487	9,613,152 9,613,152	18,261,39 18,261,39
Unit 3	2,857,402	6,218,011	2,716,232	5,910,81
Unit 4	2,864,092	6,200,760	2,722,592	5,894,41
Unit 8	6,668,321	20,995,725	6,338,872	19,958,43
Martin Solar	10,856,697	28,672,889	10,320,322	27,256,30
Okeechobee				
Common Unit 1	5,726,113 6,641,891	25,084,242 34,869,012	5,443,214 6,313,748	23,844,95 33,146,30
O.M. 1	0,011,051	31,007,012	0,515,710	33,210,30
Port Everglades Common	6,426,572	25,097,705	6,109,067	23,857,75
Unit 5	6,079,219	28,862,811	5,778,875	27,436,84
Gas Turbines	1,935,975	2,069,493	1,840,328	1,967,25
Riviera Beach				
Common	6,452,457	21,761,919	6,133,673	20,686,77
Unit 5	7,051,684	29,015,737	6,703,296	27,582,21
Sanford				
Santoru Common	10,290,606	24,963,942	9,782,199	23,730,59
Unit 4	6,424,194	18,370,483	6,106,806	17,462,88
Unit 5	6,397,182	17,670,475	6,081,129	16,797,46
Scherer				
Common	33,972,828	80,197,672	32,294,400	76,235,50
Unit 4 Handling	1,028,362 15,403,424	2,298,020 34,564,384	977,555 14,642,418	2,184,48 32,856,73
Space Coast Solar				1,904,71
Space Coast Solar	886,054	2,003,712	842,278	1,904,71
St. Johns River		22.110		
Common Unit 1	14,532,336 3,258,795	33,148,871 7,356,102	13,814,366 3,097,794	31,511,15 6,992,67
Unit 2	3,258,795	7,356,102	3,097,794	6,992,67
Handling	1,137,429	2,406,861	1,081,235	2,287,95
Turkey Point				
Common	14,068,274	38,409,418	13,373,231	36,511,80
Unit 1	13,564,981	41,798,519	12,894,803	39,733,46
Unit 2	7,384,545	24,170,409	7,019,711	22,976,27
Unit 5	10,235,882	34,458,323	9,730,179	32,755,91
West County				
Common	20,101,515	59,631,111	19,108,400	56,685,03
Unit 1	6,576,917	23,791,257	6,251,984	22,615,85
Unit 2	6,603,614	23,882,502	6,277,362	22,702,58
Unit 3	6,631,175	25,774,470	6,303,562	24,501,08
		\$ 1,238,509,183		

**Section 4** *Calculation of Current and Future Jurisdictional Dismantlement Costs* 

	To 1	TO 11		ictional
Site/Unit	Dismantlement Cost in 2016 Dollars	Dismantlement Cost in Future Dollars	Dismantlement Cost in 2016 Dollars	Dismantlement Cost i Future Dollars
Babcock Ranch Solar	\$ 6,601,101	\$ 17,928,699	\$ 6,279,521	\$ 17,055,28
Cape Canaveral				
Common	8,745,382	28,861,856	8,319,342	27,455,82
Unit 1	7,122,444	28,452,355	6,775,467	27,066,27
Cedar Bay	4,520,250	4,520,250	4,300,042	4,300,04
Citrus Solar	6,601,101	17,928,699	6,279,521	17,055,28
DeSoto Solar	2,338,490	5,108,176	2,224,568	4,859,32
Ft. Myers				
Common	19,702,679	48,380,642	18,742,843	46,023,73
Unit 2	9,039,546	26,346,751	8,599,175	25,063,24
Unit 3	1,568,707	4,498,227	1,492,286	4,279,09
Unit 4 (Combustion Turbine Peakers) Gas Turbines	1,727,318 297,386	7,691,861 1,522,405	1,643,170 282,899	7,317,14 1,448,24
r				
<u>Lauderdale</u> Common	19,099,027	34,238,552	18,168,598	32,570,58
Unit 4	4,346,178	8,578,351	4,134,449	8,160,44
Unit 5	4,340,750	8,569,391	4,129,286	8,151,92
Unit 6 (Combustion Turbine Peakers)	4,226,112	18,894,765	4,020,232	17,974,28
Gas Turbines	281,335	1,458,950	267,629	1,387,87
Manatee				
Common	31,234,151	50,931,140	29,712,549	48,449,97
Unit 1	10,574,637	18,040,007	10,059,483	17,161,17
Unit 2 Unit 3	10,574,637 6,732,122	18,040,007 20,971,186	10,059,483	17,161,17 19,949,55
			6,404,160	
Manatee Solar	6,601,101	17,928,699	6,279,521	17,055,28
Martin	46.450.050	00.004.000	44.405.550	# c 10 1 20
Common	46,459,059	80,096,302	44,195,760	76,194,33
Unit 1 Unit 2	10,112,774	19,210,487	9,620,120	18,274,62
Unit 3	10,112,774 2,857,402	19,210,487 6,218,011	9,620,120 2,718,201	18,274,62 5,915,09
Unit 4	2,864,092	6,200,760	2,724,565	5,898,68
Unit 8	6,668,321	20,995,725	6,343,467	19,972,89
Martin Solar	10,856,697	28,672,889	10,327,802	27,276,06
Okeechobee				
Common	5,726,113	25,084,242	5,447,159	23,862,23
Unit 1	6,641,891	34,869,012	6,318,325	33,170,33
Port Everglades		25.005.505		22.055.0
Common	6,426,572	25,097,705	6,113,495	23,875,04
Unit 5 Gas Turbines	6,079,219 1,935,975	28,862,811 2,069,493	5,783,064 1,841,662	27,456,73 1,968,67
Riviera Beach				
Common	6,452,457	21,761,919	6,138,119	20,701,76
Unit 5	7,051,684	29,015,737	6,708,154	27,602,20
Sanford				
Common	10,290,606	24,963,942	9,789,289	23,747,79
Unit 4 Unit 5	6,424,194 6,397,182	18,370,483 17,670,475	6,111,233 6,085,537	17,475,54 16,809,64
	0,377,102	17,070,473	0,005,557	10,007,0-
Scherer Common	33,972,828	80,197,672	32,317,807	76,290,76
Unit 4	1,028,362	2,298,020	978,264	2,186,0
Handling	15,403,424	34,564,384	14,653,031	32,880,54
Space Coast Solar	886,054	2,003,712	842,889	1,906,09
St. Johns River				
Common	14,532,336	33,148,871	13,824,379	31,533,99
Unit 1	3,258,795	7,356,102	3,100,039	6,997,74
Unit 2	3,258,795 1,137,429	7,356,102 2,406,861	3,100,039	6,997,74 2,289,60
Handling	1,137,429	2,400,861	1,082,018	2,289,60
Turkey Point Common	14,068,274	38,409,418	13,382,924	36,538,20
Unit 1	13,564,981	41,798,519	12,904,150	39,762,20
Unit 2	7,384,545	24,170,409	7,024,799	22,992,92
Unit 5	10,235,882	34,458,323	9,737,231	32,779,6
West County				
Common	20,101,515	59,631,111	19,122,250	56,726,12
Unit 1	6,576,917	23,791,257	6,256,516	22,632,24
Unit 2	6,603,614	23,882,502	6,281,912	22,719,0
Unit 3	6,631,175	25,774,470	6,308,131	24,518,8

## Section 5 Escalation Rates Used to Calculate Future Dismantlement Costs

#### INFLATION FORECAST

The U.S. Economy
GLOBAL INSIGHT
30 Year Outlook (May 2015)

		er Hour (Non-Farm)	1	(Intermediate Materials)		ator (Implicit)		ETAL PRODUCTS
	ANNUAL	COMPOUNDED	ANNUAL	COMPOUNDED	ANNUAL	COMPOUNDED	ANNUAL	COMPOUNDED
	RATE OF	MULTIPLIER	RATE OF	MULTIPLIER	RATE OF	MULTIPLIER	RATE OF	MULTIPLIER
YEAR	CHANGE	FROM 2015	CHANGE	FROM 2015	CHANGE	FROM 2015	CHANGE	FROM 2015
2015	2.7%	1.000	-7.3%	1.000	1.1%	1.000	-5.0%	1.000
2016	3.5%	1.035	0.9%	1.009	2.0%	1.020	-0.6%	0.994
2017	3.7%	1.073	2.6%	1.036	2.0%	1.040	1.8%	1.013
2018	3.9%	1.115	2.4%	1.061	1.9%	1.060	2.8%	1.041
2019	3.9%	1.158	2.0%	1.082	2.0%	1.081	1.7%	1.058
2020	3.9%	1.203	0.5%	1.088	1.9%	1.101	1.4%	1.073
2021	3.9%	1.249	1.1%	1.100	2.0%	1.124	1.4%	1.088
2022	3.9%	1.298	1.9%	1.121	2.1%	1.147	1.4%	1.103
2023	3.9%	1.349	2.0%	1.143	2.2%	1.172	1.4%	1.119
2024	4.0%	1.402	1.4%	1.160	2.1%	1.197	1.3%	1.133
2025	4.0%	1.458	0.9%	1.170	2.1%	1.222	1.4%	1.148
2026	3.9%	1.515	0.8%	1.179	2.1%	1.247	1.7%	1.168
2027	3.9%	1.573	1.0%	1.191	2.1%	1.273	2.1%	1.192
2028	3.9%	1.634	1.2%	1.205	2.1%	1.299	2.2%	1.218
2029	3.8%	1.697	1.1%	1.218	2.1%	1.327	2.2%	1.245
2030	3.8%	1.763	1.0%	1.230	2.1%	1.355	2.1%	1.272
2031	3.9%	1.831	1.2%	1.244	2.2%	1.385	2.2%	1.300
2032	3.9%	1.902	0.9%	1.256	2.2%	1.416	2.1%	1.327
2033	3.9%	1.975	1.0%	1.269	2.2%	1.447	2.1%	1.354
2034	3.9%	2.052	1.1%	1.283	2.2%	1.480	2.0%	1.382
2035	3.9%	2.131	1.0%	1.296	2.2%	1.513	2.0%	1.409
2036	3.9%	2.214	1.0%	1.309	2.2%	1.546	1.9%	1.437
2037	3.9%	2.300	1.1%	1.323	2.2%	1.580	1.9%	1.465
2038	3.9%	2.390	1.1%	1.338	2.2%	1.616	1.9%	1.493
2039	3.9%	2.482	1.2%	1.354	2.3%	1.653	1.9%	1.522
2040	3.9%	2.579	1.2%	1.370	2.3%	1.690	1.9%	1.550
2041	3.9%	2.680	1.2%	1.386	2.3%	1.729	1.9%	1.580
2042	3.9%	2.784	1.2%	1.402	2.3%	1.769	1.9%	1.609
2043	3.9%	2.893	1.2%	1.418	2.3%	1.811	1.8%	1.639
2044	3.9%	3.005	1.2%	1.436	2.4%	1.853	1.8%	1.668
2045	3.9%	3.123	1.2%	1.453	2.4%	1.897	1.8%	1.698
2046	3.9%	3.244	1.2%	1.470	2.4%	1.942	1.8%	1.728
2047	3.9%	3.371	1.2%	1.487	2.4%	1.987	1.8%	1.759
2048	3.9%	3.502	1.2%	1.505	2.4%	2.034	1.8%	1.791
2049	3.9%	3.639	1.2%	1.523	2.4%	2.082	1.8%	1.822
2050	3.9%	3.780	1.2%	1.541	2.4%	2.131	1.8%	1.855
2051	3.9%	3.928	1.2%	1.559	2.4%	2.182	1.8%	1.888
2052	3.9%	4.081	1.2%	1.578	2.4%	2.233	1.8%	1.921
2053	3.9%	4.240	1.2%	1.596	2.4%	2.286	1.8%	1.956
2054	3.9%	4.405	1.2%	1.615	2.4%	2.340	1.8%	1.991
2055	3.9%	4.577	1.2%	1.634	2.4%	2.395	1.8%	2.026
2056	3.9%	4.755	1.2%	1.654	2.4%	2.451	1.8%	2.062
2057	3.9%	4.941	1.2%	1.673	2.4%	2.509	1.8%	2.099
2058	3.9%	5.133	1.2%	1.693	2.4%	2.568	1.8%	2.136
2059	3.9%	5.333	1.2%	1.713	2.4%	2.629	1.8%	2.174
2060	3.9%	5.541	1.2%	1.734	2.4%	2.691	1.8%	2.213
2061	3.9%	5.757	1.2%	1.754	2.4%	2.754	1.8%	2.252
2062	3.9%	5.982	1.2%	1.775	2.4%	2.819	1.8%	2.292
2063	3.9%	6.215	1.2%	1.796	2.4%	2.885	1.8%	2.333
2064	3.9%	6.457	1.2%	1.817	2.4%	2.953	1.8%	2.375
2065	3.9%	6.709	1.2%	1.839	2.4%	3.023	1.8%	2.417
2066	3.9%	6.970	1.2%	1.861	2.4%	3.094	1.8%	2.460
2067	3.9%	7.242	1.2%	1.883	2.4%	3.167	1.8%	2.504
2068	3.9%	7.524	1.2%	1.905	2.4%	3.242	1.8%	2.548
2069	3.9%	7.817	1.2%	1.928	2.4%	3.318	1.8%	2.594
2070	3.9%	8.122	1.2%	1.951	2.4%	3.397	1.8%	2.640
2071	3.9%	8.438	1.2%	1.974	2.4%	3.477	1.8%	2.687
2072	3.9%	8.767	1.2%	1.997	2.4%	3.559	1.8%	2.735
2073	3.9%	9.109	1.2%	2.021	2.4%	3.643	1.8%	2.783
2074	3.9%	9.464	1.2%	2.045	2.4%	3.728	1.8%	2.833
2075	3.9%	9.833	1.2%	2.069	2.4%	3.816	1.8%	2.883

198,429 24,194 24,678 9,212 9,211 35,454 75,424 32,188 5,624 7,520 3,253 40,136 13,407 13,392 18,427 3,117 76,674 23,845 24,313 35,639 Monthly Accrual 31,697 26,522 318,267 290,331 290,331 296,137 110,544 110,535 425,448 4 Year Average 334,407 2020 323,408 384,143 2019 313,686 312,770 2018 ,974,543 264,345 269,528 401,089 302,482 2017 35,943,702 16,890,930 2,923,847 7,691,861 1,522,405 34,238,552 3,431,340 3,427,757 18,894,765 1,458,950 27,704,488 3,816,155 3,890,982 20,971,186 41,308,169 5,273,467 5,378,936 2,642,655 2,635,323 20,995,725 25,097,705 28,862,811 1,654,921 4,520,250 17,928,699 4,599,220 17,928,699 Amount To Accrue 12,436,940 9,455,820 1,574,379 5,147,011 5,141,635 23,226,652 14,223,852 14,149,025 38,788,133 13,937,020 13,831,551 3,575,356 3,565,437 - 414,572 Adj Reserve as of 12/31/2016 2,105,831 508,956 48,380,642 26,346,751 4,498,227 7,691,861 1,522,405 34,238,552 8,578,351 8,569,391 18,894,765 1,458,950 80,096,302 19,210,487 19,210,487 6,218,011 6,200,760 20,995,725 29,015,737 4,520,250 25,097,705 28,862,811 2,069,493 Total Future \$ Cost 56,519,729 13,572,452 13,572,452 4,396,872 4,384,418 14,853,650 24,160,900 6,060,811 6,054,496 13,367,645 1,032,975 17,740,257 20,426,563 1,463,206 15,374,395 2nd Yr Expense (Future \$) 12,665,743 3,607,469 6,387,524 8,490,214 5,262,957 1st Yr Expense (Future \$) Recovery Period As of 1/1/2017 37 50 28 11 11 22 23 4 4 4 7 7 8 <del>4</del> <del>4</del> 0 39 Economic Recovery Year 2053 2016 2046 2033 2033 2033 2056 2056 2031 2031 2034 2034 2034 2045 2056 2056 2016 2043 2043 2043 2056 2056 2028 2028 2028 2045 2046 2059 2054 6,452,457 6,601,101 Dismantlement Cost in 2016 Dollars Unit 5 Unit 6 (Combustion Turbine Peakers) Gas Turbines Turbine Peakers) Unit

Annual Accrual Calculation

Section 6

Section 6
Annual Accrual Calculation

			Year		Future Cost		Diff	Difference			Annual Accrual	crual		
Unit	Dismantlement Cost in 2016 Dollars	Economic Recovery Year	Recovery Period As of 1/1/2017	1st Yr Expense (Future \$)	2nd Yr Expense (Future \$)	Total Future \$ Cost	Adj Reserve as of 12/31/2016	Amount To Accrue	2017	2018	2019	2020	4 Year Awrage	Monthly Accrual
Sanford Common	10,290,606	2043	26	7,335,246	17,628,696	24,963,942	8,737,380	16,226,562	389,795	403,650	417,998	432,856	411,075	34,256
Unit 4	6,424,194	2043	26	5,377,800	12,992,683	18,370,483	3,746,638	14,623,845	317,202	330,778	344,935	359,698	338,153	28,179
Unit 5	6,397,182	2042	25	5,173,325	12,497,151	17,670,475	6,626,428	11,044,047	254,293	265,254	276,687	288,614	271,212	22,601
cherer														
Common	33,972,828	2039	22	23,527,858	56,669,814	80,197,672	21,556,477	58,641,196	1,693,362	1,762,715	1,834,908	1,910,058	1,800,261	150,022
Juit 4	15,403,424	2039	22	10,147,893	24,416,491	34,564,384	19,090,984	15,473,400	458,138	475,913	494,377	513,558	485,497	40,458
Handling	1,028,362	2039	22	674,769	1,623,251	2,298,020	1,286,891	1,011,129	30,017	31,175	32,377	33,626	31,799	2,650
Space Coast Solar	886,054	2040	23	588,530	1,415,181	2,003,712	235,872	1,767,840	49,833	51,697	53,630	55,636	52,699	4,392
St. Johns River														
Common	14,532,336	2038	21	9,726,004	23,422,867	33,148,871	11,109,095	22,039,776	680,071	708,117	737,320	767,726	723,308	60,276
Unit 1	3,258,795	2038	21	2,158,169	5,197,933	7,356,102	4,327,119	3,028,983	93,690	97,533	101,534	105,699	99,614	8,301
Unit 2	3,258,795	2038	21	2,158,169	5,197,933	7,356,102	4,266,539	3,089,563	95,564	60,484	103,565	107,813	101,607	8,467
Handling	1,137,429	2038	21	707,433	1,699,428	2,406,861	1,395,979	1,010,882	32,537	33,754	35,016	36,325	34,408	2,867
Turkey Point														
Common	14,068,274	2047	30	11,281,647	27,127,771	38,409,418		38,409,418	746,604	772,579	799,458	827,272	786,478	65,540
Unit 1	13,564,981	2047	30	12,249,225	29,549,294	41,798,519		41,798,519	770,814	780,008	830,472	862,010	815,846	186,79
Unit 2	7,384,545	2047	30	7,075,226	17,095,183	24,170,409	(15,923,728)	40,094,137	1,000,799	1,020,012	1,039,594	1,059,551	1,029,989	85,832
Unit 5	10,235,882	2047	30	10,081,384	24,376,939	34,458,323		34,458,323	587,906	612,967	639,097	666,341	626,578	52,215
West County														
Common	20,101,515	2051	34	17,518,230	42,112,881	59,631,111		59,631,111	973,764	1,006,025	1,039,355	1,073,790	1,023,234	85,269
Unit 1	6,576,917	2049	32	6,958,462	16,832,795	23,791,257		23,791,257	363,573	378,974	395,027	411,760	387,333	32,278
Unit 2	6,603,614	2049	32	6,985,176	16,897,326	23,882,502		23,882,502	365,022	380,481	396,595	413,391	388,872	32,406
Unit 3	6,631,175	2051	34	7,537,564	18,236,906	25,774,470		25,774,470	354,762	369,668	385,200	401,385	377,754	31,479
E									00 101 00	700 000 00	000 000 000	FOR OOK 26	010 101 70	978 404 6
Grand Iotal	\$ 478,276,387			\$ 361,934,435	872,054,499	\$ 1,238,509,183	\$ 228,557,844	\$ 1,009,971,539	29,101,052	5 25,833,386 5	5 25,391,149 \$	787,667,787	\$ 26.181.218	5 2.181.

**Section 7** *Future Expenditures by Year* 

## Future Dismantlement Expenditures by Year (Per 2016 Dismantlement Study)

Year	Projected Dismantlement Expenditures
2017	\$ 5,126,537
2018	1,463,206
2033	25,582,399
2034	61,428,755
2036	34,852,642
2037	83,664,634
2038	15,110,087
2039	39,913,688
2040	8,781,290
2043	14,749,774
2044	71,369,388
2045	86,905,556
2046	1,415,181
2047	5,173,325
2048	48,449,154
2049	86,608,041
2050	20,696,868
2051	65,731,803
2052	78,684,710
2053	98,149,187
2054	13,943,638
2055	33,730,121
2056	25,055,795
2057	60,349,787
2058	16,796,545
2059	55,395,405
2060	35,899,918
2061	24,441,522
2062	59,086,975
2064	17,542,224
2065	42,411,030
<b>Grand Total</b>	\$ 1,238,509,183

Dismantlement Cost Analysis Prepared by Burns & McDonnell

## **Fossil Dismantlement Study**



### Florida Power & Light Company

Fossil Dismantlement Study Project No. 84400

Final 03/01/2016

Corrected 04/19/2016

# **Fossil Dismantlement Study**

prepared for

Florida Power & Light Company Fossil Dismantlement Study Miami, Florida

Project No. 84400

Final 03/01/2016

Corrected 04/19/2016

prepared by

Burns & McDonnell Engineering Company, Inc. Kansas City, Missouri

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March 1, 2016

Jon-Paul Zabala Asset Recovery & Analysis Florida Power & Light Company 700 Universe Boulevard, Juno Beach, FL 33408

Re: FPL Decommissioning Cost Study

Dear Mr. Zabala,

Burns & McDonnell is pleased to present its report to Florida Power & Light Company (FPL) on the Decommissioning Cost Study (Study) for power generation assets in Florida and Georgia, excluding nuclear.

The objective of the Study was to review the facilities and to make a recommendation to FPL regarding the total cost in 2015 dollars to decommission the facilities at the end of their useful lives. The preparation of the cost estimates included in the Study were performed in accordance with Rule 25-6.04364, Electric Utilities Dismantlement Studies, Florida Administrative Code.

Burns & McDonnell appreciates the opportunity to provide our professional consulting services to FPL. Please feel free to contact me at any time to discuss questions that may arise during your review of the Study. You may reach me by phone at (816) 822- 4239 or via email at jkopp@burnsmcd.com. We look forward to working with you again on any future projects.

Respectfully Submitted, BURNS & MCDONNELL

Jeff Kopp, PE Project Manager

JTK/kps

# **TABLE OF CONTENTS**

			Page No.
1.0	EXE	CUTIVE SUMMARY	1-1
	1.1	Introduction	1-1
	1.2	Results	1-1
	1.3	Statement of Limitations	1-3
2.0	INTF	RODUCTION	2-1
	2.1	Background	2-1
	2.2	Study Methodology	2-1
	2.3	Site Visits	2-1
3.0	EXIS	STING PLANT DESCRIPTIONS	3-1
	3.1	Cape Canaveral	3-1
	3.2	DeSoto Next Generation Solar Energy Center	3-1
	3.3	Fort Myers	
	3.4	Lauderdale	3-1
	3.5	Manatee	3-2
	3.6	Martin	3-2
	3.7	Port Everglades	3-2
	3.8	Riviera	3-3
	3.9	St. Johns River Power Park	3-3
	3.10	Sanford	3-3
	3.11	Scherer	3-4
	3.12	Space Coast Next Generation Solar Energy Center	3-4
	3.13	Turkey Point	
	3.14	West County	3-5
4.0	PRO	POSED PLANTS DESCRIPTIONS	4-1
	4.1	Babcock Ranch Solar Energy Center	4-1
	4.2	Citrus Solar Energy Center	
	4.3	Fort Myers	
	4.4	Lauderdale	
	4.5	Manatee Solar Energy Center	4-2
	4.6	Okeechobee Clean Energy Center	
5.0	DEC	COMMISSIONING COSTS	5-1
	5.1	General Assumptions for All Sites	5-2
	5.2	Site Specific Decommissioning Assumptions	
		5.2.1 Cape Canaveral	
		5.2.2 DeSoto Next Generation Solar Energy Center	
		5.2.3 Space Coast Next Generation Solar Energy Center	
		5.2.4 Fort Myers	5-7

		5.2.5	Lauderdale	5-7
		5.2.6	Manatee	5-8
		5.2.7	Martin	5-8
		5.2.8	Port Everglades	5-8
		5.2.9	Riviera	5-9
		5.2.10	Sanford	5-9
		5.2.11	Scherer	5-10
		5.2.12	St. Johns River Power Park	
		5.2.13	Turkey Point	
		5.2.14	West County	
		5.2.15	Babcock Ranch Solar Energy Center	
		5.2.16	Citrus Solar Energy Center	
		5.2.17	Manatee Solar Energy Center	
		5.2.18	Okeechobee	
	5.3	Results.		5-13
6.0	I IMI	ΤΔΤΙΩΝΙ	S	6-1
0.0	LIIVII	AHONS	<i>,</i>	

**APPENDIX A - COST BREAKDOWNS** 

**APPENDIX B - PLANT AERIALS** 

# **LIST OF TABLES**

		Page No.
Table 1-1:	Decommissioning Cost Summary (2015\$)	1-2
Table 1-2:	Annual Groundwater Monitoring Costs (2015\$)	
Table 2-1:	Site Visit Dates	
Table 5-1:	Site Decommissioning Cost (2015\$)	
Table 5-2:	Annual Groundwater Monitoring Costs (2015\$)	
	LIST OF FIGURES	
		Page No.
Figure 2-1:	FPL Facilities Visited	2-3

#### LIST OF ABBREVIATIONS

<u>Abbreviation</u> <u>Term/Phrase/Name</u>

Babcock Ranch Solar Babcock Ranch Solar Energy Center

BMcD Burns & McDonnell

C&D Construction & Demolition

Citrus Solar Energy Center

Desoto Solar DeSoto Next Generation Solar Energy Center

FPL Florida Power & Light Company

GE General Electric

HRSG Heat recovery steam generator

kV kilovolt

Manatee Solar Energy Center

MW Megawatt

NO<sub>x</sub> Mono-nitrogen oxides

OCEC Okeechobee Clean Energy Center

PCB Polychlorinated Biphenyl

Plants Fleet of gas, fuel oil, solar, and coal-fired generation facilities reviewed

in this Study.

SCR Selective catalytic reduction

Space Coast Solar Space Coast Next Generation Solar Energy Center

Study Fossil Dismantlement Study

## 1.0 EXECUTIVE SUMMARY

#### 1.1 Introduction

Burns & McDonnell ("BMcD") was retained by Florida Power & Light ("FPL") to conduct a Decommissioning Cost Study ("Study") for power generation assets ("Plants") in Florida and Georgia, excluding nuclear units. The assets include natural gas, fuel oil, solar, and coal-fired generating facilities. Individuals from BMcD visited each of the existing Plants covered by the Study in May of 2015, along with a representative from Brandenburg, a demolition contractor who served as a sub-consultant to BMcD on the Study. The purpose of the Study was to review the facilities and to make a recommendation to FPL regarding the total cost in 2015 dollars to decommission the facilities at the end of their useful lives. The preparation of the cost estimates included in the Study were performed in accordance with Rule 25-6.04364, Electric Utilities Dismantlement Studies, Florida Administrative Code.

The decommissioning costs were developed using the information provided by FPL, in-house data available to BMcD, and information supplied by Brandenburg. Quantity take-offs were performed for major plant facilities and equipment based on observations from the site visits and review of drawings provided for each Plant. Decommissioning activities were determined and labor hours were estimated to complete each decommissioning activity. Current market pricing for labor rates and unit pricing were then developed for each task, and these rates were applied to the estimated quantities for the Plants to determine the total cost of decommissioning.

#### 1.2 Results

When FPL determines that the Plants should be retired, the above grade equipment and steel structures are assumed to have sufficient scrap value to a salvage contractor to offset a portion of the decommissioning costs. FPL will incur costs in the demolition and restoration of the sites less the salvage value of equipment and bulk steel. BMcD has prepared estimates in current year dollars (2015\$) for the decommissioning of the Plants, as summarized in Table 1-1. Further breakdowns of these costs are presented in Table A-1 through Table A-18 in Appendix A. BMcD has also prepared annual costs for groundwater monitoring associated with closed ash ponds and/or landfills, as presented in Table 1-2. Note that the regulatory requirement for groundwater monitoring extends over a 30 year period following the closure.

Table 1-1: Decommissioning Cost Summary (2015\$)1

	Decommissioning		
Plant	Costs	Credits	Net Project Cost
Cape Canaveral	\$20,031,993	(\$4,616,199)	\$15,415,794
DeSoto Solar	\$3,009,309	(\$735,431)	\$2,273,878
Ft. Myers	\$41,516,932	(\$10,119,993)	\$31,396,939
Lauderdale	\$39,299,982	(\$7,864,398)	\$31,435,584
Manatee	\$73,789,541	(\$16,363,554)	\$57,425,987
Martin	\$113,594,115	(\$26,204,511)	\$87,389,603
Port Everglades	\$21,261,928	(\$7,317,093)	\$13,944,835
Riviera	\$17,500,262	(\$4,387,026)	\$13,113,236
St. Johns River <sup>2</sup>	\$119,600,000	(\$11,470,000)	\$108,130,000
Sanford	\$31,444,119	(\$9,043,912)	\$22,400,207
Scherer <sup>2,3</sup>	\$205,554,000	(\$9,629,000)	\$195,925,000
Space Coast Solar	\$1,150,000	(\$289,000)	\$861,000
Turkey Point	\$64,616,729	(\$13,677,173)	\$50,939,556
West County	\$54,842,211	(\$16,156,521)	\$38,685,690
Babcock Ranch Solar <sup>4</sup>	\$8,569,000	(\$2,152,000)	\$6,417,000
Citrus Solar <sup>4</sup>	\$8,569,000	(\$2,152,000)	\$6,417,000
Manatee Solar <sup>4</sup>	\$8,569,000	(\$2,152,000)	\$6,417,000
Okeechobee <sup>4</sup>	\$17,515,000	(\$5,560,000)	\$11,955,000

<sup>&</sup>lt;sup>1</sup> Cost estimates were rounded to the nearest \$1,000 and then site inventory costs and recoverable scrap for inventory was added to the rounded estimate resulting in the values shown.

Table 1-2: Annual Groundwater Monitoring Costs (2015\$)

Plant	<b>Annual Cost</b>
St. Johns River	\$175,000
Scherer	\$1,175,300

Monitoring installation costs included in decommissioning costs.

The total project costs presented above include the costs to return the sites to an industrial condition suitable for reuse for development of an industrial facility. Included are the costs to dismantle the power generating equipment owned by FPL as well as the costs to dismantle the FPL-owned balance of plant facilities and environmental site restoration activities.

<sup>&</sup>lt;sup>2</sup>Costs for Scherer and St. Johns River have not been adjusted for FPL's ownership percentage.

<sup>&</sup>lt;sup>3</sup> Scherer estimate includes only Unit 4 and all common facilities.

<sup>&</sup>lt;sup>4</sup> Proposed facility.

#### 1.3 Statement of Limitations

In preparation of this decommissioning study, BMcD has relied upon information provided by FPL. BMcD acknowledges that it has requested the information from FPL that it deemed necessary to complete this study. While we have no reason to believe that the information provided to us, and upon which we have relied, is inaccurate or incomplete in any material respect, we have not independently verified such information and cannot guarantee its accuracy or completeness.

Engineer's estimates and projections of decommissioning costs are based on Engineer's experience, qualifications and judgment. Since Engineer has no control over weather, cost and availability of labor, material and equipment, labor productivity, construction contractors' procedures and methods, and other factors, Engineer does not guarantee the accuracy of its estimates and projections.

Engineer's estimates do not include allowances for unforeseen environmental liabilities associated with unexpected environmental contamination due to events not considered part of normal operations, such as fuel tank ruptures, oil spills, etc. Estimates also do not include allowances for environmental remediation associated with changes in classification of hazardous materials.

#### 2.0 INTRODUCTION

## 2.1 Background

Burns & McDonnell ("BMcD") was retained by Florida Power & Light ("FPL") to conduct a Decommissioning Cost Study ("Study") for power generation assets ("Plants") in Florida and Georgia, excluding nuclear units. The assets include natural gas, fuel oil, solar, and coal-fired generating facilities. Individuals from BMcD visited each of the existing Plants covered by the Study in May of 2015, along with a representative from Brandenburg, a demolition contractor who served as a sub-consultant to BMcD on the Study. The purpose of the Study was to review the facilities and to make a recommendation to FPL regarding the total cost in 2015 dollars to decommission the facilities at the end of their useful lives.

## 2.2 Study Methodology

The site decommissioning costs were developed using information provided by FPL, information developed by Brandenburg, and in-house data BMcD has collected from previous project experience. BMcD estimated quantities for equipment based on a visual inspection of the facilities, review of engineering drawings, BMcD's in house database of plant equipment quantities, and BMcD's professional judgment. This resulted in an estimate of quantities for the tasks required to be performed for each decommissioning effort. Current market pricing for labor rates, equipment, scrap materials, and unit pricing were then developed for each task. These pricing inputs were developed for each site based on costs specific to the area in which the work is to be performed. These rates were applied to the quantities for the Plants to determine the total cost of decommissioning for each site.

The decommissioning costs include the cost to return the site to an industrial condition, suitable for reuse for development of an industrial facility. Included are the costs to decommission all of the assets owned by FPL at the site, including power generating equipment and balance of plant facilities along with environmental site restoration activities.

#### 2.3 Site Visits

Representatives from BMcD and Brandenburg visited the sites. The site visits consisted of a tour of each facility with plant personnel to review the equipment installed at each site.

Mr. Jon-Paul Zabala, served as the FPL representative throughout the site visits, along with plant personnel at each of the sites.

The following BMcD and Brandenburg representatives comprised the site visit team:

- Mr. Jeff Kopp, BMcD, Project Manager
- Mr. Kory Sandven, BMcD, Project Engineer
- Mr. Parker Hills, BMcD, Project Engineer
- Mr. Andy Debrowski, Brandenburg, Demolition Contractor Representative

The site visits were performed on the following dates.

Table 2-1: Site Visit Dates

Plant	Site Visit Date
Martin	14-May-15
DeSoto Solar	20-May-15
Ft. Myers	20-May-15
Riviera Beach	21-May-15
West County	21-May-15
Scherer	26-May-15
St. Johns River	27-May-15
Cape Canaveral	27-May-15
Sanford	28-May-15
Manatee	28-May-15
Turkey Point	29-May-15
Lauderdale	29-May-15
Port Everglades	29-May-15



Figure 2-1: FPL Facilities Visited

#### 3.0 EXISTING PLANT DESCRIPTIONS

The fiollowing are plant descriptions for each of the existing power plants included in this Study.

# 3.1 Cape Canaveral

The Cape Canaveral plant is located in Cape Canaveral, Florida. Originally, the facility consisted of two (2) natural gas fired boilers, however, those units were fully demolished and removed from the site and replaced with a single 3-on-1 combined cycle unit (Unit 1). Unit 1 consists of three Siemens 8000H combustion turbines, three heat recovery steam generators ("HRSGs"), and one steam turbine. The total capacity is 1,210 megawatts ("MW") at the summer peak rating. Additionally, this unit includes a selective catalytic reduction ("SCR") for reducing mono-nitrogen oxides ("NO<sub>x</sub>") emissions. The facility also includes a man-made cooling water intake and discharge canal which has a manatee heating station.

## 3.2 DeSoto Next Generation Solar Energy Center

The DeSoto Next Generation Solar Energy Center ("Desoto Solar") is a photovoltaic solar power facility located approximately 30 miles northeast of Port Charlotte, in Arcadia, Florida. The facility currently includes approximately 90,504 single axis tracking SunPower solar panels with a total plant capacity of 25 MW at the summer peak rating.

## 3.3 Fort Myers

The Fort Myers plant is located along the Caloosahatchee River approximately 7 miles northeast of downtown Fort Myers, Florida. The facility includes a single 6-on-2 combined cycle unit (Unit 2) which incorporates six General Electric ("GE") 7FA combustion turbines, six Foster Wheeler HRSGs, and two steam turbines with a capacity of 1,470 MW at the summer peak rating. The facility also includes 2 simple cycle GE 7FA combustion turbines (Units 3A and 3B) with a combined capacity of 314 MW at the summer peak rating and 12 small simple cycle combustion turbines. By the end of 2016, 10 of the 12 simple-cycle combustion turbines will be retired. Water for the facility's condensing cooling system is provided via Caloosahatchee River with water discharge from the cooling towers to a man-made canal that discharges to the Orange River.

#### 3.4 Lauderdale

The Lauderdale plant is located in Fort Lauderdale, Florida. Originally, the facility included two conventional boiler steam units and associated steam turbines that were repowered in the mid 1990's to combined cycle units (Units 4 and 5). The repowered combined cycle units can each be fired with either natural gas or fuel oil and each include two Westinghouse 501F combustion turbines, two HRSGs, and

one steam turbine. These two combined cycle units have a combined capacity of 884 MW or 442 MW each at the peak summer rating. Unlike many of the other FPL combined cycle units, the combustion turbines and generators are completely enclosed within a building. In addition to the combined cycle units, the facility has 24 simple-cycle combustion turbines. By the end of 2016, 22 of the 24 simple-cycle combustion turbines will be retired. The brackish water used in the facility's condensing cooling system is provided by the Dania Cut-Off Canal and discharged into a man-made canal to the South Fork New River.

#### 3.5 Manatee

The Manatee plant is located within Manatee County, approximately 5 miles east of Parrish, Florida. The facility includes two fuel oil-fired boilers (Unit 1 and Unit 2), rated at approximately 809 MW each at the summer peak rating, and a 4-on-1 combined cycle unit (Unit 3) which includes four GE 7FA combustion turbines, four HRSGs, and one steam turbine with a combined capacity of 1,140 MW at the summer peak rating. In its entirety, the plant is rated to produce over 2,700 MW. The facility also includes a cooling pond to the east of the generation units which encompasses approximately 3,700 acres. Fuel oil is provided to the facility via a fuel oil pipeline that interconnects with offsite fuel oil storage tanks located at the port in Manatee County, approximately 20 miles away.

#### 3.6 Martin

The Martin plant is located within Martin County, along the northeastern side of Lake Okeechobee and approximately 4 miles west of Indiantown, Florida. The facility includes two fuel oil-fired boilers (Unit 1 and Unit 2), with a combined capacity of 1,626 MW at the summer peak rating. The plant also includes two 2-on-1 combined cycle units (Unit 3 and Unit 4) which consist of two GE 7FA combustion turbines, two HRSGs, and one steam turbine with a combined capacity of 469 MW at the summer peak rating for each of these units. The facility also features an integrated solar thermal station which integrates solar thermal energy with Unit 8, a 4-on-1 combined cycle unit. The solar unit is capable of supporting up to 75 MW worth of steam, the equivalent of excess steam produced by duct firing the HRSGs on Unit 8. Although the solar thermal station supports Unit 8, the HRSGs for this unit are capable of providing rated capacity of the steam turbine without the aid of the solar station. In its entirety, the plant is rated to produce over 3,500 MW. The facility also includes a cooling pond to the east of the generation units which encompasses approximately 6,500 acres.

#### 3.7 Port Everglades

The Port Everglades plant is located within the boundaries of the Port Everglades port, in the City of Fort Lauderdale, Florida. Similar to the Cape Canaveral plant, originally the Port Everglades plant consisted

of two (2) natural gas fired boilers, however, those units were fully demolished and removed from the site and replaced with a single 3-on-1 combined cycle unit (Unit 5). Unit 5 consists of three Siemens 8000H combustion turbines, three heat recovery steam generators ("HRSGs"), and one steam turbine. The total capacity is 1,237 MW at the summer peak rating. Additionally, this unit includes an SCR for reducing NO<sub>x</sub> emissions. The Port Everglades plant also includes 12 small simple cycle combustion turbines, all of which will be retired by the end of 2016.

#### 3.8 Riviera

The Riviera plant is located on approximately 22 acres of land in Palm Beach County, approximately 10 miles north of the city of West Palm Beach, Florida. Similar to the Cape Canaveral and Port Everglades plants, originally the Riviera plant consisted of two (2) natural gas fired boilers, however, it was recently reconstructed as a single 3-on-1 combined cycle unit (Unit 5). Unit 5 consists of three Siemens 8000H combustion turbines, three HRSGs, and one steam turbine. The total capacity is 1,237 MW at the summer peak rating. Additionally, this unit includes an SCR for reducing NO<sub>x</sub> emissions.

#### 3.9 St. Johns River Power Park

The St. Johns River Power Park Plant is located in northeast area of Jacksonville, Florida. This facility is jointly owned between Jacksonville Electric Authority and FPL with ownership percentages of 80 and 20 percent, respectively. The facility includes two coal-fired steam turbine units (Units 1 and 2) with a combined capacity of 1,270 MW at the summer peak rating. The coal handling system for the facility includes a rotary rail car dumper equipped with a static weight scale, a train positioner, a receiving bin, four short belt feeders, a cross conveyor, two elevating conveyors, and two magnetic separators. In addition, the plant includes a coal unloading facility on Blount Island for coal delivered by barge, along with a system of coal conveyers from Blount Island to the plant. For cooling, the facility includes two hyperbolic natural draft cooling towers which are located in the northeast boundary of the site.

#### 3.10 Sanford

The Sanford plant is located on approximately 1,718 acres of land in Volusia County, approximately 2.5 miles south of DeBary, Florida. Originally, the facility included two conventional boiler steam units which were repowered in the mid 1990's to two 4-on-1 combined cycle units (Units 4 and 5). During the retrofit process, the boilers and associated equipment were removed, however, the steam turbines remained and are currently used in combined cycle mode. Each combined cycle unit operates using natural gas as the primary fuel supply and includes four GE 7FA combustion turbines, four HRSGs, and one steam turbine. These two units have a combined capacity of 2,010 MW or 1,005 MW each at the

summer peak rating. Additionally, the site includes a 1,100 acre cooling pond to the north of the generation units which is connected via a 4,500 foot canal.

#### 3.11 Scherer

The Scherer Steam Plant is located approximately 17 miles north of Macon, Georgia and includes four (4) coal-fired steam turbine units. The facility is jointly owned between Georgia Power Corporation, Jacksonville Electric Authority and FPL, with FPL having 76.36 percent ownership Unit 4 only. Unit 4 has a capacity of 990 MW at the summer peak rating and consists of a boiler, steam turbine generator, condenser, electrostatic precipitator, flue gas desulfurization unit, SCR, baghouse, one 530-foot tall natural draft-cooling tower, and a shared stack with Unit 3. Common facilities evaluated as part of this Study consist of the power house, the recycle pond, stormwater ponds, settling ponds, ash pond, ash settling landfill, coal storage yard, and limestone storage area.

## 3.12 Space Coast Next Generation Solar Energy Center

The Space Coast Next Generation Solar Energy Center ("Space Coast Solar") is a photovoltaic solar power facility located at the Kennedy Space Center in Cape Canaveral, Florida. The facility includes 35,000 single axis tracking SunPower solar panels with a total plant capacity of 10 MW at the summer peak rating. The Space Coast Solar facility uses the same panels as the Desoto Solar Center.

## 3.13 Turkey Point

The Turkey Point plant is located on the western coast of Biscayne Bay approximately 15 miles south of Miami, Florida. The facility includes two natural gas-fired boiler steam units (Units 1 and 2), two nuclear generating units (Units 3 and 4), and a 4-on-1 combined cycle unit (Unit 5). For the purpose of this study, the nuclear generating units and associated common facility equipment are excluded from the decommissioning estimates. Units 1 and 2 were originally designed with the plan for future conversion to burn coal, however, this conversion was never made. Unit 2 has been converted to a synchronous condenser and Unit 1 will be converted to a synchronous condenser in 2016. Unit 5 is a combined cycle unit which includes four 170-MW GE "F" Class combustion turbines with dry low NO<sub>x</sub> combustors, four HRSGs, and one steam turbine with a combined capacity of 1,187 MW at the summer peak rating. The facility's condensing cooling system includes intake from the Biscayne Bay and discharges to a manmade series of canals that are associated with the nuclear unit. For purposes of this Study, the canal system was excluded from the decommissioning estimates, since it is a nuclear generation asset.

# 3.14 West County

The West County Energy Center is located approximately 15 miles west of West Palm Beach, in Palm Beach County, Florida. The facility includes three 3-on-1 combined cycle units, each configured with three Mitsubishi 501G1 combustion turbines, 3 Nooter Eriksen HRSGs, and one steam turbine with a combined capacity of 3,657 MW at the summer peak rating for the entire facility. Additionally, each unit has an SCR for reducing  $NO_x$  emissions. Each combined cycle unit includes a dedicated mechanical draft cooling tower.

#### 4.0 PROPOSED PLANTS DESCRIPTIONS

FPL currently has several generation facilities under development which are anticipated to have a commercial operation date between 2016 and mid-2019 that were included for evaluation in the Study. Because these facilities are still in the development stage, as-built drawings of these facilities were unavailable. Instead, the decommissioning costs for these plants were estimated based on BMcD's experience with demolition of facilities similar to those proposed.

Following are plant descriptions for each of the proposed power plants included in this Study.

## 4.1 Babcock Ranch Solar Energy Center

The Babcock Ranch Solar Energy Center ("Babcock Ranch Solar") is proposed to be built by the end of 2016 as a photovoltaic solar power facility located near Babcock, Florida, with a proposed capacity of 74.5 MW at the summer peak rating and a facility size of approximately 440 acres. The facility is proposed to include approximately 229,000 panels in conjunction with 40 GE 2 MVA inverters and one 85 MVA step-up transformer.

## 4.2 Citrus Solar Energy Center

The Citrus Solar Energy Center ("Citrus Solar") is proposed to be built by the end of 2016 as a photovoltaic solar power facility located in DeSoto County, Florida, with a proposed nameplate capacity of 74.5 MW and a facility size of approximately 841 acres. The facility is proposed to include approximately 229,000 Hanwha 325 W panels in conjunction with 40 GE 2 MVA inverters and one 85 MVA step-up transformer.

#### 4.3 Fort Myers

It is anticipated that by the end of 2016, the Fort Myers plant will replace 10 of the 12 simple-cycle combustion turbines with two GE 7FA.05 combustion turbines, each rated for 231 MW. For purposes of this Study, decommissioning estimates have been prepared based on the configuration of the plant after this replacement project occurs.

#### 4.4 Lauderdale

It is anticipated that by the end of 2016, the Lauderdale plant will replace 22 of the 24 simple-cycle combustion turbines with five GE 7FA.05 combustion turbines, each rated for 231 MW. For purposes of this Study, decommissioning estimates have been prepared based on the configuration of the plant after this replacement project occurs.

## 4.5 Manatee Solar Energy Center

The Manatee Solar Energy Center ("Manatee Solar") is proposed to be built by 2016 as a photovoltaic solar power facility located in Manatee County, Florida, with a proposed capacity of 74.5 MW at the summer peak rating and a facility size of approximately 762 acres. The facility is proposed to include approximately 229,000 panels in conjunction with 40 GE 2 MVA inverters and one 85 MVA step-up transformer.

## 4.6 Okeechobee Clean Energy Center

The Okeechobee Clean Energy Center ("OCEC") is proposed to be built prior to June 2019 and will be located in northeast Okeechobee County, Florida, approximately 24 miles west of Vero Beach and 27 miles north-northeast of Okeechobee on the border with Indian River County. The OCEC will include approximately 189 acres and utilize three "H" Class combustion turbines, three HRSGs, and a steam turbine. The plant will have an approximate generating capability of 1,633 MW at the summer peak rating. Additionally, each HRSG will have an SCR for reducing NO<sub>x</sub> emissions. For cooling, Unit 1 is anticipated to have a 30-cell mechanical draft cooling tower and basin located at the site. The facility will use equipment similar to that at the Riviera Plant.

#### 5.0 DECOMMISSIONING COSTS

BMcD has prepared decommissioning cost estimates for the Plants. When FPL determines that each site should be retired, the above grade equipment and steel structures are assumed to have sufficient scrap value to a demolition contractor to offset a portion of the site decommissioning costs. However, FPL will incur costs of decommissioning of the Plants and restoration of the site to the extent that those costs exceed the salvage value of equipment and bulk steel.

The decommissioning costs include the cost to return the site to an industrial condition, suitable for reuse for development of an industrial facility. Included are the costs to dismantle all of the assets owned by FPL at the site, including power generating equipment and balance of plant facilities, as well as environmental site restoration activities.

For purposes of this study, BMcD has assumed that each site will be decommissioned as a single project, allowing the most cost effective demolition methods to be utilized. It is BMcD's understanding, based on information provided by FPL, that this methodology was used for demolition of the other FPL facilities that were fully retired. A summary of several of the means and methods that could be employed is summarized in the following paragraphs; however, means and methods will not be dictated to the contractor by BMcD. It will be the contractor's responsibility to determine means and methods that result in safely decommissioning the Plants at the lowest possible cost.

Asbestos remediation would take place prior to commencement of any other demolition activities.

Abatement would need to be performed in compliance with all state and federal regulations, including, but not limited to requirements for sealing off work areas and maintaining negative pressure throughout the removal process. Final clearances and approvals would need to be achieved prior to performing further demolition activities.

High grade assets would then be removed from the site, to the extent possible. This would include items such as transformers, transformer coils, circuit breakers, electrical wire, condenser plates and tubes, and heater tubes. High grade assets include precious alloys such as copper, aluminum, brass tubes, stainless steel tubes, and other high value metals occurring in plant systems. High grade asset removal would occur up-front in the schedule, to reduce the potential for vandalism, to increase cash flow, and for separation of recyclable materials, in order to increase scrap recovery. Methods of removal vary with the location and nature of the asset. Small transformers, small equipment, and wire would likely be removed and shipped as-is for processing at a scrap yard. Large transformers, combustion turbines, steam turbines, and condensers would likely require some on-site disassembly prior to being shipped to a scrap yard.

Construction and Demolition ("C&D") waste includes items such as non-asbestos insulation, roofing, wood, drywall, plastics, and other non-metallic materials. C&D waste would typically be segregated from scrap and concrete to avoid cross-contaminating of waste streams or recycle streams. C&D demolition crews could remove these materials with equipment such as excavators equipped with material handling attachments, skid steers, etc. This material would be consolidated and loaded into bulk containers for disposal.

In general, boilers and HRSGs could be felled and cut into manageable sized pieces on the ground. First the structures around the boilers would need to be removed using excavators equipped with shears and grapples. Stairs, grating, elevators, and other high structures would be removed using an "ultra-high reach" excavator, equipped with shears. Following removal of these structures, the boilers or HRSGs would be felled, using explosive blasts. The boilers would then be dismantled using equipment such as excavators equipped with shears and grapples, and the scrap metal loaded onto trailers for recycling.

After the surrounding structures and ductwork have been removed, the stacks would be imploded, using controlled blasts. Following implosion the stack liners and concrete would be reduced in size to allow for handling and removal.

Balance of plant structures and foundations would likely be demolished using excavators equipped with hydraulic shears, hydraulic grapples, and impact breakers, along with workers utilizing open flame cutting torches. Steel components would be separated, reduced in size, and loaded onto trailers for recycling. Concrete would be broken into manageable sized pieces and stockpiled for crushing on-site. Concrete pieces would ultimately be loaded in a hopper and fed through a crusher to be sized for on-site disposal.

The Turkey Point plant would likely be demolished utilizing "ultra-high reach" excavators equipped with shears and a concrete processor, excavators, and skid steers, since it cannot be felled, due to the proximity of the adjacent nuclear unit.

## 5.1 General Assumptions for All Sites

The following assumptions were made as the basis of all of the cost estimates.

- 1. Pricing for all estimates are in 2015 dollars.
- 2. Scrap values are based on the American Metals Market Monthly Report for October 2015.
- 3. All work will take place in a safe and cost efficient method.
- 4. Labor costs are based on a regular 40 hour workweek without overtime.

- 5. Labor rates are based on RS Means values for a demolition crew B-8 with rates adjusted based on the site cost indexes for Florida and Georgia.
- 6. The estimates are inclusive of all costs necessary to properly dismantle and decommission all sites to a marketable or usable condition. For purposes of this study and the included cost estimates, the facilities will be restored to a condition suitable for industrial use.
- 7. All facilities will be decommissioned to zero generating output. Existing utilities will remain in place for use by the contractor for the duration of the demolition activities.
- 8. It is assumed that all of the power stations will be dismantled after all units at a single site are taken out of service, allowing dismantlement of entire sites at once.
- 9. Soil testing and any other on-site testing has not been conducted for this study.
- 10. Transmission switchyards and substations within the boundaries of the plant are not part of the demolition scope. Switchyards that are associated with the facilities only and are not part of the transmission system are included for demolition. For purposes of this study, the division between generation assets and transmission assets is at the high side of the generator step-up transformers.
- 11. The costs for relocation of transmission lines, or other transmission assets, are specifically excluded from the decommissioning cost estimates. Any costs necessary to support on-going operations of adjacent or newly proposed units will be allocated to the operating costs of the units not being decommissioned.
- 12. Step-up transformers, auxiliary transformers, and spare transformers are included for demolition and scrap in all estimates.
- 13. Abatement of asbestos will precede any other work. After final air quality clearances have been obtained, demolition can proceed.
- 14. All demolition and abatement activities, including removal of asbestos, will be done in accordance with any and all applicable Federal, State and Local laws, rules and regulations.
- 15. Asbestos estimates were provided by FPL and escalated at 2.5 percent from 2014 to 2015 to represent 2015 year dollars unless noted otherwise in the site specific sections below.
- 16. FPL will remove or consume all burnable coal, fuel oil and chemicals prior to commencement of demolition activities.
- 17. Hazardous material abatement is included for all sites as necessary, including asbestos, mercury, and polychlorinated biphenyls ("PCBs"). Lead paint coated materials will be handled by certified personnel as necessary, but lead paint will not be removed prior to demolition.
- 18. Intake and discharge canals including any manatee heater equipment are assumed to remain at the site after demolition and thus have been excluded from decommissioning estimates.

- 19. No environmental costs have been included to address cleanup of contaminated soils, hazardous materials, or other conditions present on-site having a negative environmental impact, other than those specifically listed in these assumptions. No allowances are included for unforeseen environmental remediation activities.
- 20. Handling and disposal of hazardous material will be performed in compliance with the approved methods of FPL's Environmental Services Department.
- 21. Refractory brick on the coal fired boilers is handled and disposed of as hazardous waste, due to the likelihood of the presence of arsenic contamination.
- 22. Existing ash ponds will be pumped dry, filled with inert debris, capped with 40 mil geomembrane, geo-net drainage layer, 24 inches of soil, and vegetated cover.
- 23. Stormwater ponds will be pumped dewatered, graded to drain to natural drainage patterns, and seeded.
- 24. Cooling lakes or ponds will remain as-is.
- 25. Site areas will be graded to achieve suitable site drainage to natural drainage patterns, but grading will be minimized to the extent possible.
- 26. All above grade structures will be demolished. All below grade structures, including foundations, will be removed to two (2) feet below grade. Additional structures and foundations greater than two (2) feet below grade will be abandoned in-place unless deemed hazardous by FPL or otherwise stated in the assumptions as being demolished.
- 27. Existing basements will be used to bury non-hazardous debris. Concrete in trenches and basements will be perforated to create drainage. Non-hazardous debris, such as concrete and brick, will be crushed and used as clean fill on-site once the capacity of all existing basements has been exceeded. All inert debris will be disposed of on-site. Costs for offsite disposal are included for materials not classified as inert debris.
- 28. Major equipment, structural steel, combustion turbines, generators, inlet filters, exhaust stacks, transformers, electrical equipment, cabling, wiring, pump skids, above ground piping, and equipment enclosures for the above equipment will be sold for scrap and removed from the Plant site by the demolition contractor. All other demolished materials are considered debris.
- 29. Except for the circulating water lines, underground piping will be abandoned in place. Circulating water system pipes will be capped, have the tops broken out, and backfilled with on-site soil.
- 30. Sewers, catch basins and ducts will be filled and sealed on the upstream side. Horizontal runs will be abandoned in place after being closed.

- 31. Costs are included to clean out the fuel oil tanks and lines. Costs have also been included to remove three (3) feet of soil directly below each of the fuel oil tanks to account for the potential for this soil to be contaminated during normal operations.
- 32. Disturbed site areas will be seeded or surfaced with crushed concrete after they are graded to provide a suitable ground cover to prevent soil erosion.
- 33. BMcD assumes that spare parts will be sold to the extent possible prior to decommissioning. Any remaining spare parts will be sold as scrap by the demolition contractor.
- 34. Rolling stock, including rail cars, dozers, plant vehicles, etc. is assumed to be removed by FPL prior to decommissioning.
- 35. Valuation and sale of land and all replacement generation costs are excluded from this scope.
- 36. For purposes of this study, it is assumed that none of the equipment will have a salvage value in excess of the scrap value of the materials in the equipment at the time of the decommissioning study. The decommissioning cost estimate is based on the end of useful life of each facility. All equipment, steel, copper, and other metals will be sold as scrap. Credits for salvage value are based on scrap value alone. Resale of equipment and materials is not included.
- 37. The scope of the costs included in this Study is limited to the decommissioning activities that will occur at the end of useful life of the facilities and groundwater monitoring activities associated with closure of ash ponds and landfills. Groundwater monitoring costs associated with the closed ash ponds and landfills are reported as the annual cost for one year, in 2015 dollars. These monitoring activities will be required for 30 years. Additional on-going costs may be required for maintenance of the site, depending on the condition of the site and ownership of the site. No additional ongoing costs have been included in the cost estimates provided in this Study.
- 38. Contingency is included in the cost estimate to cover expenses that are unknown at the time the estimate was prepared, but can reasonably be anticipated to be expended on the project. When preparing a cost estimate, there is always some uncertainty as to the precision of the quantities in the estimate, how work will be performed, and what work conditions will be like when the project is executed. Uncertainties are greater in a demolition project than in a construction project due to the nature of the drawings used for quantity takeoffs and the likelihood of encountering unknown conditions, such as hazardous materials, or environmental contamination. Other unknown conditions that could impact the costs include, but are not limited to, changing market conditions and weather delays. These uncertainties will impact the actual costs of the project relative to the estimated cost. The estimator is aware of these unknowns when preparing the cost estimate and includes contingency to cover these costs. A 20 percent contingency was included on the direct costs in the estimates prepared as part of this study to cover unknowns.

39. Indirect costs are included in the cost estimate to cover owner expenses such as management trailers, utilities, demolition oversight, and home office general and administrative costs. An indirect cost of 5 percent was included in the estimates to cover such costs.

Market conditions may result in cost variations at the time of contract execution.

## 5.2 Site Specific Decommissioning Assumptions

The following assumptions were made specific to each plant cost estimate.

## 5.2.1 Cape Canaveral

The following assumptions were made specific to the Cape Canaveral plant.

- 1. Intake and discharge canals including any manatee heater equipment are assumed to remain in place after demolition and have been excluded from the decommissioning estimate.
- 2. The laydown yard south of intake and discharge canals is assumed to be separate from the plant and is excluded from the demolition estimate.
- 3. Crushed concrete is assumed to be disposed of onsite and spread across the site.
- 4. The collector switchyard equipment, located west of the gas turbines, and the overhead transmission line from the onsite collector switchyard to the adjacent substation are included in the demolition estimate. The plant substation will remain in place and is not included in the decommissioning estimate.
- 5. The natural gas feeder station located north of the onsite switchyard is assumed to remain in place after demolition and has been excluded from the decommissioning estimate.
- 6. Cost estimate includes cost for importing topsoil, grading, and seeding the stormwater pond.

## 5.2.2 DeSoto Next Generation Solar Energy Center

The following assumptions were made specific to the DeSoto Next Generation Solar Center facility.

1. The cost estimate includes cost for grading, and seeding the site. No imported topsoil is assumed necessary for the solar facility due to the small footprint of the equipment foundations.

# 5.2.3 Space Coast Next Generation Solar Energy Center

The following assumptions were made specific to the Space Coast Solar Center facility.

1. The cost estimate includes cost for grading, and seeding the site. No imported topsoil is assumed necessary for the solar facility due to the small footprint of the equipment foundations.

## 5.2.4 Fort Myers

- 1. The property south of State Road 80 which is leased to the city for the manatee park is excluded from the decommissioning estimates.
- 2. The collector switchyard equipment immediately adjacent to the combustion turbines will be removed and all salvageable material will be scrapped including the overhead transmission lines to the plant substation. The plant substation and switchyard will remain and all access roads on the site that are specifically for the plant substation are not included in the decommissioning estimate.
- 3. The discharge canal located central to the plant site will remain and is excluded from the estimate
- 4. Cooling water piping from intake and to discharge canals is assumed to be below two (2) feet and will be capped and left in place.
- 5. The estimate includes the proposed two (2) GE 7FA.05 combustion turbines in replacement of 10 of the existing simple-cycle combustion turbines, with two simple-cycle combustion turbines remaining at the site and included in the decommissioning estimate. For reference, the proposed GE 7FA.05 combustion turbines were classified as Unit 4.

#### 5.2.5 Lauderdale

- 1. The discharge canal located north of the steam turbines site will remain and is excluded from the estimate.
- 2. The collector switchyard equipment immediately adjacent to the combustion turbines will be removed and all salvageable material will be scrapped including the overhead transmission lines to the plant substation. The plant substation and switchyard will remain in place and all access roads on the site that are specifically for the plant substation are not included in the decommissioning estimate.
- 3. The site includes a bridge to access the main entrance of the site. This bridge is assumed to remain after decommissioning of site and has been excluded from the decommissioning cost estimate.
- 4. The estimate includes the proposed five (5) GE 7FA.05 combustion turbines in replacement of 22 of the existing simple-cycle combustion turbines, with two simple-cycle combustion turbines remaining at site and included in decommissioning estimate. For reference, the proposed GE 7FA.05 combustion turbines were classified as Unit 6.

#### 5.2.6 Manatee

- The collector switchyard equipment immediately south of the combustion turbines will be removed and all salvageable material will be scrapped including the overhead transmission lines to the plant substation.
- The plant substation and switchyard located south of the boilers will remain and all access roads on the site that are required for access to the plant substation are not included in the decommissioning estimate.
- 3. Units 1 and 2 have electrostatic precipitators for air quality controls which were included in the decommissioning estimate.
- 4. The cooling pond located northeast of site is assumed to remain after decommissioning of plant and all costs associated with pond have been excluded from the decommissioning estimate.
- 5. Condenser tube material for Units 1 and 2 are sea cure. Unit 3 condenser tube material is 316 stainless.
- 6. Fuel oil tanks at the nearby port are assumed to be separate from the plant and are excluded from the decommissioning estimate. The fuel pipeline from the port to the plant will be flushed, capped, and abandoned in place.
- 7. The soil contamination estimate was provided by FPL and performed by FPL's environmental team based on known contamination issues at the site. BMcD did not independently verify these estimates.

#### 5.2.7 **Martin**

- 1. The site includes two substations, both of which are assumed to remain in place and are excluded from the decommissioning estimate.
- 2. The cooling pond located on the west side of the site is assumed to remain in place and all costs associated with the pond have been excluded from the decommissioning estimate.
- 3. Unit 8 includes a parabolic solar thermal facility. The parabolic troughs will be removed and disposed of in the onsite landfill. The structural framing for the parabolic troughs is made of aluminum and will be recycled, along with the steel columns that support the aluminum framing. The foundations below the columns will be removed to two (2) feet below grade.

## 5.2.8 Port Everglades

1. The Plant was under construction during the time of the Study. Estimates are based on the anticipated layout of the facility after construction is complete.

- 2. The two (2) plant substations and switchyards located south and southwest of the facility will remain and all access roads on the site that are required for access to the plant substations are not included in the decommissioning estimate.
- 3. The discharge canal is assumed to remain at site and was excluded from the decommissioning estimate.
- 4. The 12 CTs located north of Unit 5 are assumed to be removed, including foundation, equipment, and interconnection to plant substations.
- 5. The above ground piping at the natural gas metering area is included in the decommissioning estimate, however, all piping below ground is assumed to be two (2) feet below grade and is excluded from the estimate.

#### 5.2.9 Riviera

The collector switchyard equipment immediately south of the combustion turbines will be
removed and all salvageable material will be scrapped including the overhead transmission lines
to the plant substation. The plant substation and switchyard located west of the combustion
turbines will remain and all access roads on the site that are specifically for the plant substation
are not included in the decommissioning estimate.

#### **5.2.10** Sanford

- 1. The gazeebo and associated parking lot located in the southwest section of the site is assumed to remain and is excluded from the decommissioning estimate.
- 2. The collector switchyards immediately adjacent to the combustion turbines will be removed and all salvageable material will be scrapped including the overhead transmission lines to the plant substation. The plant substation will remain and all access roads on the site that are specifically for the plant substation are not included in the decommissioning estimate.
- 3. The plant includes two (2) condensate tanks within a containment area which were originally used for fuel oil storage. Soil remediation under these tanks is included.
- 4. The cooling pond and associated canal system are assumed to remain after decommissioning of plant and all costs associated with pond have been excluded from the decommissioning estimate.
- 5. The concrete separator between intake and discharge canal is assumed to remain in place and is excluded from decommissioning estimate.
- 6. The site includes ash landfills which were approved as closed prior to this Study. No costs are included in the current estimates for these landfills

#### 5.2.11 Scherer

- 1. The decommissioning estimate includes the complete cost for demolition of Unit 4 and all common facilities. BMcD notes that FPL has percentage ownership of Unit 4 and common facilities; however, the costs presented in this Study are based on the full removal costs of each of these items, with no ownership percentages applied to these values. FPL will apply their ownership percentage to determine their portion of the cost obligations.
- 2. The plant substation will remain and all access roads on the site that are specifically for the plant substation are not included in the decommissioning estimate.
- 3. All railroad spurs from highway 87 to site are included in the decommissioning estimate. This includes the railroad tracks used for both limestone and coal transportation.
- 4. The coal pile area will have two (2) feet of soil excavated and replaced with clean fill, covered with imported topsoil, and seeded.
- 5. The powdered activated carbon ("PAC") and gypsum landfills located north of the Plant will be closed by rough grading of berms and sediment for cap base, importing material for cap base, installing geotextile over base soil, installing a 40-mil HDPE liner, installing geotextile on top of FML, importing and placing 24 inches of cover soil, grading cover soil, and hydroseeding.
- 6. The site includes an ash pond which will be closed by dewatering, rough grading of berms and sediment for cap base, importing material for cap base, installing geotextile over base soil, installing a 40-mil HDPE liner, installing geotextile on top of FML, importing and placing 24 inches of cover soil, grading cover soil, and hydroseeding.
- 7. The recycle pond will be closed by dewatering the pond, excavating ash residuals (estimated at 2 feet), transporting the residuals to the ash pond, removing the dam and transporting material the to the ash pond, grading the area, and hydroseeding.
- 8. The site includes a river pumping station located approximately five (5) miles southeast of the Plant and a water supply pipeline, which transports intake water from the river pumping station to the Plant. These pipes will be excavated to the top of pipe, have the tops broken out, and backfilled with soil.
- 9. Each unit includes a dedicated parabolic cooling tower.
- 10. There is a small and large dry stack, each of which is shared between two (2) units (i.e., Unit 4 shares stacks with Unit 3). Half of the costs associated with demolishing the Unit 3 and Unit 4 stacks has been included in the Unit 4 decommissioning costs.
- 11. The asbestos cost estimate was provided by FPL which included 20 percent for contingency and 5 percent for indirects in 2013 year-dollars. BMcD removed the contingency and indirects and then escalated value to represent 2015 year-dollars.

#### 5.2.12 St. Johns River Power Park

- BMcD notes that FPL has percentage ownership of the plant, however, the costs presented in this
  Study are based on the full removal costs for the plant, with no ownership percentages applied to
  these values. FPL will apply their ownership percentage to determine their portion of the cost
  obligations.
- 2. The plant substation will remain and all access roads on the site that are specifically for the plant substation are not included in the decommissioning estimate.
- 3. All railroad spurs surrounding the Plant are included for demolition up to the main railway located approximately 0.5 miles west of the Plant.
- 4. The coal pile area will have 2 feet of soil excavated and replaced with clean fill covered with imported topsoil, and seeded.
- 5. The limestone storage area located east of the boiler units will have 2 feet of soil excavated and replaced with clean fill, covered with imported topsoil, and seeded.
- 6. The site includes two (2) ash landfills which will be closed by rough grading of berms and sediment for cap base, importing material for cap base, installing geotextile over base soil, installing a 40-mil HDPE liner, installing geotextile on top of FML, importing and placing 24 inches of cover soil, grading cover soil, and hydroseeding.
- 7. The soil contamination estimate was provided by FPL and performed by FPL's environmental team based on known contamination issues at the site. BMcD did not independently verify these estimates.
- 8. North of the plant is the old city landfill that is assumed to be separate from the Plant. All costs associated with this landfill have been excluded from the decommissioning costs.
- 9. The site includes a telecommunication tower onsite which is not owned by the Plant. This tower is assumed to remain onsite after the decommissioning of the Plant.
- 10. The Plant includes an unloading dock located offsite. The coal is transported from the unloading dock to the Plant via a three (3) mile conveyor. The conveyor system is assumed to be removed at time of demolition, however, the unloading dock will remain in place, and was excluded from the decommissioning costs.

# 5.2.13 Turkey Point

1. Due to the proximity of the two nuclear units, this facility will require specialized dismantling to minimize vibrations which may impact the safety and operation of the nuclear facility. Since explosive blast to topple the boilers and stacks will not be allowed, the crew size was adjusted to

- include two (2) additional iron workers and an upgraded crane to 90 ton load. This estimate was adjusted to account for selective equipment dismantlement methodology.
- 2. Unit 1 and 2 are natural gas-fired boiler units which burn low-sulfur fuel oil and have no air quality control equipment.
- 3. Several components of the two boiler units are shared with the nuclear units. The nuclear units were excluded from this decommissioning study and therefore, any components that are integrated were excluded from this study. Such components include:
  - i) Discharge canal;
  - ii) 6,500 acre cooling basin located south of Turkey Point;
  - iii) Water treatment facility;
  - iv) Project substation;
  - v) All parking lots located south of Units 1 and 2;
  - vi) Steam turbine crane track south of Unit 1 and 2 (crane is included); and
  - vii) Boundary fence.
- 4. Decommissioning estimate includes a cost of \$350,000 for the removal of the firewater protection surrounding the boiler units. This value was provided by FPL and was not independently evaluated by BMcD.
- 5. FPL has completed several studies regarding the method and cost for dismantling the stacks for Unit 1 and 2 in order to protect from impacting the nearby nuclear units. These studies include a vibrations study which evaluates the maximum size of sections which can be dropped off the stacks in order to be below the vibrations limit of the nuclear units. Based on the findings of the studies, and as described to BMcD by FPL, BMcD prepared an estimated cost for removing the stacks based on the removal process determined from these studies.

# 5.2.14 West County

- The collector switchyard equipment adjacent to the combustion turbines will be removed and all
  salvageable material will be scrapped including the overhead transmission lines to the plant
  substation. The plant substation located north of the combustion turbines will remain and all
  access roads on the site that are specifically for the plant substation are not included in the
  decommissioning estimate.
- 2. Cooling water piping from the steam turbine to cooling towers is assumed to be below two (2) feet and will be capped and left in place at the steam turbine and at the cooling towers. All other cooling water piping will be removed and scrapped.

## 5.2.15 Babcock Ranch Solar Energy Center

The following assumptions were made specific to the Babcock Ranch Solar Energy Center facility.

2. The plant is currently in the development stage. Estimates were scaled based on the DeSoto Next Generation Solar Center facility.

## 5.2.16 Citrus Solar Energy Center

The following assumptions were made specific to the Citrus Solar Energy Center facility.

3. The plant is currently in the development stage. Estimates were scaled based on the DeSoto Next Generation Solar Center facility.

# 5.2.17 Manatee Solar Energy Center

The following assumptions were made specific to the Manatee Solar Energy Center facility.

4. The plant is currently in the development stage. Estimates were scaled based on the DeSoto Next Generation Solar Center facility.

#### 5.2.18 Okeechobee

1. The plant is currently in the development stage. Estimates were based on a typical 3-on-1"H" Class combustion turbine combined cycle plant.

### 5.3 Results

Table 5-1 presents a summary of the decommissioning cost for each Plant. This summary provides a breakout of the major decommissioning activities and the scrap value for the Plant. Further breakdowns of these costs are presented in Table A-1 through Table A-18 in Appendix A. BMcD has also prepared annual costs for groundwater monitoring associated with closed ash ponds and/or landfills, as presented in Table 5-2. Note that the regulatory requirement for groundwater monitoring should be for a period of 30 years following the closure.

Table 5-1: Site Decommissioning Cost (2015\$)1

	Decommissioning		
Plant	Costs	Credits	Net Project Cost
Cape Canaveral	\$20,031,993	(\$4,616,199)	\$15,415,794
DeSoto Solar	\$3,009,309	(\$735,431)	\$2,273,878
Ft. Myers	\$41,516,932	(\$10,119,993)	\$31,396,939
Lauderdale	\$39,299,982	(\$7,864,398)	\$31,435,584
Manatee	\$73,789,541	(\$16,363,554)	\$57,425,987
Martin	\$113,594,115	(\$26,204,511)	\$87,389,603
Port Everglades	\$21,261,928	(\$7,317,093)	\$13,944,835
Riviera	\$17,500,262	(\$4,387,026)	\$13,113,236
St. Johns River <sup>2</sup>	\$119,600,000	(\$11,470,000)	\$108,130,000
Sanford	\$31,444,119	(\$9,043,912)	\$22,400,207
Scherer <sup>2,3</sup>	\$205,554,000	(\$9,629,000)	\$195,925,000
Space Coast Solar	\$1,150,000	(\$289,000)	\$861,000
Turkey Point	\$64,616,729	(\$13,677,173)	\$50,939,556
West County	\$54,842,211	(\$16,156,521)	\$38,685,690
Babcock Ranch Solar <sup>4</sup>	\$8,569,000	(\$2,152,000)	\$6,417,000
Citrus Solar <sup>4</sup>	\$8,569,000	(\$2,152,000)	\$6,417,000
Manatee Solar <sup>4</sup>	\$8,569,000	(\$2,152,000)	\$6,417,000
Okeechobee <sup>4</sup>	\$17,515,000	(\$5,560,000)	\$11,955,000

<sup>&</sup>lt;sup>1</sup> Cost estimates were rounded to the nearest \$1,000 and then site inventory costs and recoverable scrap for inventory was added to the rounded estimate resulting in the values shown.

**Table 5-2: Annual Groundwater Monitoring Costs (2015\$)** 

Plant	<b>Annual Cost</b>
St. Johns River	\$175,000
Scherer	\$1,175,300

Monitoring installation costs included in decommissioning costs.

<sup>&</sup>lt;sup>2</sup> Costs for Scherer and St. Johns River have not been adjusted for FPL's ownership percentage.

<sup>&</sup>lt;sup>3</sup> Scherer estimate includes only Unit 4 and all common facilities.

<sup>&</sup>lt;sup>4</sup> Proposed facility.

#### 6.0 LIMITATIONS

In preparation of this decommissioning study, BMcD has relied upon information provided by Florida Power & Light. BMcD acknowledges that it has requested the information from Florida Power & Light that it deemed necessary to complete this study. While we have no reason to believe that the information provided to us, and upon which we have relied, is inaccurate or incomplete in any material respect, we have not independently verified such information and cannot guarantee its accuracy or completeness.

Engineer's estimates and projections of decommissioning costs are based on Engineer's experience, qualifications and judgment. Since Engineer has no control over weather, cost and availability of labor, material and equipment, labor productivity, construction contractors' procedures and methods, and other factors, Engineer does not guarantee the accuracy of its estimates and projections.

Engineer's estimates do not include allowances for unforeseen environmental liabilities associated with unexpected environmental contamination due to events not considered part of normal operations, such as fuel tank ruptures, oil spills, etc. Estimates also do not include allowances for environmental remediation associated with changes in classification of hazardous materials.

Docket No. 160021-EI FPL 2016 Dismantlement Study (Corrected) Exhibit KF-4. Page 51 of 127

**APPENDIX A - COST BREAKDOWNS** 

# Table A-1 Cape Canaveral Power Plant Decommissioning Cost Summary

			r	Material and							
		Labor		Equipment		Disposal		Environmental	Total Cost		Salvage
Cape Canaveral Power Plant											
Unit 1		0.070.000		0.047.000					5 507 000		
GTs and HRSGs Steam Turbine & Pedestal	\$	2,670,000	\$	2,917,000		-	\$	-	\$ 5,587,000		-
SCR	\$ \$	1,174,000		1,282,000		-	\$	-	\$ 2,456,000		-
GSU & Electrical	\$	135,000 227.000		147,000 248,000		54.000	\$	-	\$ 282,000 529.000	\$	-
Stack	\$	95.000	\$	103,000		54,000	ş S	-	\$ 198.000	\$	-
On-site Concrete Crushing & Disposal	\$	95,000	\$	103,000	\$	182,000	\$	-	\$ 182,000	\$	-
Scrap	\$	_	\$	_	\$	102,000	s S	-	\$ 162,000	\$	(4,218,000
Subtotal	\$	4,301,000	\$	4.697.000	\$	236,000	\$		\$ 9,234,000	\$	(4,218,000)
	<u> </u>	1,000,000		,,,,,,,,,	_		_		 -,,		(1,210,000)
Common Auxiliary, Switchyard and Substation	\$	31,000	\$	34,000	\$	_	\$	_	\$ 65,000	\$	_
Cooling Water Intakes and Circulating Water Pumps	\$	172,000	\$	188,000	\$	-	\$	-	\$ 360,000	\$	-
Roads	\$	193,000	\$	211,000		212,000	\$	-	\$ 616,000	\$	-
All BOP Buildings	\$	521,000	\$	569,000	\$	-	\$	-	\$ 1,090,000	\$	-
Fuel Oil Storage Tanks	\$	110,000	\$	121,000	\$	-	\$	-	\$ 231,000	\$	-
All Other Tanks	\$	113,000	\$	124,000	\$	-	\$	-	\$ 237,000	\$	-
Contaminated Soil Removal	\$	-	\$	-	\$	-	\$	101,000	\$ 101,000	\$	-
Fuel Oil Storage Tank Cleaning	\$	-	\$	-	\$	-	\$	1,504,000	\$ 1,504,000	\$	-
Fuel Oil Line Flushing/Cleaning	\$	-	\$	-	\$	-	\$	154,000	\$ 154,000	\$	-
Settling Pond Closure	\$	-	\$	-	\$	-	\$	1,085,000	\$ 1,085,000	\$	-
On-site Concrete Crushing & Disposal	\$	-	\$	-	\$	65,000	\$	-	\$ 65,000	\$	-
Seeding and Grading	\$	-	\$	-	\$	-	\$	137,000	\$ 137,000	\$	-
Debris	\$	-	\$	-	\$	1,000	\$	-	\$ 1,000	\$	-
Scrap	\$	-	\$	-	\$	-	\$	-	\$ -	\$	(255,000)
Subtotal	\$	1,140,000	\$	1,247,000	\$	278,000	\$	2,981,000	\$ 5,646,000	\$	(255,000)
Cape Canaveral Energy Center Subtotal	\$	5,441,000	\$	5,944,000	\$	514,000	\$	2,981,000	\$ 14,880,000	\$	(4,473,000)
TOTAL COST (CREDIT)									\$ 14,880,000	s	(4,473,000
PROJECT INDIRECTS (5%)									\$ 744,000		., ,
CONTINGENGY (20%)									\$ 2,976,000		
SITE INVENTORY COST (CREDIT) <sup>1</sup>									\$ 1,431,993	•	(143,199
											, ,
TOTAL NET PROJECT COST (CREDIT)									\$ 20,031,993	Þ	(4,616,199)
TOTAL NET PROJECT COST (CREDIT)									\$ 15,415,794		

<sup>&</sup>lt;sup>1</sup> Site inventory costs and recoverable scrap of inventory estimates (10%) were provided by FPL and were not independently reviewed by BMcD.

# Table A-2 DeSoto Next Generation Solar Energy Center Decommissioning Cost Summary

			- 1	Material and								
		Labor		Equipment		Disposal		Environmental		Total Cost		Salvage
eSoto Next Generation Solar Energy Center												
Unit 1												
Demolition	\$	564,000		846,000		-	\$	-	\$	1,410,000		-
Collector System	\$	44,000		66,000		-	\$	-	\$	110,000		-
Project Buildings	\$	6,000		9,000			\$	-	\$	15,000		-
Hazardous Material Disposal	\$	-	\$	-	\$	393,000		-	\$	393,000		-
On-site Concrete Crushing & Disposal	\$	-	\$	-	\$	25,000	\$		\$	25,000		-
Site Restoration	\$	-	\$	-	\$	-	\$	300,000	\$	300,000		-
Debris	\$	-	\$	-	\$	47,000	\$	-	\$	47,000		(700,000)
Scrap	3		Þ	-	\$	-	\$	-	\$	-	\$	(722,000)
Subtotal	\$	614,000	\$	921,000	ą	465,000	ą	300,000	ð	2,300,000	Þ	(722,000)
Desoto Solar Energy Center Subtotal	\$	614,000	\$	921,000	\$	465,000	\$	300,000	\$	2,300,000	\$	(722,000)
TOTAL COST (CREDIT)									\$	2,300,000	\$	(722,000)
PROJECT INDIRECTS (5%)									\$	115,000		
CONTINGENGY (20%)									\$	460,000		
SITE INVENTORY COST (CREDIT) <sup>1</sup>									\$	134,309	\$	(13,431)
TOTAL PROJECT COST (CREDIT)									\$	3,009,309	\$	(735,431)
TOTAL NET PROJECT COST (CREDIT)									\$	2,273,878		

<sup>&</sup>lt;sup>1</sup> Site inventory costs and recoverable scrap of inventory estimates (10%) were provided by FPL and were not independently reviewed by BMcD.

### Table A-3 Ft. Myers Power Plant **Decommissioning Cost Summary**

		Labor	Material and Equipment	Disposal	Environmental	Total Cost	Salvage
yers Power Plant							
Unit 2				_			
Asbestos Removal GTs and HRSGs	\$ \$		\$ - \$ 4,668,000	\$ - \$ -		\$ - \$ 8,940,000	\$
Steam Turbines & Pedestals	\$		\$ 4,668,000 \$ 1,179,000	\$ -	T	\$ 2,258,000	\$
SCR	\$		\$ 1,179,000	\$ -		\$ 2,238,000	\$
GSUs & Electrical	\$		\$ 190,000	\$ 64,000		\$ 428,000	\$
Stack	\$		\$ 190,000	\$ -		\$ 364,000	\$
Cooling Tower and Basin	\$		\$ 149,000	\$ -		\$ 285,000	\$
On-site Concrete Crushing & Disposal	\$		\$ -	\$ 384,000		\$ 384,000	\$
Scrap	\$		\$ -	\$ -		\$ -	\$ (6,883,0
Subtotal	\$	5,979,000	\$ 6,534,000	\$ 448,000	\$ -	\$ 12,961,000	\$ (6,883,0
Unit 3			•			£	6
Asbestos Removal GTs	\$		\$ - \$ 820.000	\$ -		\$ -	\$
SCR	\$			\$ -	T	\$ 1,570,000	\$
GSUs & Electrical	\$		\$ 121,000	\$ -	T	\$ 231,000	\$
Stack	\$ \$		\$ 73,000 \$ 68,000	\$ 27,000 \$ -		\$ 167,000 \$ 130,000	\$ \$
On-site Concrete Crushing & Disposal	\$		\$ 68,000 \$ -	\$ - \$ 66,000			
Scrap	\$		φ - \$ -	\$ 00,000		\$ 66,000 \$ -	\$ (1,090,
Subtotal	\$		\$ 1,082,000	\$ 93,000	T	\$ 2,164,000	\$ (1,090,
			1,000,000	7 20,000	·	_,,,,,,,,	(1,111)
Unit 4 (Proposed 2x GE 7FA.05s)							
Turbines & Foundations	\$		\$ 1,035,000	\$ -			\$
GSU	\$		\$ 95,000	\$ 23,000		\$ 205,000	\$
Stack	\$	6,000	\$ 6,000	\$ -	\$ -	\$ 12,000	\$
On-site Concrete Crushing & Disposal	\$		\$ -	\$ 75,000			\$
Scrap	\$		\$ -	\$ -		\$ -	\$ (1,066,
Subtotal	\$	1,040,000	\$ 1,136,000	\$ 98,000	\$ -	\$ 2,274,000	\$ (1,066,
GTs 1 & 2							
Asbestos Removal	\$		\$ -	\$ -	\$ -	\$ -	\$
GTs & Foundations	\$		\$ 238,000	\$ -		\$ 456,000	\$
GSUs & Electrical	\$		\$ 16,000	\$ 19,000		\$ 50,000	\$
On-site Concrete Crushing & Disposal	\$		\$ -	\$ 11,000		\$ 11,000	\$
Scrap	\$		\$ -	\$ -		\$ -	\$ (338,
Subtotal	\$	233,000	\$ 254,000	\$ 30,000	\$ -	\$ 517,000	\$ (338,
- F 199	•						
Common Facilities				_			
Asbestos Removal	\$		\$ -	\$ -			\$
Auxiliary, Switchyard and Substation	\$		\$ 5,000	\$ 17,000		\$ 26,000	\$
Cooling Water Intakes and Circulating Water Pumps	\$		\$ 547,000	\$ -		\$ 1,047,000	\$
Roads	\$		\$ 802,000	\$ 805,000		\$ 2,341,000	\$
All BOP Buildings	\$		\$ 940,000	\$ -		\$ 1,801,000	\$
Fuel Oil Storage Tanks	\$		\$ 144,000	\$ -		\$ 276,000	\$
All Other Tanks	\$		\$ 217,000	\$ -		\$ 415,000	\$
Contaminated Soil Removal	\$		\$ -	\$ -		\$ 167,000	\$
Fuel Oil Storage Tank Cleaning	\$		\$ -	\$ -		\$ 4,854,000	\$
Fuel Oil Line Flushing/Cleaning	\$		\$ -	\$ -		\$ 723,000	\$
Settling Pond Closure	\$		\$ -	\$ -		\$ 1,036,000	\$
On-site Concrete Crushing & Disposal	\$		\$ -	\$ 114,000		\$ 114,000	\$
Seeding and Grading	\$		\$ -	\$ -		\$ 369,000	\$
Debris	\$		\$ -	\$ 3,000		\$ 3,000	\$
Scrap	\$		\$ -	\$ -	T	\$ -	\$ (479,
Subtotal	\$	2,429,000	\$ 2,655,000	\$ 939,000	\$ 7,163,000	\$ 13,186,000	\$ (479,
Ft. Myers Power Plant Subtotal	\$	10,670,000	\$ 11,661,000	\$ 1,608,000	\$ 7,163,000	\$ 31,102,000	\$ (9,856
TOTAL COST (CREDIT)	¥	10,010,000	11,001,000	<b>V</b> 1,000,000		\$ 31,102,000	,
PROJECT INDIRECTS (5%)						\$ 1,555,000	
CONTINGENGY (20%)						\$ 6,220,000	
SITE INVENTORY COST (CREDIT) <sup>2</sup>						\$ 2,639,932	\$ (263
TOTAL PROJECT COST (CREDIT)						\$ 41,516,932	
							¥ (10,119
TOTAL NET PROJECT COST (CREDIT)						\$ 31,396,939	

<sup>&</sup>lt;sup>1</sup> Asbestos removal estimates were provided by FPL and were not independently reviewed by BMcD.
<sup>2</sup> Site inventory costs and recoverable scrap of inventory estimates (10%) were provided by FPL and were not independently reviewed by BMcD.

### Table A-4 Lauderdale Power Plant **Decommissioning Cost Summary**

		Labor	Material and Equipment		Disposal	Environmental	7	Total Cost		Salvage
lerdale Power Plant		Labor	Equipment		Diapusai	Livironmental		i otal oost		Jaivage
Unit 4										
GTs and HRSGs	\$	1,374,000		\$		\$ -	\$	2,875,000	\$	
Steam Turbine & Pedestal	\$	786,000		\$		\$ -	\$	1,645,000	\$	
SCR	\$	50,000		\$		\$ -	\$	104,000	\$	
GSU & Electrical	\$	128,000		\$		\$ -	\$	314,000	\$	
Stack	\$		\$ 63,000	\$		\$ -	\$	121,000	\$	
On-site Concrete Crushing & Disposal	\$ \$	- 9		\$		\$ - \$ -	\$	136,000 1,000	\$	
Debris Scrap	\$	- 3		\$		\$ - \$ -	\$	1,000	\$	(2,03
Subtotal	\$		\$ 2,617,000	\$		\$ -	\$	5,196,000	\$	(2,034
		,,	, , , , , , , , , , , , , , , , , , , ,		,			-,,		( , ,
Unit 5 GTs and HRSGs		1 274 000	1.501.000	6		\$ -	\$	2.875.000	6	
Steam Turbine & Pedestal	\$ \$	1,374,000 \$ 786,000 \$		\$		\$ - \$ -	\$	1.645.000	\$	
SCR	\$	48,000		\$		\$ - \$ -	\$	100,000	\$	
GSU & Electrical	\$	129,000		\$		ş - \$ -	\$	318.000	\$	
Stack	\$	58,000		\$		\$ - \$ -	\$	121,000	\$	
On-site Concrete Crushing & Disposal	\$	- 5		\$		ş - \$ -	\$	136,000	\$	
Debris	\$	- 5		\$		\$ -	\$	1,000	\$	
Scrap	\$	- 5		\$		\$ -	\$	-	S	(2,03
Subtotal	\$		2,616,000	\$		\$ -	\$	5,196,000	\$	(2,03
Heit C (Presented St. OF 754 05-)	-									
Unit 6 (Proposed 5x GE 7FA.05s) Turbines & Foundations	6	2 220 000	2 554 000	©.		\$ -	\$	4,892,000	œ.	
GSU	\$ \$	2,338,000 S		\$		\$ - \$ -	\$	4,892,000	\$	
Stack	\$	15,000		\$		\$ - \$ -	\$	31,000	\$	
On-site Concrete Crushing & Disposal	\$		\$ 16,000 \$ -	\$		\$ - \$ -	\$	188,000	\$	
Scrap	\$ \$			\$		\$ - \$ -	\$	100,000	\$	(2,639
Subtotal	\$		\$ 2,809,000	\$		\$ -	\$	5,591,000	\$	(2,63
		, ,	,,.		,			, . ,		. ,
GTs 1 & 2		040.000						400.000	•	
Turbines & Foundations	\$	210,000		\$		\$ -	\$	439,000	\$	
GSUs On-site Concrete Crushing & Disposal	\$	17,000		\$		\$ -	\$	51,000	\$	
	\$	- 9		\$		\$ -	\$	10,000	\$	(00)
Scrap Subtotal	\$	227,000		\$		\$ - \$ -	\$	500,000	\$	(33)
	*				,	*				(
Common										
Asbestos Removal	\$	- 5		\$		\$ 195,000	\$	195,000	\$	
Auxiliary, Switchyard and Substation	\$	14,000		\$		\$ -	\$	51,000	\$	
Cooling Water Intakes and Circulating Water Pumps	\$	448,000		\$		\$ -	\$	938,000	\$	
Roads	\$	409,000		\$		\$ -	\$	1,305,000	\$	
All BOP Buildings	\$	569,000		\$		\$ -	\$	1,190,000	\$	
Fuel Oil Storage Tanks	\$	162,000		\$		\$ -	\$	339,000	\$	
All Other Tanks	\$	230,000		\$		\$ -	\$	482,000	\$	
Contaminated Soil Removal	\$	- 5		\$		\$ 201,000	\$	201,000	\$	
Fuel Oil Storage Tank Cleaning	\$	- 9		\$		\$ 2,591,000	\$	2,591,000	\$	
Fuel Oil Line Flushing/Cleaning	\$	- 9		\$		\$ 2,734,000	\$	2,734,000	\$	
Settling Pond Closure	\$	- 9		\$		\$ 1,127,000	\$	1,127,000	\$	
	\$	- (	p –	\$		\$ -	\$	108,000	\$	
On-site Concrete Crushing & Disposal	_					\$ 163,000	\$	163,000	\$	
Seeding and Grading	\$	- 9	7	\$				2,000		
Seeding and Grading Debris	\$	- 5	-	\$	2,000	\$ -	\$	2,000	\$	/27
Seeding and Grading Debris Scrap	\$	- 5	-	\$	2,000	\$ - \$ -	\$	-	\$	(37
Seeding and Grading Debris	\$	- 5	-	\$	2,000	\$ -		11,426,000		(37 <b>(37</b>
Seeding and Grading Debris Scrap Subtotal	\$	- 5	2,002,000	\$	2,000	\$ - \$ - \$ 7,011,000	\$	11,426,000	\$	
Seeding and Grading Debris Scrap	\$	1,832,000	2,002,000	\$	2,000 - <b>581,000</b>	\$ - \$ - \$ 7,011,000	\$	11,426,000	\$	(37
Seeding and Grading Debris Scrap Subtotal  Lauderdale Power Plant Subtotal	\$	1,832,000	2,002,000	\$	2,000 - <b>581,000</b>	\$ - \$ - \$ 7,011,000	\$	11,426,000	\$	(7,42
Seeding and Grading Debris Scrap Subtotal  Lauderdale Power Plant Subtotal  TOTAL COST (CREDIT)	\$	1,832,000	2,002,000	\$	2,000 - <b>581,000</b>	\$ - \$ - \$ 7,011,000	\$ \$ \$	11,426,000 27,909,000 27,909,000	\$	(7,42
Seeding and Grading Debris Scrap Subtotal  Lauderdale Power Plant Subtotal  TOTAL COST (CREDIT)  PROJECT INDIRECTS (5%)	\$	1,832,000	2,002,000	\$	2,000 - <b>581,000</b>	\$ - \$ - \$ 7,011,000	\$ \$ \$ \$	27,909,000 27,909,000 1,395,000	\$ \$	(7,42 (7,42
Seeding and Grading Debris Scrap Subtotal  Lauderdale Power Plant Subtotal  TOTAL COST (CREDIT) PROJECT INDIRECTS (5%)  CONTINGENGY (20%)	\$	1,832,000	2,002,000	\$	2,000 - <b>581,000</b>	\$ - \$ - \$ 7,011,000	\$ \$ \$ \$	11,426,000 27,909,000 27,909,000 1,395,000 5,582,000	\$ \$	(7,42

<sup>&</sup>lt;sup>1</sup> Asbestos removal estimates were provided by FPL and were not independently reviewed by BMcD.
<sup>2</sup> Site inventory costs and recoverable scrap of inventory estimates (10%) were provided by FPL and were not independently reviewed by BMcD.

#### Table A-5 Manatee Power Plant **Decommissioning Cost Summary**

		Labor	Material and Equipment	D	isposal	Environmental	Total Cost	Sí	alvage
tee Power Plant									
Unit 1								_	
Boiler	\$	3,532,000			-	\$ -	\$ 7,391,000		-
Steam Turbine & Building	\$		\$ 1,392,000	\$	-	\$ -	\$ 2,666,000		-
Precipitator	\$		\$ 1,017,000	\$	-	\$ -	\$ 1,948,000		-
Stack	\$		\$ 206,000	\$	-	\$ -	\$ 395,000		-
GSU & Foundation	\$	63,000	\$ 69,000	\$	67,000	\$ -	\$ 199,000	\$	-
On-site Concrete Crushing & Disposal	\$	-	\$ -	\$	289,000	\$ -	\$ 289,000	\$	-
Debris	\$	-	\$ -	\$	52,000	\$ -	\$ 52,000	\$	-
Scrap	\$	-	\$ -	\$	-	\$ -	\$ -	\$	(5,313,0
Subtotal	\$	5,989,000	\$ 6,543,000	\$	408,000	\$ -	\$ 12,940,000	\$	(5,313,0
Unit 2									
Boiler	\$	3.532.000	\$ 3.859.000	\$		\$ -	\$ 7.391.000	2	
Steam Turbine & Building	\$		\$ 1,392,000	\$	_	\$ -	\$ 2,666,000		
					-				-
Precipitator	\$		\$ 1,017,000	\$	-	\$ -	\$ 1,948,000		-
Stack	\$	189,000		\$	-	\$ -	\$ 395,000		-
GSU & Foundation	\$	63,000		\$		\$ -	\$ 199,000		-
On-site Concrete Crushing & Disposal	\$	-	\$ -	\$	289,000	\$ -	\$ 289,000	\$	
Debris	\$	-	\$ -	\$	52,000	\$ -	\$ 52,000	\$	
Scrap	\$	-	\$ -	\$	-	\$ -	\$ -	\$	(5,313,0
Subtotal	\$	5,989,000	\$ 6,543,000	\$	408,000	\$ -	\$ 12,940,000	\$	(5,313,0
Unit 3									
GTs and HRSGs		0.007.000	¢ 0.040.000			6	¢ 0000 000		
	\$	2,967,000		\$	-	\$ -	\$ 6,209,000		
Steam Turbine & Pedestal	\$		\$ 1,095,000	\$	-	\$ -	\$ 2,097,000		
SCR	\$	97,000	\$ 106,000	\$	-	\$ -	\$ 203,000	\$	
GSU & Electrical	\$	236,000	\$ 258,000	\$	57,000	\$ -	\$ 551,000	\$	
Stack	\$	116,000	\$ 127,000	\$	-	\$ -	\$ 243,000	\$	
On-site Concrete Crushing & Disposal	\$	_	\$ -	\$	174,000	\$ -	\$ 174,000	\$	
Scrap	\$	_	\$ -	\$		\$ -	\$ -	\$	(4,909,0
Subtotal	\$	4,418,000	\$ 4,828,000	\$	231,000	\$ -	\$ 9,477,000	\$	(4,909,0
0 5 174									
Common Facilities									
Asbestos Removal	\$		\$ -	\$	-		\$ 15,000		
Cooling Water Intakes and Circulating Water Pumps	\$	625,000	\$ 682,000	\$	-	\$ -	\$ 1,307,000	\$	
Roads	\$	389,000	\$ 425,000	\$	426,000	\$ -	\$ 1,240,000	\$	
All BOP Buildings	\$	768,000	\$ 839,000	\$		\$ -	\$ 1,607,000		
Fuel Oil Storage Tanks	\$		\$ 450,000	\$	_	\$ -	\$ 862,000		
All Other Tanks	\$		\$ 64,000	\$	_	\$ -	\$ 122,000		
All Other ranks									
3	S				-	\$ 1,004,000	\$ 1,004,000		
Contaminated Soil Removal <sup>2</sup>	Ψ	-	\$ -	\$	-			\$	
Contaminated Soil Removal <sup>2</sup> Fuel Oil Storage Tank Cleaning	\$		\$ -	\$	-	\$ 6,937,000	\$ 6,937,000		
Fuel Oil Storage Tank Cleaning		-			-		\$ 6,937,000 \$ 7,034,000	\$	
Fuel Oil Storage Tank Cleaning Fuel Oil Line Flushing/Cleaning	\$	-	\$ -	\$	-	\$ 6,937,000 \$ 7,034,000	\$ 7,034,000	\$	
Fuel Oil Storage Tank Cleaning Fuel Oil Line Flushing/Cleaning Settling Pond Closure	\$		\$ - \$ - \$ -	\$ \$	-	\$ 6,937,000 \$ 7,034,000 \$ 484,000	\$ 7,034,000 \$ 484,000	\$ \$ \$	
Fuel Oil Storage Tank Cleaning Fuel Oil Line Flushing/Cleaning Settling Pond Closure Cooling Pond Closure	\$ \$ \$ \$	- - -	\$ - \$ - \$ -	\$ \$ \$ \$	- - -	\$ 6,937,000 \$ 7,034,000 \$ 484,000 \$ -	\$ 7,034,000 \$ 484,000 \$ -	\$ \$ \$ \$	
Fuel Oil Storage Tank Cleaning Fuel Oil Line Flushing/Cleaning Settling Pond Closure Cooling Pond Closure On-site Concrete Crushing & Disposal	\$ \$ \$ \$	- - - -		\$ \$ \$ \$	- - - - 127,000	\$ 6,937,000 \$ 7,034,000 \$ 484,000 \$ - \$ -	\$ 7,034,000 \$ 484,000 \$ - \$ 127,000	\$ \$ \$ \$	
Fuel Oil Storage Tank Cleaning Fuel Oil Line Flushing/Cleaning Settling Pond Closure Cooling Pond Closure On-site Concrete Crushing & Disposal Seeding and Grading	. \$ \$ \$ \$ \$ \$ \$	- - - -	-   -   -   -   -   -   -   -   -   -		- - - - 127,000	\$ 6,937,000 \$ 7,034,000 \$ 484,000 \$ - \$ - \$ 344,000	\$ 7,034,000 \$ 484,000 \$ - \$ 127,000 \$ 344,000	99999	
Fuel Oil Storage Tank Cleaning Fuel Oil Line Flushing/Cleaning Settling Pond Closure Cooling Pond Closure On-site Concrete Crushing & Disposal Seeding and Grading Debris	. \$ \$ \$ \$ \$ \$ \$ \$	- - - - -	\$ - \$ - \$ - \$ - \$ - \$ - \$ -	. \$ \$ \$ \$ \$ \$ \$	- - - - 127,000	\$ 6,937,000 \$ 7,034,000 \$ 484,000 \$ - \$ -	\$ 7,034,000 \$ 484,000 \$ - \$ 127,000 \$ 344,000 \$ 3,000	99999	
Fuel Oil Storage Tank Cleaning Fuel Oil Line Flushing/Cleaning Settling Pond Closure Cooling Pond Closure On-site Concrete Crushing & Disposal Seeding and Grading	. \$ \$ \$ \$ \$ \$ \$	- - - - -	-   -   -   -   -   -   -   -   -   -		- - - - 127,000	\$ 6,937,000 \$ 7,034,000 \$ 484,000 \$ - \$ - \$ 344,000	\$ 7,034,000 \$ 484,000 \$ - \$ 127,000 \$ 344,000	99999	(505,0
Fuel Oil Storage Tank Cleaning Fuel Oil Line Flushing/Cleaning Settling Pond Closure Cooling Pond Closure On-site Concrete Crushing & Disposal Seeding and Grading Debris	. \$ \$ \$ \$ \$ \$ \$ \$	- - - - - - -	\$ - \$ - \$ - \$ - \$ - \$ - \$ -	. \$ \$ \$ \$ \$ \$ \$	- - - 127,000 - 3,000	\$ 6,937,000 \$ 7,034,000 \$ 484,000 \$ - \$ 5 \$ 344,000 \$ -	\$ 7,034,000 \$ 484,000 \$ - \$ 127,000 \$ 344,000 \$ 3,000		(505,1
Fuel Oil Storage Tank Cleaning Fuel Oil Line Flushing/Cleaning Settling Pond Closure Cooling Pond Closure On-site Concrete Crushing & Disposal Seeding and Grading Debris Scrap	. 66 66 66 66 66 66 66 66 66 66 66 66 66	- - - - - - -	\$ - \$ - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 -	. \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	- - - 127,000 - 3,000	\$ 6,937,000 \$ 7,034,000 \$ 484,000 \$ - \$ - \$ 344,000 \$ - \$ - \$ -	\$ 7,034,000 \$ 484,000 \$ - \$ 127,000 \$ 344,000 \$ 3,000 \$ -		(

TOTAL NET PROJECT COST (CREDIT)

57,425,987

Asbestos removal estimates were provided by FPL and were not independently reviewed by BMcD.
 As provided by FPL's from estimates prepared by their Environmental Group based on areas of known soil contamination that will require remediation at the time of project dismantlement.
 Site inventory costs and recoverable scrap of inventory estimates (10%) were provided by FPL and were not independently reviewed by BMcD.

# Table A-6 Martin Energy Center Decommissioning Cost Summary

		Labor	Material and Equipment	Disposal	Environmental	Total Cost	Salvage
n Energy Center Unit 1		Luboi	Equipment	Біорозиі	Livironincitai	Total Gost	Ourrage
Boiler	\$	3,553,000	\$ 3,882,000	\$ -	\$ -	\$ 7,435,000 \$	
Steam Turbine & Building	\$		\$ 1,619,000	\$ -		\$ 3,101,000 \$	
Precipitator Stack	\$ \$		\$ 1,017,000 \$ 206,000	\$ - \$ -	T	\$ 1,948,000 \$ \$ 395,000 \$	
GSU & Foundation	\$					\$ 177,000 \$	
On-site Concrete Crushing & Disposal	\$	-	\$ -			\$ 311,000 \$	
Debris	\$		\$ -			\$ 52,000 \$	
Scrap Subtotal	\$		\$ - \$ 6,782,000	7		\$ - \$ \$ 13,419,000 \$	(6,369,0 ( <b>6,369</b> ,0
Jnit 2	<u> </u>	0,200,000	ψ 0,702,000	420,000	-	<u>₹ 10,415,000 ψ</u>	(0,000,
Boiler	\$	3,553,000	\$ 3,882,000	\$ -	\$ -	\$ 7,435,000 \$	
Steam Turbine & Building	\$			\$ -		\$ 3,101,000 \$	
Precipitator	\$		\$ 1,017,000			\$ 1,948,000 \$	
Stack GSU & Foundation	\$ \$		\$ 206,000 \$ 58,000			\$ 395,000 \$ \$ 177,000 \$	
On-site Concrete Crushing & Disposal	\$		\$ -			\$ 311,000 \$	
Debris	\$		\$ -			\$ 52,000 \$	
Scrap Subtotal	\$		\$ - \$ 6,782,000			\$ - \$ \$ 13,419,000 \$	
Jnit 3	- P	0,200,000	\$ 6,762,000	\$ 429,000	-	p 13,415,000 p	(0,303
GTs and HRSGs	\$	1,381,000	\$ 1,509,000	\$ -	\$ -	\$ 2,890,000 \$	
Steam Turbine & Pedestal	\$			\$ -		\$ 879,000 \$	
SCR	\$		\$ 53,000			\$ 101,000 \$	
GSU & Electrical Stack	\$ \$					\$ 278,000 \$ 129,000 \$	
On-site Concrete Crushing & Disposal	э \$		\$ 67,000			\$ 90,000 \$	
Debris	\$		\$ -			\$ - \$	
Scrap	\$		\$ -			\$ - \$	
Subtotal	\$	2,031,000	\$ 2,220,000	\$ 116,000	\$ -	\$ 4,367,000 \$	(2,508
Jnit 4 GTs and HRSGs	6	1.378.000	¢ 1 506 000	6	\$ -	\$ 2.884.000 \$	
Steam Turbine & Pedestal	\$ \$		\$ 1,506,000 \$ 443,000	\$ - \$ -		\$ 2,884,000 \$ \$ 849,000 \$	
SCR	\$		\$ 53,000			\$ 101,000 \$	
GSU & Electrical	\$					\$ 245,000 \$	
Stack On-site Concrete Crushing & Disposal	\$ \$		\$ 67,000 \$ -			\$ 129,000 \$ \$ 90,000 \$	
Debris	\$		\$ -	\$ 90,000		\$ 90,000 \$	
Scrap	\$		\$ -			\$ - \$	
Subtotal	\$	2,001,000	\$ 2,186,000	\$ 111,000	\$ -	\$ 4,298,000 \$	(2,415
Jnit 8							
GTs and HRSGs Steam Turbine & Pedestal	\$ \$		\$ 3,246,000 \$ 970,000	\$ - \$ -		\$ 6,217,000 \$ \$ 1,857,000 \$	
SCR	\$ \$		\$ 106,000	\$ - \$		\$ 203,000 \$	
GSU & Electrical	\$					\$ 417,000 \$	
Stack	\$		\$ 127,000			\$ 243,000 \$	
Cooling Tower and Basin On-site Concrete Crushing & Disposal	\$ \$		\$ 262,000 \$ -			\$ 502,000 \$ \$ 232,000 \$	
Debris	\$ \$		» - \$ -			\$ 232,000 \$ 14,000 \$	
Scrap	\$		\$ -			\$ - \$	
Subtotal	\$	4,485,000	\$ 4,901,000	\$ 299,000	\$ -	\$ 9,685,000 \$	(5,231
SCC							
Mirrors and Frames Hazardous Waste Disposal	\$ \$					\$ 8,686,000 \$	
On-site Concrete Crushing & Disposal	\$ \$		\$ - \$ -			\$ 1,160,000 \$ \$ 278,000 \$	
Debris	\$		\$ -			\$ 205,000 \$	
Scrap	\$		\$ -	\$ -	7	\$ - \$	(1,809
Subtotal	\$	4,151,000	\$ 4,535,000	\$ 1,643,000	\$ -	\$ 10,329,000 \$	(1,809
Common							
Asbestos Removal <sup>1</sup> Switchyard and Substation	\$ \$		\$ - \$ 23,000			\$ 241,000 \$ 68,000 \$	
Cooling Water Intakes and Circulating Water Pumps	\$					\$ 2,486,000 \$	
Roads	\$	959,000		\$ 1,052,000	\$ -	\$ 3,059,000 \$	
All BOP Buildings	\$					\$ 2,414,000 \$	
Fuel Oil Storage Tanks All Other Tanks	\$ \$		\$ 2,187,000 \$ 78,000			\$ 4,188,000 \$ \$ 150,000 \$	
Contaminated Soil Removal	\$		\$ 70,000			\$ 619,000 \$	
Fuel Oil Storage Tank Cleaning	\$	-	\$ -		\$ 7,444,000	\$ 7,444,000 \$	
Fuel Oil Line Flushing/Cleaning	\$		\$ -			\$ 4,537,000 \$	
Settling Pond Closure	\$ \$		\$ - \$ -			\$ 2,676,000 \$ \$ 365,000 \$	
	\$		\$ -			\$ 886,000 \$	
On-site Concrete Crushing & Disposal Seeding and Grading	- P		\$ -		\$ -	\$ 5,000 \$	
On-site Concrete Crushing & Disposal Seeding and Grading Debris	\$			\$ -	S -	\$ - \$	
On-site Concrete Crushing & Disposal Seeding and Grading Debris Scrap	\$	-	\$ - \$ 5.894.000			\$ 29 138 000 €	1726
On-site Concrete Crushing & Disposal Seeding and Grading Debris Scrap Subtotal	\$ \$	5,395,000	\$ 5,894,000	\$ 1,446,000	\$ 16,403,000	\$ 29,138,000 \$	
On-site Concrete Crushing & Disposal Seeding and Grading Debris Scrap Subtotal	\$	-	\$ 5,894,000	\$ 1,446,000	\$ 16,403,000 \$ 16,403,000	\$ 84,655,000 \$	(25,427
On-site Concrete Crushing & Disposal Seeding and Grading Debris Scrap Subtotal	\$ \$	5,395,000	\$ 5,894,000	\$ 1,446,000	\$ 16,403,000 \$ 16,403,000		(25,427
On-site Concrete Crushing & Disposal Seeding and Grading Debris Scrap Subtotal	\$ \$	5,395,000	\$ 5,894,000	\$ 1,446,000	\$ 16,403,000 \$ 16,403,000	\$ 84,655,000 \$	(25,427
On-site Concrete Crushing & Disposal Seeding and Grading Debris Scrap Subtotal  Martin Energy Center Subtotal  TOTAL COST (CREDIT)	\$ \$	5,395,000	\$ 5,894,000	\$ 1,446,000	\$ 16,403,000 \$ 16,403,000	\$ 84,655,000 \$ \$ 84,655,000 \$	(25,427
On-site Concrete Crushing & Disposal Seeding and Grading Debris Scrap Subtotal  Martin Energy Center Subtotal  FOTAL COST (CREDIT)  PROJECT INDIRECTS (5%) CONTINGENGY (20%)	\$ \$	5,395,000	\$ 5,894,000	\$ 1,446,000	\$ 16,403,000 \$ 16,403,000	\$ 84,655,000 \$ \$ 84,655,000 \$ \$ 4,233,000 \$ 16,931,000	(25,427
On-site Concrete Crushing & Disposal Seeding and Grading Debris Scrap Subtotal  Martin Energy Center Subtotal  OTAL COST (CREDIT)  PROJECT INDIRECTS (5%)	\$ \$	5,395,000	\$ 5,894,000	\$ 1,446,000	\$ 16,403,000 \$ 16,403,000	\$ 84,655,000 \$ \$ 84,655,000 \$ \$ 4,233,000	(25,427

Asbestos removal estimates were provided by FPL and were not independently reviewed by BMcD.
 Site inventory costs and recoverable scrap of inventory estimates (10%) were provided by FPL and were not independently reviewed by BMcD.

# Table A-7 Port Everglades Power Plant Decommissioning Cost Summary

			Materia									
		Labor	Equip	ment		Disposal	Env	vironmental		Total Cost		Salvage
t Everglades Power Plant Unit 5												
		0.040.000		004 000						E E07 000		
GTs and HRSGs	\$	2,646,000		891,000		-	\$	-	\$	5,537,000		-
Steam Turbine & Pedestal	\$	1,116,000		219,000	\$	-	\$	-	\$	2,335,000	\$	-
SCR	\$			147,000	\$		\$	-	\$	282,000	\$	-
GSU & Electrical	\$	191,000		208,000	\$	79,000	\$	-	\$	478,000	\$	-
Stack	\$	95,000	\$	103,000	\$	-	\$	-	\$	198,000	\$	-
On-site Concrete Crushing & Disposal	\$	-	\$	-	\$	179,000	\$	-	\$	179,000	\$	-
Scrap	\$	-	\$	-	\$	-	\$	-	\$	-	\$	(4,986,00
Subtotal	\$	4,183,000	\$ 4	568,000	\$	258,000	\$		\$	9,009,000	\$	(4,986,00
GTs 1-12												
Turbines & Foundations	\$	1,377,000	s 1	504,000	\$	_	\$	_	\$	2,881,000	\$	_
GSUs	\$		\$	82,000	\$	12,000	\$		\$	169,000	\$	
On-site Concrete Crushing & Disposal	\$	70,000	\$	-	\$		\$		\$	96,000	\$	_
Scrap	\$	_	\$	_	\$	30,000	\$	_	\$	30,000	\$	(1,931,00
	\$	4 450 000		-	_	400.000	_		_	0.440.000	_	
Subtotal	\$	1,452,000	\$ 1	586,000	\$	108,000	\$		\$	3,146,000	\$	(1,931,00
Common												
Auxiliary, Switchyard and Substation	\$	67,000		73,000	\$	51,000		-	\$	191,000	\$	-
Cooling Water Intakes and Circulating Water Pumps	\$	144,000	\$	157,000	\$	-	\$	-	\$	301,000	\$	-
Roads	\$	124,000	\$	135,000	\$	136,000	\$	-	\$	395,000	\$	-
All BOP Buildings	\$	110,000	\$	120,000	\$	-	\$	-	\$	230,000	\$	-
Fuel Oil Storage Tanks	\$	521,000	\$	570,000	\$	-	\$	-	\$	1,091,000	\$	-
All Other Tanks	\$	115.000	\$	125,000	\$	_	\$	_	\$	240,000	\$	_
Contaminated Soil Removal	\$	-	\$	-	\$	_	\$	147,000	\$	147,000	\$	_
Fuel Oil Storage Tank Cleaning	\$	_	\$	_	\$	_	\$		\$	1,488,000	\$	_
Fuel Oil Line Flushing/Cleaning	S		\$		\$		\$	288.000	\$	288,000	\$	
On-site Concrete Crushing & Disposal	\$		S		\$	66,000	\$	200,000	\$	66,000	\$	
Seeding and Grading	\$	_	\$	_	\$	-	\$	228,000	\$	228,000	\$	_
Debris	\$ \$	-	\$	-	\$		\$	220,000	\$		\$	-
	-	-	Ψ	-		5,000		-		5,000		-
Scrap	\$		\$		\$		\$		\$		\$	(377,00
Subtotal	\$	1,081,000	\$ 1	180,000	\$	258,000	\$	2,151,000	\$	4,670,000	\$	(377,00
Port Everglades Subtotal	\$	6,716,000	\$ 7.	334,000	\$	624,000	\$	2,151,000	\$	16,825,000	\$	(7,294,00
	Ţ.	0,7 10,000	Ψ ,	004,000		024,000		2,101,000				
TOTAL COST (CREDIT)									\$	16,825,000	\$	(7,294,00
PROJECT INDIRECTS (5%)									\$	841,000		
CONTINGENGY (20%)									\$	3,365,000		
SITE INVENTORY COST (CREDIT) <sup>1</sup>									\$	230,928	\$	(23,09
TOTAL PROJECT COST (CREDIT)									\$	21,261,928	\$	(7,317,09
·												( )- ,
TOTAL NET PROJECT COST (CREDIT)									\$	13,944,835		

<sup>&</sup>lt;sup>1</sup> Site inventory costs and recoverable scrap of inventory estimates (10%) were provided by FPL and were not independently reviewed by BMcD.

### Table A-8 Riviera Beach Power Plant Decommissioning Cost Summary

			1	Material and								
		Labor		Equipment		Disposal	E	Environmental		Total Cost		Salvage
Riviera Beach Power Plant												
Unit 5												
GTs and HRSGs	\$	2,670,000	\$	2,917,000	\$	-	\$	-	\$	5,587,000		-
Steam Turbine & Pedestal	\$	1,124,000	\$	1,229,000		-	\$	-	\$		\$	-
SCR	\$	135,000	\$				\$	-	\$	282,000	\$	-
GSU & Electrical	\$	181,000		197,000		41,000	\$	-	\$	419,000	\$	-
Stack	\$	95,000	\$	103,000	\$	-	\$	-	\$	198,000	\$	-
Cooling Tower and Basin	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-
On-site Concrete Crushing & Disposal	\$	-	\$	-	\$	180,000	\$	-	\$	180,000	\$	-
Scrap	\$	-	\$	-	\$	-	\$	-	\$	-	\$	(4,024,000)
Subtotal	\$	4,205,000	\$	4,593,000	\$	221,000	\$		\$	9,019,000	\$	(4,024,000)
Common												
Auxiliary, Switchyard and Substation	S	20.000	\$	22.000	\$		\$		\$	42.000	0	
Cooling Water Intakes and Circulating Water Pumps	\$	58.000		63,000			S		\$	121.000		
Roads	\$	126,000		138,000		138,000	S		\$	402,000		
All BOP Buildings	\$	508.000		555.000		130,000	ş S	-	\$	1.063.000		-
Fuel Oil Storage Tanks	\$	104,000	\$		S	-	ş S	-	\$			-
All Other Tanks	\$ \$	112.000	\$	114,000 122.000	\$	-	\$	-	\$	218,000 234.000	\$	-
Contaminated Soil Removal	\$	112,000		122,000	\$	-		404.000				-
	\$ \$	-	\$	-	-	-	\$	101,000	\$	101,000		-
Fuel Oil Storage Tank Cleaning	-	-	\$	-	\$	-	\$	1,504,000	\$	1,504,000	\$	-
Fuel Oil Line Flushing/Cleaning	\$	-	\$	-	\$		\$	144,000	\$		\$	-
On-site Concrete Crushing & Disposal	\$	-	\$	-	\$	51,000	\$		\$	51,000		-
Seeding and Grading	\$	-	\$	-	\$		\$	164,000	\$	164,000		-
Debris	\$	-	\$	-	\$	1,000	\$	-	\$	1,000		-
Scrap	\$	-	\$	-	\$	-	\$	-	\$	-	\$	(246,000)
Subtotal	\$	928,000	\$	1,014,000	\$	190,000	\$	1,913,000	\$	4,045,000	\$	(246,000)
Riviera Beach Power Plant Subtotal	\$	5,133,000	\$	5,607,000	\$	411,000	\$	1,913,000	\$	13,064,000	\$	(4,270,000)
TOTAL COST (CREDIT)									\$	13,064,000	\$	(4,270,000)
PROJECT INDIRECTS (5%)									\$	653,000		
CONTINGENGY (20%)									\$	2,613,000		
SITE INVENTORY COST (CREDIT) <sup>1</sup>									\$	1,170,262	\$	(117,026)
TOTAL PROJECT COST (CREDIT)									\$	17,500,262	\$	(4,387,026)
TOTAL NET PROJECT COST (CREDIT)									\$	13,113,236		
TOTAL HET THOSE OF GOOD (OREDIT)									Ψ	10,110,200		

<sup>&</sup>lt;sup>1</sup> Site inventory costs and recoverable scrap of inventory estimates (10%) were provided by FPL and were not independently reviewed by BMcD.

### Table A-9 St. Johns River Power Plant Decommissioning Cost Summary

Company   Comp				.9 -		,						
			Labor				Dienocal		wironmontal	Total Cost		Salvaga
Boar   Table & Building	St. Johns River Power Plant		Laboi		Equipment		Disposai		ivironinentai	Total Cost		Salvage
Sear Turbine & Building												
Proportion	Boiler		3,620,000	\$	3,955,000	\$	-	\$	- 9	7,575,000	\$	-
SCRPCPO							-	-				-
Short							-					-
Sinch Cooling Tower & Basens							-					-
Colong Tower & Basins							-					-
Contract C							-					-
Control Cont							79 000					-
Debris   Scrip   S			143,000					-				-
Surpolate												
Line   Section			_		_							(5.455.000)
Boller	·		8,165,000	_	8,922,000		636,000	\$				(-,,,
Boiler												
Steam Tuthine & Building			2 620 000	e.	3 055 000	0		6	d	7 575 000	6	
Presipitator   \$ 1,283,000   \$ 1,187,000   \$ - \$   \$ 2,285,000   \$ - \$   \$ 2,285,000   \$ - \$   \$ 5,000   \$   \$ - \$   \$ 5,000   \$   \$ - \$   \$ 5,000   \$   \$ - \$   \$ 5,000   \$   \$ - \$   \$ \$   \$   \$   \$   \$   \$							-					-
SCR/FGD SCRUDbers Scrubbers Scrubber							-					-
Strokbers   \$ 219,000   \$ 240,000   \$ - \$   \$ 145,000   \$ - \$												-
Stack							_					_
Cooling Tower & Basins							-					_
Second							_					_
On-site Concrete Crushing & Disposal   S							78,000					-
Scrap   S	On-site Concrete Crushing & Disposal	\$	-	\$	-	\$	534,000	\$	- 9	534,000	\$	-
Subtotal   Subtotal   Subtoside   Subtos	Debris	\$	-	\$	-	\$	24,000	\$	- 9	24,000	\$	-
Handling	Scrap		-	\$	-	\$	-	\$	- 9	-	\$	(5,455,000)
Demolition	Subtotal	\$	8,165,000	\$	8,922,000	\$	636,000	\$	- \$	17,723,000	\$	(5,455,000)
Demolition	Handling											
Limestone Handling Facilities   \$ 555.00   \$ 606.00   \$ - \$   \$ - \$   \$ 1,161.00   \$ - \$   \$ 1.000   \$   \$ - \$   \$ 1.000   \$   \$ - \$   \$ 1.000   \$   \$ - \$   \$ 1.000   \$   \$   \$   \$   \$   \$   \$   \$   \$		\$	1,613,000	\$	1,762,000	\$	-	\$	- 9	3,375,000	\$	-
Debris   S	Limestone Handling Facilities			\$	606,000	\$	_	\$	- 9	1,161,000	\$	-
Scrap   S	On-site Concrete Crushing & Disposal	\$	-	\$	-	\$	134,000	\$	- 9	134,000	\$	-
Subtotal   S	Debris	\$	-	\$	-	\$	23,000	\$	- 9	23,000	\$	-
Common   Auxillary, Switchyard and Substation   \$ 40,000 \$ 44,000 \$ 34,000 \$ - \$ 118,000 \$ - \$ - \$ 118,000 \$ - \$ - \$ Coling Water Inkies and Circulating Water Pumps   \$ 127,000 \$ 138,000 \$ 85,000 \$ - \$ 2,680,000 \$ - \$ 2,428,000 \$ - \$ 2,	Scrap		-	\$	-	\$	-	\$			\$	(64,000)
Auxiliary, Switchyard and Substation	Subtotal	\$	2,168,000	\$	2,368,000	\$	157,000	\$	- 9	4,693,000	\$	(64,000)
Auxiliary, Switchyard and Substation	Common											
Cooling Water Intakes and Circulating Water Pumps Roads \$ 177,000 \$ 850,000 \$ 854,000 \$ - \$ 2,482,000 \$ - \$ 2,482,000 \$ - \$ \$ 2,482,000 \$ - \$ \$ 2,482,000 \$ - \$ \$ 14,784,000 \$ - \$ \$ 2,482,000 \$ - \$ \$ 14,784,000 \$ - \$ \$ 2,482,000 \$ - \$ \$ 14,784,000 \$ - \$ \$ 14,784,000 \$ - \$ \$ 14,784,000 \$ - \$ \$ 14,784,000 \$ - \$ \$ 14,784,000 \$ - \$ \$ 14,784,000 \$ - \$ \$ 14,784,000 \$ - \$ \$ 14,784,000 \$ \$ - \$ \$ 14,784,000 \$ - \$ \$ 14,784,000 \$ - \$ \$ 14,784,000 \$ - \$ \$ 14,784,000 \$ - \$ \$ 14,784,000 \$ - \$ \$ 14,784,000 \$ - \$ \$ 14,784,000 \$ - \$ \$ 14,784,000 \$ - \$ \$ 14,784,000 \$ - \$ \$ 14,784,000 \$ 14,780,000 \$ - \$ \$ 14,784,000 \$ 14,780,000 \$ - \$ \$ 14,784,000 \$ 14,780,000 \$ - \$ \$ 14,780,000 \$ 14,780,000 \$ - \$ \$ 14,784,000 \$ 14,780,000 \$ 14,78	Auxiliary, Switchyard and Substation	\$	40,000	\$	44,000	\$	34,000	\$	- 9	118,000	\$	_
Roads \$ 778,000 \$ 850,000 \$ 854,000 \$ - \$ 2,482,000 \$ - \$ 1,092,000 \$ 1,193,000 \$ - \$ 5 - \$ 2,285,000 \$ - \$ 1,092,000 \$ 1,193,000 \$ 5 - \$ 5 - \$ 2,285,000 \$ - \$ 1,092,000 \$ 1,193,000 \$ 5 - \$ 5 - \$ 1,195,000 \$ - \$ 1,193,000 \$ 5 - \$ 5 - \$ 1,195,000 \$ - \$ 1,195,000 \$ 1,195,000 \$ - \$ 1,195,000 \$ 1,			127,000	\$	138,000	\$	-	\$	- 9	265,000	\$	-
Fuel Oil Storage Tanks All Other Tanks \$ 88,000 \$ 98,000 \$ - \$ - \$ 187,000 \$ - \$ All Other Tanks Contaminated Soil Removal \$ 5 - \$ 5 - \$ 178,000 \$ - \$ Fuel Oil Storage Tank Cleaning \$ 5 - \$ 5 - \$ 5 - \$ 178,000 \$ 92,000 \$ - \$ Fuel Oil Storage Tank Cleaning \$ 5 - \$ 5 - \$ 5 - \$ 92,000 \$ 92,000 \$ - \$ Fuel Oil Incer Flushing/Cleaning \$ 5 - \$ 5 - \$ 5 - \$ 92,000 \$ 92,000 \$ - \$ Fuel Oil Line Flushing/Cleaning \$ 5 - \$ 5 - \$ 5 - \$ 93,000 \$ 92,000 \$ - \$ Fuel Oil Line Flushing/Cleaning Plant Washdown & Materials Disposal \$ 5 - \$ 5 - \$ 5 - \$ 381,000 \$ 381,000 \$ - \$ Closure of Aba Landfill \$ 5 - \$ 5 - \$ 5 - \$ 44,550,000 \$ 44,550,000 \$ - \$ Closure of Landfill \$ 5 - \$ 5 - \$ 5 - \$ 44,550,000 \$ 44,550,000 \$ - \$ Closure of Limestone Area \$ 5 - \$ 5 - \$ 5 - \$ 5 183,000 \$ 153,000 \$ - \$ Closure of Limestone Area \$ 5 - \$ 5 - \$ 5 - \$ 733,000 \$ 733,000 \$ - \$ Closure of Other Ponds \$ 5 - \$ 5 - \$ 5 - \$ 733,000 \$ 733,000 \$ - \$ Closure of Other Ponds \$ 5 - \$ 5 - \$ 5 - \$ 2,156,000 \$ 2,156,000 \$ - \$ Groundwater Monitoring Installation \$ 5 - \$ 5 - \$ 5 105,000 \$ - \$ 105,000 \$ - \$ On-site Concrete Crushing & Disposal \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 6,000 \$ - \$ Debris \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 6,000 \$ - \$ Debris \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 6,000 \$ - \$ Debris \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 6,000 \$ 5 - \$ Debris \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 6,000 \$ \$ Debris \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 6,000 \$ \$ Debris \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 6,000 \$ \$ Debris \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 6,000 \$ \$ Debris \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 6,000 \$ \$ Debris \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 6,000 \$ \$ Debris \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 6,000 \$ \$ Debris \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 6,000 \$ \$ Debris \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 6,000 \$ \$ Debris \$ 5 -	Roads	\$	778,000	\$	850,000	\$	854,000	\$	- 9	2,482,000	\$	-
All Other Tanks \$ 91,000 \$ 99,000 \$ - \$ - \$ 190,000 \$ - \$ Contaminated Soil Removal \$ 5 - \$ 178,000 \$ 178,000 \$ - \$ 190,000 \$ 190,000 \$ 19			1,092,000	\$	1,193,000	\$	-	\$	- 9	2,285,000	\$	-
Contaminated Soil Removal							-					-
Fuel Oil Storage Tank Cleaning \$ - \$ - \$ - \$ 92,000 \$ 92,000 \$ - Peul Oil Line Flushing/Cleaning \$ - \$ - \$ - \$ 381,000 \$ 381,000 \$ - Peul Oil Line Flushing/Cleaning \$ - \$ - \$ - \$ 381,000 \$ 381,000 \$ - Peul Oil Line Flushing/Cleaning \$ - \$ - \$ - \$ 381,000 \$ 381,000 \$ - Peul Oil Line Flushing/Cleaning \$ - \$ - \$ - \$ 381,000 \$ 381,000 \$ - Peul Oil Line Flushing/Cleaning \$ - \$ - \$ - \$ 313,000 \$ 331,000 \$ - Peul Oil Closure of Ash Landfill \$ - \$ - \$ - \$ - \$ 44,550,000 \$ 44,550,000 \$ - Peul Oil Closure of Limestone Area \$ - \$ - \$ - \$ 153,000 \$ 153,000 \$ - Peul Oil Closure of Stormwater and Wastewater Ponds \$ - \$ - \$ - \$ 153,000 \$ 733,000 \$ - Peul Oil Closure of Oil Ponds \$ - \$ - \$ - \$ 105,000 \$ 733,000 \$ - Peul Oil Closure of Oil Ponds \$ - \$ - \$ - \$ 2,156,000 \$ - Peul Oil Closure of Oil Ponds \$ - \$ - \$ - \$ 105,000 \$ - Peul Oil Closure of Oil Ponds \$ - \$ - \$ - \$ 105,000 \$ - Peul Oil Closure of Oil Ponds \$ - \$ - \$ - \$ 105,000 \$ - Peul Oil Closure of Oil Ponds \$ - \$ - \$ - \$ 105,000 \$ - Peul Oil Closure of Oil Ponds \$ - \$ - \$ - \$ 105,000 \$ - Peul Oil Closure of Oil Ponds \$ - \$ - \$ 105,000 \$ - Peul Oil Closure of Oil Ponds \$ - \$ - \$ 105,000 \$ - Peul Oil Closure of Oil Ponds \$ - \$ - \$ 105,000 \$ - Peul Oil Ponds \$ - \$ - \$ 105,000 \$ - Peul Oil Ponds \$ - \$ - \$ 105,000 \$ - Peul Oil Ponds \$ - \$ - \$ 105,000 \$ - Peul Oil Ponds \$ - \$ - \$ 105,000 \$ - Peul Oil Ponds \$ - \$ - \$ 105,000 \$ - Peul Oil Ponds \$ - \$ - \$ 105,000 \$ - Peul Oil Ponds \$ - \$ - \$ 105,000 \$ - Peul Oil Ponds \$ - \$ - \$ 105,000 \$ - Peul Oil Ponds \$ - \$ - \$ 105,000 \$ - Peul Oil Ponds \$ - \$ - \$ 105,000 \$ - Peul Oil Ponds \$ - \$ - \$ 105,000 \$ - Peul Oil Ponds \$ - \$ - \$ 105,000 \$ - Peul Oil Ponds \$ - \$ - \$ 105,000 \$ - Peul Oil Ponds \$ - \$ - \$ 105,000 \$ - Peul Oil Ponds \$ - \$ - \$ 105,000 \$ - Peul Oil Ponds \$ - \$ - \$ 105,000 \$ - Peul Oil Ponds \$ - \$ - \$ 105,000 \$ - Peul Oil Ponds \$ - \$ 105,000 \$ - Peul Oil Ponds \$ - \$ - \$ 105,000 \$ - Peul Oil Ponds \$ - \$ 105,000 \$ - Peul Oil Ponds \$ - \$ 105,000 \$ - Peul Oil Ponds \$ - \$ 105,000 \$ - Peul Oil Ponds \$ - \$ 105,000 \$ - Peul Oil Pon	All Other Tanks		91,000	\$	99,000	\$	-	\$	- \$	190,000	\$	-
Fuel Oil Line Flushing/Cleaning   S			-	-	-	-	-	\$	178,000 \$	178,000	\$	-
Plant Washdown & Materials Disposal   \$ - \$ - \$ - \$   313,000 \$ 313,000 \$ - Closure of Ash Landfill   \$ - \$ - \$ - \$ - \$   44,550,000 \$ 44,550,000 \$ - Closure of Ash Landfill   \$ - \$ - \$ - \$ - \$   44,550,000 \$ 44,550,000 \$ - Closure of Stormwater and Wastewater Ponds   \$ - \$ - \$   - \$   513,000 \$   153,000 \$ - Closure of Stormwater and Wastewater Ponds   \$ - \$ - \$   - \$   733,000 \$   733,000 \$ - Closure of Other Ponds   \$ - \$ - \$   - \$   2,156,000 \$   2,156,000 \$   - Closure of Other Ponds   \$ - \$ - \$   5 - \$   5   - \$   2,156,000 \$   - Closure of Other Ponds   \$ - \$ - \$   5 - \$   5   - \$			-		-	-	-					-
Closure of Ash Landfill Closure of Limestone Area Closure of Limestone Area S - \$ - \$ - \$ 153,000 \$ 153,000 \$ - Closure of Stormwater and Wastewater Ponds S - \$ - \$ - \$ 153,000 \$ 733,000 \$ - Closure of Other Ponds Closure of Other Ponds S - \$ - \$ - \$ 2,156,000 \$ 2,156,000 \$ - Closure of Other Ponds Groundwater Monitoring Installation On-site Concrete Crushing & Disposal S - \$ - \$ - \$ 105,000 \$ - \$ 105,000 \$ - Closure of Other Ponds Seeding and Grading S - \$ - \$ - \$ 105,000 \$ - \$ 105,000 \$ - Closure of Other Ponds Seeding and Grading S - \$ - \$ - \$ 105,000 \$ - \$ 105,000 \$ - Closure of Other Ponds Scrap S - \$ - \$ - \$ 6,000 \$ - \$ 6,000 \$ - Closure of Other Ponds Subtotal S - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ 6,000 \$ - Closure of Other Ponds St. Johns River Power Plant Subtotal S - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -			-		-	-	-					-
Closure of Limestone Area Closure of Stormwater and Wastewater Ponds S - \$ - \$ - \$ 153,000 \$ 153,000 \$ - Closure of Stormwater and Wastewater Ponds Closure of Other Ponds Groundwater Monitoring Installation S - \$ - \$ - \$ 2,156,000 \$ 2,156,000 \$ - Closure of Other Ponds Groundwater Monitoring Installation S - \$ - \$ - \$ 105,000 \$ 2,156,000 \$ - Closure of Other Ponds Groundwater Monitoring Installation S - \$ - \$ - \$ 105,000 \$ - Closure of Other Ponds Groundwater Monitoring Installation S - \$ - \$ 105,000 \$ - \$ 105,000 \$ - Closure of Other Ponds Seeding and Grading S - \$ - \$ 105,000 \$ - \$ 105,000 \$ - Closure of Other Ponds Seeding and Grading S - \$ - \$ - \$ 105,000 \$ - \$ 105,000 \$ - Closure of Other Ponds Scrap Scrap S - \$ - \$ - \$ 6,000 \$ - \$ 6,000 \$ - \$ 6,000 \$ - \$ 6,000 \$ - Closure of Other Ponds Subtotal St. Johns River Power Plant Subtotal S 20,715,000 \$ 22,634,000 \$ 2,428,000 \$ 49,903,000 \$ 95,680,000 \$ (11,470,000) TOTAL COST (CREDIT) St. Johns River Power Plant Subtotal S 20,715,000 \$ 22,634,000 \$ 2,428,000 \$ 49,903,000 \$ 95,680,000 \$ (11,470,000) TOTAL PROJECT COST (CREDIT) S 119,600,000 \$ (11,470,000) TOTAL PROJECT COST (CREDIT)			-		-	-	-					-
Closure of Stormwater and Wastewater Ponds Closure of Other Ponds S-S-S-S-S-S-S-S-S-S-S-S-S-S-S-S-S-S-S-			-		-		-					-
Closure of Other Ponds \$ - \$ - \$ - \$ 2,156,000 \$ 2,156,000 \$ - Groundwater Monitoring Installation \$ - \$ - \$ - \$ 388,000 \$ 388,000 \$ - On-site Concrete Crushing & Disposal \$ - \$ - \$ 105,000 \$ 105,000 \$ 105,00			-	-	-	-	-					-
Groundwater Monitoring Installation \$ - \$ - \$ - \$ 388,000 \$ 388,000 \$ - On-site Concrete Crushing & Disposal \$ - \$ - \$ 105,000 \$ - \$ 105,000 \$ - \$ 105,000 \$ - \$ 105,000 \$ - \$ 105,000 \$ - \$ 105,000 \$ - \$ 105,000 \$ - \$ 105,000 \$ - \$ 105,000 \$ - \$ 105,000 \$ - \$ 105,000 \$ - \$ 105,000 \$ - \$ 105,000 \$ - \$ 105,000 \$ - \$ 105,000 \$ - \$ 105,000 \$ - \$ 105,000 \$ - \$ 105,000 \$ - \$ 105,000 \$ 105,000 \$ - \$ 105,000 \$ 105,000 \$ - \$ 105,000			-		-	-	-					-
On-site Concrete Crushing & Disposal Seeding and Grading Seeding and Seedi			-	-	-	-	-					-
Seeding and Grading   S			-		-		105.000					-
Debris   Scrap   S			-		_		105,000					-
Scrap   Subtotal   S		-		-			6 000					
Subtotal         \$ 2,217,000         \$ 2,422,000         \$ 999,000         \$ 49,903,000         \$ 55,541,000         \$ (496,000)           St. Johns River Power Plant Subtotal         \$ 20,715,000         \$ 22,634,000         \$ 2,428,000         \$ 49,903,000         \$ 95,680,000         \$ (11,470,000)           TOTAL COST (CREDIT)         \$ 95,680,000         \$ (11,470,000)         \$ 4,784,000         \$ 4,784,000         \$ 19,136,000         \$ 19,136,000         \$ 119,600,000         \$ (11,470,000)         \$ 119,600,000         \$ (11,470,000)         \$ 119,600,000         \$ (11,470,000)         \$ 119,600,000         \$ (11,470,000)         \$ 119,600,000         \$ (11,470,000)         \$ 119,600,000         \$ (11,470,000)         \$ 119,600,000         \$ (11,470,000)         \$ 119,600,000         \$ (11,470,000)         \$ 119,600,000         \$ (11,470,000)         \$ 119,600,000         \$ (11,470,000)         \$ 119,600,000         \$ (11,470,000)         \$ 119,600,000         \$ (11,470,000)         \$ 119,600,000         \$ (11,470,000)         \$ 119,600,000         \$ (11,470,000)         \$ 119,600,000         \$ (11,470,000)         \$ 119,600,000         \$ (11,470,000)         \$ 119,600,000         \$ (11,470,000)         \$ (11,470,000)         \$ 119,600,000         \$ (11,470,000)         \$ (11,470,000)         \$ (11,470,000)         \$ (11,470,000)         \$ (11,470,000)         \$ (11,470,000)         \$ (11,4		_	_		_		-					(496.000)
TOTAL COST (CREDIT)       \$ 95,680,000       \$ (11,470,000)         PROJECT INDIRECTS (5%)       \$ 4,784,000       \$ 19,136,000         CONTINGENGY (20%)       \$ 19,36,000       \$ (11,470,000)         TOTAL PROJECT COST (CREDIT)       \$ 119,600,000       \$ (11,470,000)			2,217,000	\$	2,422,000	\$	999,000	\$	49,903,000	55,541,000		
TOTAL COST (CREDIT)       \$ 95,680,000       \$ (11,470,000)         PROJECT INDIRECTS (5%)       \$ 4,784,000       \$ 19,136,000         CONTINGENGY (20%)       \$ 19,36,000       \$ (11,470,000)         TOTAL PROJECT COST (CREDIT)       \$ 119,600,000       \$ (11,470,000)												
PROJECT INDIRECTS (5%) \$ 4,784,000 CONTINGENGY (20%) \$ 19,136,000 \$ 119,600,000 \$ (11,470,000)	St. Johns River Power Plant Subtotal	\$	20,715,000	\$	22,634,000	\$	2,428,000	\$	49,903,000	95,680,000	\$	(11,470,000)
CONTINGENGY (20%) \$ 19,136,000 TOTAL PROJECT COST (CREDIT) \$ 119,600,000 \$ (11,470,000)	TOTAL COST (CREDIT)								\$	95,680,000	\$	(11,470,000)
TOTAL PROJECT COST (CREDIT) \$ 119,600,000 \$ (11,470,000)	PROJECT INDIRECTS (5%)								\$	4,784,000		
	CONTINGENGY (20%)								\$	19,136,000		
TOTAL NET PROJECT COST (CREDIT) \$ 108,130,000	TOTAL PROJECT COST (CREDIT)								\$	119,600,000	\$	(11,470,000)
	TOTAL NET PROJECT COST (CREDIT)								\$	108,130,000		

<sup>1</sup> As provided by FPL's from estimates prepared by their Environmental Group based on areas of known soil contamination that will require remediation at the time of project dismantlement.

### Table A-10 Sanford Energy Center **Decommissioning Cost Summary**

			aterial and							
	Labor	E	quipment		Disposal	Environmental		Total Cost	S	Salvage
ford Energy Center										
Unit 4 GTs and HRSGs	0.700.000	•	0.000.000	6		\$ -	\$	E 704 000	0	
	\$ 2,739,000		2,992,000	\$					\$	-
Steam Turbine & Pedestal	\$ 925,000	\$	1,010,000	\$	-	\$ -	\$		\$	-
SCR	\$	\$	106,000	\$	-	\$ -	\$		\$	-
GSU & Electrical	\$ 154,000	\$	168,000	\$	37,000	\$ -	\$		\$	-
Stack	\$ 116,000	\$	127,000	\$	-	\$ -	\$	243,000	\$	-
Cooling Tower	\$ 18,000	\$	20,000	\$	-	\$ -	\$	38,000	\$	
On-site Concrete Crushing & Disposal	\$ -	\$	-	\$	180,000	\$ -	\$	180,000	\$	
Scrap	\$ -	\$	-	\$	-	\$ -	\$	-	\$	(4,248,0
Subtotal	\$ 4,049,000	\$	4,423,000	\$	217,000	\$ -	\$	8,689,000	\$	(4,248,0
Unit 5										
GTs and HRSGs	0.700.000	Φ.	0.000.000				•	F 704 000	0	
	\$ 2,739,000		2,992,000	\$		\$ -	\$		\$	
Steam Turbine & Pedestal	\$ 914,000		999,000	\$	-	\$ -	\$		\$	
SCR	\$	\$	106,000	\$	-	\$ -	\$		\$	
GSU & Electrical	\$ 149,000	\$	163,000	\$	37,000	\$ -	\$	349,000	\$	
Stack	\$	\$	127,000	\$		\$ -	\$	243,000	\$	
Cooling Tower	\$ 18,000	\$	20,000	\$	-	\$ -	\$	38,000	\$	
On-site Concrete Crushing & Disposal	\$ -	\$	-	\$	180,000	\$ -	\$	180,000	\$	
Scrap	\$ _	\$	_	S	-	\$ -	\$	-	\$	(4,235,0
Subtotal	\$ 4,033,000	\$	4,407,000	\$	217,000	\$ -	\$	8,657,000	\$	(4,235,0
Common										
								50.000		
Asbestos Removal <sup>1</sup>	\$ 	\$		\$		\$ 50,000			\$	
Switchyard and Substation	\$ 25,000	\$	27,000	\$	35,000	\$ -	\$	87,000	\$	
Cooling Water Intakes and Circulating Water Pumps	\$ 34,000	\$	37,000	\$	-	\$ -	\$	71,000	\$	
Roads	\$ 422,000	\$	461,000	\$	463,000	\$ -	\$	1,346,000	\$	
All BOP Buildings	\$ 166,000	\$	182,000	\$	-	\$ -	\$	348,000	\$	
Fuel Oil Storage Tanks	\$ 329,000	\$	359,000	\$	_	\$ -	\$	688,000	\$	
All Other Tanks	\$ 45,000	\$	49,000	S	_	\$ -	\$	94,000	\$	
Contaminated Soil Removal	\$ ,	\$	,	\$		\$ 167,000	\$		\$	
Fuel Oil Storage Tank Cleaning	\$	\$		\$		\$ 2,566,000	\$		\$	
Fuel Oil Line Flushing/Cleaning	\$ _	\$	_	\$		\$ 282,000	\$		\$	
	\$ -	\$	-	\$			\$			
Settling Pond Closure	-		-						\$	
On-site Concrete Crushing & Disposal	\$ -	\$	-	\$	26,000	\$ -	\$		\$	
Seeding and Grading	\$ -	\$	-	\$	-	\$ 351,000	\$		\$	
Debris	\$ -	\$	-	\$		\$ -	\$	2,000	\$	
Scrap	\$ -	\$	-	\$	-	\$ -	\$	-	\$	(375,0
Subtotal	\$ 1,021,000	\$	1,115,000	\$	526,000	\$ 3,660,000	\$	6,322,000	\$	(375,0
Conford France Control Subtatal	0.400.000	•	0.045.000	•	202 202	<b>*</b> 2.000.000	•	00.000.000	•	(0.050.4
Sanford Energy Center Subtotal	\$ 9,103,000	\$	9,945,000	\$	960,000	\$ 3,660,000	\$	23,668,000	\$	(8,858,
Sanford Energy Center Subtotal	\$ 9,103,000	\$	9,945,000	\$	960,000	\$ 3,660,000	\$	23,668,000	\$	
TOTAL COST (CREDIT)							\$	23,668,000	\$	(8,8
PROJECT INDIRECTS (5%)							\$	1,183,000		
CONTINGENGY (20%)							\$	4,734,000		
SITE INVENTORY COST (CREDIT) <sup>2</sup>							\$	1,859,119	\$	(185
TOTAL PROJECT COST (CREDIT)							\$	31,444,119	\$	(9,043
TOTAL NET PROJECT COST (CREDIT)							\$	22,400,207		
TOTAL NET PROJECT COST (CREDIT)							Ф	22,400,207		

Asbestos removal estimates were provided by FPL and were not independently reviewed by BMcD.
 Site inventory costs and recoverable scrap of inventory estimates (10%) were provided by FPL and were not independently reviewed by BMcD.

### Table A-11 Scherer Power Plant Decommissioning Cost Summary

		IV.	laterial and								
	Labor		Equipment		Disposal	E	nvironmental		Total Cost		Salvage
										_	
					-	-	-				-
					-	-	-				-
					-	-	-				-
					-		-				-
					-		-				-
					-		-				-
					-	-	-	-			-
					-	Ÿ	-	-			-
	57,000	\$	75,000	\$	66,000	\$	-	\$	198,000	\$	-
	-	\$	-	\$	802,000	\$	-	\$	802,000	\$	-
	-	\$	-		37,000	\$	-		37,000	\$	-
\$	-	\$	-	\$	-	\$	-	\$	-	\$	(7,274,00
\$	9,243,000	\$	12,239,000	\$	905,000	\$	-	\$	22,387,000	\$	(7,274,00
.8	1.004.000	S	1.329.000	S	_	S	_	\$	2.333.000	S	_
					_	-	_				
	_ 12,000				33 000		_				
	_		-				_				_
	-		-		70,000		-		70,000		(897,00
\$	1,216,000	\$	1,609,000	\$	103,000	\$	-	\$	2,928,000	\$	(897,00
s	164 000	S	217 000	S	62 000	S	_	S	443 000	s	_
	101,000		211,000		02,000		44 574 000				
	470.000		-		-		14,571,000				-
					-		-				-
-					1,506,000	-	-	-			-
					-	-	-				-
					-		-				-
	153,000		202,000		-		-		355,000		-
	-		-	-	-	\$		\$	16,000	\$	-
	-	\$	-	\$	-	\$	119,000	\$	119,000	\$	-
\$	-	\$	-	\$	-	\$	1,200,000	\$	1,200,000	\$	-
\$	-	\$	-	\$	-	\$	248,000	\$	248,000	\$	-
\$	-	\$	-	\$	-	\$	107,992,000	\$	107,992,000	\$	-
\$	-	\$	-	\$	-	\$	2,514,000	\$	2,514,000	\$	-
\$	_	\$	_	\$	-	\$	167,000	\$	167,000	\$	_
\$	_	\$	_	S	_	\$	1.823.000	\$	1.823.000	\$	_
		\$	_	\$	172,000	\$	_	\$	172,000	\$	_
S											
\$	-		_	S	_	S	2 097 000	\$	2 097 000	S	_
\$	-	\$	-	\$	7 000	\$ \$	2,097,000	\$	2,097,000	\$	-
	-		-	\$ \$	7,000	\$ \$ \$	2,097,000	\$ \$	2,097,000 7,000	\$ \$ \$	- - (1.458.00
\$	2,855,000	\$	3,779,000	\$	7,000 - <b>1,747,000</b>	\$	2,097,000 - - - 130,747,000	\$		\$	(1,458,00 (1,458,00
\$ \$ \$	2,855,000	\$ \$	3,779,000	\$		\$ \$	-	\$	7,000	\$	
	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	\$ 4,520,000 \$ 1,564,000 \$ 503,000 \$ 1,590,000 \$ 286,000 \$ 339,000 \$ 174,000 \$ 57,000 \$ -5, - \$ - \$ - \$ 1,004,000 \$ 212,000 \$ 1,009,000 \$ 1,33,000 \$ 1,33,000 \$ 1,33,000 \$ 1,33,000 \$ 1,53,000	\$ 4,520,000 \$ \$ 1,564,000 \$ \$ 503,000 \$ \$ 1,590,000 \$ \$ 286,000 \$ \$ 339,000 \$ \$ 174,000 \$ \$ 210,000 \$ \$ 57,000 \$ \$ 212,000 \$ \$ 212,000 \$ \$ 1,004,000 \$ \$ 212,000 \$ \$ 1,004,000 \$ \$ 1,133,000 \$ \$ 1,133,000 \$ \$ 1,133,000 \$ \$ 1,069,000 \$ \$ 163,000 \$ \$ 153,000 \$ \$ 5 -	\$ 4,520,000 \$ 5,984,000 \$ 1,564,000 \$ 2,071,000 \$ 503,000 \$ 666,000 \$ 1,590,000 \$ 2,106,000 \$ 286,000 \$ 379,000 \$ 339,000 \$ 449,000 \$ 174,000 \$ 231,000 \$ 57,000 \$ 75,000 \$ 5,000 \$ 75,000 \$ - \$ - \$ \$ - \$ - \$ \$ - \$ - \$ \$ - \$ - \$	\$ 4,520,000 \$ 5,984,000 \$ 1,564,000 \$ 1,564,000 \$ 2,071,000 \$ 5 666,000 \$ 1,590,000 \$ 2,106,000 \$ 2,866,000 \$ 3,449,000 \$ 3,449,000 \$ 3,449,000 \$ 3,449,000 \$ 3,449,000 \$ 3,449,000 \$ 3,449,000 \$ 3,449,000 \$ 3,449,000 \$ 3,449,000 \$ 3,449,000 \$ 3,449,000 \$ 3,449,000 \$ 3,449,000 \$ 3,449,000 \$ 3,49	\$ 4,520,000 \$ 5,984,000 \$ - \$ 1,564,000 \$ 2,071,000 \$ - \$ 503,000 \$ 666,000 \$ - \$ 1,590,000 \$ 2,106,000 \$ - \$ 286,000 \$ 379,000 \$ - \$ 339,000 \$ 449,000 \$ - \$ 174,000 \$ 231,000 \$ - \$ 210,000 \$ 75,000 \$ 660,000 \$ - \$ - \$ - \$ 802,000 \$ - \$ - \$ - \$ 802,000 \$ - \$ - \$ - \$ 37,000 \$ - \$ - \$ - \$ 37,000 \$ - \$ - \$ - \$ 37,000 \$ - \$ - \$ - \$ 30,000 \$ - \$ - \$ - \$ 30,000 \$ - \$ - \$ - \$ 30,000 \$ - \$ - \$ - \$ 30,000 \$ - \$ - \$ - \$ 30,000 \$ - \$ - \$ - \$ - \$ 30,000 \$ - \$ - \$ - \$ - \$ 30,000 \$ - \$ - \$ - \$ - \$ 30,000 \$ - \$ - \$ - \$ - \$ 30,000 \$ - \$ - \$ - \$ - \$ 70,000 \$ - \$ - \$ - \$ - \$ 70,000 \$ - \$ - \$ - \$ - \$ - \$ 70,000 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ 13,000 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ 13,000 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 4,520,000 \$ 5,984,000 \$ - \$ \$ 1,564,000 \$ 2,071,000 \$ - \$ \$ 503,000 \$ 666,000 \$ - \$ \$ 1,590,000 \$ 2,106,000 \$ - \$ \$ 286,000 \$ 379,000 \$ - \$ \$ 339,000 \$ 449,000 \$ - \$ \$ 174,000 \$ 231,000 \$ - \$ \$ 210,000 \$ 75,000 \$ 666,000 \$ \$ - \$ - \$ - \$ 802,000 \$ \$ - \$ - \$ - \$ 802,000 \$ \$ - \$ - \$ - \$ 37,000 \$ \$ - \$ - \$ - \$ 37,000 \$ \$ - \$ - \$ - \$ 37,000 \$ \$ - \$ - \$ - \$ 37,000 \$ \$ - \$ - \$ - \$ 37,000 \$ \$ - \$ - \$ - \$ 37,000 \$ \$ - \$ - \$ - \$ 37,000 \$ \$ - \$ - \$ - \$ 37,000 \$ \$ - \$ - \$ - \$ 37,000 \$ \$ - \$ - \$ - \$ 37,000 \$ \$ - \$ - \$ - \$ 37,000 \$ \$ - \$ - \$ - \$ 37,000 \$ \$ - \$ - \$ - \$ 37,000 \$ \$ - \$ - \$ - \$ 37,000 \$ \$ - \$ - \$ - \$ 37,000 \$ \$ - \$ - \$ - \$ 37,000 \$ \$ - \$ - \$ - \$ 37,000 \$ \$ - \$ - \$ - \$ 37,000 \$ \$ - \$ - \$ - \$ - \$ 37,000 \$ \$ - \$ - \$ - \$ - \$ 37,000 \$ \$ - \$ - \$ - \$ - \$ 37,000 \$ \$ - \$ - \$ - \$ - \$ 37,000 \$ \$ - \$ - \$ - \$ - \$ 37,000 \$ \$ - \$ - \$ - \$ - \$ 37,000 \$ \$ - \$ - \$ - \$ - \$ 37,000 \$ \$ - \$ - \$ - \$ - \$ 37,000 \$ \$ - \$ - \$ - \$ - \$ - \$ \$ - \$ - \$ - \$ -	\$ 4,520,000 \$ 5,984,000 \$ - \$ - \$ - \$ 503,000 \$ 666,000 \$ - \$ - \$ - \$ 52,000 \$ 52,000,000 \$ - \$ - \$ - \$ - \$ 52,000 \$ 52,000,000 \$ - \$ - \$ - \$ - \$ 52,000 \$ 52,000,000 \$ - \$ - \$ - \$ - \$ 52,000 \$ - \$ - \$ 52,000 \$ - \$ 52,000 \$ - \$ - \$ 52,000 \$ - \$ 52,	\$ 4,520,000 \$ 5,984,000 \$ - \$ - \$ \$ \$ 1,564,000 \$ 2,071,000 \$ - \$ - \$ \$ 503,000 \$ 666,000 \$ - \$ - \$ \$ 286,000 \$ 379,000 \$ - \$ - \$ \$ 339,000 \$ 449,000 \$ - \$ - \$ \$ 174,000 \$ 231,000 \$ - \$ - \$ \$ 210,000 \$ 278,000 \$ - \$ - \$ \$ 57,000 \$ 75,000 \$ 66,000 \$ - \$ \$ - \$ - \$ \$ 9,243,000 \$ 12,239,000 \$ - \$ - \$ \$ 1,004,000 \$ 1,329,000 \$ - \$ \$ - \$ - \$ - \$ \$ 1,216,000 \$ 1,609,000 \$ 103,000 \$ - \$ \$ 1,133,000 \$ 229,000 \$ - \$ - \$ \$ 1,133,000 \$ 229,000 \$ - \$ - \$ \$ 1,133,000 \$ 229,000 \$ - \$ - \$ \$ 1,133,000 \$ 220,000 \$ - \$ - \$ \$ 1,133,000 \$ 220,000 \$ - \$ - \$ \$ 1,133,000 \$ 220,000 \$ - \$ - \$ \$ 1,133,000 \$ 220,000 \$ - \$ - \$ \$ 1,133,000 \$ 220,000 \$ - \$ - \$ \$ 1,133,000 \$ 220,000 \$ - \$ - \$ \$ 1,133,000 \$ 220,000 \$ - 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\$ - \$ - \$ 405,000 \$ 575,000 \$ 66,000 \$ - \$ - \$ 198,000 \$ - \$ 198,000 \$ - \$ - \$ 198,000 \$ - \$ - \$ 198,000 \$ - \$ - \$ 198,000 \$ - \$ - \$ 198,000 \$ - \$ - \$ 198,000 \$ - \$ - \$ 198,000 \$ - \$ - \$ 198,000 \$ - \$ - \$ 10,000 \$ - \$ 10,000 \$ 1,000 \$ 12,239,000 \$ - \$ 10,000 \$ - \$ 10,000 \$ 1,000 \$ 12,239,000 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 4,520,000 \$ 5,984,000 \$ - \$ - \$ 10,504,000 \$ \$ \$ 1,564,000 \$ 2,071,000 \$ - \$ - \$ 3,635,000 \$ \$ 503,000 \$ 666,000 \$ - \$ - \$ 1,169,000 \$ \$ \$ 286,000 \$ - \$ - \$ - \$ 1,169,000 \$ \$ \$ 286,000 \$ - \$ - \$ - \$ 665,000 \$ \$ \$ 286,000 \$ 379,000 \$ - \$ - \$ - \$ 665,000 \$ \$ 339,000 \$ 449,000 \$ - \$ - \$ - \$ 788,000 \$ \$ 174,000 \$ 231,000 \$ - \$ - \$ - \$ 405,000 \$ \$ 210,000 \$ - \$ - \$ - \$ 488,000 \$ \$ 5 57,000 \$ 75,000 \$ 66,000 \$ - \$ - \$ 198,000 \$ \$ 5 57,000 \$ 75,000 \$ 66,000 \$ - \$ 198,000 \$ \$ 5 - \$ - \$ 802,000 \$ \$ 5 - \$ - \$ 802,000 \$ \$ 5 - \$ - \$ 802,000 \$ \$ 5 - 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<sup>&</sup>lt;sup>1</sup> Asbestos removal estimates were provided by FPL and were not independently reviewed by BMcD.

### Table A-12 Space Coast Next Generation Solar Energy Center Decommissioning Cost Summary

			1	Material and								
		Labor		Equipment		Disposal		Environmental		Total Cost		Salvage
Space Coast Next Generation Solar Energy Center												
Unit 1												
Demolition	\$	226,000		338,000		-	\$	-	\$	564,000		-
Collector System	\$	,	\$	26,000		-	\$	-	\$	44,000	\$	-
Project Buildings	\$	2,000	\$	4,000	\$		\$	-	\$	6,000	\$	-
Hazardous Material Disposal	\$	-	\$	-	\$		\$	-	\$	157,000	\$	-
On-site Concrete Crushing & Disposal	\$	-	\$	-	\$	10,000	\$	-	\$	10,000	\$	-
Site Restoration	\$	-	\$	-	\$	-	\$	120,000	\$	120,000	\$	-
Debris	\$	-	\$	-	\$	19,000	\$	-	\$	19,000	\$	-
Scrap	\$	-	\$	-	\$	-	\$	-	\$	-	\$	(289,000)
Subtotal	\$	246,000	\$	368,000	\$	186,000	\$	120,000	\$	920,000	\$	(289,000)
Space Coast Next Generation Solar Energy Center Subtotal	\$	246,000	\$	368,000	\$	186,000	S	120,000	\$	920,000	S	(289,000)
opaco ocaci non constanci com Energy conter cariotal	Ţ	0,000	_	000,000	<u> </u>	.00,000	_	.20,000	_	020,000	<u> </u>	(200,000)
TOTAL COST (CREDIT)									\$	920,000	\$	(289,000)
PROJECT INDIRECTS (5%)									\$	46,000		
CONTINGENGY (20%)									\$	184,000		
TOTAL PROJECT COST (CREDIT)									\$	1,150,000	\$	(289,000)
TOTAL NET PROJECT COST (CREDIT)									\$	861,000		

### Table A-13 **Turkey Point Power Plant Decommissioning Cost Summary**

		Labor		erial and uipment		Disposal	Envir	onmental		Total Cost		Salvage
ey Point Power Plant												
Unit 1 Boiler	\$	5.038.000	\$	4.695.000	\$	_	S		\$	9.733.000	S	
Steam Turbine & Building	\$		\$	774,000	\$		\$		\$	1,575,000	\$	
Stack	\$		\$	1,278,000	\$		\$		\$	2,602,000	\$	
GSU & Foundation	\$		\$	32,000	\$	51,000	\$		\$	116,000	\$	
On-site Concrete Crushing & Disposal	\$	55,000	\$	52,000	\$		\$		\$	228,000	\$	
Debris	\$	_	\$		\$		\$	_	\$	38,000	\$	_
	\$	-	\$	-	ş S	38,000	ş S	-	\$	36,000	ş S	(3,488,00
Scrap Subtotal	\$	7,196,000	\$	6,779,000	\$	317,000	\$	-	\$	14,292,000	\$	(3,488,00
Unit 2	<u>-</u>											
Boiler		F 000 000	•	4 005 000			\$		\$	0.700.000		
	\$		\$	4,695,000	\$	-		-		9,733,000	\$	-
Steam Turbine & Building	\$		\$	774,000	\$	-	\$	-	\$	1,575,000	\$	-
Stack	\$	1,324,000	\$	1,278,000	\$	-	\$	-	\$	2,602,000	\$	-
GSU & Foundation	\$		\$	32,000	\$	51,000	\$	-	\$	116,000	\$	-
On-site Concrete Crushing & Disposal	\$	-	\$	-	\$		\$	-	\$	228,000	\$	-
Debris	\$	-	\$	-	\$	38,000	\$	-	\$	38,000	\$	
Scrap	\$		\$	-	\$		\$	-	\$	-	\$	(3,488,0
Subtotal	\$	7,196,000	\$	6,779,000	\$	317,000	\$	-	\$	14,292,000	\$	(3,488,0
Unit 5												
GTs and HRSGs	\$	5,017,000		4,844,000	\$	-	\$	-	\$		\$	-
Steam Turbine & Pedestal	\$	1,001,000	\$	966,000	\$	-	\$	-	\$	1,967,000	\$	-
SCR	\$	216,000	\$	209,000	\$	-	\$	-	\$	425,000	\$	-
GSU & Electrical	\$	153,000	\$	148,000	\$	70,000	\$	-	\$	371,000	\$	-
Stack	\$	130,000	\$	125,000	\$	-	\$	-	\$	255,000	\$	-
Cooling Tower and Basin	\$	137,000	\$	133,000	\$	_	\$	_	\$	270,000	\$	_
On-site Concrete Crushing & Disposal	\$	_	\$	-	\$	167,000	\$	_	\$	167,000	\$	
Debris	\$	_	\$	_	\$	-	\$	_	\$	_	\$	
Scrap	\$	_	\$	_	\$	-	\$	_	\$	_	\$	(6,130,0
Subtotal	\$	6,654,000	\$	6,425,000	\$	237,000	\$	-	\$	13,316,000	\$	(6,130,0
Common												
Auxiliary, Switchyard and Substation	\$	14,000	\$	14,000	S	33,000	\$	_	\$	61,000	S	_
	\$	,	\$	_	\$	,	\$	050 000	\$		\$	
Asbestos Removal		-				-		859,000		859,000		-
Cooling Water Intakes and Circulating Water Pumps	\$		\$	66,000	\$	-	\$	-	\$	134,000	\$	-
Cooling Water Discharge Canal	\$		\$		\$	-	\$	-	\$	143,000	\$	-
Roads	\$		\$		\$	450,000	\$	-	\$	1,350,000	\$	-
All BOP Buildings	\$		\$	411,000	\$	-	\$	-	\$	837,000	\$	-
Fuel Oil Storage Tanks	\$	683,000	\$	659,000	\$	-	\$	-	\$	1,342,000	\$	-
All Other Tanks	\$	85,000	\$	82,000	\$	-	\$	_	\$	167,000	\$	_
Contaminated Soil Removal	\$	_	\$	_	\$	_	\$	228,000	\$	228,000	s	
Fuel Oil Storage Tank Cleaning	\$	_	\$	_	S	_	S		\$	2,151,000	s	
Fuel Oil Line Flushing/Cleaning	\$		\$		\$		\$		\$	60,000	S	
On-site Concrete Crushing & Disposal	\$	_	\$	_	\$		\$	-	\$	93,000	\$	
Seeding and Grading	\$	-	\$	-	\$	93,000	\$	293,000	\$	293,000	\$	
Debris	\$	-	\$	-	\$		\$	293,000		2,000	\$	
	φ e	-	\$	-	Ģ S	2,000	ō.	-	\$	2,000	φ	(312,0
Scrap	3		Ψ		Ψ	-	)		Ψ		ψ.	
Subtotal	\$	1,807,000	\$	1,744,000	\$	578,000	\$	3,591,000	\$	7,720,000	\$	(312,0
Turkey Point Subtotal	\$	22,853,000	\$	21,727,000	\$	1,449,000	\$	3,591,000	\$	49,620,000	\$	(13,418,0
Turkey Point Subtotal	\$	22,853,000	\$	21,727,000	\$	1,449,000	\$	3,591,000	\$	49,620,000	\$	
TOTAL COST (CREDIT)									\$	49,620,000	\$	(13,4
PROJECT INDIRECTS (5%)									\$	2,481,000		
CONTINGENGY (20%)									\$	9,924,000		
SITE INVENTORY COST (CREDIT) <sup>2</sup>									\$	2,591,729	\$	(259,
TOTAL PROJECT COST (CREDIT)									\$	64,616,729	\$	(13,677,
TOTAL NET PROJECT COST (CREDIT)									\$	50,939,556		
									Ψ	00,000,000		

<sup>&</sup>lt;sup>1</sup> Asbestos removal estimates were provided by FPL and were not independently reviewed by BMcD.
<sup>2</sup> Site inventory costs and recoverable scrap of inventory estimates (10%) were provided by FPL and were not independently reviewed by BMcD.

# Table A-14 West County Energy Center Decommissioning Cost Summary

			٠			•							
		Labor		Material and Equipment		Disposal	Е	Environmental		Total Cost		Salvage	
Vest County Energy Center													
Unit 1													
GTs and HRSGs	\$	2,625,000	\$		\$	-	\$	-	\$	5,494,000	\$	-	
Steam Turbine & Pedestal SCR	\$ \$	990,000	\$	1,082,000	\$	-	\$ \$	-	\$	2,072,000	\$	-	
GSU & Electrical	\$	,	-	101,000	\$		\$	-	\$	194,000	\$	-	
	\$	262,000 95,000	\$				\$	-	\$	630,000		-	
Stack				103,000				-		198,000		-	
Cooling Tower and Basin On-site Concrete Crushing & Disposal	\$	302,000		329,000			\$	-	\$		\$	-	
Debris	\$	-	\$	-	\$		\$	-	\$	242,000	\$	-	
Scrap	\$	-	\$	-	\$	-	\$	-	\$	-	\$	(5.047.000)	
Subtotal	\$	4,367,000	\$	4,770,000	\$	324,000	\$	-	\$	9,461,000	\$	(5,047,000) (5,047,000)	
Unit 2													
GTs and HRSGs	\$	2,625,000	\$	2,869,000	S		\$		\$	5,494,000	S		
Steam Turbine & Pedestal	\$		\$	1,082,000	\$		\$		\$	2,072,000	\$		
SCR	\$		\$		\$		\$		\$	194,000	S.		
GSU & Electrical	\$		\$		S	82.000	\$		\$	663,000	S		
Stack	\$		\$		\$	-	\$		\$	198,000	\$		
Cooling Tower and Basin	\$	302,000	\$		\$	_	\$	-	\$		\$	-	
On-site Concrete Crushing & Disposal	\$	302,000	\$	329,000	\$	242,000	\$	-	\$	631,000 242,000	\$	-	
Debris	\$	-	\$	-	\$	242,000	\$	-	\$	242,000	\$	-	
Scrap	\$	-	\$	-	ş S	-	\$	-	\$	-	\$	(5,060,000)	
Scrap Subtotal	\$	4,383,000	-	4,787,000	-	324,000	-		-	9,494,000		(5,060,000)	
Subtotal	\$	4,363,000	Þ	4,767,000	Þ	324,000	Þ		\$	9,494,000	Þ	(5,060,000)	
Unit 3													
GTs and HRSGs	\$	2,625,000		2,869,000		-	\$	-	\$	5,494,000		-	
Steam Turbine & Pedestal	\$		\$		\$	-	\$	-	\$	2,072,000	\$	-	
SCR	\$		\$	,	\$	-	\$	-	\$	194,000	\$	-	
GSU & Electrical	\$	293,000	\$		\$	82,000	\$	-	\$	695,000	\$	-	
Stack	\$	95,000	\$		\$	-	\$	-	\$	198,000	\$	-	
Cooling Tower and Basin	\$	302,000	\$	329,000	\$	-	\$	-	\$	631,000	\$	-	
On-site Concrete Crushing & Disposal	\$	-	\$	-	\$	242,000	\$	-	\$	242,000	\$	-	
Debris	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	
Scrap	\$	-	\$	-	\$	-	\$	-	\$	-	\$	(5,073,000)	
Subtotal	\$	4,398,000	\$	4,804,000	\$	324,000	\$	-	\$	9,526,000	\$	(5,073,000)	
Common													
Auxiliary, Switchyard and Substation	\$	134,000	\$	147,000	\$	31,000	\$	_	\$	312,000	\$	_	
Cooling Water Intakes and Circulating Water Pumps	\$	89,000	\$	98,000	\$	-	\$	-	\$	187,000	\$	-	
Roads	\$	535,000	\$	585,000	\$	587,000	\$	-	\$	1,707,000	\$	_	
All BOP Buildings	\$	502,000	\$	548,000	\$	-	\$	-	\$	1,050,000	\$	-	
Fuel Oil Storage Tanks	\$	1,164,000	\$	1,271,000	\$		S	_	\$	2,435,000	\$	_	
All Other Tanks	\$	138,000	\$	151,000	\$		S	_	\$	289,000	\$	_	
Contaminated Soil Removal	\$	-	\$	-	\$		\$	253,000			\$	_	
Fuel Oil Storage Tank Cleaning	\$	_	\$	_	\$		\$	2,835,000			\$	_	
Fuel Oil Line Flushing/Cleaning	\$	_	\$	_	\$		\$	1,688,000			\$	_	
On-site Concrete Crushing & Disposal	\$	_	\$	_	\$		\$	-	\$		\$	_	
Seeding and Grading	\$	_	\$	_	S	-	\$	699,000	\$		\$	_	
Debris Debris	\$	_	\$	_	S	1,000	\$	-	\$		\$	_	
Scrap	\$		\$		S.	1,000	S		\$	1,000	S.	(504.000)	
Subtotal	\$	2,562,000	\$	2,800,000	\$	775,000	\$	5,475,000	\$	11,612,000	\$	(504,000)	
West County Energy Center Subtotal	\$	15,710,000	\$	17,161,000	\$	1,747,000	\$	5,475,000	\$	40,093,000	\$	(15,684,000)	
TOTAL COST (CREDIT)									\$	40,093,000	\$	(15,684,000)	
PROJECT INDIRECTS (5%)									\$	2,005,000			
CONTINGENCY (20%)									\$	8,019,000			
SITE INVENTORY COST (CREDIT) <sup>1</sup>									\$	4,725,211	\$	(472,521)	
TOTAL PROJECT COST (CREDIT)									\$	54,842,211	\$	(16,156,521)	
TOTAL NET PROJECT COST (CREDIT)									\$	38,685,690			

<sup>&</sup>lt;sup>1</sup> Site inventory costs and recoverable scrap of inventory estimates (10%) were provided by FPL and were not independently reviewed by BMcD.

### Table A-15 Babcock Ranch Solar Energy Center Decommissioning Cost Summary

		N	Material and							
	Labor		Equipment	Disposal	Е	invironmental		Total Cost		Salvage
Babcock Ranch Solar Energy Center										
Unit 1										
Demolition	\$ 1,681,000		2,521,000	-	\$	-	\$	4,202,000		-
Collector System	\$ 131,000		197,000	-	\$	-	\$	328,000		-
Project Buildings	\$ 18,000	\$	27,000		\$	-	\$	45,000	\$	-
Hazardous Material Disposal	\$ -	\$	-	\$ .,,	\$	-	\$	1,171,000		-
On-site Concrete Crushing & Disposal	\$ -	\$	-	\$ 75,000	\$		\$	75,000		-
Site Restoration	\$ -	\$	-	\$ 	\$	894,000	\$	894,000	\$	-
Debris	\$ -	\$	-	\$ 140,000	\$	-	\$	140,000		
Scrap	\$ 	\$		\$ 	\$		\$		\$	(2,152,000)
Subtotal	\$ 1,830,000	\$	2,745,000	\$ 1,386,000	\$	894,000	\$	6,855,000	\$	(2,152,000)
Babcock Ranch Solar Energy Center Subtotal	\$ 1,830,000	\$	2,745,000	\$ 1,386,000	\$	894,000	\$	6,855,000	\$	(2,152,000)
TOTAL COST (CREDIT)							\$	6,855,000	s	(2,152,000)
							*	0,000,000	*	(2,102,000)
PROJECT INDIREGTS (5%)							\$	343,000		
CONTINGENGY (20%)							\$	1,371,000		
TOTAL PROJECT COST (CREDIT)							\$	8,569,000	\$	(2,152,000)
TOTAL NET PROJECT COST (CREDIT)							\$	6,417,000		

### Table A-16 Citrus Solar Energy Center Decommissioning Cost Summary

Salvage
-
-
-
-
-
-
-
(2,152,000)
(2,152,000)
(2,152,000)
(2,152,000)
(2,152,000)
(2,152,000)

### Table A-17 Manatee Solar Energy Center Decommissioning Cost Summary

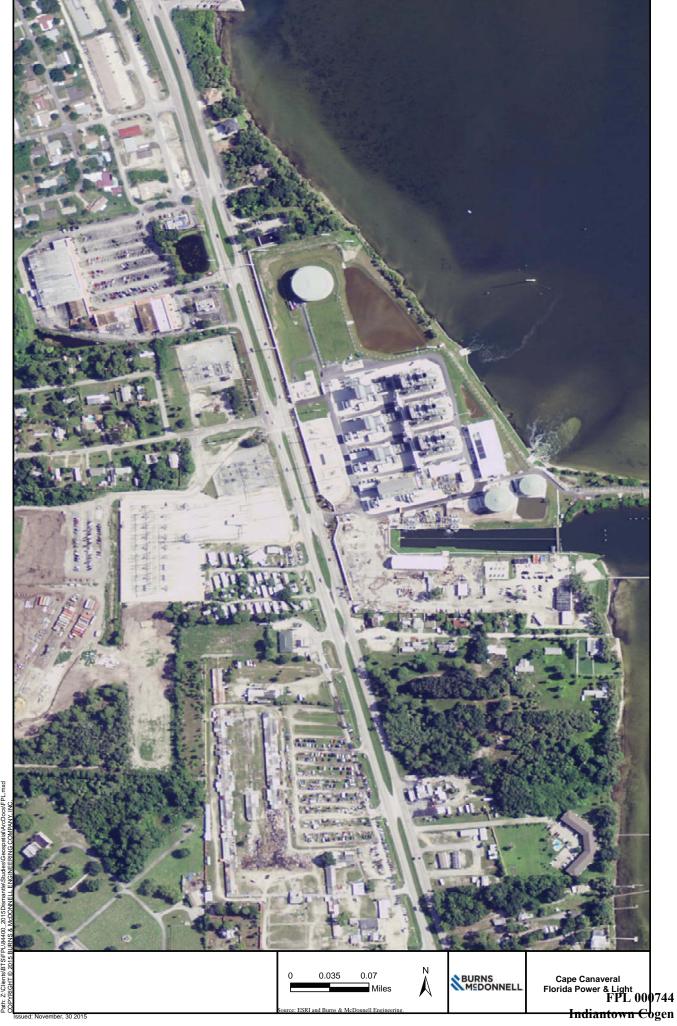
		N	Material and					
	Labor		Equipment	Disposal	E	Environmental	Total Cost	Salvage
Manatee Solar Energy Center								
Unit 1								
Demolition	\$ 1,681,000		2,521,000	-	\$	-	\$ 4,202,000	-
Collector Sytem	\$ 131,000		197,000	-	\$	-	\$ 328,000	\$ -
Project Buildings	\$ 18,000	\$	27,000	-	\$	-	\$ 45,000	\$ -
Hazardous Material Disposal	\$ -	\$	-	\$ 1,171,000	\$	-	\$ 1,171,000	\$ -
On-site Concrete Crushing & Disposal	\$ -	\$	-	\$ 75,000	\$	-	\$ 75,000	\$ -
Site Restoration	\$ -	\$	-	\$ -	\$	894,000	\$ 894,000	\$ -
Debris	\$ -	\$	-	\$ 140,000	\$	-	\$ 140,000	\$ -
Scrap	\$ -	\$	-	\$ -	\$	-	\$ -	\$ (2,152,000)
Subtotal	\$ 1,830,000	\$	2,745,000	\$ 1,386,000	\$	894,000	\$ 6,855,000	\$ (2,152,000)
Manatee Solar Energy Center Subtotal	\$ 1,830,000	\$	2,745,000	\$ 1,386,000	\$	894,000	\$ 6,855,000	\$ (2,152,000)
TOTAL COST (CREDIT)							\$ 6,855,000	\$ (2,152,000)
PROJECT INDIREGTS (5%)							\$ 343,000	
CONTINGENGY (20%)							\$ 1,371,000	
TOTAL PROJECT COST (CREDIT)							\$ 8,569,000	\$ (2,152,000)
TOTAL NET PROJECT COST (CREDIT)							\$ 6,417,000	

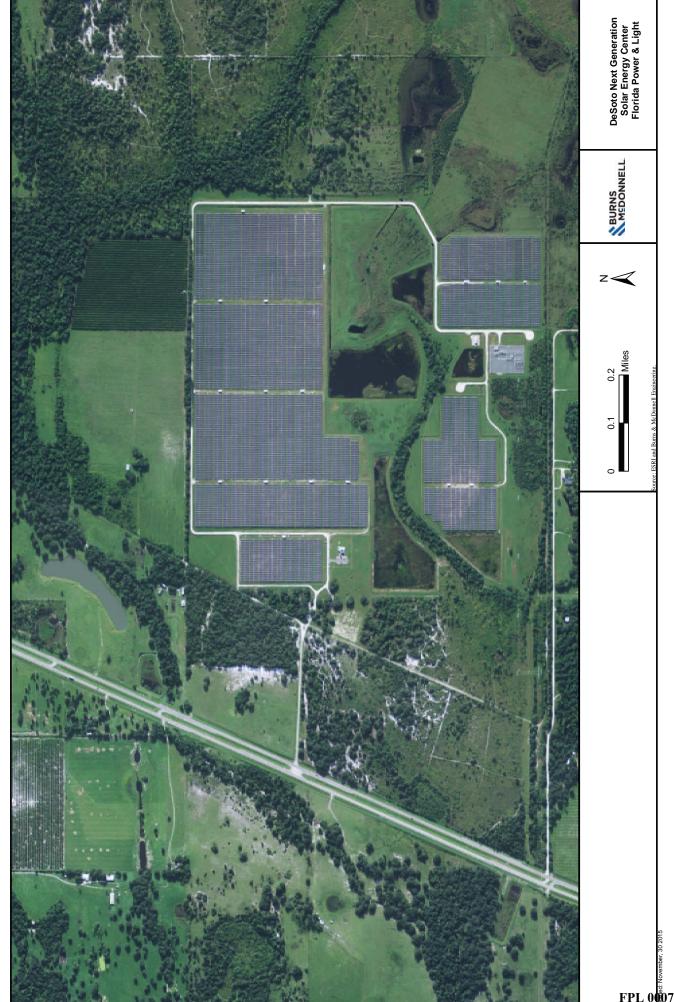
### Table A-18 Okeechobee Clean Energy Center Decommissioning Cost Summary

	Material and												
		Labor		Equipment		Disposal	Е	Environmental		Total Cost		Salvage	
seechobee Clean Energy Center													
Unit 1													
GTs and HRSGs	\$	2,682,000	\$	2,930,000		-	\$	-	\$	5,612,000	\$	-	
Steam Turbine & Pedestal	\$	1,045,000	\$	1,142,000		-	\$	-	\$	2,187,000	\$	-	
SCR	\$	98,000		107,000	\$	-	\$	-	\$	205,000		-	
GSU & Electrical	\$	238,000	\$	260,000		82,000	\$	-	\$			-	
Stack	\$	95,000	\$	104,000	\$	-	\$	-	\$	199,000	\$	-	
Cooling Tower and Basin	\$	311,000	\$	340,000	\$	-	\$	-	\$	651,000	\$	-	
On-site Concrete Crushing & Disposal	\$	-	\$	-	\$	247,000	\$	-	\$	247,000	\$	-	
Scrap	\$	-	\$	-	\$	-	\$	-	\$	-	\$	(5,252,000	
Subtotal	\$	4,469,000	\$	4,883,000	\$	329,000	\$		\$	9,681,000	\$	(5,252,000	
Common													
Auxiliary, Switchyard and Substation	\$	16,000	\$	18,000	\$	13,000	\$	-	\$	47,000	\$	-	
Cooling Water Intakes and Circulating Water Pumps	\$	41,000	\$	45,000	\$	-	\$	-	\$	86,000	\$	-	
Roads	\$	161,000	\$	175,000	\$	176,000	\$	-	\$	512,000	\$	-	
All BOP Buildings	\$	501,000	\$	548,000	\$	-	\$	-	\$	1,049,000	\$	-	
Fuel Oil Storage Tanks	\$	174,000	\$	190,000	\$	-	\$	-	\$	364,000	\$	-	
All Other Tanks	\$	107,000	\$	117,000	\$	-	\$	-	\$	224,000	\$	-	
Contaminated Soil Removal	\$	-	\$	-	\$	-	\$	134,000	\$	134,000	\$	-	
Fuel Oil Storage Tank Cleaning	\$	-	\$	-	\$	-	\$	1,498,000	\$	1,498,000	\$	-	
Fuel Oil Line Flushing/Cleaning	\$	-	\$	-	\$	-	\$	154,000	\$	154,000	\$	-	
On-site Concrete Crushing & Disposal	\$	-	\$	-	\$	52,000	\$	-	\$	52,000	\$	-	
Seeding and Grading	\$	-	\$	-	\$	-	\$	210,000	\$	210,000	\$	-	
Debris	\$	-	\$	-	\$	1,000	\$	-	\$	1,000	\$	-	
Scrap	\$	-	\$	-	\$	-	\$	-	\$	-	\$	(308,000	
Subtotal	\$	1,000,000	\$	1,093,000	\$	242,000	\$	1,996,000	\$	4,331,000	\$	(308,000	
	•	- 100 000	^		_		^	1 000 000	•	11010000		/T TOO 000	
Ockeechobee Clean Energy Center Subtotal	\$	5,469,000	Þ	5,976,000	\$	571,000	Þ	1,996,000	\$	14,012,000	Þ	(5,560,000	
TOTAL COST (CREDIT)									\$	14,012,000	\$	(5,560,000	
PROJECT INDIRECTS (5%)									\$	701,000			
CONTINGENGY (20%)									\$	2,802,000			
TOTAL PROJECT COST (CREDIT)									\$	17,515,000	\$	(5,560,000	
										, ,	Ψ	(3,360,000	
TOTAL NET PROJECT COST (CREDIT)									\$	11,955,000			

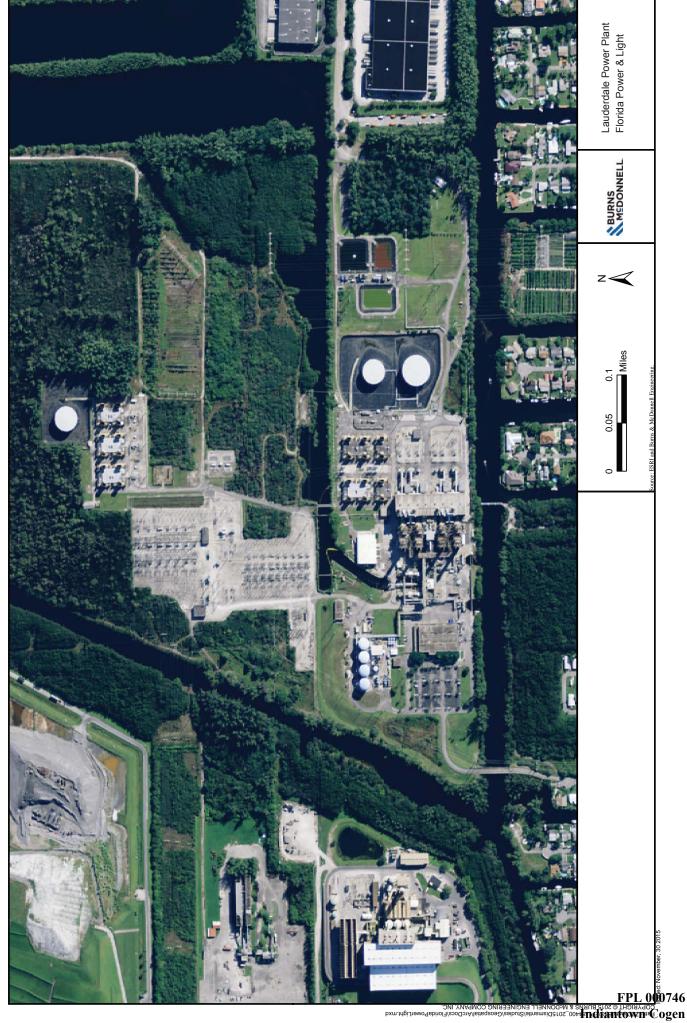
Docket No. 160021-EI FPL 2016 Dismantlement Study (Corrected) Exhibit KF-4. Page 70 of 127

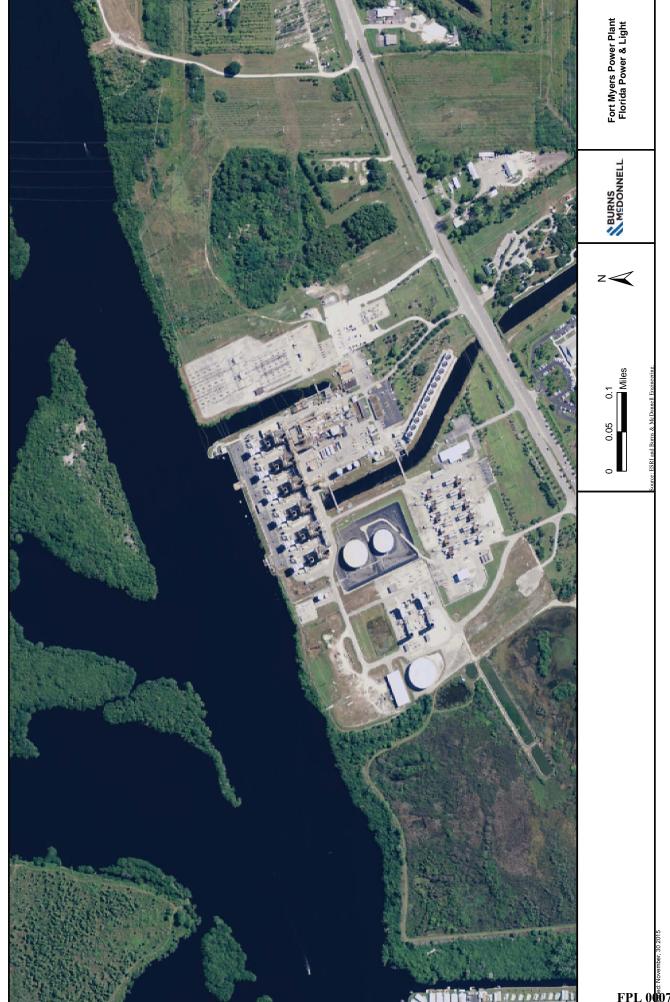
**APPENDIX B - PLANT AERIALS** 



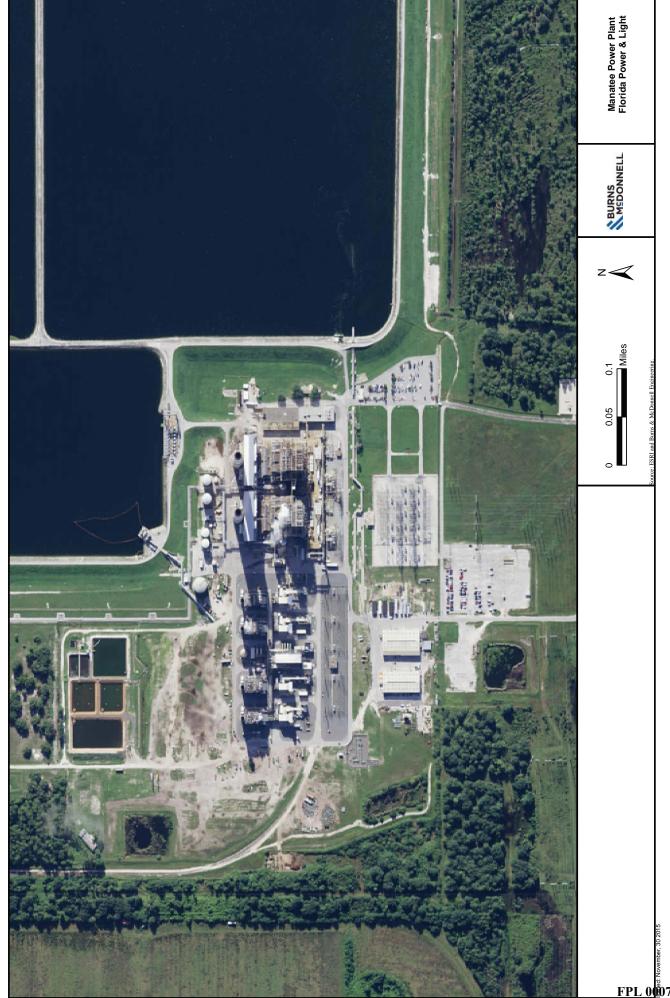


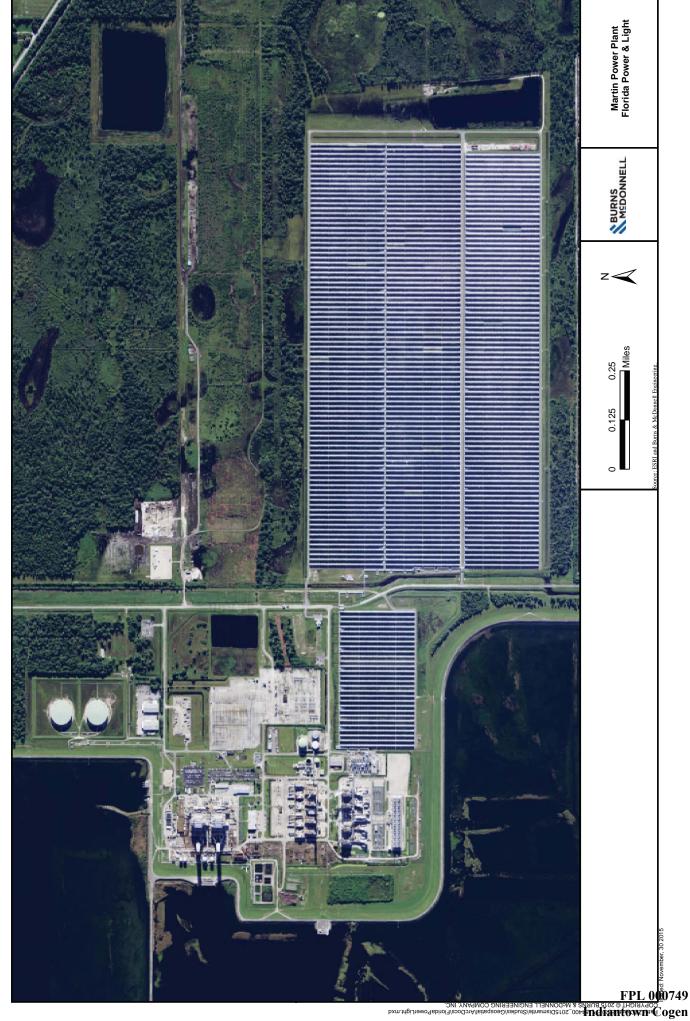
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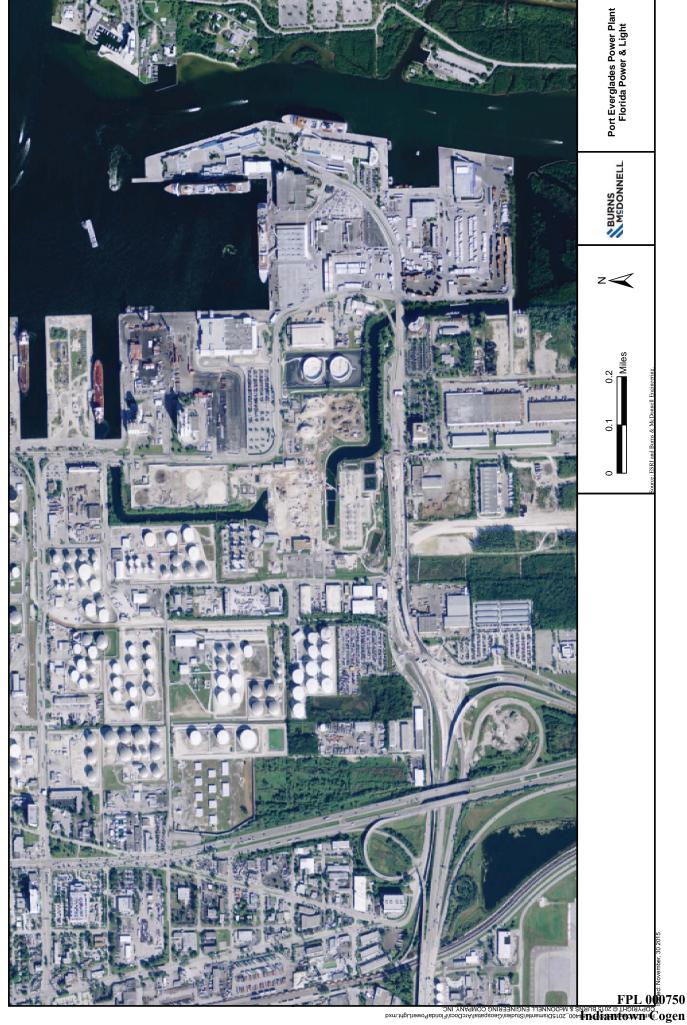




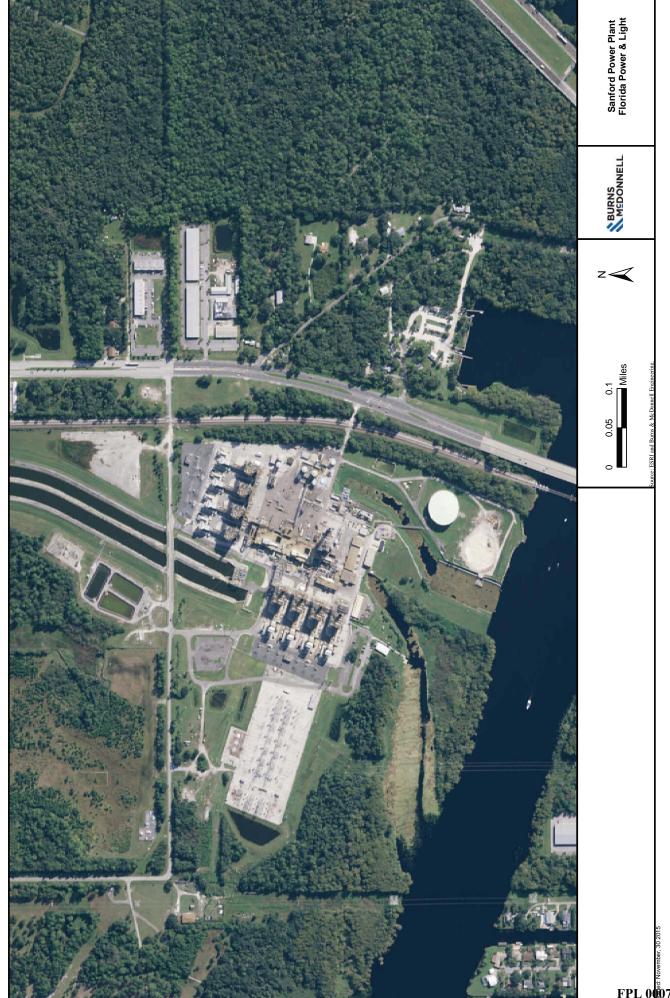
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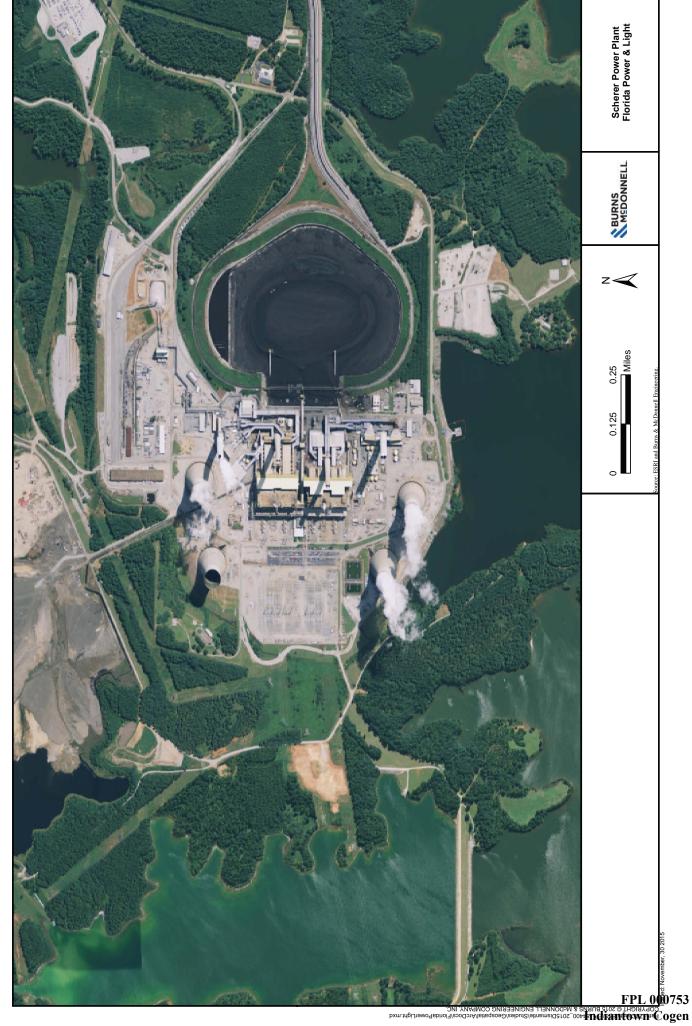


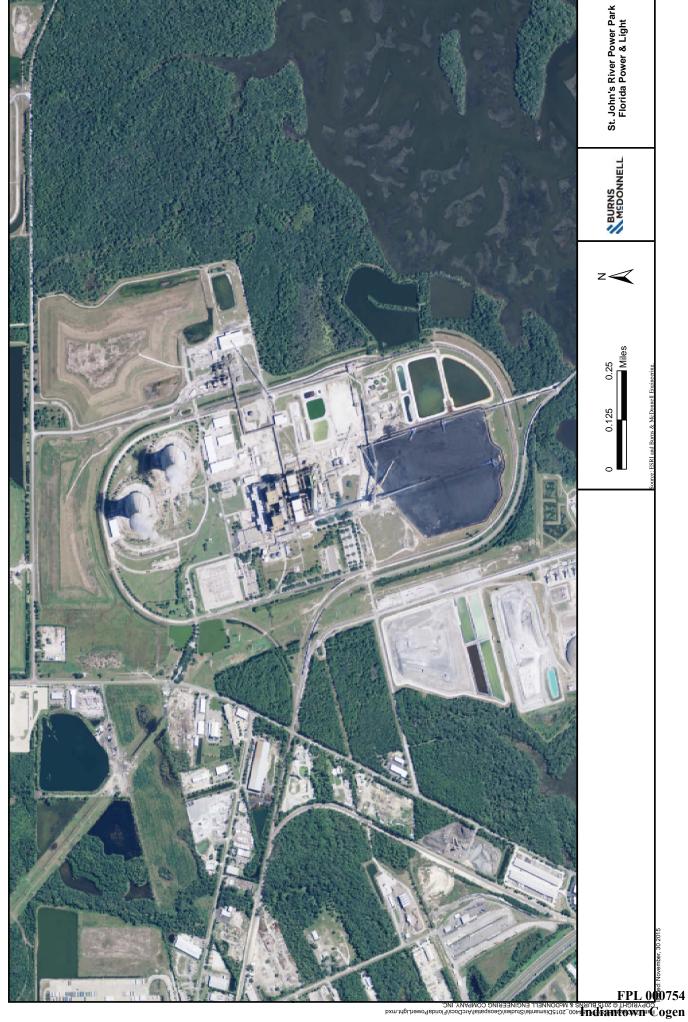


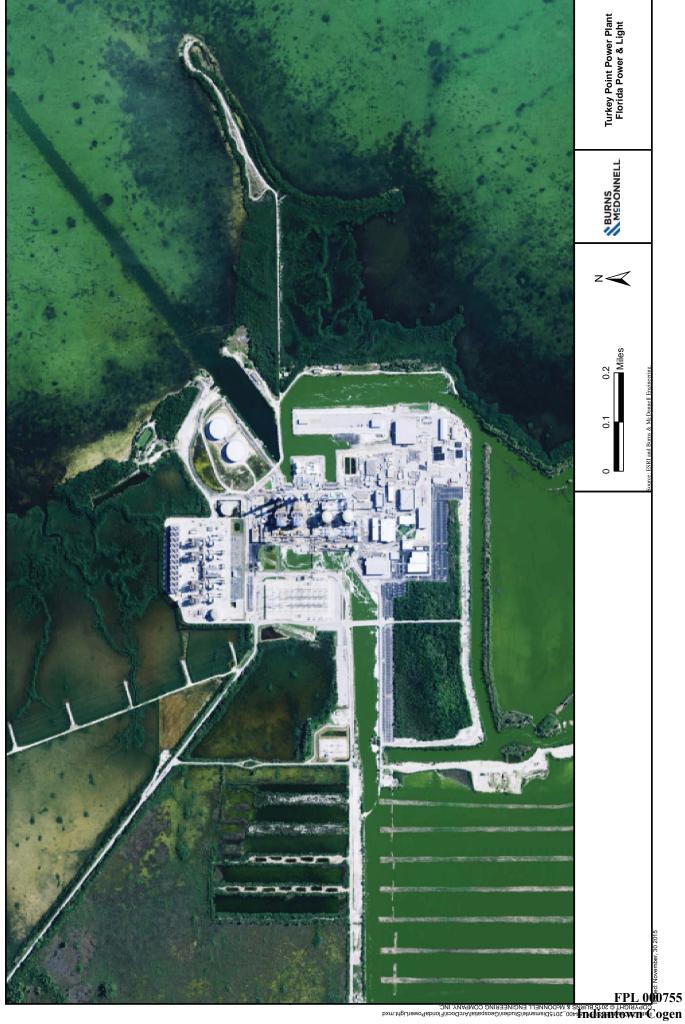


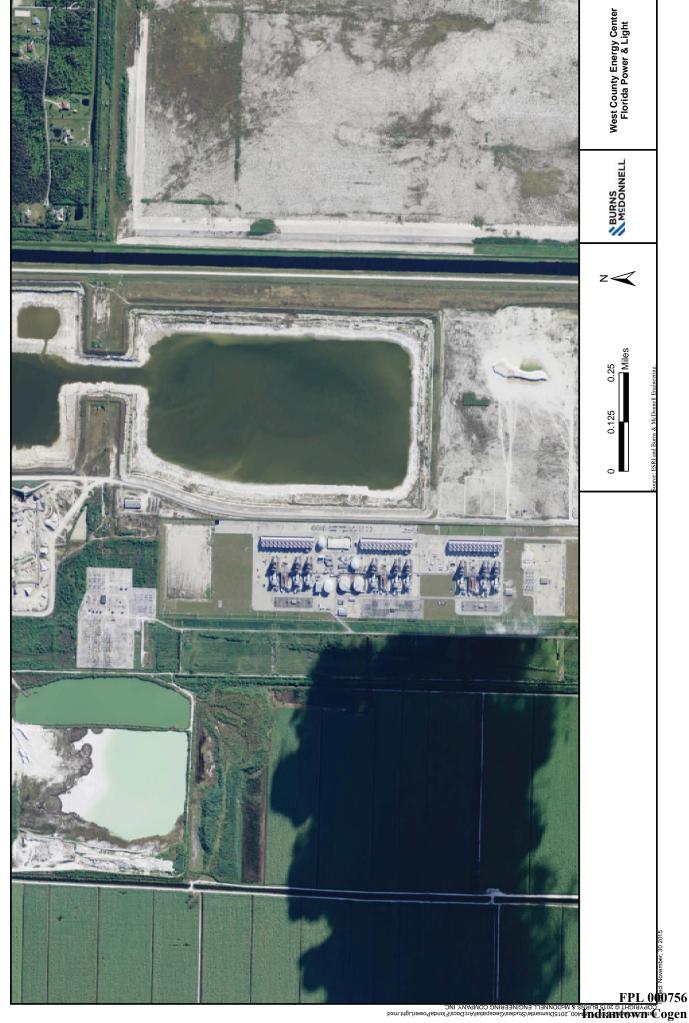












# **Section 9**

Dismantlement Cost Analysis for Cedar Bay Prepared by NorthStar Demolition & Remediation, LP

# **Cedar Bay:**

# **Purpose and timing**

On January 16, 2015, a walk down was conducted to determine a budgetary value to remove the assets from the site.

### **Attendees**

Cedar Bay Generating Co LP site representatives – Operated by Cogentrix Tracy Paterson II Plant GM

Mark R. Chaffee Chief Civil Structural Engineer

Steven J. Busbin Engineering Manager

**FPL** 

Randal Voyles - FPL capital projects GM

### Cedar Bay - Plant description

The Site is an existing coal fired power station producing a nominal 290 GMW and a net 260MW at maximum capability. This consists of 3 equal sized pyroflow circulating boiler firing a low surfer coal using limestone to capture the free sulfur materials. Prior to this decade was potentially a technology that could relatively environmentally friendly. Through a header system a consensual steam turbine produces the electrical power to the grid via step up transformers.

At a very high level the infrastructure in support of this is consists of the following:

### **Coal system**

- Rail delivery system including diesel powered locomotive
- Coal Car dumping station
- Coal storage yard
- Coal crushing
- Tripper conveyor
- Paper refuge blending and drying area to
- Other coal handling equipment conveyors, silos, gravimetric feeders, structures

### Lime stone system

- Truck unloading
- Blowers
- Silo bughouses
- Williams heated Pulverizes
- Screw conveyors
- Distribution systems into the boiler

#### **Boilers**

- 3 pyroflow natural circulation boilers
- Cyclone separators
- Waterwalls, convection section, sonic soot removal system, Omega tubes
- Primary Fans
- Secondary air Fans
- ID fans
- Blowers

# Ash capture removal and system

- Water cooled rotary screw conveyors
- Drag chains
- Baghouses
- Pneumatic fly ash conveyance system
- Stack

### Power generation equipment

- Boiler Water treatment systems
- Clarifier
- Chlorinators
- Demonetization
- Cation and anion resin beds
- Feed pumps
- Low, medium and high feedwater heaters
- Steam condensers
- Condensate pumps

## **Steam Turbine/Generator**

- Hydrogen cooled Generator
- Hydrogen recovery, cooling, and storage systems
- Oil lubrication
- Step up transformers
- Aux transformers
- Power distribution
- Motor Control cantors
- Transformers
- Cabling. Electrical manholes and safety systems
- Grounding
- Lightning protection
- Transmission lines (short~ ½ mile)

Exciter

### Other

- Control and protection
- Valves
- Gas systems
- Piping
- Storm water recovery systems
- Collection and storage basins
- Pumps
- Clean up system (very sophisticated)
- Tankage

## **Critical Spare Parts**

A nominal number of spare parts are stored around the plant, this includes motors, tubing, pumps and so forth. Most are located on the Turbine Deck

## **Administration facilities**

- Admin building
- Maintenance employee rooms
- Machine shops
- Electrical shops
- I&C maintenance facilities
- Mobile equipment as follows

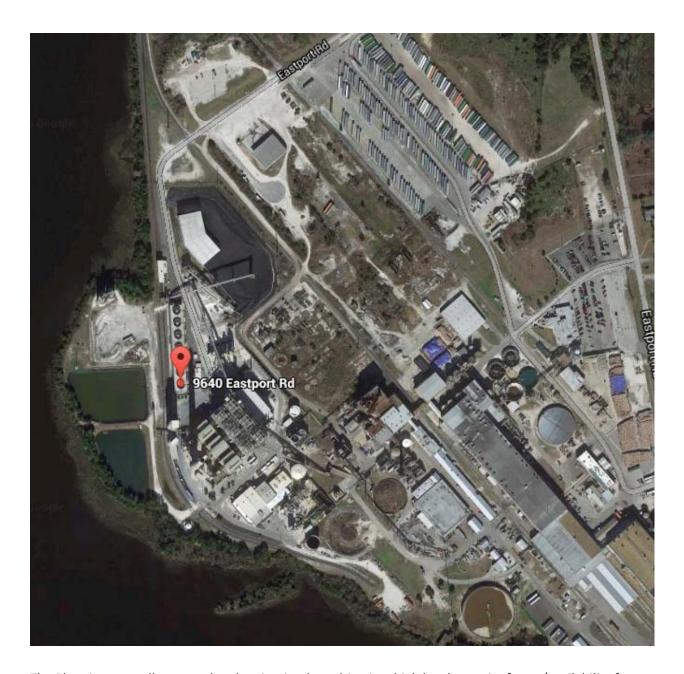
Physical address:

9640 Eastport Road (32218)

Jacksonville, FL 32226

Located at 30.423581, -81.607984

The following is an aerial picture represents the general plant. The plant was designed by Black and Veatch and construction completed in 1991-1992



The Plant is very well operated and maintained resulting in a high level capacity factor/availability for circulating fluid bed boiler of this vintage. This will support the potential to reduce the cost of dismantlement of the facilities.

#### **Basis of Estimate: Current Day Feb 2015**

**Exclusions:** 

No foundation removal

No hazardous waste removal

No Asbestos

No lead Paint

No Mercury devices

No PCP equipment

No removal of Major removal of coal, ash limestone, water, chemicals

#### Included:

All equipment, structures, hardware, lubrication oils, pumps, motors, skids, pipe, conduit, cabling as listed above. Fill in the coal unloading pit, removal of the residual layer of coal in the coal yard. Title would be transferred for everything at the site unless specifically excluded.

#### **Execution strategy:**

Market and Sell all equipment on the site to the extent possible first as systems and secondary at the component level. Followed by dismantlement activities using conventional methods. The ability to minimize the final cost of this effort is highly dependent upon the need of other similar power producers and the timing of their need, the value of the materials that can be scrapped, and the distance to the end users. We would actively auction or Bid the entire site as an EPC approach to support us in this effort. This has demonstrated to provide us with the lower risk and highest market value. Our experience stems from Cape, Rivera, port everglades, cutler, Sanford, and numerous ancillary supporting systems in the NEE portfolio.

#### Schedule:

Recommended this effort take 24-30 months from notice to proceed to complete. Although this can be substantially shorter; time has shown that the longer durations typically result in a lower end cost. This works in two ways, it allows us to locate viable buyers in need, or time the salvage market to recover the highest salvage value attainable.

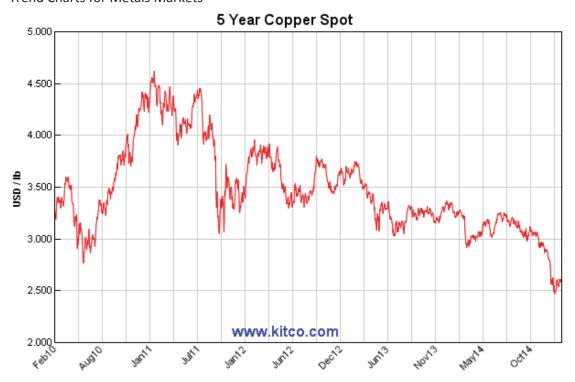
#### **Budgetary cost:**

The recommended cost of this effort is:

- P90 cost of \$4.5M this is considered to be conservative due to the current timing the plant will continue to operate for several more years, cost of escalation of the resource pool, volatility of the salvage market, and the potential for whole sailing the equipment on the international market. There is of course equal potential for upside or down side. Dependent upon the level of upside there is potential that the marketability of the plant would result in a null cost or even some moneys being returned.
- **P50 cost of \$1.0M** with a range of \$0 to a cost of \$2.0M

As an example the following salvage markets have trended downward since peaking in 2008-2010 time period. The majority of the savings values are in the steel, cooper, Stainless areas. Scrap Steel has somewhat returned to the higher level due to the reduction in inventory and the same trend is expected yet has not materialized yet for the other metals. Additionally, since this is a budgetary effort and not a great deal of effort was put forth to estimate the amount of materials the resulting weights may increase providing further savings.

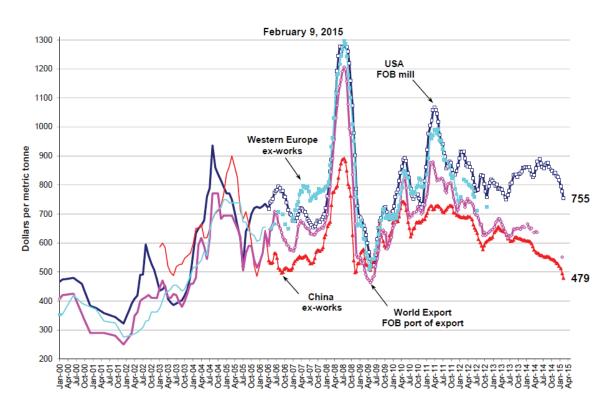
#### Trend Charts for Metals Markets



#### SteelBenchmarker<sup>TM</sup> CRC Price

#### USA, China, Western Europe and World Export

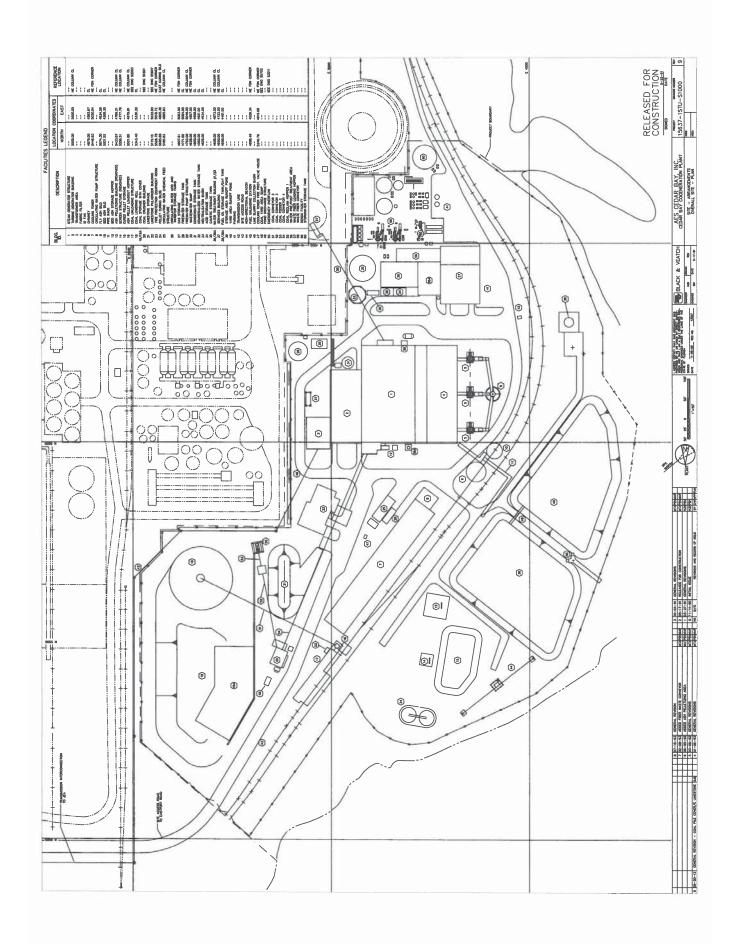
(WSD's PriceTrack data, Jan. 2000 - March 2006; SteelBenchmarker data begins April 2006)



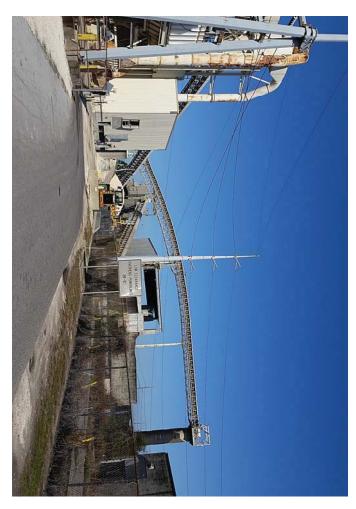
Appendix supporting information: Appendix A Budgetary Vendor information

Appendix B Pictures

Appendix C
Plant documentation



Docket No. 160021-EI FPL 2016 Dismantlement Study (Corrected) Exhibit KF-4. Page 94 of 127

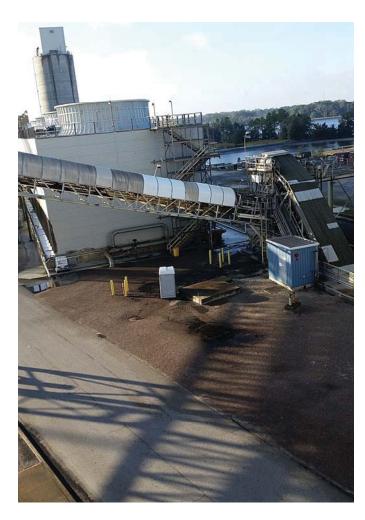








**Indiantown Cogen** 



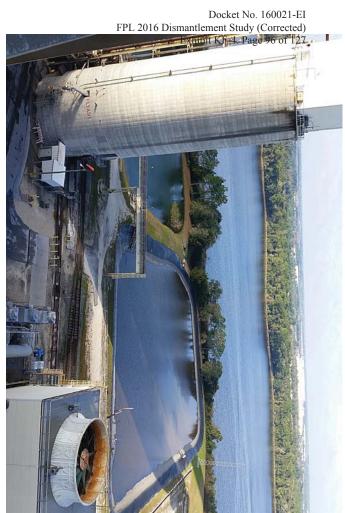






**Indiantown Cogen** 

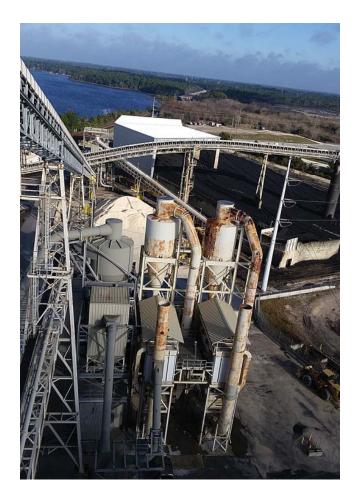




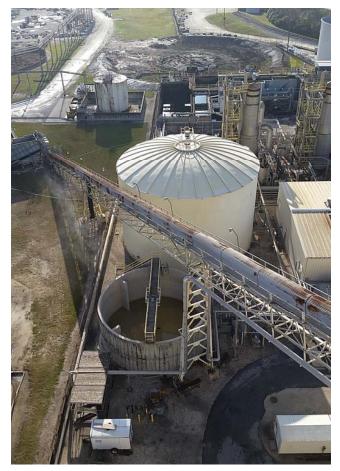


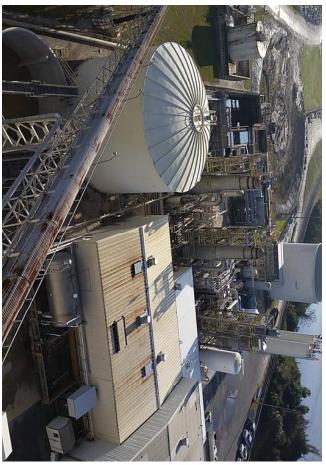


**Indiantown Cogen** 

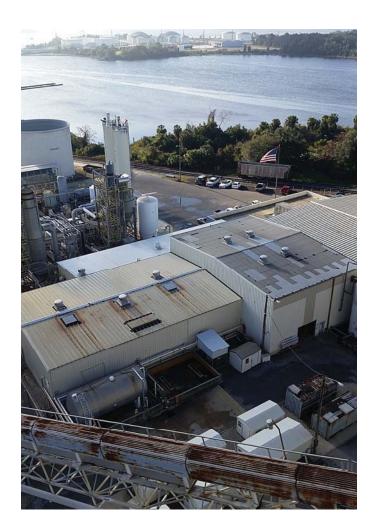






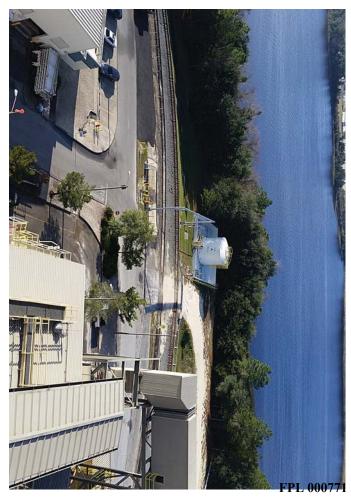


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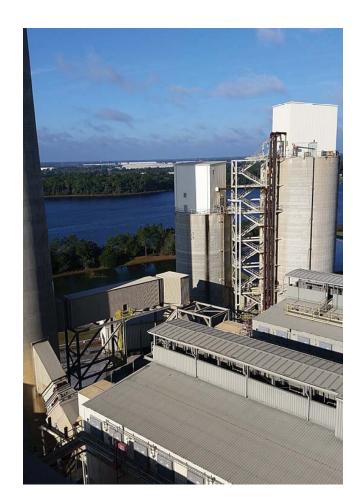








**Indiantown Cogen** 









FPL 000772 Indiantown Cogen









**Indiantown Cogen** 

February 12, 2015

Florida Power & Light PGD Technical Services 700 Universe Blvd. Juno Beach, FL 33408

Mr. Randal Voyles Technical Services Manager

Re: Budget Estimate for Cedar Bay Plant NorthStar Proposal No. 15-02-09

Dear Mr. Voyles,

NorthStar Demolition and Remediation LP is pleased to provide this budget estimate for the demolition of the Cedar Bay facility. The budget estimate was developed based on information gathered during a site inspection and drawings provided by the facility. This budget estimate includes the removal of the coal powered steam generator structure with 3 individual boiler units, one chimney stack, turbine generator building and condensers, all above ground structures listed on the Overall Site Plan (15637-1STU-S1000), such as transformers, cooling tower, fly and bed ash silos, cured pellet storage, coal storage, crushing and conveyance, limestone storage, pulverizing and conveyance, circulating water structure, misc. tanks and systems for water, fuel, acid and caustics, water treatment building, coal unloading structure, storage area runoff and yard area runoff ponds, misc. outbuildings, etc. All work will be to top of foundation or slab at or near grade.

Additionally, as this plant has only recently shut down and the equipment had been maintained to the highest level of quality, there are many items that potentially have a much greater value as a reusable asset rather than being sold as scrap. Because of the state of these materials, NorthStar feels that it would be of benefit to both FPL and NorthStar if we could partner in the marketing and sales of as much of this equipment as possible as this could increase our asset recovery well above \$5.5 million.

In order to maximize FPL's return on its capital investment, we feel that additional marketing time is required to explore the international market on a piece by piece basis. NorthStar has relationships with many end user buyers and brokers that could be used for the liquidation of miscellaneous pieces and parts for this plant. They specialize in this type of equipment and have a vast client basis worldwide. Based on the extremely clean condition of the plant, we feel that this relationship would best serve FPL if we could spend time immediately marketing the equipment while it is still in place. This would allow us time to bring in our out-of-country clients to view and make "firm" offers on this equipment.

The assumptions made in the development of this estimate include the following;

- Work will be performed 5 days per week 10 hours per day
- The work can be completed within 12-14 months.
- FP&L will make all utility disconnects and relocations.
- All line break and hazardous material removal including universal wastes will be performed by FPL.
- Assumed no lead abatement besides employee protection during torch activities.
- Excludes any damage to existing concrete slabs and foundations to remain.
- Excludes any ash, coal, limestone and process waste cleanup and disposal.
- Asbestos is excluded from the pricing

**Budget Estimate of Cost** 

Project Overhead	\$650,000
Stack and Concrete Silos	\$590,000
Boiler and ancillary structures	\$3,250,000
Misc Buildings, cooling tower	\$870,000
Water Treatment/Condensers	\$650,000
Turbine	\$350,000
Total Cost	\$6,360,000
Scrap Recovery Credit	(\$2,237,750)
Net Cost to FPL	\$4,122,250

**Budget Estimate for Salvage Recovery** 

Steel Scrap	11000	Gross Tons	\$140/ton	\$1,540,000
Sales	Pumps/valves/motors			\$300,000
Copper	140,000	Pounds	\$1.95/lb.	\$273,000
Stainless Tubes	115,000	Pounds	\$0.65/lb.	\$74,750
Misc.				\$50,000
			Total Scrap	\$2,237,750

Thank you for the opportunity to provide you with this budget estimate. Please feel free to call with any questions. Chris Schillesci 985-705-2641 Regards,

Chris Schillesci

Sr. Project Manager

apr.

NorthStar Demolition and Remediation LP

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# ALTA/ACSM LAND TITLE SURVE)

A PORTION OF WEBB PLACE, SUBDIVISION OF THE JOHN BROWARD GRANT,
SECTION 46, TOWNSHIP 1 SOUTH, RANGE 27 EAST, DUVAL COUNTY, FLORIDA, AS DEPICTED
IN PLAT BOOK 1, PAGES 7 AND 8, OF THE FORMER PUBLIC RECORDS OF SAID COUNTY,
ALSO BEING A PORTION OF THOSE LANDS DESCRIBED AND RECORDED IN
OFFICIAL RECORDS BOOK 6222, PAGE 504, TOGETHER WITH A PORTION OF THOSE
LANDS DESCRIBED AND RECORDED IN OFFICIAL RECORDS BOOK 7101,
PAGE 1756, OF THE CURRENT PUBLIC RECORDS OF SAID COUNTY.

## le Commitment):

SOUTH RALPOND EXEXENT (Official Records Book 7101, Page 1736):
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SHEET 2 OF 9 SEE SHEET 5 FOR GENERAL NOTES.

PREPARED BY:
ROBERT M. ANGAS ASSOCIATES, INC
14775 OLD ST. AUGUSTIME ROAD
JACKSOWILLE, PT. 32258 (964) 642-839
GRIPPICHT OF JATHORIZATION IN: JB 3824

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# ALTA/ACSM LAND TITLE SURVE)

A PORTION OF WEBB PLACE, SUBDIVISION OF THE JOHN BROWARD GRANT,
SECTION 46, TOWNSHIP 1 SOUTH, RANGE 27 EAST, DUVAL COUNTY, FLORIDA, AS DEPICTED
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PAGE 1756, OF THE CURRENT PUBLIC RECORDS OF SAID COUNTY.

EASEMENT DESCRIPTIONS (per Title Commitment) (continued):

EWAY EASEMENT (Official Records Book 7101, Page 1756):	PER
of Webb Place of the subdivision of the John Broward Grant, Section 46, Township 1	4
South, Kange 27 East, Jacksonville, Duval County, Florida, as recorded in Plat Book 1, Pages 7, and 8, of the former Public Records of said Duval County. Florida, and being more particularly	So So
described as follows:	des
For Point of Reference, commence at a concrete monument located at the point of	For
Intersection of the Northerly line of Section 22 of said subdivision, (also being the Southerly	inte
line of Section 19 of said subdivision), with the Easterly line of said subdivision, said	line
monument lying South 89'57'56" West, a distance of 1,325.83 feet from a concrete	ŭ
ot located at the Northeasterly corner of said Section 22; run thence South	ou.
West, along the Westerly prolongation of the Northerly line of said Section 22, a	89.
distance of 578,30 feet to a point on the Westerly right of way line of Eastport Road (a 66	dist
lic right of way, as now established); run thence North 1023'56" West, along said	Ç
right of way line, a distance of 890.02 feet to a point on said Westerly right of way	Wes
thence South 79'36'04" West, a distance of 508,51 feet to a point at the	
terly corner of those lands described and recorded in Official Records Volume 6652,	Fro
17 thru 2228 of the current Public Records of said Duval County, Florida; run thence	Wes

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OMERNY EXEMBIT No. 2 (Official Records Book 7101, Page 1756):
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ning thus described, continue North 02'51'06" West, a distance of run theres who has 20'8'54" East, a distance of 150,00 feet to a 0.25'106" East, a distance of 50,00 feet to a point; run thence distance of 150,00 feet to the Point of Beginning. From the Point of Beginn 600.00 feet to a point; repoint; run thence South (South 87'08'54" West, a di

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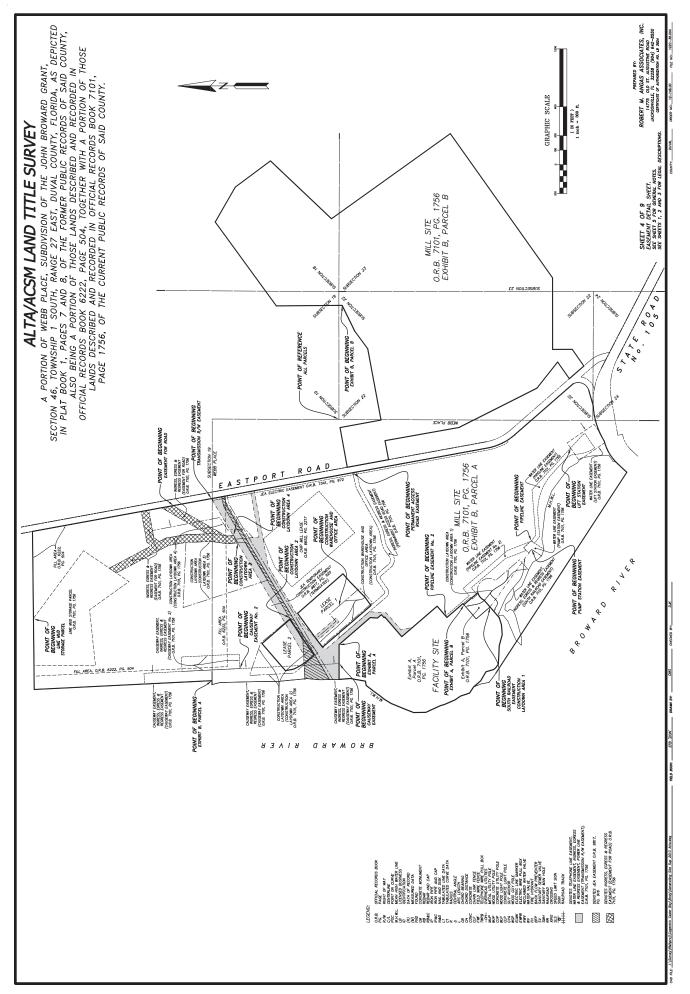
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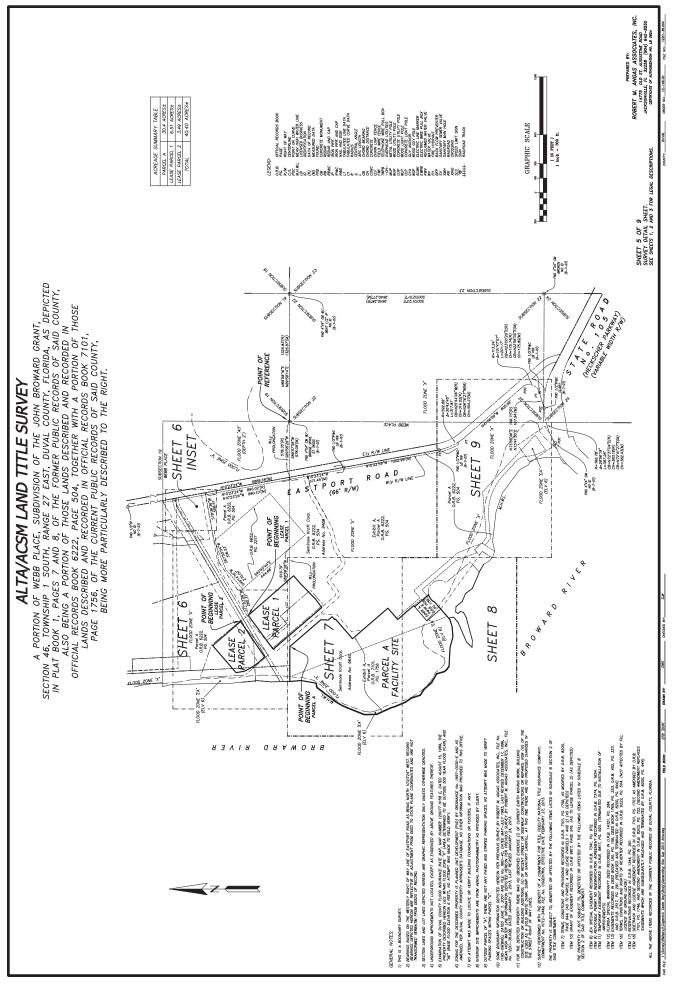
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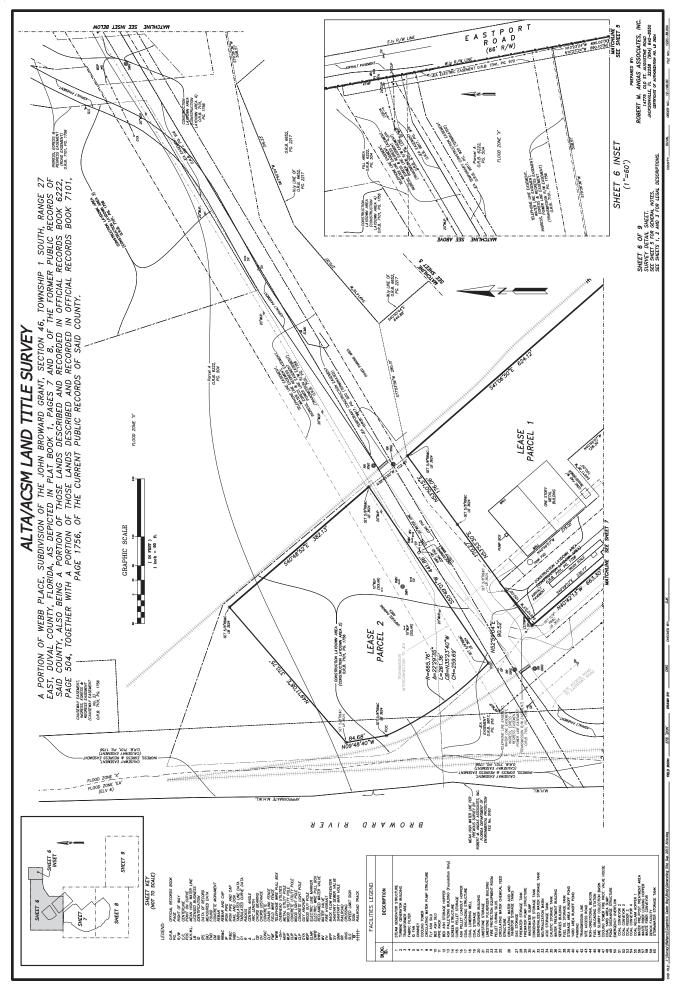
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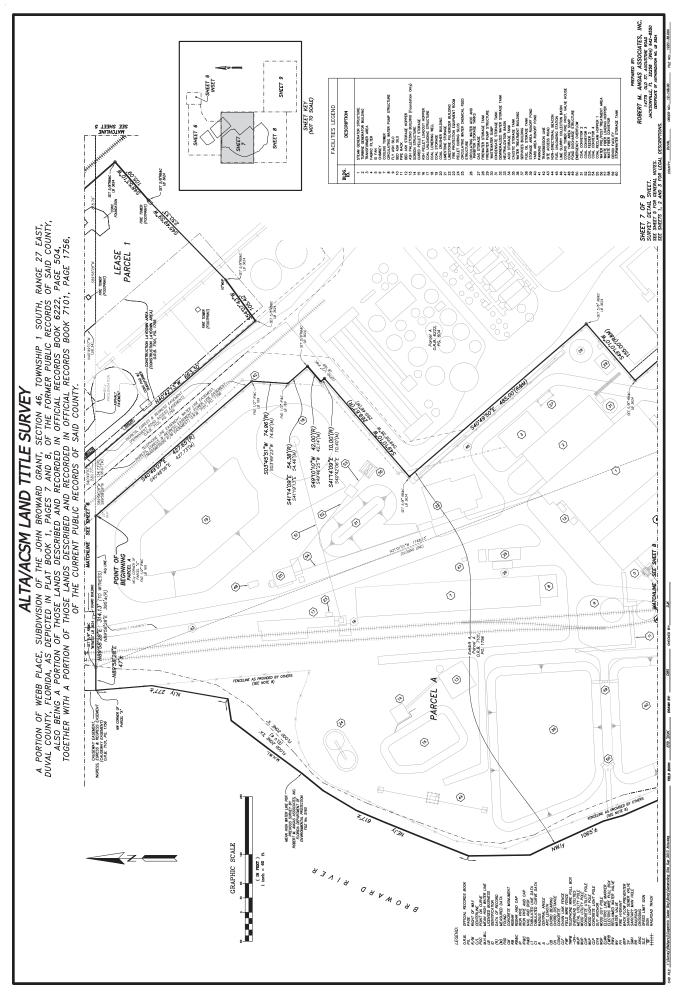
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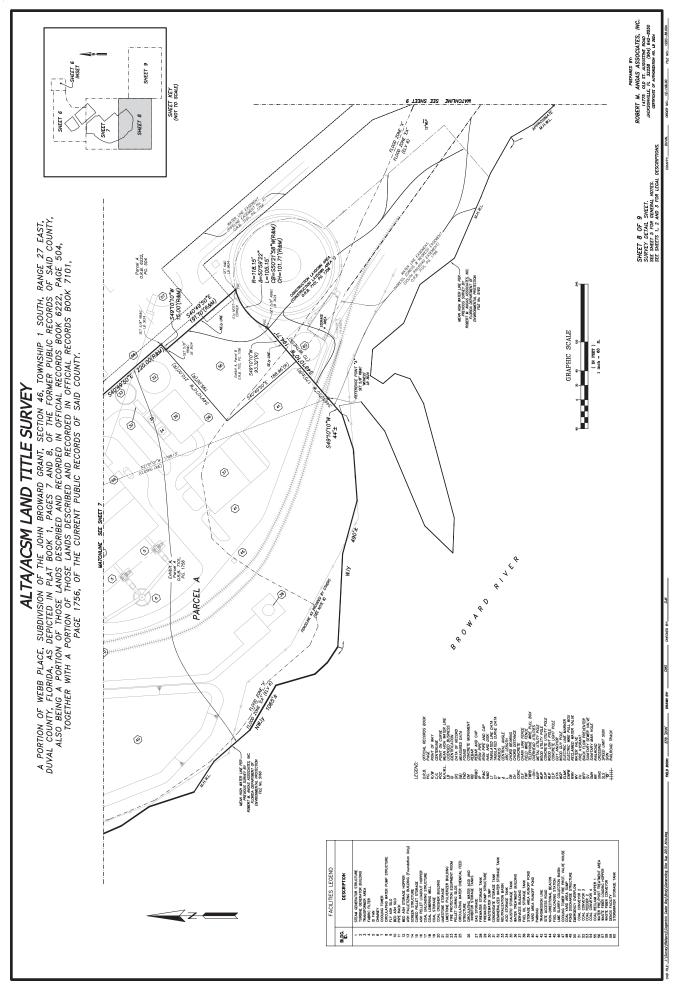
PREPARED BY:
ROBERT M. ANGAS ASSOCIATES, INC
14778 OLD ST. AUGUSTIME ROAD
JAKSOWILLE, P. 32288 (944) 642-839
GRITICAIT OF AUTHORIZATION RO. LB 3824 SHEET 3 OF 9 SEE SHEET 5 FOR GENERAL NOTES.

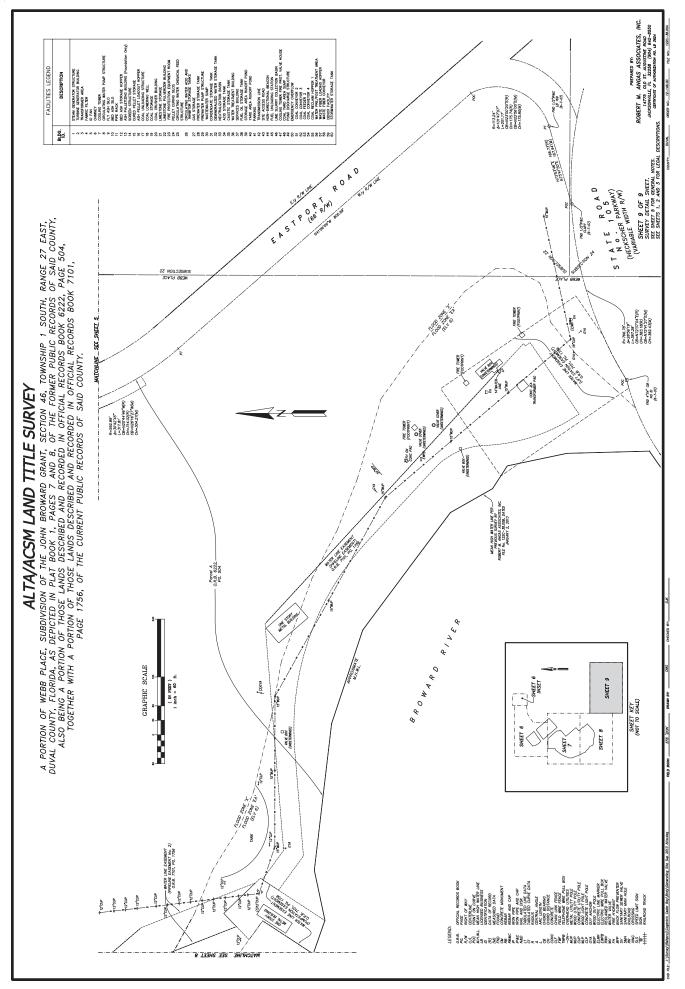












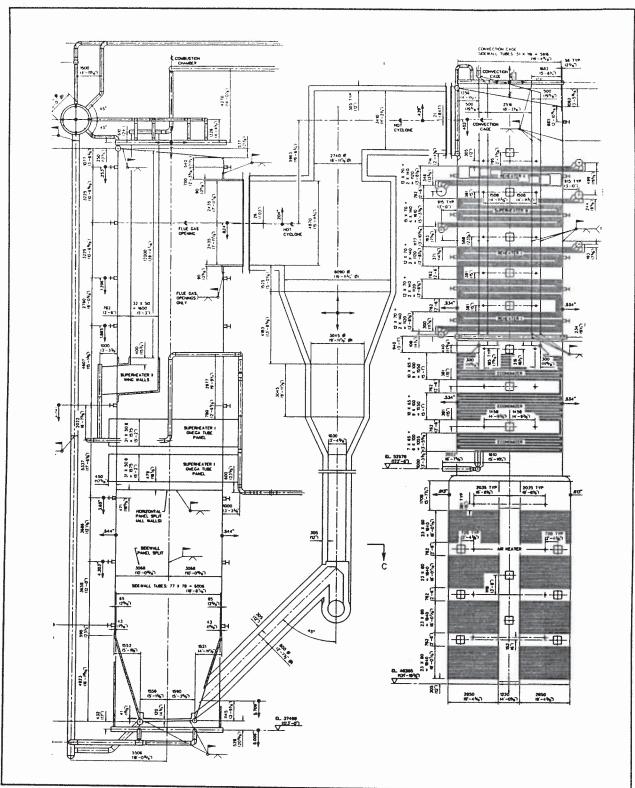


Figure 32 SIDE ELEVATION DRAWING OF YOUR PLANT

#### **TOSHIBA**

E- KC00478

INSTRUCTION MANUAL

DESIGN DATA AND CONSTRUCTION

FOR 343, 000 kVA GENERATOR

TOSHIBA CORPORATION

			Page
1.1 GEN	NERAL DESCRIPTION		2
1.1.1	General		2
1.1.2	Design Data		3
1.2 DES	SCRIPTION OF EQUIPMENT	<u> </u>	5
1.2.1	Generator Structure		5
1.2.2	Attachment Drawings		2.2

#### 1.1 GENERAL DESCRIPTION

#### 1.1.1 General

This instruction manual gives overall design data and descriptions of 343,000kVA generator and its auxiliary units installed at AES CEDAR BAY COGEN.PLANT

The electrical power output capability of a single generator is 291,550kW at a power factor of 0.85 lagging. The generator which is located in the power house at EL 132'-0", is mechanically driven by its associated steam turbine, electrically excited by the static thyristor rectifier excitation system and internally cooled by hydrogen gas and stator cooling water.

#### 1.1.2 Design Data

a. Type

Three phase synchronous generator totally enclosed, direct coupled to steam turbine.

b. Cooling System

Stator winding : Direct water cooled

Stator core : Hydrogen cooled

Rotor winding : Direct hydrogen cooled

c. Rating

Rating Continuous

Nominal rated capacity 343 MVA

at 45Psi 9

hydrogen pressure

Power factor 0.85 (lagging)

Rated hydrogen pressure 45Psi g

Number of phases 3

Number of poles 2

Frequency 60 Hz

Rates speed 360 \rpm

Terminal voltage 20 kV

Short circuit ratio Not less than 0.58 at rated MVA (343 MVA base)

at rated MVA ( 343 MVA base)
Insulation

Class-Stator Class F

-Rotor Class F

Excitation Static excitation system

with thyristor

d. Cooling Gas

Cooling gas flow rate through generator: Cf/s(at 45psi g)

Cooling gas inlet temperature : 115 ° F

Cooling gas outlet temperature : 151°F

e. Water flow through stator winding : 174 g/min

Hydrogen Gas cooler

Quantity : 4 units/one generator

Cooling water flow rate per unit : 343 g/min

Total cooling water flow : 1372 g/min

Cooling water inlet temperature : 97 °F

Cooling water outlet temperature : 1106 °F

Head loss : Approx. 10.8 ft Aq

Cooling water quality : Fresh water

Crex -

#### TOSHIBA

E-KS100195

GENER	RAL DESCRIPTION	

TOSHIBA CORPORATION

#### General Description

This turbine is a tandem-compound reheat unit with double-flow low pressure stages. The design incorporates features which have proved their reliability and efficiency in a large number of units operating at comparable conditions.

This turbine has an opposed-flow, high-pressure reheat section and double-flow, low-pressure section. The high-pressure steam initially enters the turbine near the middle of the high pressure span and flows through the high-pressure stages toward the turbine end of the unit.

The steam leaves the high-pressure section and returns to the reheat section of the boiler. The reheated steam returns to the turbine through the combined reheat valves, and again enters the turbine near the middle. Of the high-pressure span. The steam then flows toward the generator through the reheat stages. After passing through the reheat stages, the steam enters the single crossover pipe from which steam enters the double-flow section. After passing through the low-pressure stages, the steam is exhaused downward into the condenser.

The exhaust hood is keyed to the foundation plates around its side of the hood to prevent axial movement.

The turbine expands axially from this point. The front standard is free to slide axially on its foundation plate, but the standard and hood are quided to prevent transverse movement.

All of the shells and hood are provided with bolted, horizontal joints for access to the steam path parts for inspection and maintenance. The joints of the shells and hood are accurately machined to give full metalto metal contact and to assure a steam-tight joint.

#### **TOSHIBA**

E-KS200243 $\alpha$ 

RA	TING	AND	DESIGN	DATA

TOSHIBA CORPORATION

#### Rating and Design Data

1. Type of Turbine

Tandem Compound 2 Cylinders

2 Flow Exhaust

Reheat Turbine

2. Rated Output

285,000 kW

3. Rated Speed

3,600 rpm

4. Direction of Rotation

Counter-clock-wise

(seeing from turbine end)

5. Steam Conditions

Main Steam Pressure at MSV inlet

1,890 psig

Main Steam Temperature at MSV inlet

1000 F

Reheat Steam Temperature at CRV inlet 1000 F

6. Exhaust Vacuum

3" Hg abs.

7. Number of Extractions

6

8. Number of Stages

HP Turbine

7 Stages

IP Turbine

4 Stages

LP Turbine

6 Stages x 2 Flows

Number of Wheels

23

Sec. 2

DWG.NO.4KA39752

#### SHIPPING DIMENSION AND WEIGHT

**FOR** 

MAJOR ITEMS

**FOR** 

 $\left(\begin{array}{ccc} \cdot_1 & \cdot_7 \\ \cdot_1 & \cdot_7 \end{array}\right)$ 

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AES CEDAR BAY INC.

CEDAR BAY COGENERATION

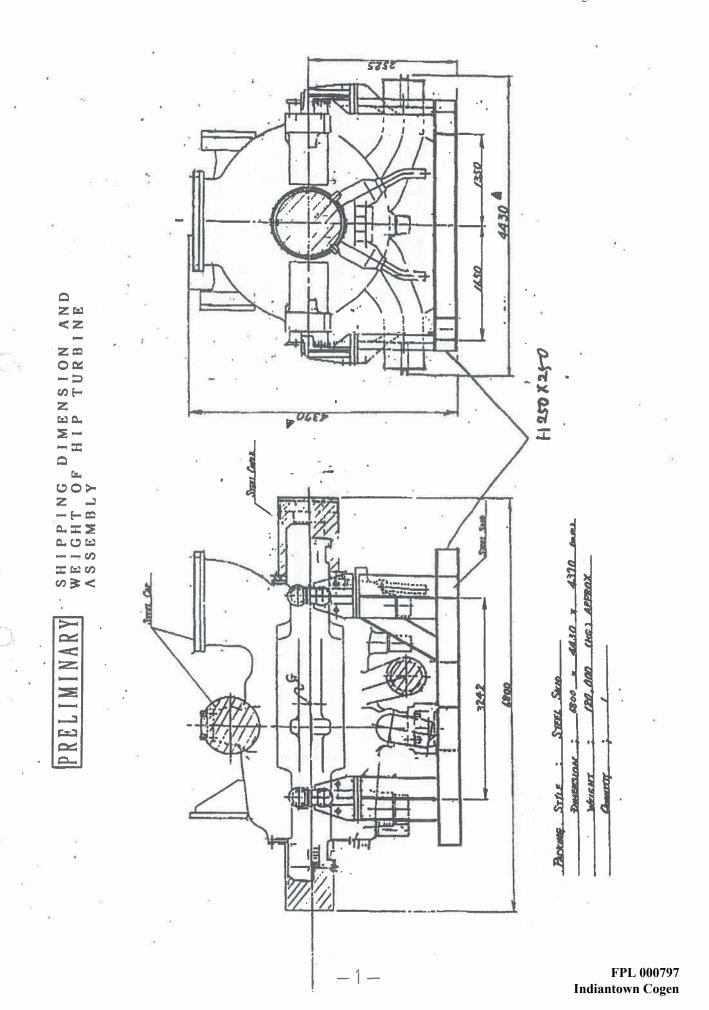
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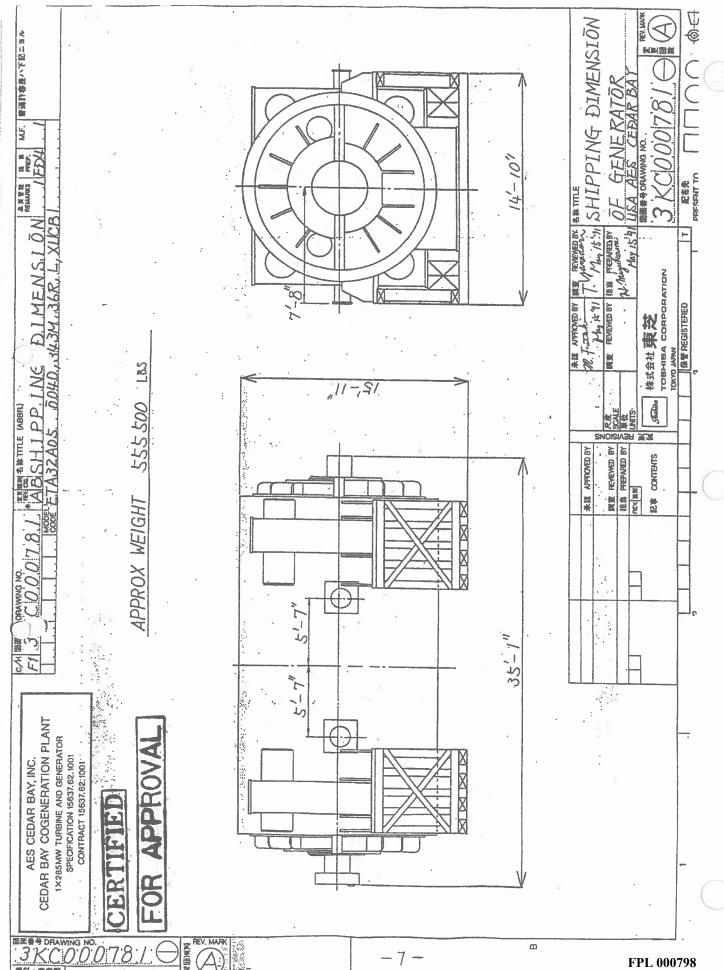
TOSHIBA CORPORATION

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### - I N D E-X -

			ITEN	A	DRG. No.	PAGE
1.	SHIPPING	DIMENSION	AND WEIGHT	OF HIP TURBINE ASSEMBLY -	- PRELIMINALY	P 1
2.	SHIPPING	DIMENSION	AND WEIGHT	OF LP OUT CASING UPPER	- LATER	
3.	SHIPPING	DIMENSION	AND WEIGHT	OF LP OUT CASING LOWER	- LATER	
4.	SHIPPING	DIMENSION	AND WEIGHT	OF LP INNER CASING UPPER-	- LATER	
5.	SHIPPING	DIMENSION	AND WEIGHT	OF LP INNER CASING LOWER-	- LATER	
6.	SHIPPING	DIMENSION	AND WEIGHT	OF HIP TURBINE ROTOR	- LATER	
7.	SHIPPING	DIMENSION	GENERATOR		- 3KC000781REV. A	P 7





FPL 000798 Indiantown Cogen Weight List of Main Parts of Steam Turbine(lbs)

1 .	HTP	Turbi	ne

Outer Casing Upper	60,000
Outer Casing Lower	63,000
HP Inner Casing Upper	10,800
HP Inner Casing Lower	11,000
Rotor(with Blades)	33,800

#### 2. LP Turbine

Outer Casing Upper	33,000
Outer Casing Lower	93,000
Inner Casing Upper	39,000
Inner Casing Lower	39,000
Rotor(with Blades)	78,100

3.	Cross-over	Pipe	16,600

			40.0	00
4.	Front	Standard	42,0	00

#### 5. Main Steam Valves

Main Stop Valve	22,000
Control Valves No.1 No.6	19,000
Combined Reheat Valve(per one set)	33,000

#### 6. Oil Tank with AOP, TOP and EOP Motors

			excluding	Lube	011	34,000
			including	lube	oil	67,700
7.	Oil	Conditioner	excluding	lube	oil	4,321

7.	Oil	Conditioner	excluding	lube	oil	4,32	1
			including	lube	oil	8.17	9

Weight List of Main Parts of Steam Turbine(lbs)

2	UID	Turbing	

Outer Casing Upper	60,000
Outer Casing Lower	63,000
HP Inner Casing Upper	10,800
HP Inner Casing Lower	11,000
Rotor(with Blades)	33,800

#### 2. LP Turbine

Outer	Casing	Upper	33,000
Outer	Casing	Lower	93,000
Inner	Casing	Upper	39,000
Inner	Casing	Lower	39,000
Rotor	with Bl	lades)	78,100

3.	Cross-over	Pipe		16,600
----	------------	------	--	--------

4.	Front	Standard	42,0	00
4.	Front	Standard	42,0	

#### 5. Main Steam Valves

Main Stop Valve	22,000
Control Valves No.1 No.6	19,000
Combined Reheat Valve(per one set)	33,000

#### 6. Oil Tank with AOP, TOP and EOP Motors

			excluding	lube	oil	34,000
			including	lube	oil	67,700
7.	Oil	Conditioner	excluding	lube	oil	4,321
			including	lube	oil	8,179

### Florida Power and Light Company Dismantlement Reserve - Company Adjustment Impact - Rate Base Only Exhibit KF-7

			2017			2018	
Line No.		Revised			Revised		
1		Beginning Balance	Accrual	Ending Balance	Beginning Balance	Accrual	Ending Balance
2		A	В	C	D	$\mathbf{E}$	F
3							
-	December						(\$7,373,046)
5	January	\$0	(\$614,421)	(\$614,421)	(\$7,373,046)	(\$614,421)	(\$7,987,467)
6	February	(614,421)	(614,421)	(1,228,841)	(7,987,467)	(614,421)	(8,601,887)
7	March	(1,228,841)	(614,421)	(1,843,262)	(8,601,887)	(614,421)	(9,216,308)
8	April	(1,843,262)	(614,421)	(2,457,682)	(9,216,308)	(614,421)	(9,830,728)
9	May	(2,457,682)	(614,421)	(3,072,103)	(9,830,728)	(614,421)	(10,445,149)
10	June	(3,072,103)	(614,421)	(3,686,523)	(10,445,149)	(614,421)	(11,059,569)
11	July	(3,686,523)	(614,421)	(4,300,944)	(11,059,569)	(614,421)	(11,673,990)
12	August	(4,300,944)	(614,421)	(4,915,364)	(11,673,990)	(614,421)	(12,288,410)
13	September	(4,915,364)	(614,421)	(5,529,785)	(12,288,410)	(614,421)	(12,902,831)
14	October	(5,529,785)	(614,421)	(6,144,205)	(12,902,831)	(614,421)	(13,517,251)
15	November	(6,144,205)	(614,421)	(6,758,626)	(13,517,251)	(614,421)	(14,131,672)
16	December	(\$6,758,626)	(\$614,421)	(\$7,373,046)	(\$14,131,672)	(\$614,421)	(\$14,746,092)
17							
18	13-Mo Avg			(\$3,686,523)			(\$11,059,569)
19							
20	Jurisd % (1)			0.950595		_	0.951284
21				(\$3,504,391)			(\$10,520,788)
22				-		-	

Notes:

<sup>24 (1)</sup> Jurisdictional factor per originally filed MFR B-2 for both 2017 Test Year and 2018 Subsequent Year (Page 3 of 8, Line 12)

<sup>25 (2)</sup> Represents rate base impact related to the corrected 2016 Dismantlement Study per the 1st Notice of Identified Adjustments

Docket Nos. 160021-EI & 160062-EI Order Approving Capital Recovery of Port Everglades ESPs Exhibit KF- 8, Page 1 of 1

ORDER NO. PSC-12-0613-FOF-EI **DOCKET NO. 120007-EI** Page 15 and 16

#### M. **Capital Cost Recovery Schedule: Port Everglades Electrostatic Precipitators**

FPL is currently recovering the costs associated with the Electrostatic Precipitators (ESPs) on the existing Units 1 through 4 at the Port Everglades Plant (PPE) through the ECRC. The Commission granted FPL an affirmative determination of need to modernize the PPE into a high-efficiency combined cycle natural gas energy center. Assuming final approval of site certification for this modernization plan, all of the existing PPE units will be retired effective January 2013. FPL proposed to complete recovery of the PPE ESPs project in the ECRC through a capital recovery schedule.

The four ESPs at the PPE were placed in-service during the period April 2005 through May 2007. The original capital investment associated with the project is \$81,901,169. As the year progressed, these capital expenditures have been recovered through the ECRC, leaving a net book value of \$65,372,158, or 80% of the original investments, to be recovered as of March 31, 2012. The ESPs at PPE cannot be removed, modified, and reinstalled to serve other units, such as the 800 MW units at PMR and PMT for which new ESPs will be installed. 10 Therefore, FPL is requesting to include in its 2013 ECRC factors the recovery of the unrecovered net investment balance of the PPE ESPs at the time of the planned retirement.

FPL proposed a 4-year capital cost recovery schedule for the PPE ESPs beginning January 1, 2013. Given that the PPE ESPs were included in the overall plant-in-service and reserve balances used in establishing the depreciation rates currently approved at the generating unit and plant account level for the PPE, 11 and that the overall unrecovered plant investments at the PPE will be recovered in a 4-year schedule, <sup>12</sup> FPL's proposed 4-year capital cost recovery schedule in the ECRC for the PPE ESPs is appropriate.

<sup>9</sup> Order No. PSC-12-0187-FOF-EI, in Docket No. 110309-EI, issued April 9, 2012, In re: Petition to determine need for modernization of Port Everglades Plant, by Florida Power & Light Company.

10 his is due to their specific design and size for the 200 and 400 MW units at the PPE, which are significantly

different from what would be required for the 800 MW units at PMR and PMT. The ESPs at PMR and PMT are retrofits into existing plants and are custom designed to fit in the limited and specific space between the boilers and stacks. Each ESP is sized for the specific exhaust gas volumes and flows of the specific unit.

<sup>&</sup>lt;sup>11</sup> The depreciation rates FPL utilizes to depreciate the ESPs at PPE were approved in Order No. PSC-10-0153-FOF-EI, in Docket Nos. 080677-EI and 090130-EI (consolidated), issued March 17, 2010, In re: Petition for increase in rates by Florida Power & Light Company and In re: 2009 depreciation and dismantlement study by Florida Power & <u>Light Company</u>, at page 42. 

12 Addressed in Issue No. 23, stipulated, in Docket No. 120015-EI, <u>In re: Petition for increase in rates by Florida</u>

Power & Light Company, which is currently before the Commission.