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BEFORE THE

FLORIDA PUBLIC SERVICE COMMISSION

DOCKET NO. 050958-EI

IN RE: Petition for Approval of New Environmental Program for Cost Recovery through Environmental Cost Recovery Clause

TESTIMONY

OF

CMP	GREGORY M. NELSON
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SCR ____

SGA ____ SEC |

OTH ____

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION 1 PREPARED DIRECT TESTIMONY 2 OF 3 GREGORY M. NELSON 4 5 Please state your name, address, occupation and employer. 6 7 My name is Gregory M. Nelson. My business address is 702 Α. 8 North Franklin Street, Tampa, Florida 33602. 9 employed by Tampa Electric Company ("Tampa Electric" or 10 "company") as Director, Environmental Policy 11 and Compliance in Regulatory Affairs. 12 13 Please provide a brief outline of your Q. educational 14 background and business experience. 15 16 17 I received a Bachelors Degree in Mechanical Engineering from the Georgia Institute of Technology in 1982 and a 18 Masters of Business Administration from the University of 19 South Florida in 1987. I am a registered Professional 20 Engineer in the State of Florida. I began my engineering 21 1982 in career in Tampa Electric's Engineering 22 Development Program. In 1983, I worked in the Production 23 responsible for power plant 24 Department where I was 25 performance projects. In 1986, I moved to the

Ι held various environmental department were environmental permitting and compliance positions. 1997, I was promoted to Administrator - Air Programs in the Environmental Planning Department. In this position, I was responsible for all air permitting and compliance 1998, Ι promoted to Manager, programs. In was Environmental Planning and in 2000 I became Director, Environmental Affairs. In 2003, I became Health Safety where Environmental, and mу of Tampa responsibilities included the management Electric's environmental permitting and compliance programs as well as generation safety programs. In 2006, I joined the Regulatory Affairs Department as Director, Environmental Policy and Compliance.

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Q. Have you previously testified before the Florida Public Service Commission ("Commission")?

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A. Yes, I have provided testimony regarding environmental projects and their associated environmental requirements in various Environmental Cost Recovery Clause ("ECRC") proceedings before this Commission.

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Q. Did you prepare any exhibits in support of your testimony?

Exhibit (GMN-1) consists of three documents. Α. Document No. 1 contains a copy of paragraphs 29 and 30 of the United States Environmental Protection Agency ("EPA") Decree ("CD") which define operating Consent characteristics of the Flue Gas Desulfurization ("FGD" or "scrubber") systems at Big Bend Station. Document No. 2 is a copy of Tampa Electric's declaratory letter to EPA stating the company's decision to continue combusting coal at Big Bend Station. Document No. 3 contains a copy of paragraph 40 of the CD which requires Tampa Electric to further restrict the operation of Big Bend Units 1, 2 and 3 should the company decide to continue combusting coal at Big Bend Station.

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- Q. What is the purpose of your testimony in this proceeding?
- The purpose of my testimony is to demonstrate that the activities for which Tampa Electric seeks cost recovery through the ECRC for the Big Bend Flue Gas ("FGD Desulfurization System Reliability Program Reliability Program") are activities necessary for the company to comply with environmental requirements of the EPA and the Florida Department of Environmental Protection ("DEP") Consent Final Judgment ("CFJ"). will also provide a summary of Tampa Electric's programs

to comply with the SO_2 emission reductions requirements of the Clean Air Act Amendments of 1990 ("CAAA") and compare these requirements to the SO_2 emission reductions requirements of the CD.

The FGD Reliability Program was previously approved for ECRC cost recovery by the Commission in Docket No. 050598-EI, Order No. PSC-06-0602-PAA-EI, issued July 10, 2006. By a five-zero vote, the Commission granted cost recovery approval for prudent costs associated with this project. However, on July 21, 2006, the Office of Public Counsel ("OPC") requested an evidentiary hearing.

Q. Please briefly describe how Tampa Electric met the SO_2 emissions reduction requirements of the CAAA.

A. The Acid Rain Program of 1990 set as its primary goal the nation-wide reduction of annual SO₂ emissions by 10 million tons below 1980 levels. To achieve these reductions, the law required a two-phase program which established annual SO₂ tonnage emission limits for fossil fuel-fired power plants. Compliance with Phase I was required by January 1, 1995 and compliance with Phase II was required by January 1, 2000.

Tampa Electric's compliance with Phase I was accomplished through a combination of fuel blending, allowance purchases and integrating the flue gas from Big Bend Unit 3 into the Big Bend Unit 4 scrubber. The Commission approved the company's cost of compliance with Phase I for cost recovery as part of its ECRC in Docket No. 960688-EI.

Tampa Electric's compliance with Phase II was accomplished through the installation of a scrubber that was designed to treat the flue gas from Big Bend Units 1 and 2. The Commission approved the company's cost of compliance with Phase II for cost recovery as part of its ECRC in Docket No. 980693-EI.

It is important to note that the scrubbers associated with compliance for both Phases I and II of the CAAA were designed to ensure SO_2 emissions were limited to the number of credits available under the approved compliance plans. The scrubbers were not designed to operate continuously whenever Big Bend Units 1, 2 and 3 were in operation.

Q. Please provide a brief overview of the litigation with EPA and DEP that resulted in the CD and CFJ.

Α. On December 16, 1999, Tampa Electric and the DEP entered into the CFJ. On February 29, 2000, the EPA initiated a CD with Tampa Electric in the Federal District Court. Both the CD and CFJ embody the resolutions between the agencies and Tampa Electric stemming from disputed issues surrounding Tampa Electric's maintenance practices to its Big Bend and Gannon Stations that were alleged to be in violation of the EPA's New Source Review rules and New Source Performance Standards currently codified in Title I of the CAAA. The CD and CFJ have been previously provided to the Commission in Docket No. 000685-EI and have been referred in environmental to numerous proceedings before the Commission in the past six years.

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Q. What does the CD require of Tampa Electric with regard to the scrubbers?

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A. Paragraphs 29, 30, 36 and 40 of the CD require Tampa Electric to operate the FGD system for each of the units at Big Bend Station at all times subject to certain specifically defined exceptions contained in Paragraphs 29 and 30, as reflected in Document No. 1 of my Exhibit.

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Paragraph 36 of the CD requires Tampa Electric to declare in writing whether the Big Bend Station units will

continue combustion of coal, repower or shutdown. The declaration date for Big Bend Units 1 through 3 is May 1, 2007. Tampa Electric has already complied with this requirement by submitting a declaratory letter to EPA dated August 19, 2004 indicating Big Bend Station will continue to be fired by coal. Document No. 2 of my Exhibit provides a copy of the declaratory letter.

Q. What are the environmental requirements as a result of Tampa Electric's declaration to the EPA that Big Bend Station will remain coal-fired?

A. With Tampa Electric having declared that it will continue to burn coal at Big Bend Station, Paragraph 40 of the CD identifies operational requirements relative to SO₂ emissions for the Big Bend Units 1 through 3. Those operational requirements are set out in Document No. 3 of my Exhibit.

According to Paragraph 40 of the CD, Tampa Electric is required to operate the FGD systems at Big Bend Station whenever coal is combusted in the units with few exceptions. Under this paragraph, the currently allowed unscrubbed days will no longer be allowed beginning January 1, 2010 for Big Bend Unit 3 and January 1, 2013

for Big Bend Units 1 and 2. In other words, beginning in 2010, anytime the scrubber for Big Bend Unit 3 is off-line, unit 3 must also be taken off-line. The same requirement applies to Big Bend Units 1 and 2 starting in 2013 - anytime the scrubber is off-line, both units 1 and 2 must be taken off-line. Therefore, the reliability of the units at Big Bend Station is limited to the reliability of their respective scrubbers.

Q. What other requirements are contained in the CD and CFJ related to SO_2 emission reductions?

A. Both the CD and CFJ require Tampa Electric to create a plan for optimizing the availability and removal efficiency of the scrubbers. This plan was submitted to the EPA in two phases and both were approved.

Phase I of the plan requires that Tampa Electric work scrubber outages around the clock and with contract labor, when necessary, in order to speed the return of a malfunctioning scrubber to service. In addition, Phase I requires Tampa Electric to review all critical scrubber spare parts and increase the number and availability of spare parts to ensure a speedy return to service of a malfunctioning scrubber.

Phase II of the plan outlines capital projects that Tampa Electric must perform to upgrade each scrubber at Big Bend Station. It also addresses the use of environmental dispatching in the event of a scrubber outage.

All of the preliminary SO_2 emissions reduction projects have been completed. However, additional work must be performed in 2007 associated with the FGD Reliability Program to comply with the elimination of the allowed scrubber outage days starting in 2010 and 2013.

Q. How do the SO_2 emissions reduction requirements of the CD vary from the SO_2 emissions reduction requirements of the CAAA?

A. As previously stated, the scrubbers associated with compliance for both Phases I and II of the CAAA were designed to ensure SO₂ emissions were limited to the number of credits available to Tampa Electric. However, the scrubbers were not designed, nor ever intended, to operate continuously whenever Big Bend Units 1, 2 and 3 were in operation. The compliance plans associated with the CAAA have already been approved and implemented.

The CD requires that the scrubber for Big Bend Unit 3

operate at the specified removal efficiencies anytime that the unit is operating beginning on January 1, 2010. The CD also requires that the scrubber for Big Bend Units 1 and 2 operate at the specified removal efficiencies anytime either of those two units is operating beginning on January 1, 2013.

Q. Please summarize your testimony.

A. Tampa Electric's CD with EPA requires significant reductions in SO₂ emissions from Tampa Electric's Big Bend Station - reductions beyond those ever contemplated in the company's efforts to comply with the requirements of the CAAA. The CD established definite requirements and time frames in which these reductions must be made and result in reasonable and fair outcomes for Tampa Electric, its community and customers, and the environmental agencies.

If not for the CD, Tampa Electric would not need to implement the FGD Reliability Program. However, implementation of the FGD Reliability Program is essential and required for Tampa Electric to comply with the 2010 and 2013 SO_2 emissions reduction requirements delineated in the CD.

EXHIBIT NO. DOCKET NO. 050958-EI TAMPA ELECTRIC COMPANY

(GMN-1)

FILED: 11/17/06

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TAMPA ELECTRIC COMPANY DOCKET NO. 050958-EI FILED: 11/17/06

EXHIBIT TO THE TESTIMONY OF GREGORY M. NELSON

DOCUMENT NO. 1

PARAGRAPHS 29 AND 30
OF CONSENT DECREE

Docket No. 050958-EI
Paragraphs 29 and 30 of
Consent Decree
Exhibit GMN-1, Page 1 of 3
Document No. 1

- 29. "Commencing upon the later of the date of entry of this Consent Decree or September 1, 2000, and except as provided in this Paragraph, Tampa Electric shall operate the existing scrubber that treats emissions of SO₂ from Big Bend Units 1 and 2 at all times that either Unit 1 or 2 is in operation. Tampa Electric shall operate the scrubber so that at least 95% of all the SO₂ contained in the flue gas entering the scrubber is removed. Notwithstanding the requirement to operate the scrubber at all times Unit 1 or 2 is operating, the following operating conditions shall apply:
 - A. Tampa Electric may operate Units 1 and/or 2 during outages of the scrubber serving Units 1 and 2, but only so long as Tampa Electric:
 - (1) in calendar year 2000, does not operate Unit 1 and/or 2, or any combination of the two of them, on more than sixty (60) calendar days, or any part thereof (providing that when both Units 1 and 2 operate on the same calendar day, such operation shall count as two days of the sixty (60) day limit), and in calendar years 2001 2009, does not operate Unit 1 and/or 2, or any combination of the two of them, on more than forty-five (45) calendar days, or any part thereof, in any calendar year (providing that when both Units 1 and 2 operate on the same calendar day, such operation shall count as two days of the forty-five (45) day limit); or
 - (2) must operate Unit 1 and/or 2 in any calendar year from 2000 through 2009 either to avoid interruption of electric service to its customers under interruptible service tariffs, or to respond to a system-wide or state-wide emergency as declared by the Governor of Florida under Section 366.055, F.S. (requiring availability of reserves), or under Section 377.703, F.S. (energy policy contingency plan), or under Section 252.36, F.S. (Emergency management powers of the Governor), in which Tampa Electric must generate power from Unit 1 and/or 2 to meet such emergency.
 - B. Whenever Tampa Electric operates Units 1 and/or 2 without all emissions from such Unit(s) being treated by the scrubber, Tampa Electric shall: (1) combust only Alternative Coal at the Unit(s) operating during the outage (except for coal already bunkered in the hopper(s) for Units 1 or 2 at the time the outage commences); (2) use all existing electric generating capacity at Big Bend and Gannon that is served by fully operational pollution control equipment before operating Big Bend Units 1 and/or 2; and (3) continue to control SO₂ emissions from Big Bend Units 1 and/or 2 as required by Paragraph 31 (Optimizing Availability of Scrubbers Serving Big Bend Units 1, 2, and 3).
 - C. In calendar years 2010 through 2012, Tampa Electric may operate Units 1 and/or 2 during outages of the scrubber serving Units 1 and 2, but only so long as Tampa Electric complies with the requirements of Subparagraphs A and B, above, and uses only coal with a sulphur content of 1.2 lb/mmBTU, or less, in place of Alternative Coal.
 - D. If Tampa Electric Re-Powers Big Bend Unit 1 or 2, or replaces the

Docket No. 050958-EI Paragraphs 29 and 30 of Consent Decree Exhibit GMN-1, Page 2 of 3 Document No. 1

scrubber or provides additional scrubbing capacity to comply with Paragraph 40, then upon such compliance the provisions of Subparagraphs 29.A, 29.B, and 29.C shall not apply to the affected Unit."

- 30. "Commencing upon entry of the Consent Decree, and except as provided in this Paragraph, Tampa Electric shall operate the existing scrubber that treats emissions of SO₂ from Big Bend Units 3 and 4 at all times that Unit 3 is in operation. When Big Bend Units 3 and 4 are both operating, Tampa Electric shall operate the scrubber so that at least 93% of all the SO₂ contained in the flue gas entering the scrubber is removed. When Big Bend Unit 3 alone is operating, until May 1, 2002, Tampa Electric shall operate the scrubber so that at least 93% of all SO₂ contained in the flue gas entering the scrubber is removed or the Emission Rate for SO₂ for Unit 3 does not exceed 0.35 lb/mmBTU. When Unit 3 alone is operating, from May 1, 2002 until January 1, 2010, Tampa Electric shall operate the scrubber so that at least 95% of the SO₂ contained in the flue gas entering the scrubber is removed or the Emission Rate for SO2 does not exceed 0.30 lb/mmBTU. Notwithstanding the requirement to operate the scrubber at all times Unit 3 is operating, and providing Tampa Electric is otherwise in compliance with this Consent Decree, the following operating conditions shall apply:
 - A. In any calendar year from 2000 through 2009, Tampa Electric may operate Unit 3 in the case of outages of the scrubber serving Unit 3, but only so long as Tampa Electric:
 - (1) does not operate Unit 3 during outages on more than thirty (30) calendar days, or any part thereof, in any calendar year; or
 - (2) must operate Unit 3 either: to avoid interruption of electric service to its customers under interruptible service tariffs, or to respond to a system-wide or state-wide emergency as declared by the Governor of Florida under Section 366.055, F.S. (requiring availability of reserves), or under Section 377.703, F.S. (energy policy contingency plan), or under Section 252.36, F.S. (Emergency management powers of the Governor), in which Tampa Blectric must generate power from Unit 3 to meet such emergency.
 - B. Whenever Tampa Electric operates Unit 3 without treating all emissions from that Unit with the scrubber, Tampa Electric shall: (1) combust only Alternative Coal at Unit 3 during the outage (except for coal already bunkered in the hopper(s) for Unit 3 at the time the outage commences); (2) use all existing electric generating capacity at Big Bend and Gannon that is served by fully operational pollution control equipment before operating Big Bend Unit 3; and (3) continue to control SO₂ emissions from Big Bend Unit 3 as required by Paragraph 31 (Optimizing Availability of Scrubbers Serving Big Bend Units, 1, 2, and 3).
 - C. If Tampa Electric Re-Powers Big Bend Unit 3, or replaces the scrubber or provides additional scrubbing capacity to comply with Paragraph 40, then upon compliance with Paragraph 40 the provisions of Subparagraphs 30.A and 30.B shall not apply to Unit 3.

Docket No. 050958-EI Paragraphs 29 and 30 of Consent Decree Exhibit GMN-1, Page 3 of 3 Document No. 1

D. Nothing in this Consent Decree shall alter requirements of the New Source Performance Standards (NSPS), 40 C.F.R. Part 60 Subpart Da, that apply to operation of the scrubber serving Unit 4."

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FILED: 11/17/06

EXHIBIT TO THE TESTIMONY OF GREGORY M. NELSON

DOCUMENT NO. 2

DECLARATORY LETTER TO EPA

Docket No. 050958-EI Declaratory Letter to EPA Exhibit GMN-1, Page 1 of 2 Document No. 2



TAMPA ELECTRIC

August 19, 2004

Mr. Bruce Gelber - Chief
Environmental Enforcement Section
Environment and Natural Resources Division
U.S. Department of Justice
1425 New York Avenue, West - Room 13044
Washington, D.C. 20005
DJ# 90-5-2-1-06932

Via FedEx Airbill No. 7913 1915 9760

Mr. Adam Kushner – Interim Director Air Enforcement Division Office of Enforcement and Compliance Assurance U.S. Environmental Protection Agency Ariel Rios Building Mail Code 2242A, Room 1119 1200 Pennsylvania Avenue, N.W. Washington, D.C. 20460 Via FedEx Airbill No. 7902 4578 0770

Mr. Tom Hankinson - Regional Administrator U.S. Environmental Protection Agency, Region IV 61 Forsyth Street, S.E. Atlanta, Georgia 30303

Via FedEx Airbill No. 7919 1453 3846

Re: Tampa Electric Company

Consent Decree

Civil Action No. 99-2524 CIV-T-23F

Notification of Continued Combustion of Coal

Dear Messrs. Gelber, Kushner and Hankinson:

Per Paragraph 33 of the Consent Decree, Tampa Electric shall advise the United States Environmental Protection Agency (EPA) in writing, on or before May 1, 2005, whether Big Bend Unit 4 will be Shutdown, will be Re-Powered, or will continue to be fired on coal. Likewise, per Paragraph 36 of the Consent Decree, Tampa Electric shall also advise EPA in writing, on or before May 1, 2007, whether Big Bend Units 1, 2 or 3, or any combination of them will be Shutdown, will be Re-Powered, or will continue to be fired on coal. This correspondence serves as the required written notification that, based on the results of a recent comprehensive study performed on Big Bend Station, Big Bend Units 1, 2, 3 and 4 will continue to be fired on

Docket No. 050958-EI Declaratory Letter to EPA Exhibit GMN-1, Page 2 of 2 Document No. 2

Mr. Bruce Gelber - Chief Mr. Adam Kushner - Interim Director Mr. Tom Hankinson - Regional Administrator August 19, 2004 Page 2 of:2

coal and as such will comply with the applicable provisions of the Consent Decree associated with this decision.

If you have any questions, please feel free to contact me at (813) 228-1763 or Laura Crouch at (813) 228-4104.

Sincerely,

Gregory M. Melson

Director

Environmental, Health and Safety

EA/bmr/LRC104

c: Jerry Campbell (EPCHC)

Jerry Kissel (FDEP – SW)

Whitney Schmidt (US Attorney)

Trina Vielhauer (FDEP)

TAMPA ELECTRIC COMPANY DOCKET NO. 050958-EI FILED: 11/17/06

EXHIBIT TO THE TESTIMONY OF GREGORY M. NELSON

DOCUMENT NO. 3

PARAGRAPH 40 OF CONSENT DECREE

Docket No. 050958-EI
Paragraph 40 of Consent Decree
Exhibit GMN-1, Page 1 of 1
Document No. 3

- 40. "If Tampa Electric elects under Paragraph 36 to continue combusting coal at Units 1, 2, and/or 3, Tampa Electric shall meet the following requirements.
 - A. Removal Efficiency or Emission Rate. Commencing on dates set forth in Subparagraph C and continuing thereafter, Tampa Electric shall operate coal-fired Units and the scrubbers that serve those Units so that emissions from the Units shall meet at least one of the following limits:
 - (1) the scrubber shall remove at least 95% of the SO₂ in the flue gas that entered the scrubber; or
 - (2) the Emission Rate for SO₂ from each Unit does not exceed 0.25 lb/mmBTU.
 - B. Availability Criteria. Commencing on the deadlines set in this Paragraph and continuing thereafter, Tampa Electric shall not allow emissions of SO₂ from Big Bend Units 1, 2, or 3 without scrubbing the flue gas from those Units and using other equipment designed to control SO₂ emissions. Notwithstanding the preceding sentence, to the extent that the Clean Air Act New Source Performance Standards identify circumstances during which Bend Unit 4 may operate without its scrubber, this Consent Decree shall allow Big Bend Units1, 2, and/or 3 to operate when those same circumstances are present at Big Bend Units 1, 2, and/or 3.
 - C. <u>Deadlines.</u> Big Bend Unit 3 and the scrubber(s) serving it shall be subject to the requirements of this Paragraph beginning January 1, 2010 and continuing thereafter. Until January 1, 2010, Tampa Electric shall control SO₂ emissions from Unit 3 as required by Paragraphs 30 and 31. Big Bend Units 1 and 2 and the scrubber(s) serving them shall be subject to the requirements of this Paragraph beginning January 1, 2013 and continuing thereafter. Until January 1, 2013, Tampa Electric shall control SO₂ emissions from Units 1 and 2 as required by Paragraphs 29 and 31.
 - D. Nothing in this Consent Decree shall alter requirements of NSPS, 40 C.F.R. Part 60 Subpart Da, that apply to operation of Unit 4 and the scrubber serving it."