

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

DOCKET NO. 130009-EI
FLORIDA POWER & LIGHT COMPANY

MARCH 1, 2013

IN RE: NUCLEAR POWER PLANT COST RECOVERY
FOR THE YEAR ENDING
DECEMBER 2012

TESTIMONY & EXHIBITS OF:

NILS J. DIAZ

COM	<u>5</u>
AFD	<u>1</u>
APA	<u>1</u>
ECO	<u>1</u>
ENG	<u>1</u>
GCL	<u> </u>
<u>IDM</u>	<u>4</u>
TEL	<u> </u>
CLK	<u>1-ct Rep</u>

DOCUMENT NUMBER-DATE

01112 MAR-1 2013

FPSC-COMMISSION CLERK

1 **BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION**

2 **FLORIDA POWER & LIGHT COMPANY**

3 **DIRECT TESTIMONY OF NILS J. DIAZ**

4 **DOCKET NO. 130009-EI**

5 **March 1, 2013**

6
7 **Q. Please state your name and business address.**

8 A. My name is Nils J. Diaz. My business address is 2508 Sunset Way, St.
9 Petersburg Beach, Florida, 33706.

10 **Q. By whom are you employed and what is your position?**

11 A. I am the Managing Director of The ND2 Group (ND2). ND2 is a consulting
12 group with a strong focus on nuclear energy matters. ND2 presently provides
13 advice for clients in the areas of nuclear power deployment and licensing, high
14 level radioactive waste issues, and advanced security systems development.

15 **Q. Please describe your other industry experience and affiliations.**

16 A. I presently hold policy advising and lead consulting positions in government and
17 industry, board memberships in private institutions, and Chair the American
18 Society of Mechanical Engineers Presidential Task Force on Response to Japan
19 Nuclear Power Plant Events. I previously served as the Chairman of the United
20 States Nuclear Regulatory Commission (NRC) from 2003 to 2006, after serving
21 as a Commissioner of the NRC from 1996 to 2003. Prior to my appointment to
22 the NRC, I was the Director of the Innovative Nuclear Space Power and
23 Propulsion Institute for the Ballistic Missile Defense Organization of the U.S.

1 Department of Defense, and Professor of Nuclear Engineering Sciences at the
2 University of Florida. I have also consulted on nuclear energy and energy policy
3 development for private industries in the United States and abroad, as well as the
4 U.S. Government and other governments. I have testified as an expert witness to
5 the U.S. Senate and House of Representatives on multiple occasions over the last
6 30 years. I also served as a Commissioner on Florida's Energy and Climate
7 Commission from 2008 to 2010. Additional details on my background and
8 experience are provided in my Resume, which is attached as Exhibit NJD-1.

9 **Q. Are you sponsoring any Exhibits in this case?**

10 A. Yes. I am sponsoring Exhibit NJD-1 - Summary Resume of Nils J. Diaz, PhD.

11 **Q. What is the purpose of your testimony?**

12 A. The purpose of my testimony is to review the prudence of Florida Power & Light
13 Company (FPL's) continued pursuit of a Combined Operating License (COL) for
14 the Turkey Point Nuclear Units 6 and 7 (Turkey Point 6 & 7) project in 2012 in
15 light of certain nuclear industry considerations and the prudence of FPL's actions
16 related to a letter received on May 4, 2012, from the NRC.

17 **Q. Please describe your review of FPL's approach to the licensing of Turkey
18 Point 6 & 7.**

19 A. I have been well-informed of FPL's Combined Operating License Application
20 (COLA) for the Turkey Point 6 & 7 project since participating in the Need
21 Determination proceedings for Turkey Point 6 & 7 and subsequent Nuclear Power
22 Plant Cost Recovery proceedings. I am knowledgeable regarding the
23 Westinghouse AP 1000 new nuclear plant design referenced by FPL in its COLA,

1 having worked on the certification of that design when I was on the NRC, and
2 afterwards. I have also reviewed FPL's project approach, as described in detail in
3 the Direct Testimony of Steven Scroggs, FPL's Senior Director for Project
4 Development for the Turkey Point 6 & 7 project, filed with the Commission prior
5 to 2013 and on this date. I have also discussed FPL's approach and certain
6 licensing-related issues with Mr. Scroggs and other key project personnel.
7 Finally, I am familiar with past and ongoing NRC reviews of other COL
8 applications.

9 **Q. Please comment on the NRC regulatory reviews and requirements**
10 **addressing the Fukushima events, as they relate to the licensing of Turkey**
11 **Point 6 & 7.**

12 A. During 2012, the NRC conducted a number of regulatory reviews arising out of
13 the Fukushima events that occurred during 2011. Presently, there should be no
14 significant impacts on the licensing of Turkey Point 6 & 7.

15
16 With respect to new reactors, the NRC has recognized the significant safety
17 enhancements already inherent in reactors with passive safety systems, such as the
18 AP 1000 reactor selected for the Turkey Point 6 & 7 project. The NRC has stated
19 that "all of the current COL and design certification applicants are addressing new
20 seismic and flooding requirements adequately in the context of updated NRC
21 guidance." The NRC Staff also concluded that "[b]y nature of their passive
22 design and inherent 72-hour coping capability for core, containment and spent
23 fuel cooling with no operator action required, the . . . AP 1000 design [has] many

1 of the design features and attributes necessary to address the Task Force
2 recommendations.” It is apparent that the certified AP 1000 reactor referenced in
3 the Turkey Point 6 & 7 COLA is likely to satisfy the majority of the post-
4 Fukushima changes under consideration by the NRC. Those regulatory changes
5 affecting the FPL COL are mostly established and should be well-incorporated
6 into the final safety review prior to issuance of the license. In my opinion, it was
7 prudent for FPL during 2012 to continue to pursue a COL referencing the AP
8 1000 Design Certification.

9 **Q. Please comment on the letter FPL received from the NRC related to Section**
10 **2.5 and Section 9.3 of its COLA, in light of the events at Fukushima.**

11 A. FPL received a letter from the NRC in 2012 indicating that additional information
12 was required in two areas of FPL’s COLA: the seismic, geologic and geotechnical
13 engineering information contained in Section 2.5 of the Safety Review, and FPL’s
14 Alternative Site analysis contained in Section 9.3 of the Environmental Review.
15 It also requested that FPL perform additional quality reviews and indicated that
16 FPL’s COLA review schedule was on hold pending receipt of the additional
17 information that NRC staff determined it needed. It is to be expected that, after
18 the Fukushima events, NRC staff review would be more focused in the two
19 sections identified in its letter to FPL, particularly the seismic, geologic, and
20 geotechnical information. Furthermore, requests for applicants to perform quality
21 reviews such as the one requested in this letter are fairly common. FPL worked
22 diligently to provide all additional information requested by NRC staff and to

1 perform the requested quality reviews to enable continued NRC staff review of its
2 COLA on a timely basis.

3 **Q. Please comment on the status of the NRC's waste confidence rule as it relates**
4 **to Turkey Point 6 & 7.**

5 A. In June 2012, the U.S. Court of Appeals for the D.C. Circuit overruled and
6 remanded the NRC's revised "Waste Confidence" rule. The NRC had found that
7 the federal government would make available a national geologic repository for
8 high level nuclear waste when necessary following the shutdown of reactors, and
9 reflected the NRC's determination that spent fuel can be safely stored onsite
10 during the period between plant shutdown and the opening of a repository. The
11 Court held that the NRC must perform additional environmental reviews
12 associated with the rule. The NRC suspended the issuance of new reactor licenses
13 and license extensions; however, the NRC is continuing the full review of
14 pending applications. The NRC staff has published a schedule to complete
15 environmental reviews for the remanded Waste Confidence rule by September
16 2014. The NRC will take final action on pending applications when the NRC has
17 finished its revised rulemaking in response to the remand.

18 **Q. Was FPL's approach to the continued pursuit of a COL for the Turkey Point**
19 **6 & 7 project in 2012 prudent?**

20 A. Yes. Based on my review, the decisions and management approaches used by
21 FPL during 2012 were prudent and consistent with a reasonable strategy for
22 pursuing the licensing and construction of the proposed Turkey Point 6 & 7
23 project.

1 Q. Does this conclude your direct testimony?

2 A. Yes.

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

Dr. Nils J. Diaz is the Managing Director of The ND2 Group, an expert and policy advisor group with a strong focus on the national and international nuclear power development and deployment arena, including new and existing plant licensing, regulatory, financial, policy and communications issues, and the Chief Strategic Officer of Blue Castle Holdings, Inc. The ND2 Group is presently or was recently engaged by governments developing new nuclear options and infrastructure, a major nuclear reactor vendor, US nuclear utilities, international engineering/ consulting firms, and the U.S. Department of Energy. He also provides developmental policy advice to OECD's Nuclear Energy Agency, and serves on three Boards of Directors. He recently served as a Commissioner, Florida Energy and Climate Commission, October 2008-October 2010.

Nils Diaz is a past Chairman of the U.S. Nuclear Regulatory Commission (NRC). Dr. Diaz was designated Chairman of the NRC by President Bush on April 1, 2003 and he served as such until his retirement from government service on June 30, 2006. As Chairman of the NRC, Dr. Diaz served as the principal executive officer of and the official spokesman for the NRC, and had ultimate authority for all NRC functions pertaining to an emergency involving an NRC license; he was directly responsible for all high level interactions with the US Executive Branch and the Congress, as well as the international relationships and the policy development under NRC's charter, including the nuclear security policies and implementation of nuclear plants safety enhancements after 9/11. Dr. Diaz was first nominated by President Clinton and confirmed by the Senate as a Commissioner with the NRC in August 1996, nominated by President Bush and confirmed by the US Senate again in 2001, and exercised the responsibilities of the position until he assumed the Chairmanship of the Commission. As Chairman, he was responsible for the exercise and direction of the Commission's policy-making, licensing and regulatory functions, and employed practical managerial, technical, and entrepreneurial skills to effect changes that enhanced new reactor licensing, license renewal, reactor oversight, enforcement and licensing processes, security and adjudication. Dr. Diaz created and implemented a multi-national initiative to improve the process for safety certification of reactors; the Multinational Design Evaluation Program continues under the umbrella of the Nuclear Energy Agency, OECD.

Prior to his appointment to the NRC, Dr. Diaz was the Director (1985-1996) of a national consortium for advanced nuclear power and propulsion (INSPI) for the Ballistic Missile Defense Organization (BMDO), Department of Defense, Professor of Nuclear Engineering Sciences at the University of Florida (1969-1996, and Dean for Research at CSULB (1984-1986). As a Director for BMDO, he exercised prime contractor management and Lead Scientist responsibilities for a diverse group of industries (including Aerojet, Boeing, Pratt & Whitney, Hughes Electronics, Rocketdyne and SRI), several national laboratories (including Los Alamos NL, Sandia NL, and Lawrence Livermore NL) and seven major universities, under contracts with the Department of Defense, the Defense Nuclear Agency, the Department of Energy and NASA. From 1969

to 1996, Dr. Diaz held senior positions at universities, Boards and industry, and consulted for the U.S. Government and other governments on civilian nuclear energy development. He also owned six small corporations serving the nuclear industry and government during that period, and spent six years at nuclear utilities and reactor vendors, often troubleshooting technical and management performance issues. He lived in Europe in 1981-1982, while serving as Principal Advisor to Spain's Consejo de Seguridad Nuclear, and consulting for nuclear industries and vendors in other European countries.

Dr. Diaz is internationally recognized for his broad expertise and contributions to nuclear sciences, reactor systems and fuels, to the regulation of nuclear facilities and radioactive materials, to the development of nuclear policy and deployment infrastructure. He has worked extensively in the international arena, including interacting and contributing to major policy, for a and decision-making efforts focusing on energy infrastructure development.

Dr. Diaz has published over 70 refereed technical articles and has participated in more than 200 international forums on nuclear energy, sciences and technology. He has been recognized worldwide for his statesmanship on nuclear affairs, including chairing the G8Nuclear Summit in Russia and leading the US Delegation to the International Atomic Energy Agency General Conference in 2005. He has received many national and international awards, including the Henry DeWolf Smyth 2008 Nuclear Statesman Award, awarded by the Nuclear Energy Institute, representing the nuclear industry, and by the American Nuclear Society. Dr. Diaz has been elected a Member of the Hispanic Hall of Fame and recognized as one of the top 50 Hispanics in Sciences and Engineering, and was named the National Hispanic Scientist of the Year for 2009.

Dr. Diaz holds a Ph.D. and M.S. in Nuclear Engineering Sciences from the University of Florida, and a B.S. Degree in Mechanical Engineering from the University of Villanova, Havana. He was licensed as a Senior Reactor Operator by the NRC and has formal training and practice in health physics, radiological sciences and nuclear medicine. He is a Fellow of the American Nuclear Society, the American Society of Mechanical Engineers, and the American Association for the Advancement of Sciences. He currently chairs the ASME Presidential Task Force in response to the Fukushima accidents.

February 2013

