# ORIGINAL BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Petition by Progress Energy Florida, ) Inc. to recover modular cooling tower costs ) through the Environmental Cost recovery clause.

Docket No. 060162-EI Dated: March 14, 2007

#### DIRECT TESTIMONY

#### OF

#### THOMAS A. HEWSON, JR.

#### On Behalf of the Citizens of the State of Florida

Charles J. Beck Deputy Public Counsel

Joseph A. McGlothlin Associate Public Counsel

Office of Public Counsel c/o The Florida Legislature 111 West Madison Street Room 812 Tallahassee, FL 32399-1400 (850) 488-9330

Attomevs for the Citizens of the State of Florida

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1		DIRECT TESTIMONY
2		OF
3		THOMAS A. HEWSON JR.
4		On Behalf Of The Office of Public Counsel
5		Before the
6		Florida Public Service Commission
7		<b>Docket No. 060162-EI</b>
8		
9	I.	Introduction
10	Q:	PLEASE STATE YOUR NAME.
11	A:	My name is Thomas A. Hewson Jr.
12		
13	Q:	ON WHOSE BEHALF ARE YOU SUBMITTING TESTIMONY?
14	A:	I am testifying on behalf of the Citizens of the State Florida as represented by
15		Florida's Office of Public Counsel (OPC).
16		
17	Q:	HOW ARE YOU CURRENTLY EMPLOYED?
18	A:	Since 1981, I have been a principal at Energy Ventures Analysis, Inc (EVA), an
19		energy consulting firm located at 1901 North Moore Street in Arlington, Virginia.
20		Between 1976-1981, I had been employed as a project manager at Energy and
21		Environmental Analysis Inc in Arlington, Virginia.
22		

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## Q: WHAT ARE YOUR QUALIFICATIONS FOR PROVIDING YOUR TESTIMONY?

A: For 30 years, I have provided numerous reports and provided testimony on the effects of environmental requirements on the electric utility industry operations for the electric utility industry, fuel suppliers, fuel transporters, electric utility commissions and industrial trade groups. I have a Bachelor of Science in Engineering degree in Civil Engineering from Princeton University (1976). My resume is attached as Exhibit \_\_\_\_ (TAH-1).

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## 10 Q: HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE FLORIDA 11 PUBLIC SERVICE COMMISSION?

- A: Yes, I have. I testified previously on behalf of the Office of Public Counsel for an
   Environmental Cost Recovery Clause request by Tampa Electric Company as part
   of Commission Docket No: 050958-EI.
- 15

## 16 Q: HAVE YOU PREVIOUSLY TESTIFIED AS AN ENVIRONMENTAL 17 EXPERT BEFORE OTHER REGULATORY BODIES?

A: Yes, I have. I have testified as an environmental expert in the energy industry in
proceedings before numerous other regulatory bodies in California, Delaware,
Georgia, Maine, Maryland, Massachusetts, Minnesota, Pennsylvania, South
Dakota, Vermont, and Virginia. I have also testified in legislative proceedings in
Idaho, Massachusetts, New Hampshire and Wisconsin as well as the US
Congress. I have also testified in legal judicial proceedings in West Virginia.

1

## 2 Q: PLEASE DESCRIBE THE ASSIGNMENT YOU WERE GIVEN BY THE 3 OFFICE OF PUBLIC COUNCIL.

- 4 A: EVA was asked to review the Progress Energy Florida (PEF) request for cost
  5 recovery of installation and operation of modular cooling towers at the Crystal
  6 River plant. Specifically, EVA was asked if these costs qualify for cost recovery
  7 under the Environmental Cost Recovery Clause (ECRC) or the Fuel Clause.
- 8

#### 9 II. Summary

#### 10 Q: PLEASE SUMMARIZE YOUR FINDINGS.

11 A: While the modular cooling tower project may be an appropriate response to 12 reduce unit derates at Crystal River station during the summer months, the project 13 is not be eligible for cost recovery under either the environmental cost recovery 14 clause (ECRC) or the fuel clause. PEF should recover its costs for this project 15 through base rates.

16

#### 17 III. <u>Environmental Cost Recovery Clause Eligibility</u>

### 18 Q: CAN YOU SUMMARIZE BRIEFLY THE ELIGIBILITY CRITERIA FOR

#### 19 COST RECOVERY UNDER THE ECRC?

A: Section 366.8255 of the Florida Statutes directs the Florida Public Service Commission to permit the recovery of certain qualifying environmental compliance costs incurred by electric utilities through the Environmental Cost Recovery Clause. The Commission defined the eligibility criteria for

1		ECRC cost recovery projects in its Order No. PSC-9400044-FOF-EI. To
2		qualify, an environmental project must demonstrate the following:
3		1. Such costs were prudently incurred after April 13, 1993;
4		2. The activity is legally required to comply with a government imposed
5		environmental regulation that was enacted or became effective, or whose
6		effect was triggered after the company's last test year upon which rates are
7		based; and
8		3. Such costs are not recovered through some other cost recovery mechanism
9		or through base rates.
10		
11	Q:	BASED UPON YOUR INVESTIGATION, DO YOU BELIEVE THAT THE
12		CRYSTAL RIVER STATION'S MODULAR COOLING TOWER
12 13		CRYSTAL RIVER STATION'S MODULAR COOLING TOWER PROJECT MEETS THESE ELIGIBILITY CRITERIA FOR COST
13	A:	PROJECT MEETS THESE ELIGIBILITY CRITERIA FOR COST
13 14	A:	PROJECT MEETS THESE ELIGIBILITY CRITERIA FOR COST RECOVERY THROUGH THE ECRC ?
13 14 15 16	A:	PROJECT MEETS THESE ELIGIBILITY CRITERIA FOR COST RECOVERY THROUGH THE ECRC ? No, it does not qualify. The modular cooling tower project does not satisfy the second criterion in the order that the activity be triggered by a legally required
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1		degrees. This limitation is required under Section I.A.1 of the station's National
2		Pollution Discharge Elimination System (NPDES) permit #FL0000159.
3		
4		This NPDES permit limitation is not a new requirement, having been in place
5		since 1988. This 1988 effective date predates Progress Energy Florida's last test
6		year upon which its rates are based (2006). Therefore, this project does not meet
7		the Commission's 2 <sup>nd</sup> ECRC qualification criteria of:
8		"a government imposed environmental regulation that was enacted or
9		became effective, or whose effect was triggered after the company's last
10		test year upon which rates are based"
11		
12	Q:	PROGRESS ENERGY ARGUES THAT THE PROJECT QUALIFIES
12 13	Q:	PROGRESS ENERGY ARGUES THAT THE PROJECT QUALIFIES UNDER THE ECRC BECAUSE THE EFFECT OF THE WARMER
	Q:	-
13	Q:	UNDER THE ECRC BECAUSE THE EFFECT OF THE WARMER
13 14	Q:	UNDER THE ECRC BECAUSE THE EFFECT OF THE WARMER INTAKE WATER TRIGGERED THE NEED FOR ADDITIONAL
13 14 15	Q:	UNDER THE ECRC BECAUSE THE EFFECT OF THE WARMER INTAKE WATER TRIGGERED THE NEED FOR ADDITIONAL COOLING WATER CAPACITY THAT WAS NECESSARY TO COMPLY
13 14 15 16	Q:	UNDER THE ECRC BECAUSE THE EFFECT OF THE WARMER INTAKE WATER TRIGGERED THE NEED FOR ADDITIONAL COOLING WATER CAPACITY THAT WAS NECESSARY TO COMPLY WITH THE MAXIMUM TEMPERATURE LIMIT WITHOUT
13 14 15 16 17	Q:	UNDER THE ECRC BECAUSE THE EFFECT OF THE WARMER INTAKE WATER TRIGGERED THE NEED FOR ADDITIONAL COOLING WATER CAPACITY THAT WAS NECESSARY TO COMPLY WITH THE MAXIMUM TEMPERATURE LIMIT WITHOUT DERATING THE UNITS OUTPUT. DO YOU BELIEVE THAT THE
<ol> <li>13</li> <li>14</li> <li>15</li> <li>16</li> <li>17</li> <li>18</li> </ol>	Q:	UNDER THE ECRC BECAUSE THE EFFECT OF THE WARMER INTAKE WATER TRIGGERED THE NEED FOR ADDITIONAL COOLING WATER CAPACITY THAT WAS NECESSARY TO COMPLY WITH THE MAXIMUM TEMPERATURE LIMIT WITHOUT DERATING THE UNITS OUTPUT. DO YOU BELIEVE THAT THE WARMER INTAKE WATER IS A "TRIGGERING EVENT" AS
<ol> <li>13</li> <li>14</li> <li>15</li> <li>16</li> <li>17</li> <li>18</li> <li>19</li> </ol>		UNDER THE ECRC BECAUSE THE EFFECT OF THE WARMER INTAKE WATER TRIGGERED THE NEED FOR ADDITIONAL COOLING WATER CAPACITY THAT WAS NECESSARY TO COMPLY WITH THE MAXIMUM TEMPERATURE LIMIT WITHOUT DERATING THE UNITS OUTPUT. DO YOU BELIEVE THAT THE WARMER INTAKE WATER IS A "TRIGGERING EVENT" AS DEFINED UNDER THE COMMISSION'S 2 <sup>ND</sup> ECRC QUALIFICATION

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Florida Progress broad interpretation would suggest that any changes in station operating conditions (e.g. intake water temperature) that require any new measures to comply with <u>existing</u> environmental limitations should qualify under the ECRC. Under this line of reasoning, any future changes in fuel market conditions that would trigger different environmental compliance measures (e.g. FGD scrubbers become cost-effective with rapid low sulfur coal price escalations) should also qualify for ECRC treatment.

8

9 Such an interpretation goes far beyond the Commission's language that was very 10 explicit. The "triggering event" clearly refers only to changes in governmental 11 regulation requirements, not operating conditions. This language was likely 12 adopted in response to environmental requirements that can be phased in over a 13 several year period. Recent examples would include the Clean Air Interstate Rule 14 (Phase I- 2009 (for NOx)/2010 (for SO2), Phase II- 2015) and Clean Air Mercury Rule (Phase I- 2010, Phase II-2018). Therefore, projects in response to the 15 16 scheduled phasing in of future tighter governmental limitations under an existing rule may qualify for ECRC treatment, while changes in operating conditions to 17 18 meet existing limitations do not qualify.

19

Since the NPDES temperature limitation has been in place since 1988, it is clearly an <u>existing</u> limitation that has not been changed. The warmer intake water temperature is not a change in a governmental requirement but a change in operating conditions that may require PEF to adopt new measures.

#### 1 IV. <u>Fuel Clause Eligibility</u>

2 Q: PEF ALSO ATTEMPTS TO JUSTIFY RECOVERING THE PROJECT
3 COSTS ASSOCIATED WITH THE MODULAR COOLING TOWER
4 PROJECT THROUGH THE FUEL COST RECOVERY PROCEEDING.
5 DO YOU HAVE ANY COMMENTS?

- A: Yes. It is my understanding that the Commission in its Order #14546 indicated
  the fuel clause was limited to only fossil fuel-related costs. This order identified
  ten different categories that would be considered as eligible costs recoverable
  through the fuel clause. I do not consider the modular cooling tower project
  qualifies under any of the ten "fossil-fuel related" categories and therefore this
  project should not be eligible for cost recovery under the fuel clause.
- 12

## 13 Q: WHY DO YOU CONSIDER THE MODULAR COOLING TOWER 14 PROJECT COSTS NOT TO BE "FOSSIL FUEL RELATED"?

15 A: The modular cooling tower project was designed specifically to reduce unit derates on Crystal River Units #1-2 that were triggered in order to maintain 16 17 compliance with the maximum temperature limitation for the cooling water canal 18 discharge. This project will not have any direct effect on the Crystal River units' 19 delivered coal prices. Like many operation and maintenance projects, it is 20 specifically designed to improve station performance, not lower fuel prices. As 21 such, it would be more appropriate for project costs to be recovered through base 22 rates.

1	Q:	PROGRESS ENERGY ARGUES THAT THE MODULAR COOLING
2		PROJECT MEETS THE COMMISSION CATEGORY 10 ELIGIBILITY
3		REQUIREMENT FOR FUEL CLAUSE RECOVERY SINCE THE
4		PROJECT WILL REDUCE SYSTEM COSTS BY REDUCING POWER
5		PURCHASE COSTS AND/OR HIGHER PEF UNIT COSTS DURING
6		<b>COOLING WATER DERATING EVENTS. DO YOU AGREE?</b>
7		
8	A:	No, I do not. Under Commission Order #14546, the category 10 qualification
9		criterion was for:
10		
11		"10. Fossil fuel related costs normally recovered through base rates but
12		were not recognized or anticipated in the cost levels used to determine
13		current base rates and which, if expended, would result in fuel savings to
14		customers. Recovery of such costs should be made on a case by case basis
15		after Commission approval."
16		
17		First, as discussed earlier, the modular cooling water project will have no direct
18		effect on the Crystal River station's delivered fossil fuel prices.
19		
20		Second, Progress Energy's argument that it will provide ratepayers savings
21		through improved station performance (from lowering forced derating events) and
22		avoiding higher cost power sources is not sufficient to qualify for fuel clause
23		treatment. These more indirect fuel savings are clearly outside the Commission's

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intent for inclusion in a fuel clause. If the Commission applied this test for fuel
clause treatment, most operation and maintenance projects would qualify for
similar fuel clause treatment since they are designed to improve unit performance
and availability and thereby minimize the dependence on higher cost power
sources.

7 The intent of the fuel clause is limited to fuel-related changes not performance
8 related changes.

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#### 10 Q: DOES THAT COMPLETE YOUR TESTIMONY?

11 A: Yes it does.

#### DOCKET NO. 060162-EI CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true and correct copy of the foregoing has been furnished

by electronic mail and U.S. Mail on this 14<sup>th</sup> day of March, 2007, to the following:

Gary V. Perko Carolyn S. Raepple Hopping, Green & Sams, P.A. P.O. Box 6526 Tallahassee, FL 32314

R. Alexander Glenn Deputy General Counsel Progress Energy Service Company, LLC 100 Central Avenue, Suite 1D St. Petersburg, FL 33701

Paul Lewis 106 East College Avenue Suite 800 Tallahassee, FL 32301-7740 Lisa Bennett Florida Public Service Commission 2540 Shumard Oak Blvd. Tallahassee, FL 32399-0850

Martha Brown Florida Public Service Commission 2540 Shumard Oak Blvd. Tallahassee, FL 32399-0850

McCother.

Kseph A. McGlothlin Associate Public Counsel

Docket No. 060162-EI Resume of Thomas A. Hewson, Jr. Exhibit \_\_\_\_ (TAH-1) Page 1 of 2

#### **RESUME OF THOMAS A. HEWSON JR.**

#### PROFESSIONAL EXPERIENCE 1981-Present Energy Ventures Analysis, Inc. Principal

Responsible for power industry market studies. Provides regular power industry forecasts of future electricity demand growth, generation mix, environmental compliance and production cost changes for Fuelcast subscribers and individual client studies. Completed numerous studies examining the effect of future environmental regulation and utility deregulation on fuel prices, supplier capacity decisions (new, repower, retire), generation/environmental technology choice, wholesale electric prices and emission allowance values. Provided market assessments for new fuel, generation and pollution control technologies. Directed industrial utility group examining repowering technology options, costs and risks. Completes studies on renewable power options, costs, incentives and price impacts. Performs assessments of electricity demand, energy conservation potential and alternative energy charge frameworks for power consumers.

Responsible for corporate emission allowance forecasts and assessments. Provides ongoing forecasts of emission trading market prices and fundamentals of existing Acid Rain SO2 market, seasonal NOx market, CAIR, RGGI and individual state new source offset markets. Assesses future market trading values for mercury and carbon dioxide. Evaluates wide range of state legislative multi-pollutant proposals and their effect on regional production costs, state GDP, and environmental benefits. Engaged in developing new rules and regulations to expand existing emission allowance trading markets to include non-traditional sources (e.g. mobile sources).

Directs technical feasibility and environmental permitting studies. Expert in electric utility repowering technologies, fuel upgrading and environmental control technologies. Work includes several plant specific analyses on the costs of reducing SO2 emissions through allowance purchases, switching to lower sulfur fuels, least emission dispatching, plant retirements, repowering and FGD scrubber retrofits for all major coal and oil fired utility stations. Examined feasibility/costs of hazardous waste treatment/disposal for all major industrial waste streams in Louisiana.

Docket No. 060162-EI Resume of Thomas A. Hewson, Jr. Exhibit \_\_\_\_ (TAH-1) Page 2 of 2

#### 1976-1981 Energy and Environmental Analysis, Inc. Project Manager

Responsible for environmental and regulatory analysis. Examined, for governmental and industrial clients, the requirements and associated impacts on current industrial practices of the Clean Water Act, Clean Air Act, Resource Conservation and Recovery Act, Toxic Substances Control Act, Safe Drinking Water Act, Fuel Use Act, Natural Gas Act, Natural Gas Policy Act, Surface Mining and Reclamation Act and Occupational Safety and Health Act. Results of these policy, economic and technical analyses have been used for Congressional hearings, EPA rulemaking, court testimony, industrial policies, administrative hearings and permit negotiations. Developed Federal and state regulatory compliance strategies for the Department of Energy and several industrial clients. On behalf of several clients, he has applied for construction, NPDES, air, solid waste, hazardous waste, water use and land use permits.

Responsible for solid waste/hazardous waste management analyses. Evaluations have included analyses of solid waste and hazardous waste treatment/disposal options for the fertilizer, fermentation ethanol, petrochemical, inorganic chemical, electric utility, synthetic fuel, pulp and paper and mineral processing industries.

#### **Publications**

Mr. Hewson has presented and published several papers on the electric utility industry and emission allowance markets. Also co-author on two papers on innovative wastewater treatment technologies.

#### **Educational Background**

1976 B.S.E. (Civil Engineering), Princeton University.

Mr. Hewson was appointed for a 2-year term as a Member of the Alexandria Environmental Policy Commission in 2005. He served as Commission Vice Chairman in 2006 until his term expired in January 2007. · · ·