

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Nuclear Cost Recovery  
Clause

DOCKET NO. 130009-EI  
Submitted for filing: May 1, 2013

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DIRECT TESTIMONY OF CHRISTOPHER M. FALLON

ON BEHALF OF  
DUKE ENERGY FLORIDA, INC.

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**IN RE: NUCLEAR COST RECOVERY CLAUSE**

**BY DUKE ENERGY FLORIDA, INC.**

**FPSC DOCKET NO. 130009-EI**

**DIRECT TESTIMONY OF CHRISTOPHER M. FALLON**

1 **I. INTRODUCTION AND QUALIFICATIONS.**

2 **Q. Please state your name and business address.**

3 A. My name is Christopher M. Fallon. My business address is 526 South Church  
4 Street, Charlotte, North Carolina 28202.

5  
6 **Q. Who do you work for and what is your position with that company?**

7 A. I am employed by Duke Energy Corporation ("Duke Energy") as Vice  
8 President of Nuclear Development. Duke Energy Florida, Inc. ("DEF" or the  
9 "Company") is a fully owned subsidiary of Duke Energy.

10

11 **Q. Do your responsibilities as Vice President of Nuclear Development**  
12 **include senior management review for the Levy Nuclear Project ("LNP")?**

13 A. Yes. As Vice President of Nuclear Development, I am responsible for the  
14 licensing and engineering design for the Levy nuclear power plant project  
15 ("LNP" or "Levy"), including the direct management of the Engineering,  
16 Procurement, and Construction ("EPC") Agreement with Westinghouse and  
17 Shaw, Stone & Webster (the "Consortium"), and I am responsible for reporting  
18 on the LNP to senior management, through the Transaction Review

1 Committee ("TRC") and Senior Management Committee ("SMC"), for Duke  
2 Energy. The TRC is responsible for project approval and ongoing funding  
3 authorization for the LNP on a project milestone basis. The TRC approved  
4 LNP funding authorization through one year after the next major LNP  
5 milestone, receipt of the LNP COL, for the LNP in April 2013. The SMC  
6 reviews the LNP project status and project management in quarterly project  
7 updates. The TRC and SMC provide senior management funding and project  
8 management oversight for the LNP.  
9

10 **II. PURPOSE AND SUMMARY OF TESTIMONY.**

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

12 A. My direct testimony supports DEF's request for cost recovery for DEF's LNP  
13 actual/estimated 2013 and projected 2014 costs pursuant to the Nuclear Cost  
14 Recovery Statute, §366.93, Florida Statutes, and Nuclear Cost Recovery Rule,  
15 Rule 25-6.0423, Florida Administrative Code ("F.A.C."). I will also provide and  
16 explain the Company's long-term feasibility analyses consistent with Rule 25-  
17 6.0423, F.A.C. and Commission Order No. PSC-09-0783-FOF-EI in Docket  
18 No. 090009-EI.  
19

20 **Q. Do you have any exhibits to your testimony?**

21 A. Yes, I am sponsoring the following exhibits to my testimony:

- 22 • Exhibit No. \_\_\_\_ (CMF-3), a confidential chart of the Company's long  
23 lead equipment ("LLE") purchase order ("PO") disposition status;

- 1 • Exhibit No. \_\_\_\_ (CMF-4), DEF's updated cumulative life-cycle net  
2 present value revenue requirements ("CPVRR") calculation for the LNP  
3 compared to the cost-effectiveness analysis presented in the Need  
4 Determination proceedings for the LNP;
- 5 • Exhibit No. \_\_\_\_ (CMF-5), a chart of the Nuclear Regulatory  
6 Commission ("NRC") review schedule and status for the LNP Combined  
7 Operating License Application ("COLA"); and
- 8 • Exhibit No. \_\_\_\_ (CMF-6) the Florida Legislature Office of Economic and  
9 Demographic Research ("EDR"), March 2013 Florida Economic  
10 Overview.

11 I am also sponsoring or co-sponsoring portions of the Schedules attached to  
12 Thomas G. Foster's testimony. Specifically, I am co-sponsoring portions of  
13 Schedules AE-4, AE-4A, and AE-6 and sponsoring Schedules AE-6A through  
14 AE-7B of the Nuclear Filing Requirements ("NFRs") included as part of Exhibit  
15 No. (TGF-3) to Mr. Thomas G. Foster's testimony. I am also co-sponsoring  
16 portions of Schedules P-4 and P-6 and sponsoring Schedules P-6A through P-  
17 7B included as part of the NFRs' included in Exhibit No. (TGF-4) to Mr.  
18 Foster's testimony. I am further co-sponsoring NFR Schedules TOR-4 and  
19 TOR-6, and sponsoring schedules TOR-6A and TOR-7, which is Exhibit No.  
20 \_\_\_\_ (TGF-5) to Mr. Foster's testimony. A description of these NFR Schedules  
21 follows:

- 1 • Schedule AE-4 reflects Capacity Cost Recovery Clause ("CCRC")  
2 recoverable Operations and Maintenance ("O&M") expenditures for the  
3 period.
- 4 • Schedule AE-4A reflects CCRC recoverable O&M expenditure variance  
5 explanations for the period.
- 6 • Schedule AE-6 reflects actual/estimated monthly expenditures for site  
7 selection, preconstruction, and construction costs for the period.
- 8 • Schedule AE-6A reflects descriptions of the major tasks.
- 9 • Schedule AE-6B reflects annual variance explanations.
- 10 • Schedule AE-7 reflects contracts executed in excess of \$1.0 million.
- 11 • Schedule AE-7A reflects details pertaining to the contracts executed in  
12 excess of \$1.0 million.
- 13 • Schedule AE-7B reflects contracts executed in excess of \$250,000, yet  
14 less than \$1.0 million.
- 15 • Schedule P-4 reflects CCRC recoverable O&M expenditures for the  
16 projected period.
- 17 • Schedule P-6 reflects projected monthly expenditures for preconstruction  
18 and construction costs for the period.
- 19 • Schedule P-6A reflects descriptions of the major tasks.
- 20 • Schedule P-7 reflects contracts executed in excess of \$1.0 million.
- 21 • Schedule P-7A reflects details pertaining to the contracts executed in  
22 excess of \$1.0 million.

- 1 • Schedule P-7B reflects contracts executed in excess of \$250,000, yet less  
2 than \$1.0 million.
- 3 • Schedule TOR-4 reflects CCRC recoverable actual to date and projected  
4 O&M expenditures.
- 5 • Schedule TOR-6 reflects actual to date and projected annual expenditures  
6 for site selection, preconstruction and construction costs for the duration of  
7 the project.
- 8 • Schedule TOR-6A reflects descriptions of the major tasks.
- 9 • Schedule TOR-7 reflects total project costs exclusive of carrying costs and  
10 fuel costs.

11 All of these exhibits and schedules are true and accurate.

12  
13 **Q. Please summarize your testimony.**

14 **A.** The Company is executing its plan presented to the Commission last year to  
15 proceed with the LNP on a slower pace until the LNP Combined Operating  
16 License ("COL") is obtained from the NRC on a schedule that is currently  
17 estimated to place Levy Unit 1 in commercial service in 2024 and Levy Unit 2  
18 in commercial service in 2025. As a result, the Company has reasonably  
19 estimated and projected its costs in 2013 and 2014, respectively, to obtain the  
20 COL, obtain other environmental permits for the project, and continue  
21 disposition of the LNP long-lead equipment ("LLE"), as well as other project  
22 management and engineering costs, consistent with this schedule. These  
23 costs are reasonably estimated based on existing contracts, purchase orders,

1 and NRC estimates of review fees and the Company's estimating experience,  
2 consistent with industry best practices. The Company, therefore, requests that  
3 the Commission determine that DEF's actual/estimated 2013 and projected  
4 2014 LNP costs are reasonable.

5 The Company has conducted the annual feasibility analyses for the  
6 LNP consistent with Commission rules and Commission Orders. The  
7 Company's current feasibility analyses demonstrate that the LNP is still  
8 feasible. Qualitatively, there remains near term uncertainty, which has been  
9 mitigated by the current LNP schedule presented to the Commission last year,  
10 thus, there is no reason to conclude at this time that these risks are so  
11 uncertain that the LNP is not qualitatively feasible at this time. The updated,  
12 quantitative feasibility analysis demonstrates that the LNP is still economically  
13 feasible at this time. For these reasons, the Company has determined that the  
14 current LNP project plan and schedule remains the reasonable course of  
15 action for the Company and its customers.

16  
17 **III. LNP WORK AND COSTS IN 2013 AND 2014.**

18 **Q. What work does the Company plan for the LNP in 2013 and 2014?**

19 A. The primary LNP activities in 2013 and 2014 involve licensing and engineering  
20 work to obtain the COL for the LNP from the NRC, continued environmental  
21 permitting work, and management of the EPC agreement, including the LNP  
22 LLE disposition previously reviewed by the Commission. This work is  
23 consistent with the Company's implementation of the decision in 2010 to

1 proceed with the LNP on a slower pace until the LNP COL is obtained that the  
2 Commission reviewed and determined to be reasonable in Order No. PSC-11-  
3 0095-FOF-EI. The Company will continue licensing and engineering work in  
4 2013 and 2014 to obtain the LNP COL, which is not expected until the fourth  
5 quarter of 2014.

6  
7 **Q. Can you describe the licensing and engineering work expected for the**  
8 **LNP COLA in 2013 and 2014?**

9 A. Yes. This work includes licensing and engineering activities to allow the NRC  
10 to finalize its safety review, including a final COLA revision that the Company  
11 plans to submit to the NRC in June 2013. The Company presented the results  
12 of its seismic update to incorporate updated Central Eastern United States  
13 ("CEUS") seismic source data to the NRC Advisory Committee on Reactor  
14 Safeguards ("ACRS"); and will provide any additional information requested by  
15 the NRC to develop the Final Safety Evaluation Report ("FSER") for the LNP.  
16 Licensing and engineering activities will also involve changes to the Levy  
17 Emergency Plan to satisfy the requirements of a late-2011 NRC Emergency  
18 Preparedness rule, revisions to proposed license conditions that address NRC  
19 Fukushima-related actions, and changes to resolve issues related to the  
20 Radwaste Building classification as part of the final COLA revision update.

21 Additional licensing and engineering work is required to address design  
22 changes identified by Westinghouse, including a design change to the reactor  
23 containment to maintain margins for post-accident cooldown requirements,



1 and to evaluate a request for an exemption from certain design requirements.  
2 The Company will also monitor the NRC Waste Confidence rulemaking that is  
3 expected to continue through 2013 and most of 2014. The Company will  
4 prepare for and support the completion of the mandatory hearing for the LNP  
5 COL, which is expected some time in November 2013, although the NRC has  
6 not yet scheduled the mandatory hearing for the LNP COL.

7  
8 **Q. What environmental permitting work is required for the LNP in 2013 and**  
9 **2014?**

10 A. Licensing and engineering work is necessary in 2013 and 2014 to continue to  
11 support environmental permitting and implementation of conditions of  
12 certification ("CoC"). This work includes submittal of the Environmental  
13 Monitoring Plans ("EMP") and the Aquifer Performance Test Plan ("APT") to  
14 the State of Florida and the Southwest Florida Water Management District for  
15 review and approval. Environmental work scope will also include  
16 preconstruction environmental monitoring, wetland mitigation plan  
17 implementation, aquifer performance testing, and other site CoC. The  
18 environmental permitting work further includes continued licensing and  
19 engineering work for the United States Army Corps of Engineers ("USACE")  
20 Section 404 permit for the LNP. Work supporting the completion of the  
21 Section 404 Permit includes updates to the Wetland Mitigation Plan to address  
22 items identified by USACE and continued work with USACE to address

1 wetlands mitigation and secondary impacts. The Company expects the  
2 USACE to issue the Section 404 Permit for the LNP in 2013.

3  
4 **Q. Can you explain what work is expected in connection with management  
5 of the EPC agreement, including the LLE disposition, in 2013 and 2014?**

6 **A.** Yes. The Company will incur LLE disposition and storage costs based on the  
7 continued LLE milestone payments, and Quality Assessment ("QA"), supply  
8 chain management, project controls, and other vendor oversight activities  
9 associated with the continued LLE fabrication for the LNP. Consortium Project  
10 Management Organization ("PMO") costs are also expected in 2013 and 2014  
11 as a result of this work scope. The Company will incur costs to administer the  
12 EPC agreement, including maintaining Consortium project status and  
13 performance indicators and complying with Consortium reporting  
14 requirements, in addition to other project management costs.

15 The Company expects to incur some engineering costs in 2013 and  
16 2014 to monitor the AP1000 module program development and design and to  
17 support site specific engineering to determine resource loading and timing to  
18 meet the current, anticipated commercial operation dates for the Levy units.  
19 The Company also continues its participation in industry groups to advance  
20 the AP1000 design and operation. This includes participation in the AP1000  
21 owners group ("APOG") committee. The Company will further continue its  
22 active involvement in industry groups such as the Nuclear Energy Institute  
23 ("NEI") New Plant Working Group, NEI New Plant Oversight Committee, and

1 Institute of Nuclear Power Operations ("INPO") New Plant Deployment  
2 Executive Working Group. Finally, the Company is also continuing its  
3 evaluation and disposition of AP1000 operating experience ("OE") in China  
4 and with the Vogtle and Summer AP1000 projects. This work involves  
5 benchmarking and monitoring of licensing and construction activities at these  
6 plants in 2013 and 2014.  
7

8 **Q. Does DEF have nuclear generation preconstruction costs in 2013 and**  
9 **2014 as a result of the LNP planned work scope and activities?**

10 A. Yes. DEF has 2013 actual/estimated and 2014 projected LNP preconstruction  
11 costs. Schedule AE-6 of Exhibit No. \_\_\_ (TGF-3) to Mr. Foster's testimony,  
12 shows LNP actual/estimated generation preconstruction costs for 2013 in the  
13 following categories: License Application development costs of [REDACTED]  
14 and Engineering, Design & Procurement costs of [REDACTED]. Schedule P-6  
15 of Exhibit No. \_\_ (TGF-4) to Mr. Foster's testimony shows the LNP 2014  
16 projected generation preconstruction costs in the following categories:  
17 License Application costs of [REDACTED] and Engineering, Design &  
18 Procurement costs of [REDACTED].  
19

20 **Q. What are the License Application costs?**

21 A. The License Application costs support the on-going LNP licensing,  
22 environmental review, and permitting activities that I described above that are  
23 necessary for the LNP. Consistent with past practice, DEF developed the

1       preconstruction License Application cost estimates on a reasonable licensing  
2       and engineering basis, using the best available information to the Company, in  
3       accordance with utility industry and DEF practices. For the costs associated  
4       with the NRC COLA review and other permit processes, DEF used the terms  
5       of its existing contracts, approved change orders, as well as updated  
6       forecasts, which are provided on a monthly basis by the contractors, to  
7       estimate the costs they will incur for the technical and engineering support  
8       necessary for the on-going LNP license and  
9       permit review processes. DEF also based its projections on known project  
10       milestones necessary to obtain the requisite approvals. DEF is using actual or  
11       expected contract costs, NRC estimates, and its own experience, including  
12       industry lessons learned, therefore, DEF's cost estimates for the  
13       preconstruction License Application work are reasonable.

14  
15   **Q.    Please describe the Engineering, Design & Procurement preconstruction**  
16   **costs.**

17   **A.**    The Engineering, Design & Procurement preconstruction costs in 2013 and  
18       2014 are for the PMO activities, shared AP1000 module program development  
19       work, implementation and oversight of the LLE change order terms and  
20       conditions, engineering for the LNP CoC, and other LNP project management  
21       activities that I described above. DEF developed these preconstruction  
22       Engineering, Design & Procurement cost estimates on a reasonable  
23       engineering basis, using the best available information to DEF. Again,

1 consistent with past practice, DEF based its cost estimates and projections on  
2 the LNP project schedule, staffing requirements, and known project  
3 milestones, utilizing cost information from the EPC Agreement, information  
4 obtained through negotiations with the Consortium, and other contractor cost  
5 information. As a result, DEF is using actual or expected contract costs and  
6 its own experience to develop reasonable 2013 and 2014 preconstruction  
7 Engineering, Design & Procurement costs for the LNP.

8  
9 **Q. Does DEF have LNP generation construction costs in 2013 and 2014?**

10 A. Yes, DEF has 2013 actual/estimated and 2014 projected LNP construction  
11 costs. Schedule AE-6 of Exhibit No. \_\_ (TGF-3) to Mr. Foster's testimony  
12 provides the 2013 actual/estimated generation construction costs in the  
13 following categories: Real Estate Acquisitions costs of [REDACTED] and Power  
14 Block Engineering, Procurement, and Related Costs of [REDACTED].  
15 Schedule P-6 of Exhibit No. \_\_ (TGF-2) to Mr. Foster's testimony provides the  
16 2014 projected generation construction costs in the following categories: Real  
17 Estate Acquisitions costs of [REDACTED], Project Management costs of [REDACTED]  
18 [REDACTED], and Power Block Engineering, Procurement, and related costs of  
19 [REDACTED].

20  
21 **Q. Please describe the Real Estate Acquisition costs.**

22 A. LNP real estate acquisition costs will be incurred in 2013 and 2014 for  
23 payment for a portion of the remaining barge slip easement acquisition; for

1 acquisition of a parcel near the barge slip needed for construction laydown;  
2 and for mitigation. These cost estimates were developed based on governing  
3 procedures for the acquisition of land needed for nuclear plant development.  
4 These governing procedures outline the acquisition procedure and payment  
5 process; document approval, management and retention procedures; and  
6 provide for cost oversight and management concerning land acquisition.  
7 Utilizing these procedures, DEF developed the construction Real Estate  
8 Acquisition cost estimates on a reasonable basis, using the best available  
9 information, consistent with utility industry and DEF practice.  
10

11 **Q. Please describe the Power Block Engineering, Procurement, and Related**  
12 **Costs.**

13 A. LNP Power Block Engineering, Procurement, and Related Costs in 2013 and  
14 2014 consist primarily of contractual milestone payments, and incremental  
15 storage and shipping, insurance, and warranty costs, on select LNP LLE items  
16 consistent with the Company's LLE disposition decisions summarized in the  
17 chart attached as Exhibit No. \_\_\_ (CMF-3) to my direct testimony. In 2013,  
18 LLE contractual milestone payments include [REDACTED]  
19 [REDACTED]  
20 [REDACTED], and [REDACTED], and  
21 incremental LLE costs include [REDACTED]  
22 [REDACTED], and [REDACTED]. In  
23 2014, projected LLE contractual milestone payments include [REDACTED]

1 [REDACTED]  
2 [REDACTED], and [REDACTED] and incremental LLE costs associated with  
3 each of these components and [REDACTED]  
4 [REDACTED], and [REDACTED]. DEF  
5 developed these cost estimates utilizing cost information from the EPC  
6 Agreement and executed LLE change orders with the Consortium. DEF's cost  
7 estimates for the LNP construction Power Block Engineering and Procurement  
8 work in 2013 and 2014 are reasonable.  
9

10 **Q. Does DEF have transmission-related preconstruction costs for the LNP**  
11 **in 2013 and 2014?**

12 A. No.  
13

14 **Q. Does DEF have transmission-related construction costs for the LNP in**  
15 **2013 and 2014?**

16 A. Yes. DEF expects some 2013 actual/estimated and 2014 projected  
17 transmission-related construction costs for the LNP. In Schedule AE-6 of  
18 Exhibit No. \_\_\_ (TGF-3) to Mr. Foster's testimony there are estimated  
19 transmission construction costs for 2013 in the following categories: Real  
20 Estate Acquisition and Mitigation costs of [REDACTED] and Other costs of  
21 [REDACTED]. In Schedule P-6 of Exhibit No. \_\_\_ (TGF-4) to Mr. Foster's testimony  
22 there are projected 2014 transmission construction costs in the following

1 categories: Real Estate Acquisition and Mitigation costs of [REDACTED] and  
2 Other costs of [REDACTED].  
3

4 **Q. What are the LNP 2013 and 2014 estimated transmission-related Real  
5 Estate Acquisition and Mitigation and Other costs?**

6 A. LNP Real Estate Acquisition activity in 2013 and 2014 includes ongoing costs  
7 related to strategic Right-of-Way ("ROW") acquisition for the LNP transmission  
8 lines. These costs are necessary to ensure that the ROW and other land upon  
9 which the transmission facilities will be located are available for the LNP.  
10 Mitigation costs are associated with Clean Water Act regulations requiring that  
11 the environmental effects of construction in wetlands and streams be  
12 mitigated. The Other LNP transmission costs include labor and related  
13 indirect costs, overheads, and contingency in support of strategic transmission  
14 ROW acquisition activities. They also include general project management,  
15 project scheduling, and cost estimating, legal services and external community  
16 relations outreach to local, state, and federal agencies. These construction  
17 costs are necessary for the transmission project work in support of the LNP.

18 Consistent with past practice for the LNP, DEF developed these LNP  
19 Real Estate Acquisition and Other transmission construction cost estimates on  
20 a reasonable engineering basis, in accordance with the Association for the  
21 Advancement of Cost Engineering International ("AACEI") standards, using  
22 the best available construction and utility market information at the time,  
23 consistent with utility industry and DEF practice. Real estate costs within the



1 project estimates are based on an expected dollar per acre amount based on  
2 the type and location of the property using current route selection analysis.

3 The management and indirect costs within the project estimates were  
4 developed based on the project schedule and staffing requirements. These  
5 estimates reasonably reflect the necessary LNP transmission project work for  
6 2013 and 2014.

7  
8 **Q. Is all of this work necessary for the LNP in 2013 and 2014?**

9 **A.** Yes. All of this work is necessary in 2013 and 2014 to obtain the LNP COL  
10 from the NRC and to move the LNP forward on a schedule with expected in-  
11 service dates for Levy Units 1 and 2 in 2024 and 2025, respectively. All of this  
12 work in 2013 and 2014 is reasonable and necessary to meet that schedule.

13  
14 **IV. FEASIBILITY.**

15 **Q. Did the Company prepare an updated LNP feasibility analyses?**

16 **A.** Yes. The Company prepared the current feasibility analyses consistent with  
17 the feasibility analyses previously performed for the LNP that were reviewed  
18 and approved by the Commission in the prior four NCRC dockets. The  
19 Company employs both a qualitative and quantitative feasibility analysis. The  
20 qualitative analysis is an analysis of the technical and regulatory capability of  
21 completing the plants, the enterprise or external risks to the project, and the  
22 short- and long-term costs and benefits of completing the Levy nuclear power  
23 plants. The quantitative analysis is an updated CPVRR economic analysis

1 that includes comparisons to the cost-effectiveness CPVRR analysis in the  
2 Company's need determination proceeding for the LNP described in Order No.  
3 PSC-08-0518-FOF-EI. The Company's updated CPVRR economic analysis  
4 for the LNP is included as Exhibit No. \_\_\_\_ (CMF-4) to my direct testimony. I  
5 explain the results of the Company's feasibility analyses for the LNP in my  
6 direct testimony and the exhibits to my direct testimony.  
7

8 **Q. How does the Company evaluate the LNP enterprise or external risks?**

9 A. Consistent with past LNP feasibility analyses, the Company's qualitative  
10 analysis of the enterprise or external risks to the LNP is more of a holistic  
11 analysis rather than a pure measurable or computable analysis. The effects of  
12 most risks external to the project cannot be accurately quantified or measured  
13 in mathematical terms, they cannot realistically be weighed against other such  
14 risks, and, therefore, they cannot be compared using a quantifiable or  
15 measureable standard. The Company must instead evaluate them by  
16 identifying events or circumstances that have changed the LNP risk profile and  
17 then use its reasonable, business judgment to determine if those events or  
18 circumstances fundamentally change the holistic analysis comparing the risks  
19 and benefits associated with continuing the project. The Company continued  
20 this process for evaluating the LNP enterprise or external project risks as part  
21 of its qualitative feasibility analysis this year. These enterprise or external  
22 project risks include, but are not limited to, the LNP regulatory feasibility, the  
23 LNP technical feasibility, economic conditions, particularly in Florida, customer

1 demand for energy and base load capacity, federal and state energy,  
2 environmental, and nuclear policy and regulation, capital markets, and long  
3 term fuel prices and diversity.  
4

5 **A. Regulatory Feasibility.**

6 **Q. Is the LNP feasible from a regulatory perspective?**

7 A. Yes. All regulatory licenses and permits for the LNP can be obtained,  
8 including the LNP COL. I have attached as Exhibit No. \_\_\_\_ (CMF-5) to my  
9 direct testimony a chart of the current NRC review schedule and status for the  
10 LNP COLA. This chart shows that the Company is nearing completion of the  
11 NRC COLA process to obtain the LNP COL.

12  
13 **Q. Can you describe the NRC COLA process?**

14 A. Yes. The Company filed its COLA with the NRC in July 2008 and it was  
15 docketed with the NRC for acceptance review in October 2008. This  
16 acceptance review initiated the NRC COLA review process. There are three  
17 parts to the NRC COLA review process: (i) the environmental review process;  
18 (ii) the safety review process; and (iii) the formal hearing process. All three  
19 parts of the NRC's review for the LNP COLA must be complete before the  
20 NRC will issue a COL for the LNP. See Exhibit No. \_\_\_\_ (CMF-5) to my direct  
21 testimony.  
22  
23

1 **Q. What is the NRC environmental review process for the LNP?**

2 A. The environmental review process involves the issuance of a draft  
3 environmental impact statement ("DEIS") followed by a public comment period  
4 before issuance of a final environmental impact statement ("FEIS") for the  
5 LNP.

6  
7 **Q. What is the status of the LNP environmental review process?**

8 A. The LNP DEIS was issued in August 2010, the public comment period on the  
9 DEIS ended in October 2010, and the NRC Staff completed its responses to  
10 the public comments on the LNP DEIS in late 2011. DEF also completed  
11 responses to all identified U.S. Army Corps of Engineers ("USACE")  
12 information needs for the FEIS. The LNP FEIS was issued on April 27, 2012.

13  
14 **Q. What is the NRC safety review process for the LNP?**

15 A. The second part of the NRC COLA review process is the review and issuance  
16 of a Final Safety Evaluation Report ("FSER"). This is preceded by NRC  
17 review of the LNP COLA and the NRC's issuance of an Advanced Safety  
18 Evaluation Report ("ASER") with no open items. Completion of the ASER  
19 signifies that the NRC Staff has completed the required safety review. The  
20 next step is review of the ASER by the Advisory Committee on Reactor  
21 Safeguards ("ACRS"). The ACRS is independent of the NRC staff and reports  
22 directly to the NRC Commissioners. The ACRS is an advisory body that is  
23 structured to provide a forum for experts representing different technical

1 perspectives. The ACRS provides independent advice to the NRC  
2 Commissioners for consideration in their licensing decisions. The ACRS  
3 review and report is followed by NRC review and issuance of the FSER. NRC  
4 issuance of the FSER completes the NRC safety review for the LNP.  
5

6 **Q. What is the status of the NRC safety review process for the LNP?**

7 A. The LNP ASER was completed on September 15, 2011. The Company and  
8 the NRC Staff met with the ACRS committee and completed review of the LNP  
9 ASER in December 2011. Subsequent to the ACRS review, the NRC Staff  
10 determined that certain recommendations from the NRC Fukushima Near  
11 Term Task Force should be implemented for new reactors prior to licensing.  
12 This NRC Staff determination was the basis for an additional RAI that was  
13 issued for the LNP COLA in March 2012 that required DEF to update its  
14 seismic information to incorporate the CEUS source data and computer  
15 model. DEF has updated its seismic information to incorporate the CEUS  
16 source data and model and DEF has provided a response to the NRC Staff to  
17 address issues identified as a result of the Fukushima event. The ACRS  
18 AP1000 subcommittee requested an additional meeting to review the actions  
19 taken to update the Levy COLA seismic information in response to Fukushima.  
20 This supplemental ACRS review was completed on January 18, 2013. The  
21 current NRC target for issuance of the LNP FSER is September 2013.  
22

1 **Q. Have the NRC Fukushima Near Term Task Force recommendations**  
2 **adversely affected issuance of the LNP COLA?**

3 A. No. DEF has addressed the NRC Fukushima Near Term Task Force  
4 recommendations that are relevant to the NRC's review of the LNP COLA by  
5 incorporating the CEUS source data and model in the seismic information for  
6 the LNP COLA and by establishment of license conditions for actions that  
7 needed to be completed post-COLA. The NRC Task Force otherwise  
8 concluded in its Fukushima Near Term Task Force Report that the Fukushima  
9 event and resulting accident are unlikely to occur in the United States and that  
10 appropriate mitigation measures have been implemented, reducing the  
11 likelihood of core damage and radiological releases from United States  
12 nuclear power plants, in the unlikely event of a similar event and accident in  
13 the United States. The NRC Fukushima Near Term Task Force further  
14 concluded that many concerns inherent in an event like the Fukushima event  
15 are addressed in the passive design features in the Westinghouse AP1000  
16 nuclear power plant design that is planned for the LNP. These conclusions  
17 support the continuation of the NRC's review of new plant licensing, in  
18 particular, the LNP COLA based on the AP1000 design. The NRC Fukushima  
19 Near Term Task Force further recognized that future regulatory or design  
20 modifications, which may be necessary based on further review of the Task  
21 Force recommendations, can be incorporated at a later date in NRC license  
22 conditions without impacting pending license approval reviews.

1           The NRC Fukushima Near Term Task Force recommendations and  
2 conclusions are a natural part of the NRC process of incorporating lessons  
3 learned into the NRC licensing review processes. The NRC and United States  
4 nuclear industry have a long history of continuously incorporating lessons  
5 learned from OE of nuclear power plants around the world. The careful  
6 analysis of the Japanese accident at Fukushima and incorporation of lessons  
7 learned into United States reactor designs and operating practices by the NRC  
8 and the nuclear industry was expected and will continue as the NRC and the  
9 industry continue to enhance planning and safety equipment to address any  
10 accidental and natural events. This is the way the United States nuclear  
11 industry operates to ensure safety at existing and planned nuclear power  
12 plants.

13  
14 **Q.    What are the benefits of the AP1000 design that were recognized by the**  
15 **NRC Near Term Fukushima Task Force in its Report?**

16 **A.**   All existing and planned nuclear power plants, including AP1000 nuclear  
17 power plants, must be designed to address a wide range of natural disasters,  
18 whether they are earthquakes, tsunamis, tornados, hurricanes, storm surges,  
19 floods, or other extreme seismic or weather events. In the event of such  
20 natural disasters, the AP1000 nuclear power plant, in particular, does not rely  
21 on emergency diesel generators for safety related power to ensure core  
22 cooling. This is the passive design of the AP1000 nuclear power plant.

1           The AP1000 nuclear power plant relies on internal condensation and  
2 natural recirculation, natural convection and air discharge, and stored water all  
3 contained within the robust structures of the containment and its shield  
4 building to cool the reactor even without electrical power. With respect to the  
5 Fukushima event, for safety related cooling the damaged Japanese nuclear  
6 units depended on electrical power from diesel generators that were  
7 inoperable as a result of the tsunami. Unlike the Japanese reactors, then, the  
8 AP1000 nuclear power plant is designed to automatically place itself in a safe  
9 shutdown state, cooling the reactor passively without reliance on an external  
10 power source for some time until power is restored to the active coolant  
11 systems. The NRC Near Term Fukushima Task Force acknowledged the  
12 operation of these passive design features in an event like the Fukushima  
13 event in its review of the planned AP1000 nuclear power plants. The AP1000  
14 nuclear reactor design planned for the Levy site will meet all requirements for  
15 operation under all potential conditions or circumstances, including the highly  
16 unlikely conditions and circumstances addressed in the NRC Fukushima Near  
17 Term Task Force Report.

18  
19 **Q. You mentioned the FSER schedule is delayed as a result of the Waste**  
20 **Confidence Decision, why has that Decision impacted the FSER**  
21 **schedule for the LNP?**

22 **A.** The LNP COLA, similar to other pending license applications for new nuclear  
23 power plants and license renewals for existing power plants, relied on the



1 NRC Waste Confidence Decision and Rule. The NRC Waste Confidence  
2 Decision and Rule represent the NRC's generic determination that spent  
3 nuclear fuel can be stored safely and without significant environmental impacts  
4 for a period of time past the end of the licensed life of a nuclear power plant.  
5 This generic Decision and Rule, codified in Title 10 of the Code of Federal  
6 Regulations, was historically incorporated in the NRC's reviews for new  
7 reactor licenses and license renewals to satisfy the NRC's obligations under  
8 the National Environmental Policy Act ("NEPA") with respect to the storage of  
9 spent nuclear fuel on site after the end of the license for the nuclear power  
10 plant. NEPA requires a comprehensive evaluation of the potential  
11 environmental impacts of proposed agency action through an environmental  
12 assessment or an EIS before a final agency decision.

13 On June 8, 2012, the United States District Court of Appeals for the  
14 District of Columbia found that some aspects of the NRC's 2010 Waste  
15 Confidence Decision did not satisfy the NRC's obligations under NEPA and  
16 vacated the NRC's Waste Confidence Decision and Rule. In particular, the  
17 Court found that the NRC should have considered the potential environmental  
18 effects in the event the federal government fails to secure a permanent  
19 repository for disposing of spent fuel and should have included additional  
20 information regarding the impacts of certain aspects of potential leaks and  
21 fires involving spent fuel pools at nuclear power plant sites. The Court's  
22 decision required the NRC to address these concerns in any new Waste  
23 Confidence Decision and Rule.

1           On August 7, 2012, the NRC issued an Order that the NRC will not  
2 issue licenses dependent on the Waste Confidence Rule, which includes new  
3 reactor licenses like the LNP COL, until the NRC had appropriately addressed  
4 the Court's concerns in its decision vacating the NRC Waste Confidence  
5 Decision and Rule. The NRC's Order did not stay the review schedule for new  
6 reactor licenses including the LNP COLA. In fact, the NRC has proceeded  
7 with the review of the LNP COLA despite the Court's decision and the NRC  
8 Order; however, the NRC will not issue the LNP COL until the NRC has  
9 addressed the Court's concerns regarding the Waste Confidence Decision and  
10 Rule. As a result, the schedule for issuance of the LNP COL is impacted by  
11 the NRC Waste Confidence Decision and Rule.

12  
13 **Q. Is the NRC addressing the Court's concerns with respect to the Waste**  
14 **Confidence Decision and Rule?**

15 **A.** Yes. On September 6, 2012, the NRC directed the NRC Staff to develop a  
16 generic EIS to support an updated Waste Confidence Rule no later than  
17 September 2014. The generic EIS will address the potential environmental  
18 impacts of the proposed Waste Confidence Rule, including the potential  
19 concerns raised by the Court in its decision vacating the prior Waste  
20 Confidence Decision and Rule, and it will form the technical basis for the  
21 proposed Waste Confidence Rule. The use of a generic EIS to address these  
22 concerns was approved by the Court in the decision that vacated and  
23 remanded the prior NRC Waste Confidence Decision and Rule.

1           The NRC is moving forward with the generic EIS and proposed Waste  
2 Confidence Rule. The NRC conducted an EIS scoping period between  
3 October 2012 and January 2013 for the proposed Rule and published a  
4 scoping summary report in early March, 2013. The NRC plans to publish the  
5 draft generic EIS for the proposed Waste Confidence Rule in September 2013.  
6 The draft generic EIS will be followed by a public comment period, and period  
7 for review and incorporation of comments into the generic EIS for the Waste  
8 Confidence Rule. Under the NRC's current Waste Confidence milestone  
9 schedule, the NRC currently expects to issue the final EIS for the Waste  
10 Confidence Rule, the Final Waste Confidence Decision, and the Final Waste  
11 Confidence Rule in August 2014.

12  
13 **Q. Does the Company still expect to receive the COL for the LNP from the**  
14 **NRC?**

15 **A.** Yes. As I explained above, the NRC is proceeding with the LNP COLA review  
16 process, in parallel with the NRC's pending review of a new Waste Confidence  
17 Decision and Rule. In fact, the NRC has targeted issuance of the LNP FSER  
18 for September 2013 before a new Waste Confidence Decision and Rule are  
19 adopted. The NRC further expects to address and resolve the Court's  
20 concerns with the Waste Confidence Decision and Rule in a new Decision and  
21 Rule by August 2014. The NRC is already moving toward resolution of the  
22 Waste Confidence Decision and Rule by that date. Assuming that the NRC  
23 maintains its current schedule for the Waste Confidence Decision and Rule,

1 pending COLs could be issued as early as September 2014. The Company  
2 expects the NRC to issue the LNP COL in December 2014, after completion of  
3 the formal hearing process this year or in 2014, which is the third part of the  
4 NRC COLA review process.

5  
6 **Q. What is the NRC formal hearing process for the LNP COLA?**

7 A. There are two hearings as part of the NRC formal hearing process for the LNP  
8 COLA, a contested hearing process before the NRC Atomic Safety and  
9 Licensing Board ("ASLB") and a mandatory hearing process before the NRC.  
10 The contested hearing conducted by the NRC ASLB is for any contentions to  
11 the LNP COLA admitted by the ASLB. The ASLB is a three-member board of  
12 administrative judges independent of the NRC Staff who conduct adjudicatory  
13 hearings on major agency licensing actions. The mandatory hearing for the  
14 LNP COL is conducted by the NRC Commissioners. The focus of the  
15 mandatory hearing is on the adequacy of the NRC Staff review of the LNP  
16 COLA.

17  
18 **Q. What is the status of the NRC formal hearing process for the LNP COLA?**

19 A. The contested hearing for the LNP COLA was conducted last fall and the  
20 ASLB issued a favorable decision this year. As background, in 2009, the  
21 ASLB allowed three private anti-nuclear groups, the Nuclear Information and  
22 Resource Service ("NIRS"), the Ecology Party of Florida ("EPF"), and the  
23 Green Party of Florida ("GPF"), to intervene in the NRC LNP COLA docket.

1 The ASLB ruled on their contentions and admitted parts of three contentions to  
2 the LNP COL. One of the three admitted contentions was dismissed by the  
3 ASLB in 2010. During the fourth quarter of 2011, the ASLB completed its  
4 review of the pending and revised contentions for the LNP COLA and, based  
5 on additional information provided by the Company, the ASLB dismissed  
6 another admitted contention. Only one environmental contention remained for  
7 consideration in the ASLB hearing. In this contention the interveners claimed  
8 the LNP FEIS failed adequately identify and assess the direct, indirect, and  
9 cumulative impacts of the LNP on wetlands and groundwater sources. DEF  
10 and the NRC responded to this contention that the LNP FEIS satisfied all  
11 NEPA requirements.

12 The ASLB conducted the contested hearing in Bronson, Florida, in late  
13 October and early November, 2012. The evidentiary hearing involved more  
14 than 300 exhibits and 24 witnesses. On March 26, 2013, the ASLB issued its  
15 decision finding in relevant part that the LNP FEIS fairly and reasonably  
16 described and addressed the site geology and hydrology and that the  
17 evidence did not support the interveners' claims. The ASLB concluded that  
18 the LNP FEIS complied with all legal and regulatory requirements. The ASLB  
19 decision is the NRC's final determination on the environmental issues raised  
20 by these interveners.

21 The LNP COLA mandatory hearing process cannot commence until the  
22 LNP FSER is issued. If the LNP FSER is issued by its NRC target date of  
23 September 2013, the mandatory hearing can be conducted as early as

1 November 2013. The NRC, however, has not yet scheduled the mandatory  
2 hearing for the LNP COLA. In any event, the Company currently expects the  
3 NRC to complete the mandatory hearing this year or next year, and then to  
4 issue the LNP COL in the fourth quarter of 2014. See Exhibit No. \_\_\_ (CMF-  
5 5) to my direct testimony for a chart and status of the LNP COLA process.  
6

7 **B. Technical Feasibility.**

8 **Q. Is the LNP feasible from a technical standpoint?**

9 A. Yes, it is. Completion of the LNP is technically feasible because the AP1000  
10 nuclear reactor design can be successfully installed at the Levy site. The  
11 AP1000 nuclear reactor design remains a viable nuclear reactor technology.  
12 The NRC has approved the AP1000 design, the AP1000 Design Control  
13 Document ("DCD"), and the AP1000 reference COL ("R-COL") for the AP1000  
14 design when the NRC approved the Georgia Power Company Vogtle AP1000  
15 COL. The NRC also approved the COL for the SCANA V.C. Summer AP1000  
16 nuclear power units in South Carolina. Both the Southern Company and  
17 SCANA are moving forward with preconstruction and construction work for  
18 their AP1000 nuclear reactors. China is also constructing AP1000 nuclear  
19 reactors at Haiyang and Sanmen and the Chinese government has focused its  
20 nuclear generation development on the AP1000 nuclear reactor design. As I  
21 explained above, the NRC is continuing its review of the LNP COLA with the  
22 understanding that the AP1000 nuclear reactor design will be used at the Levy  
23 site. The ASLB recently issued its decision finding that the FEIS for the

1 installation of the AP1000 nuclear power plants at the Levy site satisfied all  
2 legal and regulatory requirements. As a result, there is no reason to believe  
3 that the AP1000 nuclear reactor design cannot be successfully installed at the  
4 Levy site.

5  
6 **C. Enterprise or External Risks to the LNP.**

7 **Q. Did the Company evaluate the enterprise or external risks to the LNP this**  
8 **year?**

9 A. Yes, it did. The Company conducted a qualitative analysis of the enterprise or  
10 external risks to the LNP that are beyond the control of the Company. This  
11 qualitative analysis included economic conditions, particularly in Florida,  
12 customer demand for energy and base load capacity, federal and state  
13 energy, environmental, and nuclear policy and regulation, capital markets, and  
14 long term fuel prices and diversity, among other qualitative factors. As I  
15 explain in more detail below, our qualitative analysis resulted in the  
16 determination that the LNP is still feasible from a qualitative perspective, and  
17 that there has been little change in the overall uncertainty, and thus,  
18 qualitative risk associated with the project is little changed from last year to  
19 this year. The Company continues to mitigate this uncertainty under the  
20 current project suspension through the anticipated receipt of the LNP COL and  
21 the revised project schedule that the Company presented to the Commission  
22 last year. This schedule is consistent with the Company's decision to move  
23 forward with the LNP on a slower pace with work focused on obtaining the

1 LNP COL and other, required permits for the project. The Company continues  
2 to believe this is the correct decision for the LNP at this time.

3  
4 **Q. What was the Company's assessment of the Florida economic**  
5 **conditions this year?**

6 A. Economic conditions in Florida are slowly improving, with positive growth for  
7 two years, but the growth rate is still below the growth rate in Florida prior to  
8 the recession. Florida personal income is also growing slowly and the Florida  
9 unemployment rate is declining, with the rate just about equaling the national  
10 average for the first time since the recession. Florida population growth is also  
11 recovering. Florida, however, still has a lot of ground to make up following the  
12 worst economic recession in Florida since the Great Depression. The Florida  
13 Legislature Office of Economic and Demographic Research ("EDR")  
14 concluded in March 2013 that it still will take a long time for the Florida job  
15 market to recover with Florida having to create about 900,000 jobs for the  
16 same percentage of the total Florida population to be working after the  
17 recession as prior to the recession. See Exhibit No. \_\_\_\_ (CMF-6) to my direct  
18 testimony.

19 One reason is that the Florida housing and construction industries are  
20 improving, but they have not yet fully recovered from the recession. The  
21 housing and construction industries are important in Florida because they  
22 have led past Florida economic recoveries. Improving home sales and home  
23 prices are a boost to these industries, however, foreclosure activity in Florida



1 is an impediment to growth in the Florida housing and construction industries.  
2 In 2012, for example, Florida had the highest foreclosure rate in the nation for  
3 the first time since the housing crisis began and, so far in 2013, Florida  
4 foreclosures continue to lead the nation. Between 2009 and 2011, Florida had  
5 the second highest number of foreclosure filings in the nation. Florida still has  
6 the third longest foreclosure resolution period in the nation at a little over two  
7 years from filing to resolution. See Exhibit No. \_\_\_\_ (CMF-6) to my direct  
8 testimony. The foreclosures will continue to be an impediment to growth in  
9 Florida's housing, real estate, and construction industries until they are  
10 brought in line with pre-recession foreclosure levels. Until then, the recovery  
11 will be slow and fragile in the Florida housing and construction industries.

12 As these examples illustrate, Florida's economy is recovering, there is  
13 growth, but it will still take time to make up ground lost during the recession.  
14 The EDR concluded in March 2013 that Florida growth rates are slowly  
15 returning to more typical levels, but drags are more persistent than in past  
16 recessions, and it will still take a few more years to climb completely out of the  
17 hole left by the recession. See Exhibit No. \_\_\_\_ (CMF-6) to my direct  
18 testimony.

19  
20 **Q. Was the Company impacted by the Florida economic conditions?**

21 **A.** Yes. As the Company explained last year, the Company was not immune to  
22 the recession and its effects on Florida's economy. DEF lost customers during  
23 and immediately following the recession, DEF experienced dramatic declines

1 in customer energy use and retail energy sales, and DEF experienced a  
2 dramatic increase in low use, vacant, but active accounts as a result of the  
3 residential and commercial vacancies and foreclosures, depressed real estate  
4 and construction industries, and high unemployment in Florida as a result of  
5 the recession. Since then, as the Florida economy has slowly recovered, DEF  
6 has experienced a slow recovery as well. DEF's customer growth returned  
7 and is expected to continue to grow, leading to increased retail energy sales.  
8 However, energy use per customer, while no longer declining, is growing  
9 slowly and remains below pre-recession energy use per customer rates,  
10 depressing the potential growth in retail sales revenues that the Company is  
11 experiencing from customer growth. As a result, near term energy sales  
12 remain at levels well below pre-recession levels. Over the long term,  
13 customer growth, customer energy use and, thus, retail energy sales and load  
14 will continue to increase as the Florida economy improves. An immediate  
15 return to pre-recession retail energy sales growth levels, however, is not  
16 expected. Rather, the Company expects a more gradual increase in retail  
17 load and resulting energy sales in the future.

18  
19 **Q. How did the Company evaluate the Florida economic conditions this**  
20 **year?**

21 **A.** We explained last year that that the Florida economy was taking longer to  
22 rebound from the recession than expected. We observed the commencement  
23 of economic improvement last year and the Florida economy is continuing to

1 slowly improve this year. We expect the Florida economy to continue to  
2 improve, but the economic recovery is going to take time. That economic  
3 recovery is also still fragile. In the near term, then, we do not see a return to  
4 the robust economic growth that existed prior to the recession and the Florida  
5 economy is susceptible to another economic downturn. As a result, we  
6 continue to believe that the Company's decision to continue with the LNP on a  
7 slower pace, focusing on obtaining the COL and revising its project schedule  
8 last year, is the right decision for the Company and its customers. This  
9 decision delays significant, near term capital investments required to  
10 commence construction of the LNP until after the COL is obtained, providing  
11 additional time for the Florida economy to strengthen, and, therefore, aligning  
12 the economic circumstances facing the Company and its customers with the  
13 current project plan.

14 As we also explained last year, the Florida economic conditions are  
15 one of the reasons for the levelized LNP costs in the 2012 Stipulation and  
16 Settlement Agreement between DEF and the customer group representatives  
17 that was approved by the Commission. This settlement reduces the near-term  
18 impact of the LNP costs on customer bills, thus providing customers rate relief  
19 until the Florida economy can more fully recover from the recession. The  
20 settlement continues the Company's efforts between 2009 and 2012 to  
21 balance the customers' ability to pay for the LNP and the need to develop the  
22 LNP for the customers' long term benefit.

1 **Q. What changes were there this year in the Company's evaluation of the**  
2 **federal and state energy and environmental policy affecting the LNP?**

3 A. The Company's evaluation of the federal and state energy and environmental  
4 policy, legislation, or regulation is essentially the same; little has changed  
5 since last year. There remains no federal or state climate control legislation or  
6 greenhouse gas ("GHG") legislation that implements a cap-and-trade system  
7 or carbon tax on fossil fuel generation. Congress has not taken action on any  
8 climate control, GHG emission, or clean energy bill and no Congressional  
9 action is expected this year. Likewise, the Florida Legislature repealed the  
10 Florida Climate Protection Act last year and no replacement state climate  
11 control or GHG legislation is expected. There is no proposed Florida  
12 legislation on climate control, GHG emission, clean energy or renewable  
13 energy standards. In sum, there continues to be near term uncertainty  
14 regarding the direction of federal and state energy and climate control policy.

15  
16 **Q. Is the Environmental Protection Agency still pursuing the regulation of**  
17 **GHG emissions?**

18 A. Yes. The federal Environmental Protection Agency ("EPA") has aggressively  
19 pursued the regulation of GHG emissions under the Clean Air Act ever since  
20 the United States Supreme Court held in 2007 that GHG are covered by the  
21 Clean Air Act. That decision led to the EPA endangerment finding for GHG  
22 emissions from new motor vehicles, which triggered the regulation of GHG  
23 emissions by other sources, in particular stationary sources like electric power

1 plants, under the Clean Air Act. In 2010, the EPA implemented the Tailoring  
2 Rule, which required limits on GHG emissions in air permits for new, large  
3 industrial sources and other, major, new and modified sources, leading to  
4 Prevention of Significant Deterioration ("PSD") permits implementing best  
5 available control technology ("BACT") for GHG emissions by 2011. The EPA  
6 completed the phase-in of the Tailoring Rule for GHG emissions for new  
7 power plants with Plant-wide Applicability Limits ("PALs") for GHG emissions  
8 in February 2012. The EPA has also implemented GHG emission reporting  
9 requirements for power plants and other GHG emission sources. And, in  
10 March 2012, the EPA proposed GHG emission standards for new power  
11 plants. This proposed new source performance standard ("NSPS"), for the  
12 first time, will set uniform national limits on the amount of GHG emissions new  
13 power plants can emit.

14 The EPA's regulation of GHG emissions from new power plants has not  
15 yet extended to existing power plants. Previously proposed legislation and  
16 litigation intended to reverse or delay EPA's efforts to regulate GHG emissions  
17 have not been effective, however, the EPA does not appear to be pursuing the  
18 regulation of GHG emissions from existing power plants. The EPA has not  
19 issued a Tailoring Rule and NSPS for GHG emissions from existing power  
20 plants, and it is unclear if and when the EPA would attempt such regulation  
21 without congressional legislation supporting it. As a result, the EPA regulation  
22 of GHG emissions from existing power plants remains uncertain; however, it is  
23 not expected at this time.

1 **Q. Is this federal and state energy and environmental policy still relevant to**  
2 **your evaluation of the LNP?**

3 A. Yes. Federal and state energy and environmental policy, in particular the  
4 regulation of power plant emissions including GHG emissions as a result of  
5 climate control legislation or regulation, is still fundamental to the Company's  
6 evaluation of the LNP against natural gas-fired, fossil fuel generation.  
7 Qualitatively, climate control or GHG emission legislation or regulation  
8 promotes nuclear over fossil fuel generation because nuclear energy  
9 generation produces no GHG emissions. Quantitatively, the potential effect of  
10 climate control or GHG emission legislation or regulation is reflected in an  
11 estimated carbon cost impact in the Company's economic, CPVRR feasibility  
12 analysis. This carbon cost impact is a significant driver in the Company's  
13 quantitative evaluation of generation resource options. As a result, federal  
14 and state energy and environmental policy continues to be a fundamental  
15 enterprise or external risk to the LNP.

16 Presently, climate control legislation is still being discussed at the  
17 federal level and the debate appears to be about how and when to implement  
18 such legislation rather than whether there is a need for future climate control  
19 legislation. Additionally, the EPA continues to regulate GHG emissions and  
20 the courts so far have upheld the EPA's existing GHG emission regulations.  
21 The EPA, therefore, is unlikely to recede from and will continue to regulate  
22 GHG emissions. As a result, DEF still expects a federal Clean Air Act  
23 standard for carbon and other GHG emissions in the future that extends the

1 current regulation of carbon and other GHG emissions to existing power  
2 plants. However, what form a uniform climate control or GHG emission policy  
3 for all power plants will take and when that legislation or regulation will be  
4 implemented remains unclear. The effect of GHG emission legislation or  
5 regulation on the LNP, therefore, continues to be uncertain at this time.

6  
7 **Q. Is climate control or GHG emission legislation or regulation the only**  
8 **federal or state energy and environmental policy that affects the LNP**  
9 **evaluation?**

10 **A.** No. The potential development of a "Clean Energy" standard, which includes  
11 new nuclear and other non-traditional renewable resources, or a renewable  
12 portfolio standard ("RPS") at the federal level or in Florida also can affect the  
13 evaluation of the LNP as a generation resource option. Obviously, a "Clean  
14 Energy" standard that promotes new nuclear as well as traditional renewable  
15 resources benefits nuclear generation in the evaluation of generation resource  
16 options. A RPS standard also affects the evaluation of generation resource  
17 options because RPS resource options generally are more costly on a dollar  
18 per energy output valuation than conventional generation resource options,  
19 like nuclear and fossil fuel generation, and RPS resources such as wind or  
20 solar are considered intermittent resources meaning they require conventional  
21 generation support during the periods they are unavailable. While a federal  
22 "Clean Energy" standard was proposed, no "Clean Energy" standard has been  
23 adopted at the federal or state level. Various jurisdictions across the country

1 have adopted RPS, but there still is no federal or Florida RPS. In fact, the  
2 Florida Legislature has not approved the Commission's proposed RPS rule  
3 that the Florida Legislature directed the Commission to adopt and submit for  
4 legislative approval in 2008. A federal or Florida "Clean Energy" standard or  
5 RPS, therefore, is unlikely in the foreseeable future.

6 Other federal and state environmental legislation and regulation also  
7 affect the evaluation of the LNP by effectively narrowing the viable base load  
8 generation resource alternatives to natural gas-fired, fossil fuel generation or  
9 new nuclear generation in Florida. For example, proposed EPA regulations for  
10 cooling water intake structures under Section 316b of the Clean Water Act, the  
11 proposed Coal Combustion Residuals Rule ("CCR"), and the Mercury and Air  
12 Toxics Standards Rule ("MATS"), among other federal and state  
13 environmental regulations affecting fossil fuel generation, increase the  
14 potential for coal plant retirements that fail to meet these requirements and  
15 decrease the cost effectiveness of new coal generation as a viable resource  
16 alternative. As a result of such proposed and existing environmental  
17 regulation, the likelihood is that existing coal plants will be replaced with gas  
18 generation, and that gas generation will be the default alternative generation  
19 resource, absent consideration of new nuclear generation as a base load  
20 generation resource.

21 Finally, federal support for new nuclear development is also an  
22 important federal energy policy that affects the evaluation of new nuclear  
23 against other conventional, fossil fuel generation resource alternatives. Clear



1 federal support for new nuclear generation benefits new nuclear generation in  
2 the utility's generation resource alternatives evaluation. Federal support for  
3 new nuclear generation, however, is currently unclear. The current  
4 Administration still supports the abandonment of Yucca Mountain as the  
5 federal nuclear waste storage option and no alternative federal nuclear waste  
6 storage option has been proposed by this Administration. Additionally, the  
7 current Administration has not clearly defined its stated support for the  
8 development of new nuclear generation. As a result, this support remains  
9 uncertain.

10  
11 **Q. What does the absence of an Energy Policy or Climate Change**  
12 **Regulations mean for your qualitative analysis of the feasibility of the**  
13 **LNP this year?**

14 **A.** Similar to the Company's qualitative evaluation last year, there is no reason to  
15 expect more certainty this year with respect to federal or state energy and  
16 environmental policy affecting the evaluation of the LNP as a generation  
17 resource. Likewise, there is no clear federal nuclear generation policy that  
18 supports the development of nuclear generation in the face of this uncertain  
19 federal energy and environmental policy. In sum, the continued uncertainty as  
20 a result of the lack of clear federal or state legislative or regulatory direction  
21 that impacts the development of nuclear generation is a continuing risk in the  
22 qualitative evaluation of the feasibility of the LNP.

23

1 **Q. Does state nuclear generation policy affect the Company's qualitative**  
2 **evaluation of the LNP?**

3 A. Yes. In 2006, the Florida Legislature passed legislation with near unanimous  
4 support that created the nuclear cost recovery statute, Section 366.93, Florida  
5 Statutes, and amended the need determination statutory provision, Section  
6 403.519, Florida Statutes, to promote fuel diversity and electric supply  
7 reliability by encouraging utility investment in nuclear power plants. This same  
8 legislation directed the Commission to develop alternative cost recovery  
9 mechanisms for the recovery of all prudently incurred preconstruction costs,  
10 as well as the carrying charges on prudently incurred construction costs, for  
11 nuclear power plants and related new, expanded, or relocated transmission  
12 lines and facilities. The Commission fulfilled this legislative directive when it  
13 adopted the nuclear cost recovery rule, Rule 25-6.0423, F.A.C. The Company  
14 developed and has continued to pursue the development of the LNP based on  
15 this legislation and the Commission rule promoting investment in new nuclear  
16 generation in the State.

17 Each year since this legislation promoting the development of new  
18 nuclear generation like the LNP was adopted by the Florida Legislature, the  
19 same individual state legislators have introduced bills to repeal the legislation,  
20 which so far, have proved unsuccessful. This year, however, there are also  
21 proposed bills to amend the nuclear cost recovery statute that alter the  
22 provisions promoting investment in new nuclear generation in the original  
23 nuclear cost recovery statute and provide for the sunset of the legislation in

1 the near future unless legislative action is taken to renew the statute. These  
2 proposed bills to repeal or amend the nuclear cost recovery statute, in the  
3 Company's view, are inconsistent with and undermine the original and still  
4 purported legislative intent to promote fuel diversity and electric generation  
5 reliability by promoting utility investment in new nuclear generation.

6 The State's energy policy reflected in the nuclear cost recovery statute  
7 and amendments to the need determination statute has not changed. That  
8 express State energy policy is to increase fuel diversity and increase electric  
9 generation reliability by reducing Florida's dependence on fossil fuels subject  
10 to supply interruptions and price volatility through the investment in new  
11 nuclear generation. This express State energy policy cannot be met by the  
12 current bills to repeal or amend the very statute that implements this energy  
13 policy. Continued legislative support for the nuclear cost recovery statute  
14 promoting the development of new nuclear generation in Florida is necessary  
15 to fulfill this express State energy policy.

16  
17 **Q. Have there been other challenges to the nuclear cost recovery statute in**  
18 **Florida?**

19 **A.** Yes. Since 2010, several purported class action lawsuits have been filed in  
20 the state and federal courts challenging the constitutionality of the nuclear cost  
21 recovery statute. Also, a group opposed to new nuclear development  
22 appealed the Commission's decision in the 2011 nuclear cost recovery clause  
23 docket to the Florida Supreme Court, challenging the decision and the

1 constitutional of the nuclear cost recovery statute. The Florida Supreme  
2 Court has not yet decided this appeal and it is unclear when the Court will  
3 issue its decision. As the Company explained last year, the Company does  
4 not believe that these legal challenges are well founded, and the state and  
5 federal courts have so far agreed. Repeated legal efforts to undermine the  
6 nuclear cost recovery statute, however, create additional risk and uncertainty  
7 for the LNP.  
8

9 **Q. Last year, the Company identified natural gas fuel prices as an increased**  
10 **qualitative risk, as well as a quantitative factor, in the LNP feasibility**  
11 **analysis. Have there been any changes in the Company's qualitative**  
12 **assessment of this factor this year?**

13 **A.** The Company's assessment of near term natural gas fuel prices has not  
14 changed. Natural gas fuel prices remain at near historic low prices. The  
15 impact of the recession on natural gas fuel prices is less of a factor now,  
16 instead current, low natural gas fuel prices appear to be driven by over supply  
17 and near capacity natural gas storage conditions resulting from the  
18 development of unconventional shale gas resources. As a result, near term  
19 natural gas prices in recent natural gas forecasts continue to be depressed,  
20 reflecting the addition of unconventional shale gas resources to the supply of  
21 natural gas in the price forecasts.

22 This trend in near term natural gas fuel prices has led to another  
23 developing trend, the increase in demand for natural gas as a result of new

1 natural gas-fired industrial plants and power plants and the conversion of other  
2 fossil fuel industrial plants and power plants to natural gas. This trend is  
3 exemplified by the country's relatively rapid conversion from an electric  
4 generation system fueled primarily by coal to one fueled more and more by  
5 natural gas. In 2000, coal fired generation accounted for over 50 percent of all  
6 electrical generation in the United States. That percentage has fallen to  
7 almost 40 percent in about a decade, and it is projected to continue to fall to  
8 less than 30 percent in the next two decades. The percentage of electrical  
9 generation from natural gas generation is rising and will continue to rise over  
10 the same time period. These percentage changes for the total electric  
11 generation by fuel type in the country are dramatic. Seasonal variations in the  
12 generation of electricity by fuel type are even more dramatic, with electricity  
13 production from natural gas equaling the generation of electricity from coal on  
14 a monthly basis for the first time in the spring of 2012. We expect the  
15 increased demand for natural gas fired generation will lead to increases in the  
16 long term forecasts of natural gas fuel prices.

17 There are other supply and demand factors that could also put upward  
18 pressure on natural gas prices over time. On the demand side, for example,  
19 the potential replacement of coal plants with natural gas generation is  
20 enhanced by the acceleration in coal plant retirements due to the current and  
21 proposed EPA environmental regulations I discussed briefly above, including  
22 MATS and CCR. Additionally, the demand for natural gas will expand with the  
23 development of domestic Liquefied Natural Gas ("LNG") projects to export

1 domestic natural gas abroad. On the supply side, for example, new  
2 regulations associated with hydraulic fracturing are being developed that may  
3 increase the production cost for natural gas. For these additional reasons,  
4 over the long-term, natural gas fuel prices are forecasted to increase.

5 These trends in natural gas fuel prices are quantified in the Company's  
6 quantitative CPVRR feasibility analysis. As the Company has explained  
7 before, natural gas prices are a key driver in the CPVRR analysis. Generally,  
8 lower natural gas price fuel forecasts reduce, and higher natural gas price fuel  
9 forecasts increase, the cost-effectiveness of new nuclear generation. The  
10 current trends described above are reflected in lower, near-term natural gas  
11 prices, and slightly increasing longer term natural gas prices, in the  
12 Company's current fuel forecasts in the economic feasibility analysis for the  
13 LNP this year.

14 The qualitative assessment of the natural gas price forecasts considers  
15 a broader time period than the year-to-year quantitative CPVRR analyses.  
16 Qualitatively, for the reasons described above, the decline in near term natural  
17 gas prices appears to be offset now by increasing long term natural gas prices  
18 in the forecast. Thus, the downward trend in near term natural gas prices due  
19 to the advent of unconventional shale gas reserves does not appear to  
20 represent a long-term trend in natural gas price forecasts. The Company  
21 believes, then, that there will not be a fundamental shift in fuel prices reflecting  
22 a longer-term trend of historic low natural gas prices similar to recent,

1 historically low natural gas prices in the fuel forecasts over the expected sixty-  
2 year life of the Levy nuclear units.

3  
4 **Q. Has the Company considered the access to the financial or capital**  
5 **markets for the LNP in its qualitative evaluation of the LNP?**

6 A. Yes, the ability to finance the LNP is always an implicit if not explicit  
7 consideration in the evaluation of the LNP. One favorable factor, as I  
8 mentioned above, is the beneficial provisions of the nuclear cost recovery  
9 statute and rule that are designed to promote investment in new nuclear  
10 generation through the recovery of prudent nuclear preconstruction costs and  
11 carrying charges on prudent nuclear construction costs. The Company's  
12 ability to attract the capital necessary to finance the LNP is also enhanced by  
13 the merger between Duke Energy and Progress Energy, Inc. that was  
14 completed in July 2012. This merger creates the largest regulated electric  
15 utility in the country with a total market cap of approximately \$50 billion and  
16 over \$19 billion in operating revenues. The Company also maintains favorable  
17 credit ratings from the rating agencies. These factors, among others, position  
18 the Company well to access the capital markets for the capital necessary to  
19 build the LNP.

1 **Q. Overall, has there been a significant change in the Company's qualitative**  
2 **feasibility analysis for the LNP since last year?**

3 A. No. Our qualitative analysis of the LNP enterprise or external risks this year  
4 reflects continued near term uncertainty, however, the Company has mitigated  
5 those risks with its plan last year to commence construction of the LNP in time  
6 to place the Levy nuclear units in service in 2024 and 2025. As a result of this  
7 decision, the Company does not need to commence construction in the near  
8 term and the Company can continue to focus its efforts on obtaining the COL  
9 for the LNP from the NRC over the next two years. In the meantime, the  
10 Company will continue to evaluate the feasibility of the LNP each year  
11 consistent with the Commission's rule and Orders.

12  
13 **D. Quantitative Feasibility Analysis.**

14 **Q. Did the Company prepare a quantitative feasibility analysis this year?**

15 A. Yes. DEF prepared a CPVRR analysis consistent with the economic analysis  
16 approved by the Commission in Commission Orders No. PSC-09-0783-FOF-  
17 EI, No. PSC-11-0095-FOF-EI, No. PSC-11-0547-FOF-EI, and No. PSC-12-  
18 0650-FOF-EI. The CPVRR analysis includes the required updated fuel,  
19 environmental, and carbon compliance cost estimates. The CPVRR analysis  
20 also includes a project cost estimate based on the estimated in-service dates  
21 for the Levy nuclear power plants. Similar to prior CPVRR analyses, the  
22 updated CPVRR economic analysis compares the LNP to an all natural gas-  
23 fired base load generation scenario using a range of fuel forecasts and a



1 range of potential carbon compliance cost estimates. The current CPVRR  
2 analysis also includes CPVRRs for DEF ownership levels of the LNP of 100  
3 percent, 80 percent, and 50 percent and total LNP project cost sensitivities for  
4 cases ranging from 15 percent less to 25 percent greater than the estimated  
5 total project cost. This is the same approach that the Company used to  
6 prepare the CPVRR cost-effectiveness analysis in the need determination  
7 proceeding for the LNP and in the 2009, 2010, 2011, and 2012 NCRC  
8 proceedings. See Exhibit No. \_\_ (CMF-4) to my direct testimony.  
9

10 **Q. What were the results of the Company's quantitative feasibility analysis?**

11 A. The updated CPVRR analysis shows that the LNP overall is more cost  
12 effective than the all natural gas generation resource plan. The CPVRR  
13 analysis shows that the LNP generation resource plan is more cost effective in  
14 10 out of 15 cases at the 100 and 80 percent ownership levels, and 9 out of 15  
15 cases at the 50 percent ownership level. See Exhibit No. \_\_ (CMF-4), p. 8.  
16 The CPVRR analysis this year demonstrates that the LNP resource plan  
17 remains cost-effective.  
18

19 **Q. How does this updated CPVRR analysis compare to the CPVRR analysis  
20 in the LNP need case?**

21 A. Just like last year, the results in the updated CPVRR analysis are similar to the  
22 results in the CPVRR analysis in the LNP need case. At the 100 percent  
23 ownership level, the LNP is more favorable than the all natural gas resource

1 plan in 10 out of 15 potential fuel and carbon cost emission scenarios in the  
2 updated CPVRR analysis and in the CPVRR analysis in the LNP need  
3 determination proceeding. The difference is that the LNP is more cost  
4 effective in the current CPVRR analysis in all of the high and mid-fuel  
5 reference cases except the no carbon, mid-fuel reference case, and in only the  
6 highest carbon, low fuel reference case, while the LNP is more cost effective  
7 in the CPVRR analysis in the LNP need case in all of the high and mid-fuel  
8 reference cases, except the lowest carbon and no carbon cases, and more  
9 cost effective in the highest and second highest carbon cases in the low fuel  
10 reference case. See Exhibit No. \_\_\_\_ (CMF-4), pp. 7, 8. Both CPVRR  
11 analyses indicate that the LNP is more cost effective than the all natural gas  
12 resource plan in more potential fuel and carbon cost emission scenarios at the  
13 100 percent, 80 percent, and 50 percent ownership levels. See Exhibit No.  
14 \_\_\_\_ (CMF-4), pp. 7, 8. The updated CPVRR analysis produces similar results  
15 to the CPVRR analysis results in the LNP need case even though the updated  
16 CPVRR analysis includes the current 2024 and 2025 in-service dates for the  
17 Levy nuclear units and a corresponding higher total project cost than the need  
18 case CPVRR analysis.

19  
20 **Q. What are your conclusions from the updated CPVRR feasibility analysis?**

21 A. Again, just like last year, the updated CPVRR analysis continues to indicate  
22 that the LNP is cost effective and, therefore, an economically viable future  
23 generation resource. The updated CPVRR analysis continues to confirm the

1 preference for the LNP as a future base load generation resource. The LNP  
2 still has the potential to provide customers with billions of dollars of savings  
3 over the expected sixty-year life of the project. The CPVRR analysis,  
4 however, is not a litmus test for the LNP. The CPVRR analysis is a snapshot  
5 of the project's estimated economic viability and the Company continues to  
6 believe that the long term projections upon which the CPVRR analysis are  
7 based on are necessarily uncertain and subject to change from year-to-year.  
8 For this reason, this type of analysis cannot be the sole basis for the Company  
9 to determine when to proceed with construction of the project. The CPVRR is  
10 simply one factor among many factors that must be considered in making a  
11 decision about moving forward with construction of the project.

12  
13 **V. LNP PROJECT RECOMMENDATION AND SMC DECISION.**

14 **Q. Did the Company's senior management evaluate the LNP this year?**

15 **A.** Yes. Consistent with prior years, senior management for the Company  
16 evaluated the LNP to determine the optimal path forward on the LNP for the  
17 Company and its customers. The Company considered continuing with the  
18 current project plan, re-negotiating the EPC agreement while continuing the  
19 project, or cancelling the project in favor of the base case assumption of  
20 natural gas generation used in the CPVRR analysis each year in this  
21 evaluation. LNP project management completed this evaluation and  
22 recommended that the Company continue with the current LNP project plan.

1 Senior management accepted this recommendation and approved funding for  
2 the LNP consistent with the current LNP project plan.

3  
4 **Q. What did the Company evaluate in making the recommendation to senior  
5 management to continue with the current LNP project plan?**

6 A. The Company's evaluation and recommendation was based on the  
7 Company's qualitative and quantitative feasibility analyses for the LNP. The  
8 Company determined that the LNP was both qualitatively and quantitatively  
9 feasible. The Company can complete the Levy nuclear power plants. The  
10 LNP COL and other necessary permits to construct the LNP have been or can  
11 be obtained and the AP1000 nuclear reactor design can be installed at the  
12 Levy site. The LNP is cost effective over the life of the Levy nuclear units for  
13 the Company's customers. Lower near term natural gas price forecasts and  
14 delayed expectations of carbon cost impacts presently diminish the economic  
15 benefits of the LNP, but they do not make it economically infeasible. The LNP  
16 still represents the best long-term, base load generation resource for DEF's  
17 customers. It will provide long-term fuel savings benefits to customers from a  
18 low-cost and clean energy fuel source. The LNP will also improve fuel  
19 diversity for the Company and the State and reduce their reliance on fossil  
20 fuels to generate electrical energy. The LNP will provide customers with a  
21 reliable, long-term source of base load generation.

22 The near term uncertainty associated with the enterprise or external  
23 LNP risks has been mitigated to a degree by the current LNP project plan that

1 estimates the in-service dates for the Levy nuclear units in 2024 and 2025.  
2 The current LNP project plan puts off the construction of the LNP and,  
3 therefore, significant capital investments in the LNP until after the COL is  
4 obtained. The LNP COL is not expected before the end of 2014. In the  
5 meantime, economic conditions in Florida can continue to improve, federal  
6 and state energy and environmental policy can develop and, federal and state  
7 support for the development of nuclear generation to promote fuel diversity  
8 and base load generation reliability can stabilize. This provides time, then, for  
9 more certainty to develop with respect to the project's enterprise or external  
10 risks, thus, mitigating the impact of these risks on the project at this time. For  
11 all these reasons, as explained in more detail above, the LNP project  
12 management recommended and senior management accepted the decision to  
13 continue with the current LNP project plan.  
14

15 **VI. TRUE UP TO ORIGINAL COST FILING FOR 2013.**

16 **Q. Has the Company filed schedules to provide information truing up the**  
17 **original estimates to the actual costs incurred?**

18 **A.** Yes. The true up to original cost ("TOR") schedules are attached as Exhibit  
19 No. \_\_\_\_ (TGF-5) to Mr. Foster's testimony. I am co-sponsoring schedule  
20 TOR-4 and sponsoring schedule TOR-6A attached as Exhibit No. \_\_\_\_ (TGF-5)  
21 to Mr. Foster's testimony.  
22  
23

1 **Q. Do these schedules reflect the current LNP total project cost estimate?**

2 A. Yes. The updated project estimate is consistent with the Company's  
3 estimated in-service for Levy Unit 1 in 2024 and estimated in-service for Levy  
4 unit 2 in 2025. The LNP total project cost estimate is still premised on a  
5 conservative Class 5 estimate consistent with the best practices of the  
6 Association for the Advancement of Cost Engineering ("AACE"), fundamental  
7 terms and conditions of the existing EPC Agreement and current market  
8 conditions, and the current project schedule for the LNP. For these reasons,  
9 the current total project cost estimate for the LNP is reasonable. The current  
10 total project cost estimate, however, is dependent upon, among other things,  
11 future Consortium negotiations to amend, modify, or alter the EPC agreement.

12  
13 **VII. JOINT OWNERSHIP.**

14 **Q. What is DEF's current position on joint ownership for the LNP?**

15 A. DEF continues to believe that joint ownership in the LNP provides DEF and its  
16 customers the benefits of sharing the costs and risks of the LNP with other  
17 potential joint owners. DEF will continue to pursue joint ownership  
18 opportunities in the LNP.

19  
20 **Q. Has the status of joint ownership in the LNP changed?**

21 A. No. As the Company explained last year, potential joint owners continue to  
22 express interest in the project; however, the delay in the receipt of the COL  
23 has shifted the time table for significant discussions with potential joint owners

1 to the late 2014 timeframe. Potential joint owners still value the fuel diversity  
2 and clean energy production that new nuclear generation provides in a future  
3 that includes increasing fossil fuel environmental regulations and carbon and  
4 other GHG emission constraints. New nuclear generation is still a prudent  
5 future generation resource for Florida. Accordingly, potential joint owners are  
6 still interested in the LNP and the Company will continue joint ownership  
7 discussions and meetings with potential joint owners at the appropriate time.  
8

9 **VIII. PROJECT MANAGEMENT AND COST CONTROL OVERSIGHT.**

10 **Q. Has the Company implemented any additional project management and**  
11 **cost control oversight mechanisms for the LNP since your testimony**  
12 **was filed on March 1, 2013?**

13 **A.** No, the Company has not implemented any significant, additional project  
14 management or cost control oversight policies or procedures for the LNP since  
15 my March 1, 2013 direct testimony. The Company continues to utilize the  
16 Company policies and procedures that I described in that testimony to ensure  
17 that costs for the LNP are reasonably and prudently incurred. The Company  
18 will continue to review policies, procedures, and controls on an ongoing basis,  
19 however, and make revisions and enhancements based on changing business  
20 conditions, organizational changes, and lessons learned, as necessary. This  
21 process of continuous review of our policies, procedures, and controls is a  
22 best practice in our industry and is part of our existing LNP project  
23 management and cost control oversight.

1 **Q. Are these the same policies and procedures that the Commission has**  
2 **previously reviewed for the LNP?**

3 A. Yes. The Commission has previously determined that the LNP project  
4 management and cost oversight controls were reasonable and prudent. The  
5 Company's current LNP management and cost oversight controls policies and  
6 procedures are substantially the same as the policies and procedures  
7 reviewed and previously determined to be reasonable and prudent by the  
8 Commission.

9  
10 **Q. Are these LNP management and cost controls policies and procedures**  
11 **consistent with best practices in the industry?**

12 A. Yes. We believe that our LNP project management and cost oversight policies  
13 and procedures are consistent with best practices for capital project  
14 management in the industry. We believe the project management,  
15 contracting, and cost control policies and procedures that we have  
16 implemented for the LNP are reasonable and prudent and consistent with  
17 industry best practices.

18  
19 **IX. CONCLUSION.**

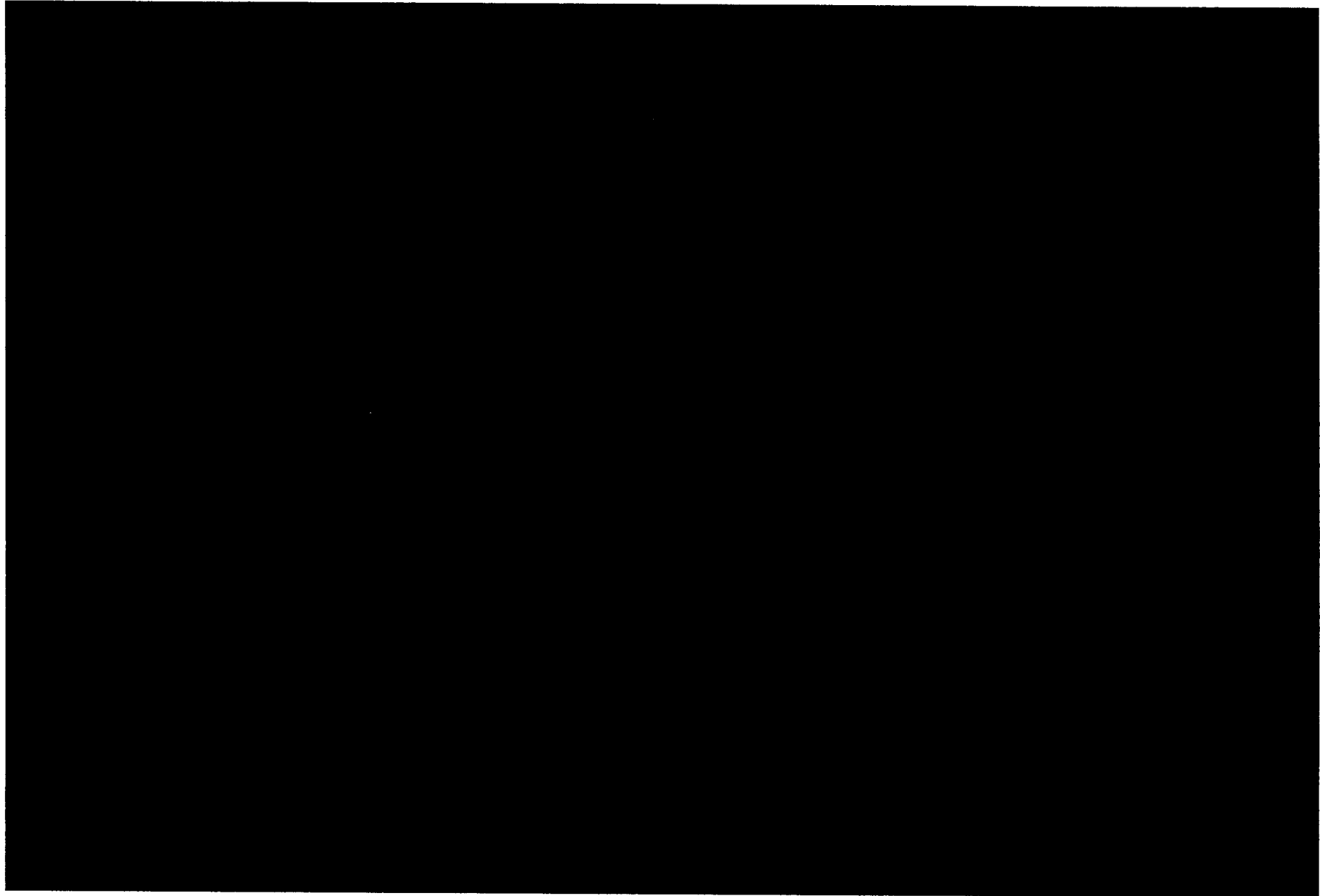
20 **Q. Does this conclude your direct testimony?**

21 A. Yes.



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Docket No. 130009-EI  
Duke Energy Florida, Inc.  
Exhibit No. \_\_\_\_\_ (CMF-3)  
Page 1 of 1



Rev 042413

**Duke Energy Florida Levy Nuclear Project**  
**April'13 CPVRR Update Summary Report**

# ***Summary Brief***

***Duke Energy Florida***  
***Levy Nuclear Project NCRC 2013 Feasibility Assessment***  
***Updated Life-Cycle Net Present Worth (CPVRR) Assessment***

***Prepared by:***

***DEF System Planning & Regulatory Performance***  
***April 24, 2013***

### ***Objective:***

The Florida Public Service Commission (FPSC) Nuclear Cost Recovery Clause (NCRC) Rule and Order No. PSC-09-0783-FOF-EI require annual feasibility updates for projects under clause recovery. In the 2009 NCRC Proceeding, FPSC Staff required that Duke Energy Florida (DEF) provide an updated life-cycle net present worth (also referred to as cumulative present value of revenue requirements, or CPVRR) assessment of the Levy Nuclear Project as a part of the 2009 feasibility assessment. In anticipation of that requirement in the 2013 NCRC Proceeding, DEF prepared an updated CPVRR assessment of the Levy Nuclear Project based on DEF's current forecasts for submission in the May 1st NCRC filing. DEF's System Planning group, which prepares these evaluations for Need Determination proceedings, updated the life cycle assessment to support this filing.

The results of this updated assessment are presented herein based on the best information available at this time and consistent with the updated projections filed in this proceeding. This assessment has been performed in a manner consistent with the approach presented in the Levy Need Determination Study (FPSC Docket 080148-EI).

### ***Overview of the Updated Assessment:***

In the Levy Need Determination Study, DEF initially established the available potential in-service dates for the new nuclear plants and then developed optimized resource portfolios to accompany the new units during the duration of the projected life of the facility (the "Levy Plan"). The remaining resources were selected from natural gas fired simple cycle and combined cycle units to complete each scenario portfolio over the study period. An alternate scenario was also developed based exclusively on natural gas fired generation resources without the nuclear units to develop the "All Gas Reference Plan" resource portfolio. The same approach was followed in developing the results for this updated assessment.

The optimizations were performed using the Strategist™ model in the same manner the scenarios were developed in the Levy Need Study based on DEF's forecasts for Load and Energy requirements, fuel prices, emission allowance costs and the development costs for new unit additions. The study period costs were then compared for these two portfolios (plans) to project the life cycle savings (or costs) between the Levy Plan and the All Gas Reference Plan on a cumulative present value of revenue requirements (CPVRR) basis.

### ***A Summary of Key Assumptions and Key Drivers:***

In the Levy Need Determination Study, the key drivers identified in the economic assessment were determined to be the forecasted costs of fuel, the potential impacts of carbon policy and the projected capital costs for new nuclear units and natural gas generation alternatives. DEF's Levy Need filing addressed the relative impacts of each of these drivers in the study results by comparing the cumulative present value of system revenue requirements (CPVRR) for each sensitivity applied to the Levy Nuclear

Plan versus the All Gas Reference Plan. This approach provides a comparable comparison of life cycle cost between alternatives being considered. Forecasts and adjustments included in this updated assessment are summarized below and provided in an appendix for review:

*Fuel Forecasts:* This assessment was performed with the long term planning fuel forecasts which were updated in 2012 supporting this year's normal planning cycle. DEF included low and high (statistical) forecast sensitivities around the mid reference case in a manner consistent with the approach used in the Levy Need Study.

*Emission Forecasts:* This assessment was performed with the long term planning emissions forecasts which were updated in late 2012 in support of this year's normal planning cycle. The carbon policy scenarios used in the 2012 study have been retained again for this year's study. This reflects the lack of ongoing action on carbon policy at federal and state levels, but recognizes the consensus understanding, supported by DEF, that some carbon policy will be enacted in the timeframe prior to the planned in-service dates for the Levy units. In this year's studies, as in last year's, the analysis was run with no CO2 cost and with four CO2 emissions cost projections provided in nominal \$/ton of equivalent CO2. The four scenarios were based on studies of the Waxman-Markey draft bill performed by the Environmental Protection Agency (EPA), Charles River Associates (CRA) and the Electric Power Research Institute (EPRI). Two EPRI scenarios were utilized representing the "Full Portfolio" and "Limited Portfolio" perspectives, based on their assessment of the cost and availability of low carbon generating resources in the future. While there are evolving policy developments at the state and national levels, these forecasts are deemed to be a reasonable characterization of potential outcomes and, as such, have been used for this updated assessment.

*Commercial In-Service and Cost Projection Update for the Levy Project:* To perform this assessment, DEF's Nuclear Development (ND) team was asked to provide an updated project cash flow estimate for construction cost based on the latest projected project schedule. This assessment was performed with the estimates updated in early 2013 which continue to project the first unit entering commercial service in mid-2024 with the second unit entering service approximately 18 months later.

*Cost Projections for Gas-Fired New Unit Additions:* This assessment was performed with long term planning project cost estimates for new peaking and combined cycle generation resource options which were updated this year to support the regular planning cycle.

*Capital Cost Sensitivities:* The sensitivities included in this study reflect a range of projected capital costs for all new resources ranging from -15%, -5% to 5%, 15% and 25%.

*Load and Energy Forecast:* This assessment was performed using the long term planning Load and Energy forecast that was used in preparing DEF's 2013 Ten Year Site Plan (TYSP'13).

*Nuclear Joint Ownership:* In this updated assessment, DEF is presenting results for ownership sensitivities of 100%, 80% and 50% in a manner consistent with the Levy Need filing.

*Discount Rate:* This assessment was performed using a discount rate adjusted to reflect the planning basis for weighted average cost of capital based on DEF's current allowed rate of return. The current discount rate being used for long term planning is 6.47%.

### **Summary Results Overview:**

In the Levy Need Determination Study, DEF provided tabular summaries of the economic assessment results (ref Table 1). The results tables represent the benefit (cost) of the life cycle cost comparisons of the Levy Nuclear Plan versus the All Gas Reference Plan based on Cumulative Present Value of Revenue Requirements (CPVRR) for each of the sensitivities addressed. The updated assessment results have been summarized and tabulated in a similar manner in Table 2.

*Table 1* provides an overview of the results originally presented in the Levy Need.

*Table 2* provides an overview of the updated planning results based on DEF's updated estimates and forecasts based on a 2024 commercial in-service date with an 18 month spread between units.

### **Observations:**

In comparing results for this updated assessment with the Levy Need, these observations are noted:

*Mid Reference Fuel Forecasts:* The fossil fuel price forecasts (e.g. natural gas, coal and oil) used in the updated assessment have changed somewhat since the 2012 study was performed. While the short term forecast price of natural gas continues to fall, the longer term price forecast is higher than the 2012 forecast. When compared to the Levy Need analysis, forecast prices are now lower over the full length of the analysis. The updated nuclear fuel forecast received a slight downward adjustment from 2012, but is similar to the forecasts presented in previous NCRC filings. The updated projections reflect changes in fuel market conditions over time and are based on the most current long term fuel forecasts available to DEF. Lower forecasted fuel prices tend to decrease the life cycle costs projected for the All Gas resource portfolio more than those projected for the Levy Need portfolio which results in a less favorable projection for the Levy Nuclear plan. The fuel forecast updates appear to be a significant driver in the changes in results between these assessments.

*Fuel Forecast Sensitivities:* The low and high fuel sensitivities presented in the Levy Need and the updated assessment are based on DEF's standard methodology for confidence intervals. The fuel prices in the updated *low* sensitivity forecast are generally lower than the comparable values in the Levy Need. As a result, the projected CPVRR differentials are lower for the *low* fuel forecast sensitivity in the updated assessment. The fuel prices in the updated *high* sensitivity forecast are generally lower in the near term than the comparable values in the Levy Need, but are generally similar over the full length of the analysis. As a result, the projected CPVRR differentials are similar for the *high* fuel sensitivity in the updated assessment.

Rev 042413

*Emission Forecasts:* The emission forecasts for SO<sub>2</sub>, NO<sub>x</sub> and Hg were updated in this assessment, but the differentials resulting from the changes appear to be negligible. The projections for the impacts of carbon policy were retained from the 2012 study. Thus, the range of potential carbon cost impacts being studied is still similar to the Levy Need, but narrower to a limited extent. As a result, the impacts in CPVRR differentials due to carbon policy, while still significant, have narrowed to a limited extent.

*Commercial In-Service and Cost Projection Updates for the Levy Project:* As discussed previously, the updated assessment was performed with information for projected project cost changes based on the updated in-service date. The 2013 estimate differs only marginally from the 2012 estimate with the predominant change being reflection of actual vs. projected expenditures. The 2013 estimate projects the in-service dates of 2024 and 2025. These costs are greater than those in the Levy Need.

*Cost Projections for New Natural Gas Fired Unit Additions:* As discussed, the updated assessment was performed with adjusted long term planning project cost estimates for new peaking and combined cycle generation resource options. The cost projections for natural gas fired generation are generally lower than the projections in the Levy Need which provides downward pressure on the life cycle costs for both the Levy Nuclear and All Gas resource portfolios being compared (since most of the new generation resources in both portfolios are natural gas additions). The cost decreases projected for the natural gas fired units appears to result in a small offset in the life cycle cost results when the CPVRR differentials between resource portfolios are compared.

*Load and Energy Forecast:* The updated assessment was performed using the long term planning Load and Energy forecast that was developed for DEF's 2013 Ten Year Site Plan (TYSP'13). The updated forecast incorporates slightly higher projected load and energy requirements reflecting recent signs of recovery in the economic outlook. The resource plans were adjusted accordingly to reflect appropriately greater resource additions.

*Nuclear Joint Ownership:* The results provided for Ownership sensitivities of 100%, 80% and 50% are directionally similar to the results submitted in the Levy Need. The impacts of many of the key drivers previously discussed affect the results in a manner proportional to ownership percentage.

*Discount Rate:* The results provided in Table 2 reflect the use of a 6.47% discount rate which reflects the Company's average weighted cost of capital (WACC) for planning purposes. This value is unchanged from the 2012 analysis. New nuclear project economics are heavily influenced by the initial capital investment in the early years of the assessment weighed against the substantial long term fuel savings and emission cost offsets projected over the life of the project.

### **Summary:**

DEF completed the updated CPVRR assessment and comparison of life cycle costs for the Levy Nuclear Project as part of the required feasibility assessment for the 2013 Nuclear Cost Recovery Clause (NCRC)

**Duke Energy Florida Levy Nuclear Project**  
*April'13 CPVRR Update Summary Report*

*Rev 042413*

filing. The results of the updated assessment have been presented in this Summary Report. The benefits projected for development of the Levy Nuclear Project in this updated assessment are similar to those presented in the Need filing.

Rev 042413

**TABLE 1**

**Summary of CPVRR Results from the Levy Need Determination (Docket 080148-EI)**

<b>Levy Need Study CPVRR Economic Results Summary Table [\$2007]</b>									
<b>Fuel Sensitivities</b>				<b>CapEx Sensitivities</b>					
<b>Base Capital Reference Case</b>	<b>Low Fuel Reference</b>	<b>Mid Fuel Reference</b>	<b>High Fuel Reference</b>	<b>Mid Fuel Reference Case</b>	<b>LNP CapEx (5%)</b>	<b>Mid Fuel Reference</b>	<b>LNP CapEx +5%</b>	<b>LNP CapEx +15%</b>	<b>LNP CapEx +25%</b>
<b>Levy Need - 100% Ownership, 2016 COD Levy Case Versus All Gas CPVRR \$Million (\$2007)</b>									
No CO2	(\$6,416)	(\$2,888)	\$2,635	No CO2	(\$2,365)	(\$2,888)	(\$3,400)	(\$4,434)	(\$5,469)
Bingaman Specter CO2	(\$3,834)	(\$343)	\$5,212	Bingaman Specter CO2	\$109	(\$343)	(\$926)	(\$1,960)	(\$2,995)
EPA No CCS	(\$2,684)	\$793	\$6,318	EPA No CCS	\$1,207	\$793	\$172	(\$862)	(\$1,897)
MIT Mid CO2	\$85	\$3,614	\$9,077	MIT Mid CO2	\$3,975	\$3,614	\$2,940	\$1,906	\$871
Lieberman Warner CO2	\$2,930	\$6,380	\$11,892	Lieberman Warner CO2	\$6,674	\$6,380	\$5,640	\$4,605	\$3,571
<b>Levy Need - 80% Ownership, 2016 COD Levy Case Versus All Gas CPVRR \$Million (\$2007)</b>									
No CO2	(\$5,566)	(\$2,725)	\$1,732	No CO2	(\$2,284)	(\$2,725)	(\$3,154)	(\$4,023)	(\$4,892)
Bingaman Specter CO2	(\$3,530)	(\$733)	\$3,756	Bingaman Specter CO2	(\$364)	(\$733)	(\$1,234)	(\$2,103)	(\$2,972)
EPA No CCS	(\$2,619)	\$171	\$4,631	EPA No CCS	\$502	\$171	(\$367)	(\$1,236)	(\$2,106)
MIT Mid CO2	(\$448)	\$2,403	\$6,790	MIT Mid CO2	\$2,681	\$2,403	\$1,812	\$942	\$73
Lieberman Warner CO2	\$1,799	\$4,594	\$9,018	Lieberman Warner CO2	\$4,805	\$4,594	\$3,936	\$3,067	\$2,197
<b>Levy Need - 50% Ownership, 2016 COD Levy Case Versus All Gas CPVRR \$Million (\$2007)</b>									
No CO2	(\$4,017)	(\$2,246)	\$523						
Bingaman Specter CO2	(\$2,766)	(\$963)	\$1,783						
EPA No CCS	(\$2,250)	(\$409)	\$2,317						
MIT Mid CO2	(\$1,018)	\$908	\$3,685						
Lieberman Warner CO2	\$339	\$2,220	\$5,139						



**Duke Energy Florida Levy Nuclear Project**  
**April'13 CPVRR Update Summary Report**

Rev 042413

**TABLE 2**

**Summary of April 2013 Updated CPVRR Results for the Levy Project**

<b>Economic Results Summary Table (NCRC '13 Study)</b>											
<b>Fuel Sensitivities</b>				<b>CapEx Sensitivities</b>							
<i>Base Capital Reference Case</i>	Low Fuel Reference	Mid Fuel Reference	High Fuel Reference	<i>Mid Fuel Reference Case</i>	LNP CapEx (15%)	LNP CapEx (5%)	Mid Fuel Reference	LNP CapEx +5%	LNP CapEx +15%	LNP CapEx +25%	
<b>NCRC APR '13 - 100% Ownership, 2024 COD - 6.47% Levy Case Versus All Gas CPVRR \$Million</b>											
No CO2	(\$12,310)	(\$3,069)	\$9,959	No CO2	(\$1,425)	(\$2,521)	(\$3,069)	(\$3,616)	(\$4,712)	(\$5,808)	
EPA WM	(\$7,814)	\$1,567	\$14,629	EPA WM	\$3,211	\$2,115	\$1,567	\$1,020	(\$76)	(\$1,171)	
CRA WM	(\$4,974)	\$4,442	\$17,555	CRA WM	\$6,085	\$4,990	\$4,442	\$3,894	\$2,799	\$1,703	
EPRI Full	(\$2,554)	\$6,875	\$20,071	EPRI Full	\$8,518	\$7,423	\$6,875	\$6,327	\$5,232	\$4,136	
EPRI Ltd	\$3,625	\$13,058	\$26,290	EPRI Ltd	\$14,702	\$13,606	\$13,058	\$12,511	\$11,415	\$10,319	
<b>NCRC APR '13 - 80% Ownership, 2024 COD - 6.47% Levy Case Versus All Gas CPVRR \$Million</b>											
No CO2	(\$10,240)	(\$2,753)	\$7,817	No CO2	(\$1,432)	(\$2,313)	(\$2,753)	(\$3,193)	(\$4,073)	(\$4,953)	
EPA WM	(\$6,609)	\$942	\$11,490	EPA WM	\$2,262	\$1,382	\$942	\$502	(\$378)	(\$1,259)	
CRA WM	(\$4,313)	\$3,282	\$13,810	CRA WM	\$4,602	\$3,722	\$3,282	\$2,842	\$1,961	\$1,081	
EPRI Full	(\$2,363)	\$5,246	\$15,815	EPRI Full	\$6,566	\$5,686	\$5,246	\$4,806	\$3,925	\$3,045	
EPRI Ltd	\$2,632	\$10,242	\$20,894	EPRI Ltd	\$11,563	\$10,683	\$10,242	\$9,802	\$8,922	\$8,042	
<b>NCRC APR '13 - 50% Ownership, 2024 COD - 6.47% Levy Case Versus All Gas CPVRR \$Million</b>											
No CO2	(\$7,047)	(\$2,367)	\$4,257	No CO2	(\$1,547)	(\$2,093)	(\$2,367)	(\$2,640)	(\$3,186)	(\$3,733)	
EPA WM	(\$4,808)	(\$82)	\$6,501	EPA WM	\$738	\$191	(\$82)	(\$355)	(\$902)	(\$1,448)	
CRA WM	(\$3,381)	\$1,355	\$7,926	CRA WM	\$2,175	\$1,628	\$1,355	\$1,082	\$535	(\$11)	
EPRI Full	(\$2,184)	\$2,537	\$9,161	EPRI Full	\$3,357	\$2,811	\$2,537	\$2,264	\$1,718	\$1,171	
EPRI Ltd	\$917	\$5,625	\$12,280	EPRI Ltd	\$6,445	\$5,898	\$5,625	\$5,352	\$4,805	\$4,259	

# ***APPENDIX***

## ***Levy Nuclear March'13 Review Planning and Modeling Assumptions Summary***

***Prepared 3/26/13 by DEF IRP & Analytics***

## **Levy Nuclear March 2013 Review**

### **Financial and Economic Assumptions**

#### 1 DEF Capitalization Ratios and Projected Cost of Capital

<b>Component</b>	<b>Ratio</b>	<b>Cost</b>
Debt	47%	3.05%
Preferred	0%	na
Equity	53%	10.50%

2 Projected Discount Rate: 6.466%

3 Projected AFUDC Rate: 6.466%

#### 4 Tax Assumptions

a) Composite Effective Income Tax Rate	37.120%
b) Combined Cycle Book Life	25 Years
Combined Cycle Tax Depreciation Life	20 Years
c) Simple Cycle CT Book Life	25 Years
Simple Cycle CT Tax Depreciation Life	15 Years
d) Nuclear Generation Book Life	40 Years
Nuclear Generation Tax Depreciation Life	15 Years
e) Transmission Book Life	40 Years
Transmission Tax Depreciation Life	15 Years

5 General Inflation Rate 2.25%

6 General Escalation Rate 2.25%

**Levy Nuclear March 2013 Review**  
**Strategist Input Assumptions - Emission Cost Estimates**

	SO2	NOX	Hg	EPA WM	CRA WM	EPRI FP	EPRI LP
	\$/ton	\$/ton	\$/oz	CO2	CO2	CO2	CO2
				\$/ton	\$/ton	\$/ton	\$/ton
2016	4.00	749	-	-	-	-	-
2017	4.00	696	-	-	-	-	-
2018	0.59	556	-	-	-	-	-
2019	0.61	362	-	-	-	-	-
2020	0.62	142	-	20	32	70	82
2021	0.64	-	-	22	35	73	89
2022	0.66	-	-	24	38	76	96
2023	0.67	-	-	26	40	78	103
2024	0.69	-	-	28	43	81	111
2025	0.71	-	-	30	46	83	118
2026	0.72	-	-	32	50	86	125
2027	0.74	-	-	34	54	88	132
2028	0.76	-	-	36	57	91	139
2029	0.78	-	-	38	61	93	146
2030	0.80	-	-	40	65	96	153
2031	0.82	-	-	44	70	104	166
2032	0.84	-	-	48	75	112	180
2033	0.86	-	-	52	80	119	193
2034	0.88	-	-	55	85	127	206
2035	0.90	-	-	59	90	135	220
2036	0.92	-	-	63	97	143	233
2037	0.94	-	-	67	104	151	246
2038	0.96	-	-	70	112	159	259
2039	0.98	-	-	74	119	167	273
2040	1.00	-	-	78	126	174	286
2041	1.02	-	-	86	137	189	311
2042	1.03	-	-	93	147	203	335

Prepared 3/26/13 by DEF IRP & Analytics

## Levy Nuclear March 2013 Review

### New Plant Modeling Information Summary

#### Capital Cost Estimates for Strategist Modeling

Prepared 3/26/13 by DEF IRP & Analytics

#### Nuclear Plant Summary Information

**Reference In-Service Year**

Projected Nominal Plant Cost (\$000 Before AFUDC)  
 Projected Nominal Trans Cost (\$000 Before AFUDC)  
 Winter Capacity Rating (MW)  
 Summer Capacity Rating (MW)  
 Fixed O&M (\$000/yr)- \$2013, Esc Annually at 2.25%  
 Variable O&M (\$/MWh) - \$2013, Esc Annually at 2.25%  
 Decom and Dism Funding (\$000/yr) - \$2013 Constant  
 Annualized Capital Replacement (\$000/yr)  
 Back End (mill/kWh) for Fed Spent Fuel Disposal  
 Planned Outage Rate  
 Average Heat Rate at Maximum (Btu/kWh)

Levy County 2024/25	
Levy Nuclear Project	Levy Nuclear Project
1st Unit	2nd Unit
2024	2025
10,128,213	5,626,921
1,846,648	130,217
1,120	1,120
1,092	1,092
73,308	51,316
2.27	2.27
10,567	10,567
10,000	10,000
1.00	1.00
3.0%	3.0%
9,715	9,715

#### Gas Fired Generation Summary Information

**Reference In-Service Year**

Projected Nominal Plant Cost (\$000 Before AFUDC)  
 Projected Nominal Trans Cost (\$000 Before AFUDC)  
 Winter Capacity Rating (MW)  
 Summer Capacity Rating (MW)  
 Fixed O&M (\$000/yr)- \$2013, Esc Annually at 2.25%  
 Variable O&M (\$/MWh) - \$2013, Esc Annually at 2.25%  
 Pipeline Reservation Charges (\$000/yr) - \$2013, Constant  
 Planned Outage Rate  
 Average Heat Rate at Maximum (Btu/kWh)

Generic 2x1G Combined Cycle	Generic 2x1G Combined Cycle	Generic 3x1G Combined Cycle	Generic 3x1G Combined Cycle
1st Unit	2nd Unit	1st Unit	2nd Unit
2016	2016	2016	2016
718,535	570,073	1,037,428	847,751
309,787	103,249	413,025	206,485
866	866	1,307	1,307
793	793	1,189	1,189
5,106	2,124	5,810	2,190
4.22	4.22	4.19	4.19
50,740	50,740	76,236	76,236
6.7%	6.7%	6.7%	6.7%
6,780	6,780	6,775	6,775

#### Gas Fired Generation Summary Information

**Reference In-Service Year**

Projected Nominal Plant Cost (\$000 Before AFUDC)  
 Projected Nominal Trans Cost (\$000 Before AFUDC)  
 Winter Capacity Rating (MW)  
 Summer Capacity Rating (MW)  
 Fixed O&M (\$000/yr)- \$2013, Esc Annually at 2.25%  
 Variable O&M (\$/MWh) - \$2013, Esc Annually at 2.25%  
 Pipeline Reservation Charges (\$000/yr) - \$2013, Constant  
 Planned Outage Rate  
 Average Heat Rate at Maximum (Btu/kWh)

Generic F Frame Simple Cycle
2nd Unit
2015
83,497
25,774
214
187
560
10.13
12,700
3.85%
10,170

## Levy Nuclear March 2013 Review

### Stratigist Fuel Forecasts - Low Fuel Table

	FUEL 1	FUEL 5	FUEL 35	FUEL 36	FUEL 10	FUEL 18	FUEL 27	FUEL 28	FUEL 29
	COAL 1.8	COAL 5.2	LNP U1	LNP U2	GAS FGTF	GulfFirm	Dist 0.3	Dist 0.5	Dist ULS
2016	4.11	2.19			2.80	2.80	12.68	12.46	13.34
2017	4.11	2.13			2.72	2.72	11.67	11.27	11.85
2018	4.15	2.10			3.26	3.26	11.03	10.66	11.03
2019	4.21	2.09			3.33	3.33	10.47	10.14	10.47
2020	4.26	2.08			2.97	2.97	10.00	9.77	10.00
2021	4.32	2.08			2.98	2.98	9.76	9.55	9.76
2022	4.38	2.08			2.98	2.98	9.55	9.35	9.55
2023	4.45	2.09			2.99	2.99	9.37	9.17	9.37
2024	4.51	2.09			3.00	3.00	9.20	9.01	9.21
2025	4.58	2.11			3.01	3.01	9.05	8.88	9.06
2026	4.63	2.12			3.00	3.00	8.95	8.79	8.96
2027	4.69	2.13			2.99	2.99	8.87	8.70	8.87
2028	4.75	2.14			2.97	2.97	8.79	8.62	8.80
2029	4.82	2.16			2.96	2.96	8.71	8.55	8.73
2030	4.89	2.18			2.95	2.95	8.65	8.47	8.66
2031	4.95	2.19			2.95	2.95	8.65	8.47	8.66
2032	5.02	2.21			2.95	2.95	8.65	8.47	8.66
2033	5.09	2.24			2.95	2.95	8.65	8.47	8.66
2034	5.16	2.25			2.95	2.95	8.65	8.47	8.66
2035	5.23	2.27			2.95	2.95	8.65	8.47	8.66
2036	5.30	2.29			2.95	2.95	8.65	8.47	8.66
2037	5.36	2.31			2.95	2.95	8.65	8.47	8.66
2038	5.43	2.33			2.95	2.95	8.65	8.47	8.66
2039	5.50	2.35			2.95	2.95	8.65	8.47	8.66
2040	5.57	2.36			2.95	2.95	8.65	8.47	8.66
2041	5.64	2.38			2.95	2.95	8.65	8.47	8.66
2042	5.70	2.40			2.95	2.95	8.65	8.47	8.66

Prepared 3/26/13 by DEF IRP & Analytics

## Levy Nuclear March 2013 Review

### Strategist Fuel Forecasts - Mid Reference Fuel Table

	FUEL 1	FUEL 5	FUEL 35	FUEL 36	FUEL 10	FUEL 18	FUEL 27	FUEL 28	FUEL 29
	COAL 1.8	COAL 5	LNP U1	LNP U2	GAS FGTF	GulfFirm	Dist 0.3	Dist 0.5	Dist ULS
2016	5.07	2.84			5.03	5.03	19.11	19.11	19.13
2017	5.29	2.92	-	-	5.35	5.35	19.39	19.38	19.40
2018	5.51	2.99	-	-	5.68	5.68	19.45	19.44	19.46
2019	5.74	3.07	-	-	6.03	6.03	19.50	19.49	19.50
2020	5.94	3.15	-	-	6.38	6.38	19.59	19.59	19.60
2021	6.14	3.23	-	-	6.74	6.74	20.09	20.09	20.09
2022	6.35	3.32	-	-	7.12	7.12	20.60	20.60	20.59
2023	6.56	3.42	-	-	7.51	7.51	21.12	21.12	21.11
2024	6.77	3.51	-	-	7.91	7.91	21.65	21.66	21.63
2025	6.99	3.61	1.07	-	8.33	8.33	22.19	22.20	22.16
2026	7.20	3.70	1.07	1.08	8.68	8.68	22.84	22.86	22.80
2027	7.41	3.80	1.00	1.08	9.04	9.04	23.50	23.52	23.46
2028	7.63	3.91	1.00	1.08	9.42	9.42	24.17	24.21	24.12
2029	7.85	4.01	0.96	1.02	9.80	9.80	24.86	24.90	24.80
2030	8.08	4.12	0.96	0.98	10.18	10.18	25.56	25.60	25.49
2031	8.31	4.22	0.99	0.99	10.58	10.58	26.17	26.12	26.25
2032	8.55	4.33	1.04	1.01	10.96	10.96	26.96	26.91	27.03
2033	8.80	4.44	1.04	1.01	11.33	11.33	27.76	27.71	27.82
2034	9.04	4.55	1.06	1.04	11.71	11.71	28.45	28.39	28.54
2035	9.27	4.65	1.08	1.08	12.09	12.09	29.14	29.07	29.25
2036	9.51	4.76	1.08	1.08	12.47	12.47	29.83	29.74	29.96
2037	9.74	4.87	1.13	1.13	12.85	12.85	30.52	30.42	30.68
2038	9.98	4.97	1.15	1.15	13.23	13.23	31.22	31.10	31.39
2039	10.21	5.08	1.15	1.15	13.61	13.61	31.91	31.77	32.11
2040	10.44	5.19	1.20	1.20	13.99	13.99	32.60	32.45	32.82
2041	10.68	5.29	1.22	1.22	14.37	14.37	33.29	33.13	33.54
2042	10.91	5.40	1.22	1.22	14.75	14.75	33.98	33.80	34.25

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## Levy Nuclear March 2013 Review

### Strategist Fuel Forecasts - High Fuel Table

	FUEL 1	FUEL 5	FUEL 35	FUEL 36	FUEL 10	FUEL 18	FUEL 27	FUEL 28	FUEL 29
	COAL 1.8	COAL 5	LNP U1	LNP U2	GAS FGTF	GulfFirm	Dist 0.3	Dist 0.5	Dist ULS
2016	6.19	3.59			7.47	7.47	27.17	27.29	28.90
2017	6.81	3.90			7.88	7.88	28.63	29.22	29.09
2018	7.25	4.10			8.60	8.60	29.71	30.25	29.70
2019	7.68	4.30			9.30	9.30	30.67	31.22	30.65
2020	8.08	4.50			10.69	10.69	31.63	32.45	31.62
2021	8.48	4.71			11.57	11.57	33.21	34.04	33.21
2022	8.90	4.92			12.48	12.48	34.79	35.63	34.79
2023	9.33	5.14			13.42	13.42	36.37	37.23	36.38
2024	9.75	5.36			14.39	14.39	37.96	38.83	37.98
2025	10.19	5.58			15.39	15.39	39.55	40.52	39.58
2026	10.62	5.80			16.30	16.30	41.33	42.33	41.37
2027	11.06	6.04			17.22	17.22	43.14	44.16	43.19
2028	11.51	6.27			18.16	18.16	44.96	46.02	45.03
2029	11.97	6.50			19.13	19.13	46.82	47.89	46.89
2030	12.43	6.74			20.11	20.11	48.68	49.62	48.77
2031	12.90	6.97			21.06	21.06	50.51	51.43	50.61
2032	13.25	7.14			22.00	22.00	52.34	53.25	52.45
2033	13.33	7.17			22.95	22.95	54.16	55.07	54.29
2034	13.69	7.35			23.89	23.89	55.99	56.89	56.13
2035	14.05	7.53			24.83	24.83	57.82	58.71	57.97
2036	14.42	7.71			25.78	25.78	59.64	60.53	59.81
2037	14.78	7.89			26.72	26.72	61.47	62.35	61.64
2038	15.15	8.07			27.67	27.67	63.30	64.17	63.48
2039	15.51	8.25			28.61	28.61	65.12	65.99	65.32
2040	15.87	8.43			29.56	29.56	66.95	67.81	67.16
2041	16.24	8.61			30.50	30.50	68.78	69.63	69.00
2042	16.60	8.79			31.44	31.44	70.60	71.45	70.84

Prepared 3/26/13 by DEF IRP & Analytics



**Levy Nuclear March 2013 Review**  
**Energy Requirements Forecasts**  
**Net Energy for Load (GWh)**

<b>YEAR</b>	<b>Forecast Base</b>
2016	43,421
2017	43,824
2018	44,452
2019	45,037
2020	45,654
2021	46,179
2022	46,689
2023	47,200
2024	47,707
2025	48,115
2026	48,552
2027	49,101
2028	49,659
2029	50,228
2030	50,811
2031	51,408
2032	52,021
2033	52,633
2034	53,241
2035	53,844
2036	54,481
2037	55,089
2038	55,693
2039	56,295
2040	56,904
2041	57,516
2042	58,128

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## **Levy Nuclear March 2013 Review**

### **Energy Demand Forecasts**

<b>YEAR</b>	<b>Summer Peak</b>	<b>Winter Peak</b>
	<b>Net Firm Demand (MW)</b>	<b>Net Firm Demand (MW)</b>
	<b>Forecast</b>	<b>Forecast</b>
2016	9,442	9,842
2017	9,504	9,910
2018	9,674	10,036
2019	9,846	10,188
2020	10,017	10,335
2021	10,086	10,485
2022	10,252	10,635
2023	10,417	10,785
2024	10,580	10,931
2025	10,742	11,076
2026	10,903	11,222
2027	11,062	11,366
2028	11,222	11,511
2029	11,379	11,652
2030	11,535	11,795
2031	11,690	11,936
2032	11,843	12,077
2033	11,996	12,216
2034	12,145	12,353
2035	12,297	12,488
2036	12,470	12,637
2037	12,639	12,795
2038	12,803	12,948
2039	12,966	13,100
2040	13,124	13,249
2041	13,289	13,401
2042	13,455	13,553

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*Levy Nuclear Filing*  
 Strategist Optimization Scenarios - 3/26/13 Data Runs

	2013 NCRC Nuclear Plan Full Ownership Case	2013 NCRC Nuclear Plan 80% Joint Ownership Case	2013 NCRC Nuclear Plan 50% Joint Ownership Case	2013 NCRC All Gas Reference Case	
2013	PEF Baseline Assumptions	PEF Baseline Assumptions	PEF Baseline Assumptions	PEF Baseline Assumptions	2013
2014					2014
2015					2015
2016	370 MW Crystal River 1 Retirement (Mar '16) 499 MW Crystal River 2 Retirement (Mar '16) 185 MW Peaker Retirements (June '16) 1892 MW PPAs (June '16)	370 MW Crystal River 1 Retirement (Mar '16) 499 MW Crystal River 2 Retirement (Mar '16) 185 MW Peaker Retirements (June '16) 1892 MW PPAs (June '16)	370 MW Crystal River 1 Retirement (Mar '16) 499 MW Crystal River 2 Retirement (Mar '16) 185 MW Peaker Retirements (June '16) 1892 MW PPAs (June '16)	370 MW Crystal River 1 Retirement (Mar '16) 499 MW Crystal River 2 Retirement (Mar '16) 185 MW Peaker Retirements (June '16) 1892 MW PPAs (June '16)	2016
2017					2017
2018	129 MW Suwannee Steam Retirement (June '16) <i>Generic 2x1 G CC</i>	129 MW Suwannee Steam Retirement (June '16) <i>Generic 2x1 G CC</i>	129 MW Suwannee Steam Retirement (June '16) <i>Generic 2x1 G CC</i>	129 MW Suwannee Steam Retirement (June '16) <i>Generic 2x1 G CC</i>	2018
2019					2019
2020	<i>Generic 3x1 G CC</i>	<i>Generic 3x1 G CC</i>	<i>Generic 3x1 G CC</i>	<i>Generic 3x1 G CC</i>	2020
2021					2021
2022	<i>Generic Simple Cycle CT</i>	<i>Generic Simple Cycle CT</i>	<i>Generic Simple Cycle CT</i>	<i>Generic Simple Cycle CT</i>	2022
2023	<i>Generic Simple Cycle CT</i>	<i>Generic Simple Cycle CT</i>	<i>Generic Simple Cycle CT</i>	<i>Generic Simple Cycle CT</i>	2023
2024	100% Levy Unit 1 - 1,092 MW (June '24)	80% Levy Unit 1 - 874 MW (June '24)	50% Levy Unit 1 - 546 MW (June '24)	<i>Generic 2x1 G CC</i>	2024
2025	100% Levy Unit 2 - 1,092 MW (December '25)	80% Levy Unit 2 - 874 MW (December '25) <i>Generic Simple Cycle CT</i>	50% Levy Unit 2 - 546 MW (December '25) <i>Generic Simple Cycle CT</i>	<i>Generic 2x1 G CC</i>	2025
2026					2026
2027		<i>Generic 2x1 G CC</i>	<i>Generic 2x1 G CC</i>	<i>Generic 2x1 G CC</i>	2027
2028	<i>Generic Simple Cycle CT</i>				2028
2029	<i>Generic 2x1 G CC</i>		<i>Generic 2x1 G CC</i>	<i>Generic Simple Cycle CT</i>	2029
2030				<i>Generic 2x1 G CC</i>	2030
2031		<i>Generic 2x1 G CC</i>			2031
2032					2032
2033	<i>Generic Simple Cycle CT</i>		<i>Generic 2x1 G CC</i>		2033
2034	<i>Generic 2x1 G CC</i>			<i>Generic Simple Cycle CT</i>	2034
2035		<i>Generic 2x1 G CC</i>		<i>Generic 2x1 G CC</i>	2035
2036			<i>Generic 2x1 G CC</i>		2036
2037					2037
2038	<i>Generic 2x1 G CC</i>			<i>Generic 2x1 G CC</i>	2038
2039		<i>Generic 2x1 G CC</i>			2039
2040			<i>Generic 2x1 G CC</i>		2040
2041					2041
2042	<i>Generic Simple Cycle CT</i>		<i>Generic 2x1 G CC</i>		2042
2043	<i>Generic 2x1 G CC (2)</i>	<i>Generic 2x1 G CC (2)</i>	<i>Generic 2x1 G CC</i>	<i>Generic 2x1 G CC (2)</i>	2043
2044					2044
2045		<i>Generic 2x1 G CC</i>	<i>Generic 2x1 G CC (2)</i>	<i>Generic 2x1 G CC</i>	2045
2046					2046
2047	<i>Generic Simple Cycle CT</i>	<i>Generic Simple Cycle CT</i>		<i>Generic Simple Cycle CT</i>	2047
2048	<i>Generic Simple Cycle CT</i>	<i>Generic Simple Cycle CT</i>		<i>Generic Simple Cycle CT</i>	2048
2049			<i>Generic Simple Cycle CT</i>	<i>Generic 2x1 G CC</i>	2049
2050		<i>Generic Simple Cycle CT</i>	<i>Generic Simple Cycle CT</i>	<i>Generic 2x1 G CC</i>	2050
2051					2051
2052		<i>Generic 2x1 G CC</i>	<i>Generic 2x1 G CC</i>	<i>Generic 2x1 G CC</i>	2052
2053	<i>Generic Simple Cycle CT</i>		<i>Generic 2x1 G CC</i>		2053
2054	<i>Generic 2x1 G CC</i>		<i>Generic 2x1 G CC</i>	<i>Generic Simple Cycle CT</i>	2054
2055				<i>Generic 2x1 G CC</i>	2055
2056		<i>Generic 2x1 G CC</i>			2056
2057			<i>Generic 2x1 G CC</i>		2057
2058	<i>Generic Simple Cycle CT</i>				2058
2059	<i>Generic 2x1 G CC</i>			<i>Generic Simple Cycle CT</i>	2059
2060		<i>Generic 2x1 G CC</i>		<i>Generic 2x1 G CC</i>	2060
2061			<i>Generic 2x1 G CC</i>		2061
2062					2062
2063	<i>Generic 2x1 G CC</i>				2063
2064	Levy Unit 1 - 20 year Life Extension	Levy Unit 1 - 20 year Life Extension <i>Generic 2x1 G CC</i>	Levy Unit 1 - 20 year Life Extension	<i>Generic 2x1 G CC</i>	2064
2065	Levy Unit 2 - 20 year Life Extension	Levy Unit 2 - 20 year Life Extension	Levy Unit 2 - 20 year Life Extension		2065
2066			<i>Generic 2x1 G CC</i>		2066
2067	<i>Generic Simple Cycle CT</i>				2067
2068	<i>Generic 2x1 G CC (2)</i>	<i>Generic 2x1 G CC (2)</i>	<i>Generic 2x1 G CC</i>	<i>Generic 2x1 G CC (2)</i>	2068
2069					2069
2070	<i>Generic 2x1 G CC</i>	<i>Generic 2x1 G CC</i>	<i>Generic 2x1 G CC (2)</i>	<i>Generic 2x1 G CC</i>	2070
2071					2071
2072	<i>Generic 2x1 G CC</i>	<i>Generic Simple Cycle CT</i>		<i>Generic 2x1 G CC</i>	2072

Levy Licensing Milestones	
Milestone	Current Schedule
ACRS Review	12/07/11 - A 01/18/13 - A
FSER	September 2013
FEIS	April 2012 - A
Contested Hearing	11/1/12 - A
Mandatory Hearing	November 2013
Waste Confidence Resolved	August 2014
COL Issued	December 2014
Planned In-Service Date (1st unit)	2024

# Florida: An Economic Overview

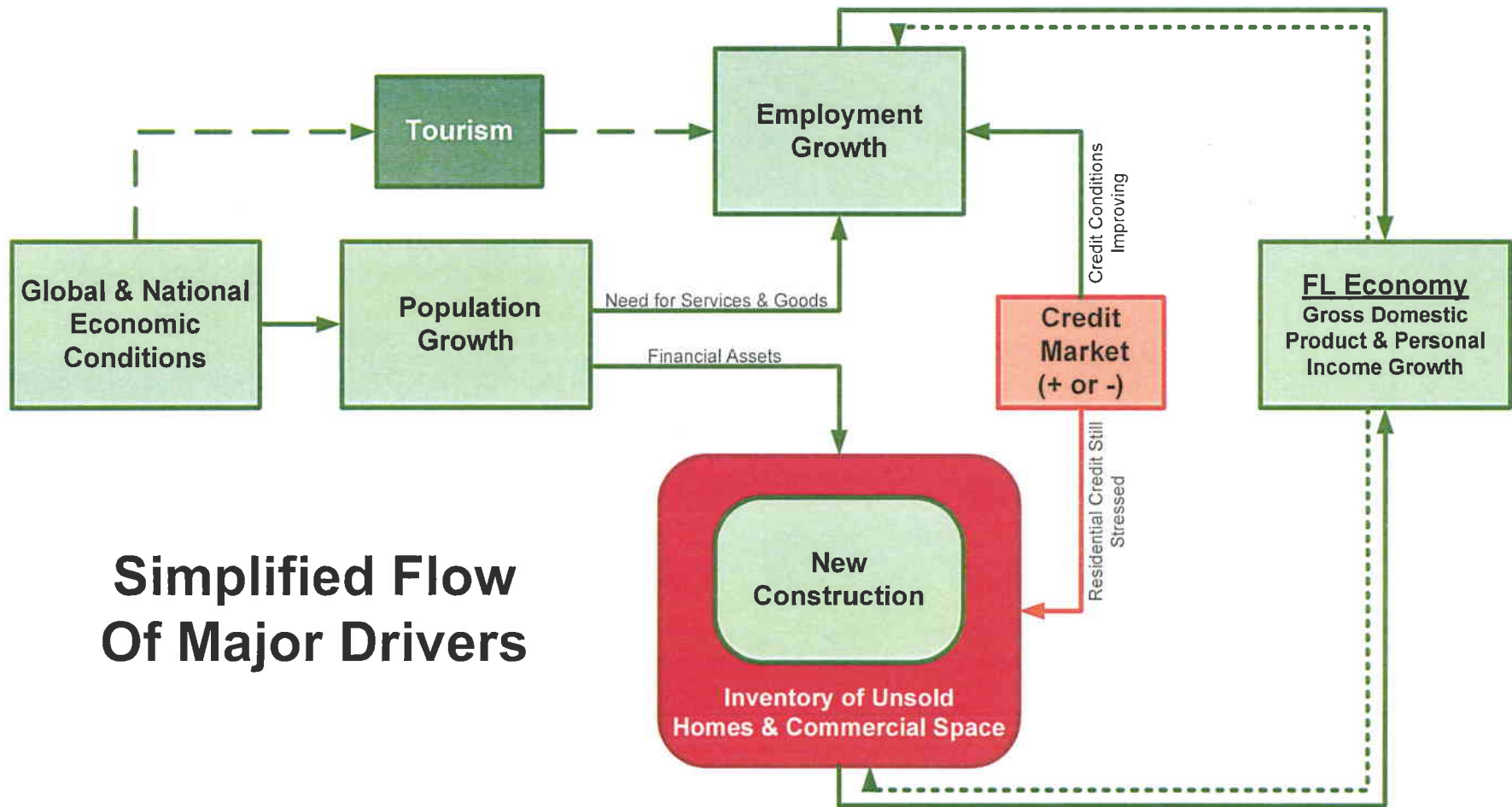
March 24, 2013

Presented by:



The Florida Legislature  
Office of Economic and  
Demographic Research  
850.487.1402  
<http://edr.state.fl.us>

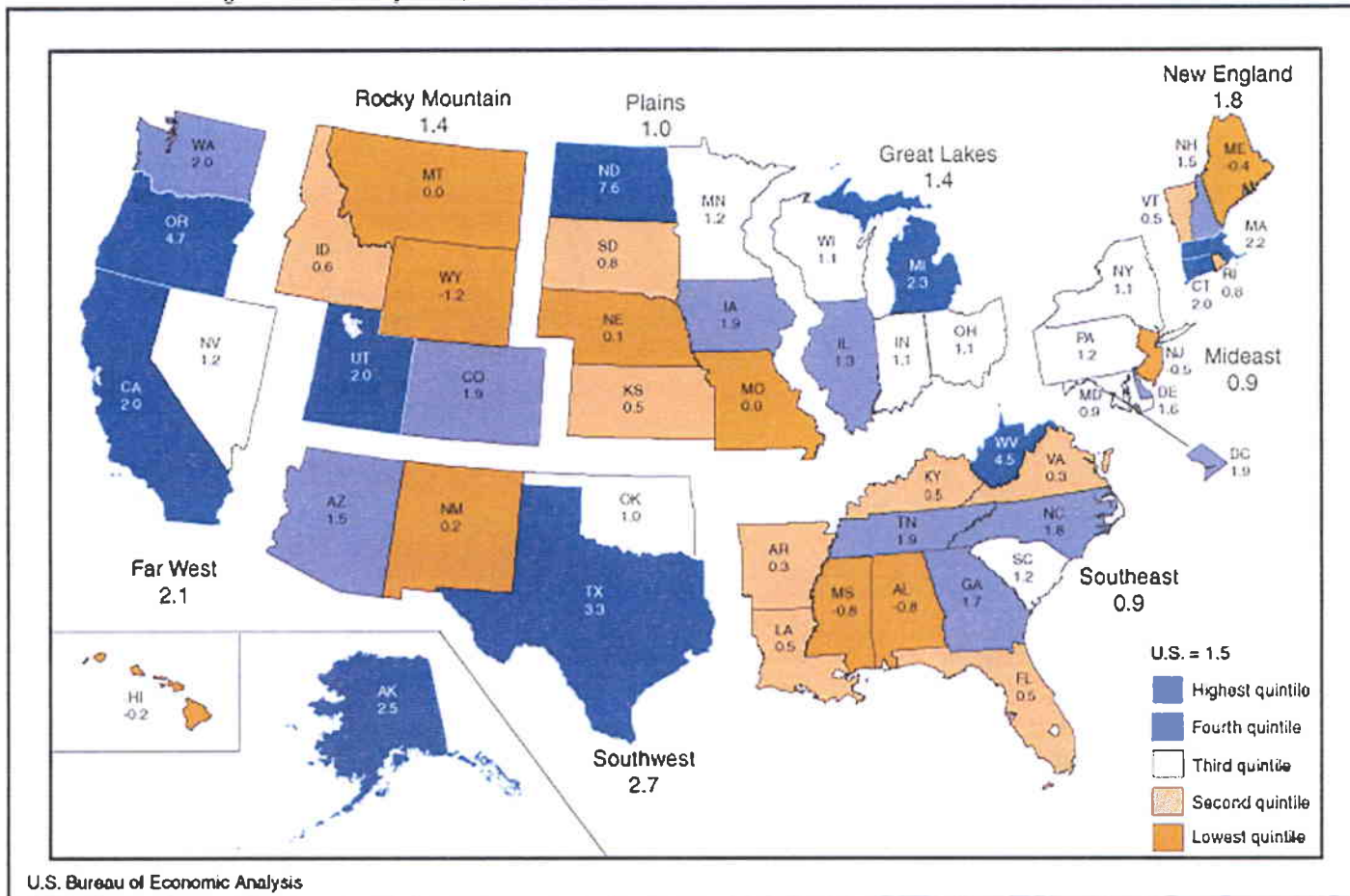
# Key Economic Variables Improving



**Simplified Flow  
Of Major Drivers**

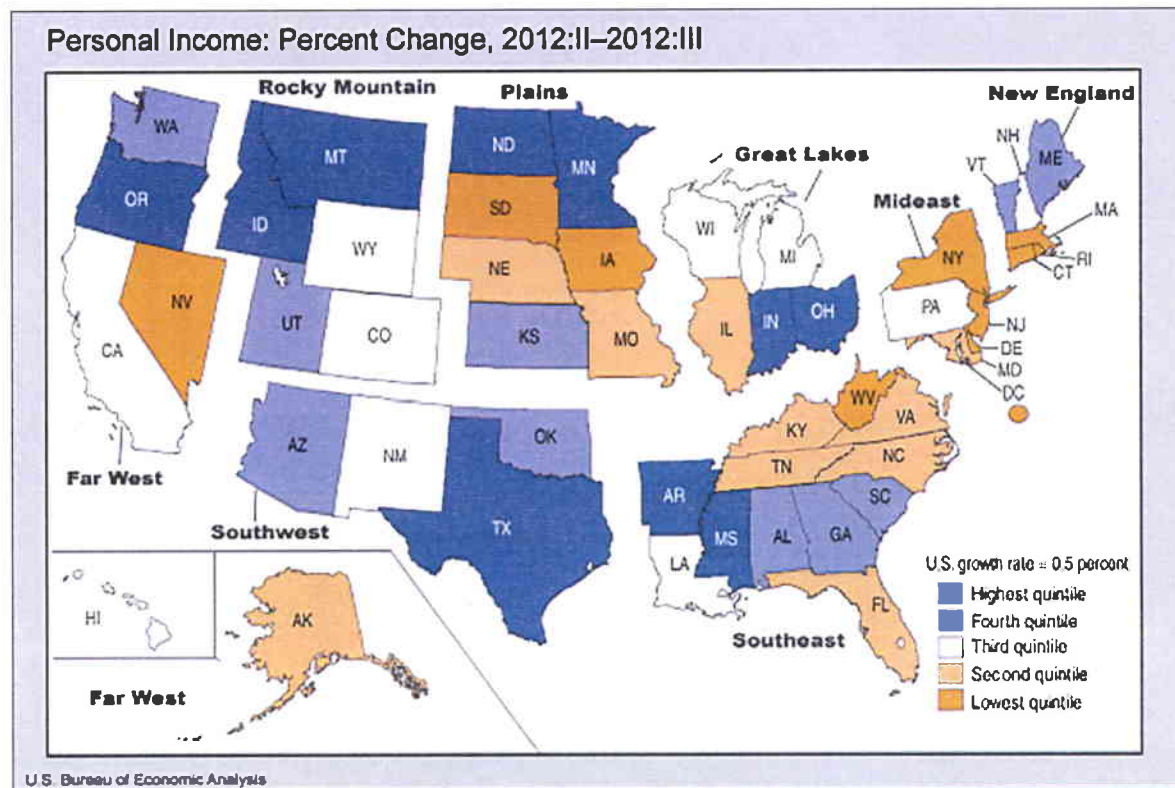
# Economy Remained Positive in 2011

Chart 1. Percent Change in Real GDP by State, 2011



In 2011, Florida's economic growth remained in positive territory for the second year after declining two years in a row. State Gross Domestic Product (GDP) ranked us 37<sup>th</sup> in the nation in real growth with a gain of 0.5%. While the state's ranking improved, the growth slowed from a downwardly revised 0.9% for 2010.

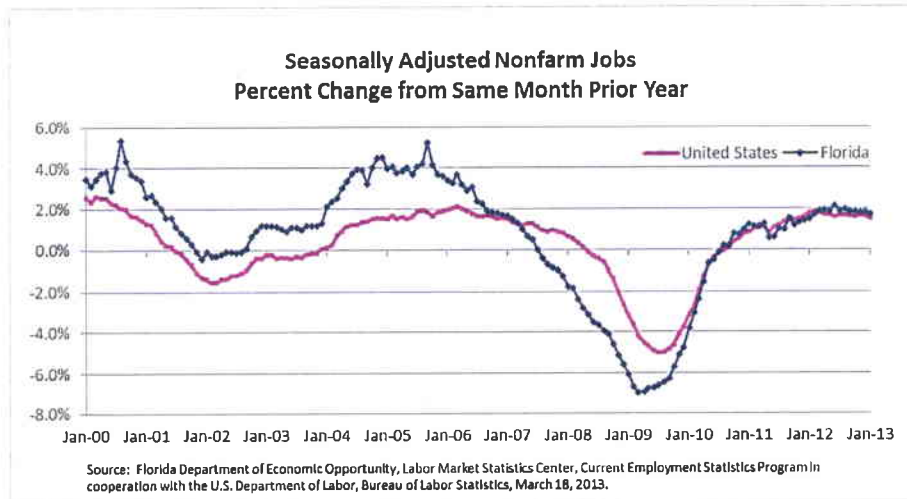
# FL Personal Income Grows in Q3:2012



Growth (although still positive) slowed in Florida during the third quarter of the 2012 calendar year—moving below the prior quarter which was significantly revised downward. Florida was ranked 35<sup>th</sup> in the nation with quarterly personal income growth of 0.4 percent, putting the state slightly below the national growth rate of 0.5 percent. *Manufacturing* and *Construction* continued to be among the state’s weakest industry areas for earnings. In contrast, the *Arts, Entertainment, and Recreation* and *Retail Trade* industry areas performed strongly.



# Current Employment Conditions



**January Nonfarm Jobs (YOY)**

US	1.5%
FL	1.7%
YR:	127,500 jobs
Peak:	-597,200 jobs

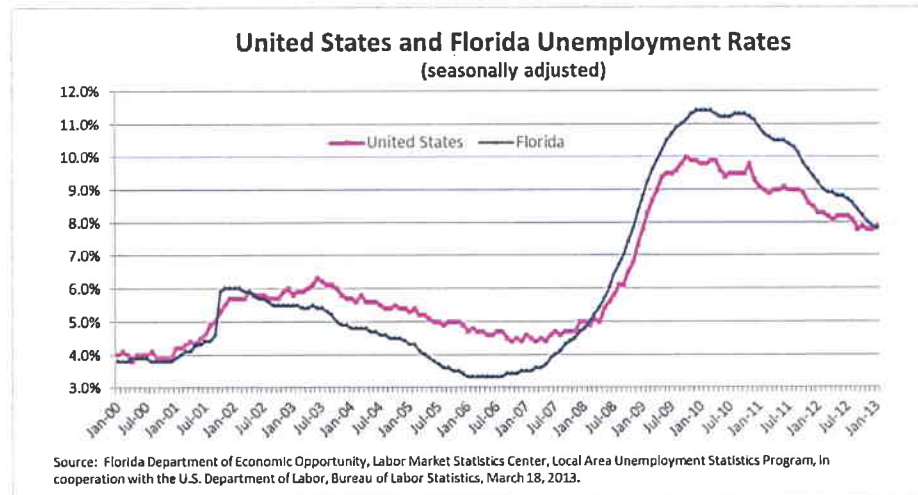
**January Unemployment Rate**

US 7.9%  
 FL 7.8%  
 (740,000 people)

Seventeen states had a higher unemployment rate than Florida.

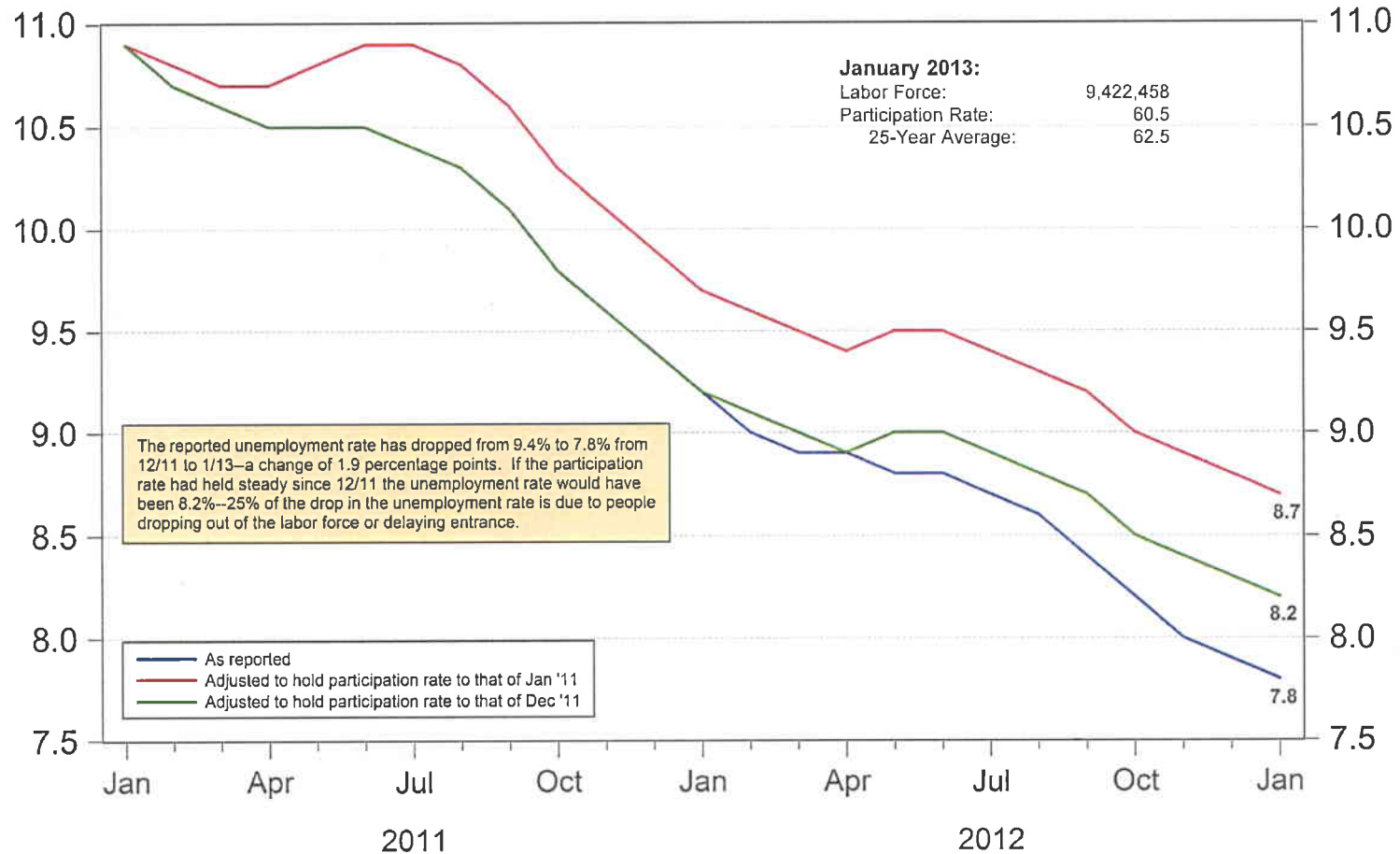
**Highest Monthly Rate**

11.4%  
 December 2009 through  
 March 2010

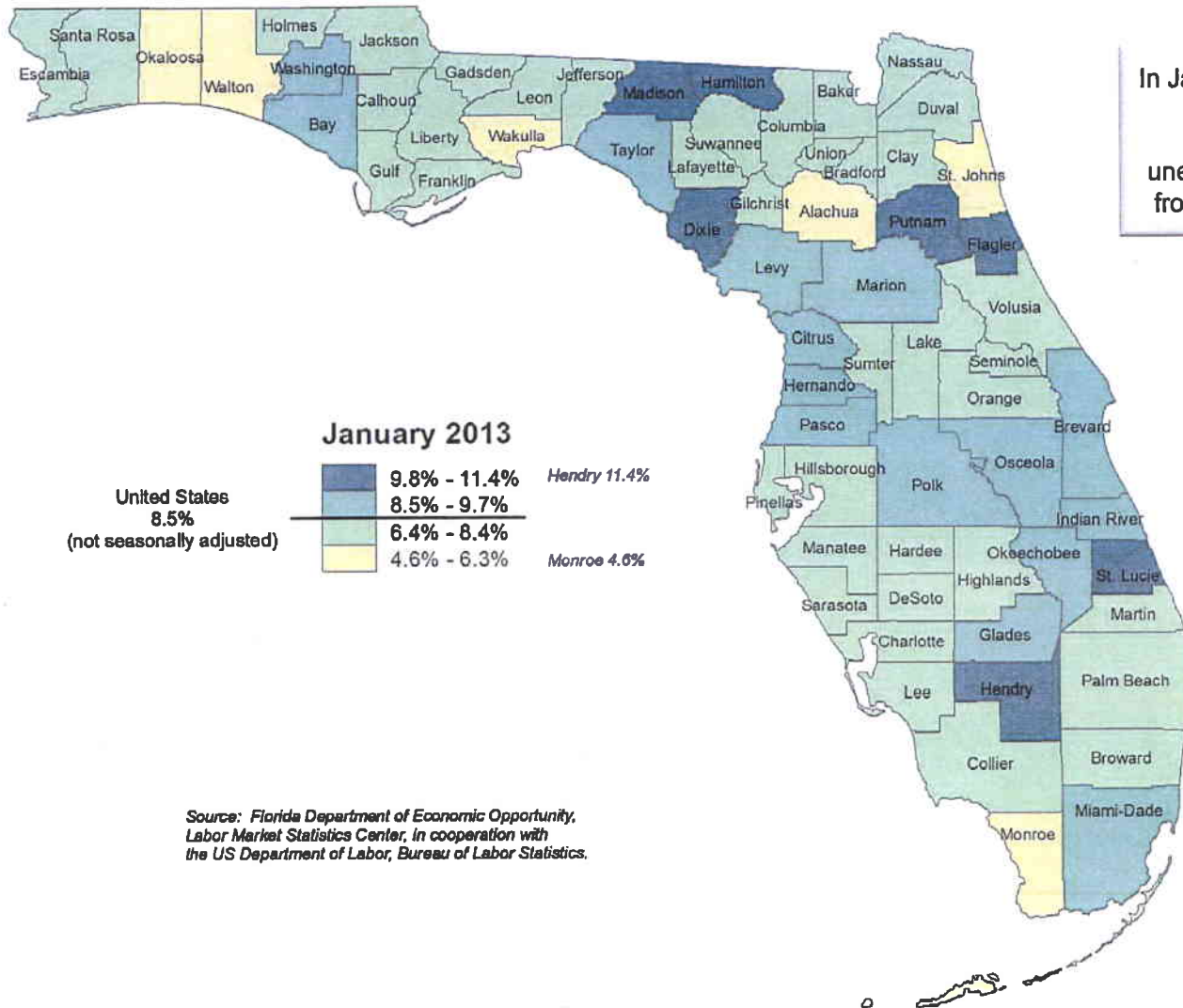


# Labor Force Changes Affect Rate Drop

**FLORIDA CIVILIAN UNEMPLOYMENT RATE**



# Unemployment Rates



In January six of Florida's 67 counties had double-digit unemployment rates, up from four in December.

**January 2013**

United States 8.5% (not seasonally adjusted)	9.8% - 11.4% Hendry 11.4%
	8.5% - 9.7%
	6.4% - 8.4%
	4.6% - 6.3% Monroe 4.6%

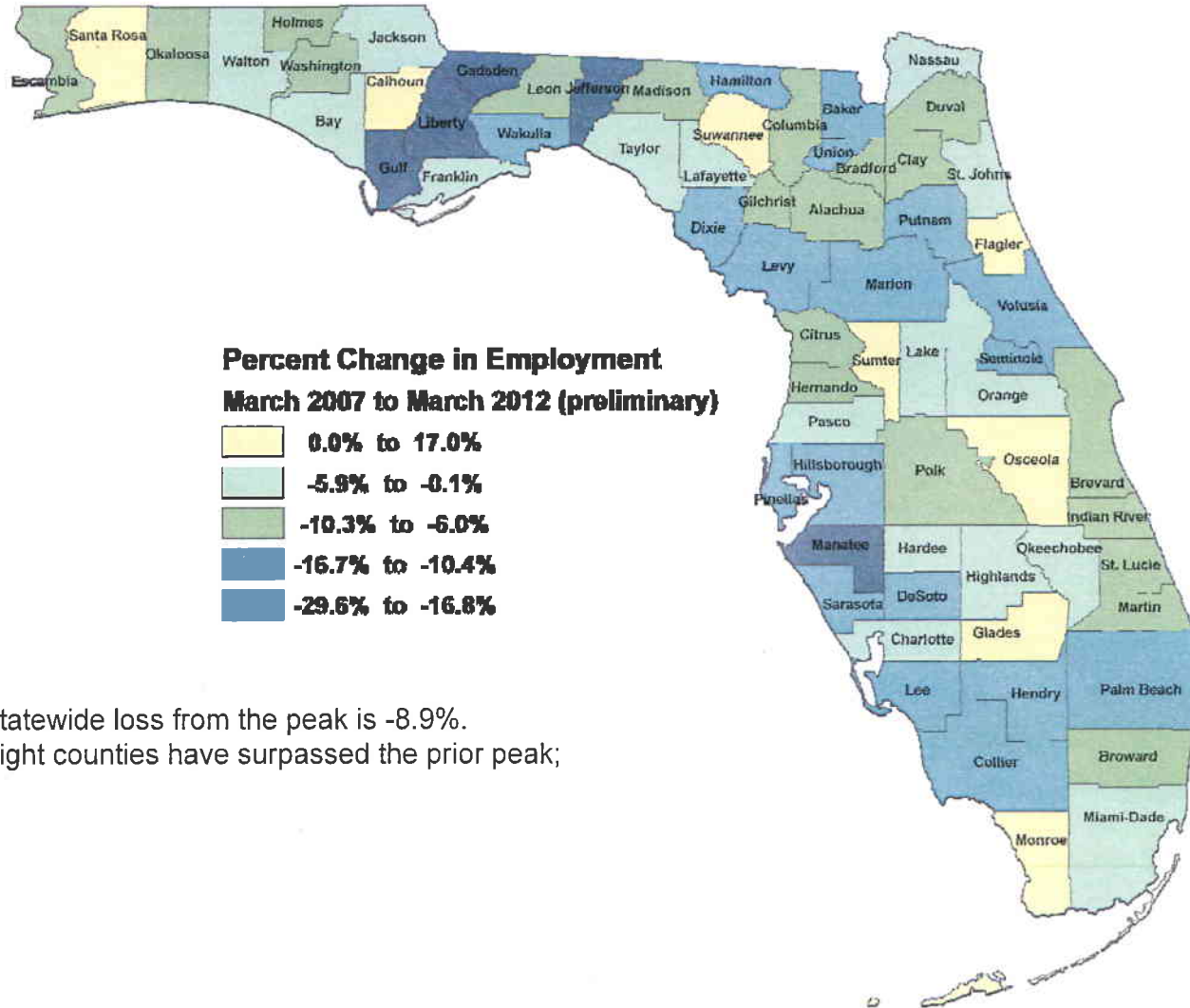
Source: Florida Department of Economic Opportunity, Labor Market Statistics Center, in cooperation with the US Department of Labor, Bureau of Labor Statistics.

# Florida's Job Market

- The job market will take a long time to recover – about 597,200 jobs have been lost since the most recent peak. Rehiring, while necessary, will not be enough.
- Florida's prime working-age population (aged 25-54) is forecast to add about 2,900 people per month, so the hole is deeper than it looks.
- It would take the creation of about 900,000 jobs for the same percentage of the total population to be working as was the case at the peak.



# Employment Still Down from Peak Levels, But Improving...



Statewide loss from the peak is -8.9%.  
 Eight counties have surpassed the prior peak;

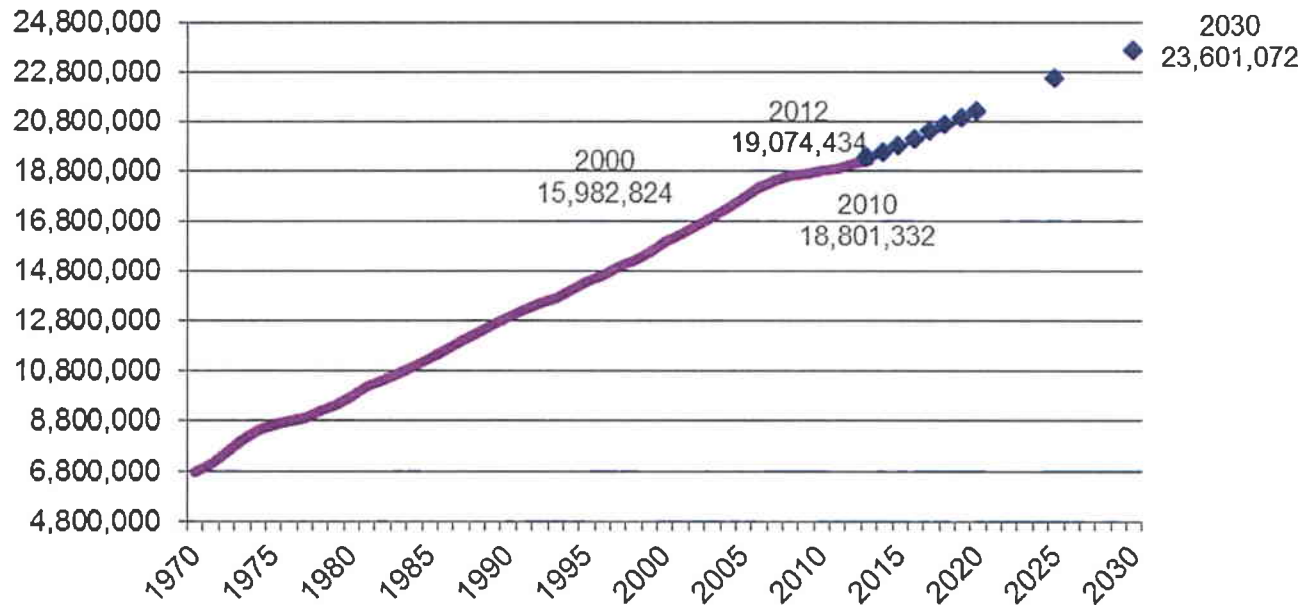


# Population Growth Recovering

- Population growth is the state's primary engine of economic growth, fueling both employment and income growth.
- Population growth is forecast to continue strengthening, showing increasing rates of growth over the next few years. In the near-term, growth is expected to average 1.2% between 2012 and 2015 – and then continue its recovery in the future, averaging 1.4% between 2015 and 2020. Most of Florida's population growth through 2030 will be from net migration (88.5%). Nationally, average annual growth will be about 0.74% between 2012 and 2030.
- The future will be different than the past; Florida's long-term growth rate between 1970 and 1995 was over 3%.
- Florida is on track to break the 20 million mark during 2016, becoming the third most populous state sometime before then – surpassing New York.



# Florida's April 1 Population Snapshot

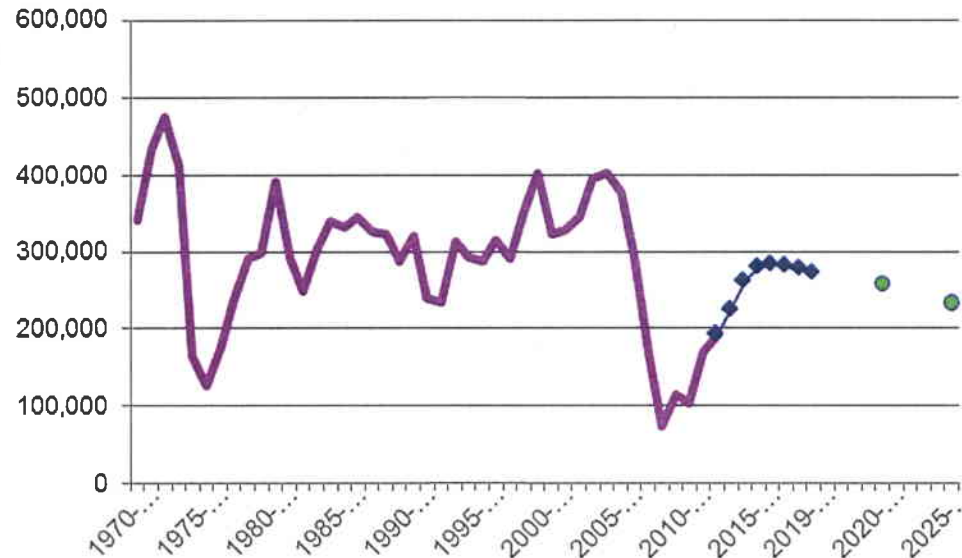


Florida's population:

- was 15,982,824 in 2000
- was 18,801,332 in 2010
- is forecast to grow to 23,601,072 by 2030



# Florida's Population Growth



## Population:

- Average annual increase between 2000 and 2006 was: 361,942
- Average annual increase between 2007 and 2012 was: 125,533

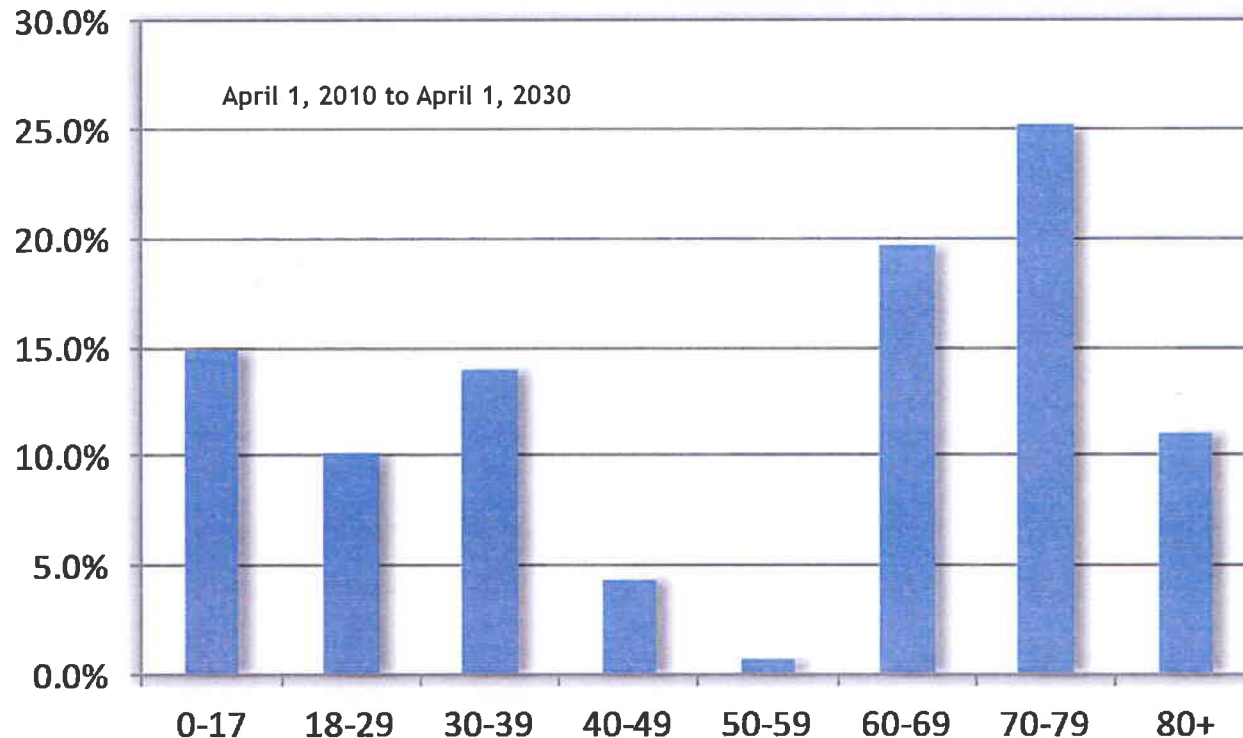
## Population is forecast to increase on average by:

- 225,381 between 2012 and 2015
- 278,148 between 2015 and 2020
- 258,540 between 2020 and 2025
- 233,412 between 2025 and 2030



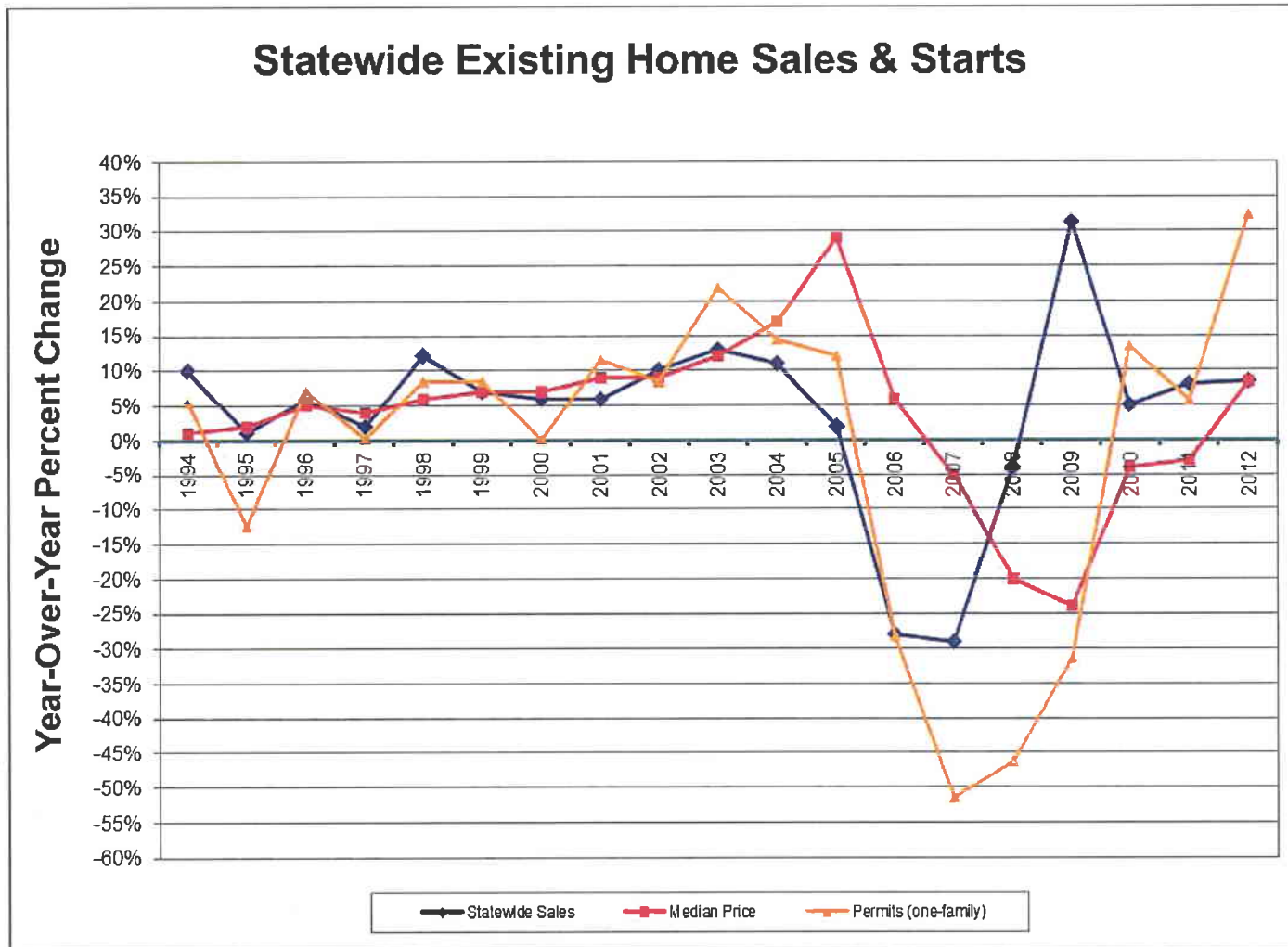


# Population Growth by Age Group



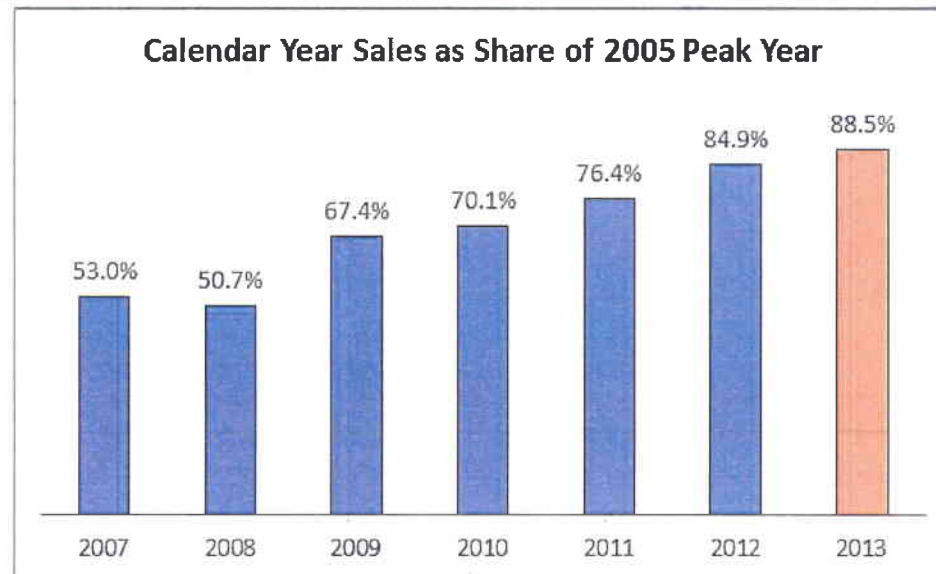
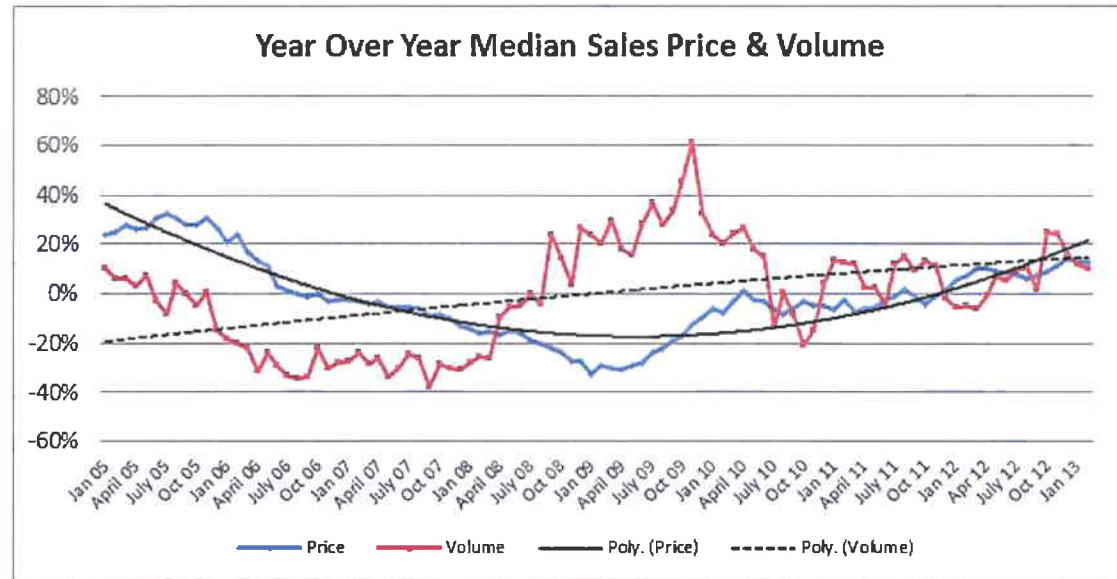
- Between 2010 and 2030, Florida's population is forecast to grow by almost 4.8 million.
- Florida's older population (age 60 and older) will account for most of Florida's population growth, representing 56.4 percent of the gains.
- Florida's younger population (age 0-17) will account for 14.8 percent of the gains.

# Florida Housing is Generally Improving



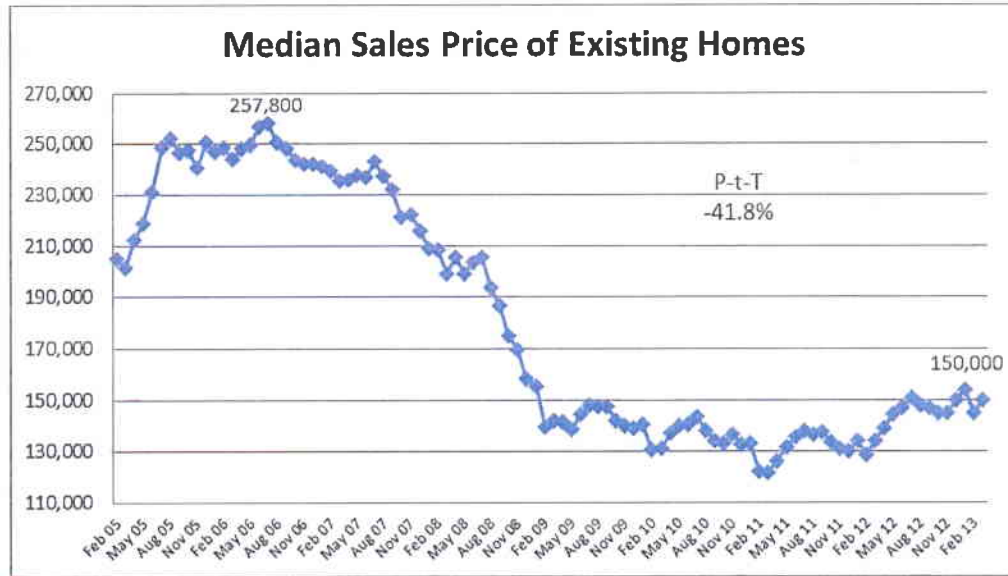
Building permit activity, an indicator of new construction, is back in positive territory, showing strong (32.4%) calendar year growth in 2012.

# Existing Homes Sales Are Growing...



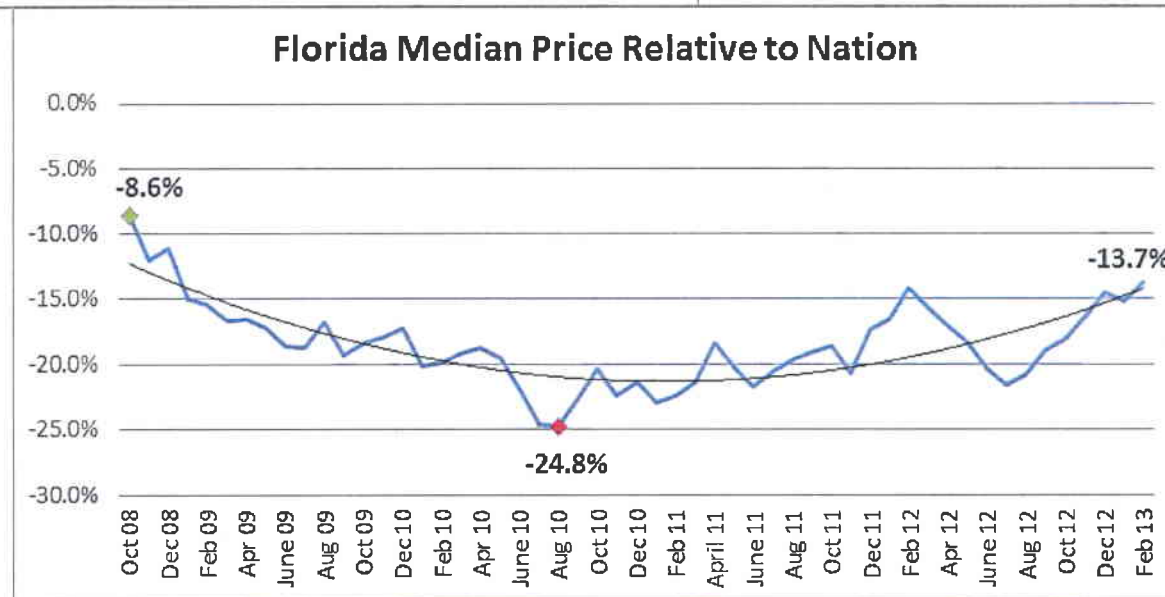
Data through February 2013

# Existing Home Price Gains Are Improving...



Data through February 2013

Median Sales Prices for Existing Homes have shown improvement, posting the highest number December in 48 months (December 2008), but median sales prices are still substantially below the nation as a whole.



# Foreclosure Activity Remains Daunting

## 2012 Calendar Year...

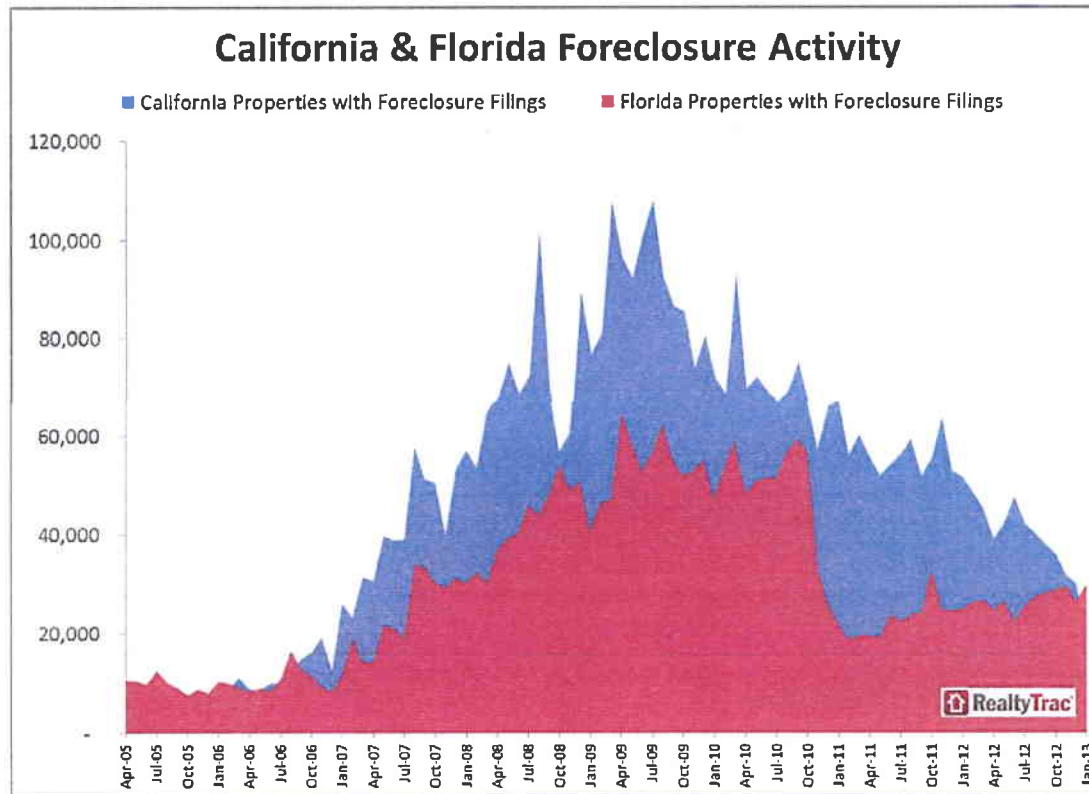
Florida had highest Foreclosure Rate in the US for the first time since the housing crisis began. (3.11% of housing units received at least 1 filing)

## February 2013, compared to US:

Florida foreclosure starts increased 20% from one year ago.

- Highest State for # of Filings
- Highest State for Foreclosure Rate (6th month)
- Among US Metro Area rates: 7 of the top 10 highest metro rates in the nation were in Florida.

Miami #1  
Orlando #2  
Ocala #3  
Tampa #4  
Palm Bay #5

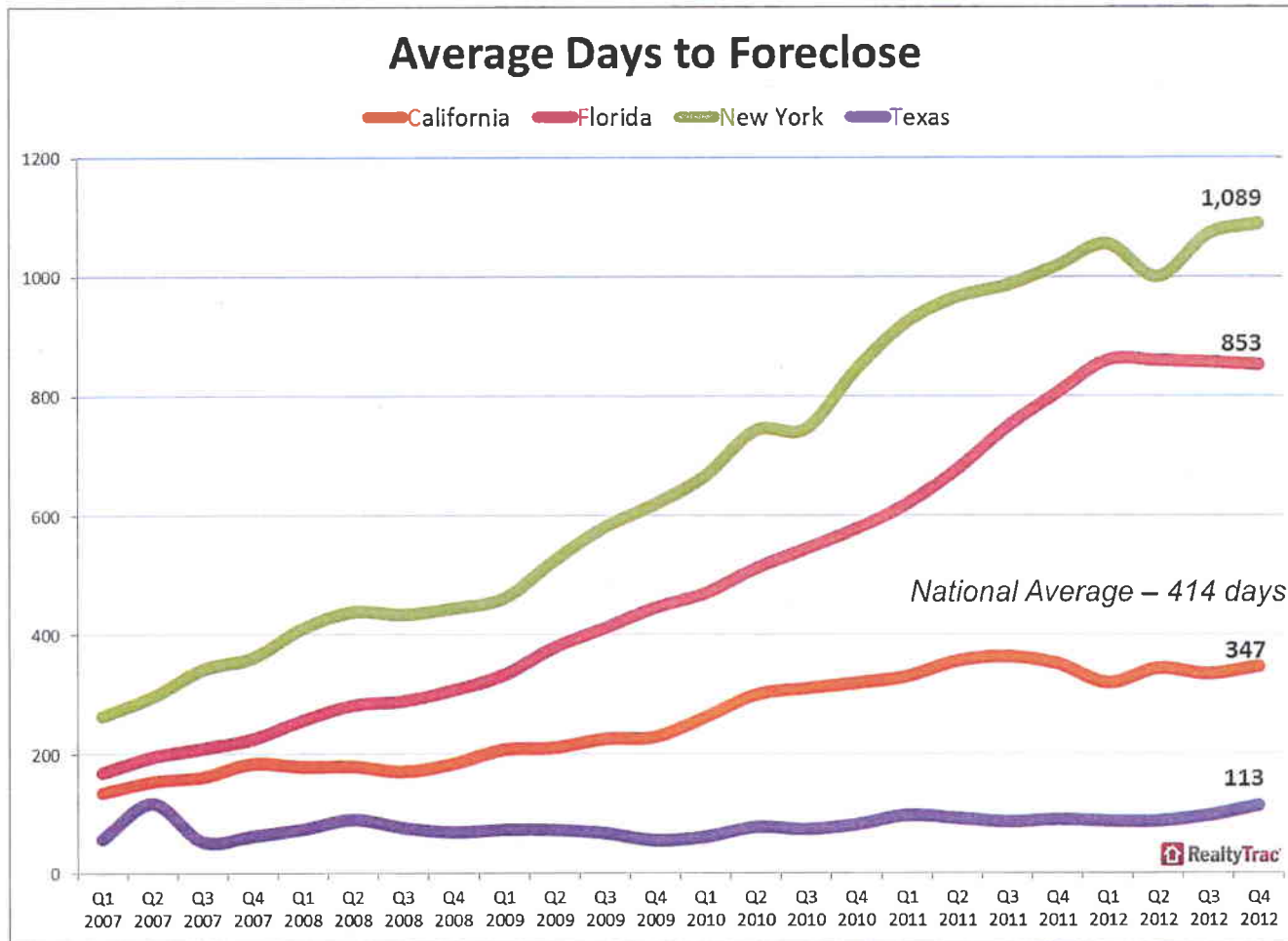


"Florida's foreclosure rate ranked highest among the states for the sixth month in a row in February. One in every 282 Florida housing units had a foreclosure filing during the month — more than three times the national average. A total of 31,726 Florida properties had a foreclosure filing during the month, up 6 percent from the previous month and up 20 percent from February 2012 to a 16-month high." RealtyTrac

# Days to Foreclose

## Foreclosure Process (once begun)

- 853 Days – 2.4 yrs – in Florida  
 (3rd Longest Period in Nation in 2012:Q4)
- At the beginning of 2007, Florida was at 169 days or less than 6 months.



High

Low

# Foreclosures & Shadow Inventory

State	Del %	FC %	Non-Curr %	Yr/Yr Change in NC%
National	7.0%	3.4%	10.4%	-12.3%
FL	7.5%	11.4%	18.9%	-15.6%
MS	13.7%	3.1%	16.9%	-7.2%
NJ	8.3%	8.1%	16.4%	3.5%
NV	9.0%	5.3%	14.4%	-15.9%
NY	7.5%	6.0%	13.5%	0.4%
ME	7.2%	5.6%	12.8%	-2.1%
LA	9.8%	2.9%	12.6%	-7.3%
MD	8.6%	4.0%	12.6%	-5.1%
RI	8.6%	3.9%	12.5%	-2.9%
IL	6.9%	5.5%	12.4%	-14.5%
CT	7.3%	5.0%	12.3%	-1.6%
AR	9.0%	2.9%	12.0%	1.5%
IN	8.3%	3.6%	11.9%	-10.2%
GA	9.6%	2.0%	11.6%	-13.7%
OH	7.8%	3.7%	11.6%	-10.6%
AL	9.9%	1.5%	11.4%	-5.1%
PA	8.0%	3.4%	11.4%	-1.9%

• - Indicates Judicial State

State	Del %	FC %	Non-Curr %	Yr/Yr Change in NC%
National	7.0%	3.4%	10.4%	-12.3%
DE	8.2%	3.2%	11.3%	-1.7%
SC	7.5%	3.6%	11.1%	-12.6%
HI	4.9%	6.0%	10.9%	-7.5%
TN	9.3%	1.5%	10.8%	-9.6%
WV	8.9%	1.7%	10.6%	-5.7%
NC	7.6%	2.4%	10.0%	-12.1%
OK	6.6%	3.2%	9.8%	-4.7%
MA	7.4%	2.3%	9.7%	-3.9%
NY	6.8%	3.6%	9.1%	-10.1%
NM	5.7%	3.6%	9.0%	-10.1%
VT	5.3%	3.6%	8.9%	-10.1%
WI	6.2%	3.6%	8.8%	-10.1%
DC	6.4%	3.6%	8.7%	-10.1%
MI	7.2%	3.6%	8.6%	-10.1%
WA	5.9%	3.6%	8.5%	-10.1%
TX	7.5%	3.6%	8.4%	-10.1%
MO	7.2%	3.6%	8.3%	-10.1%

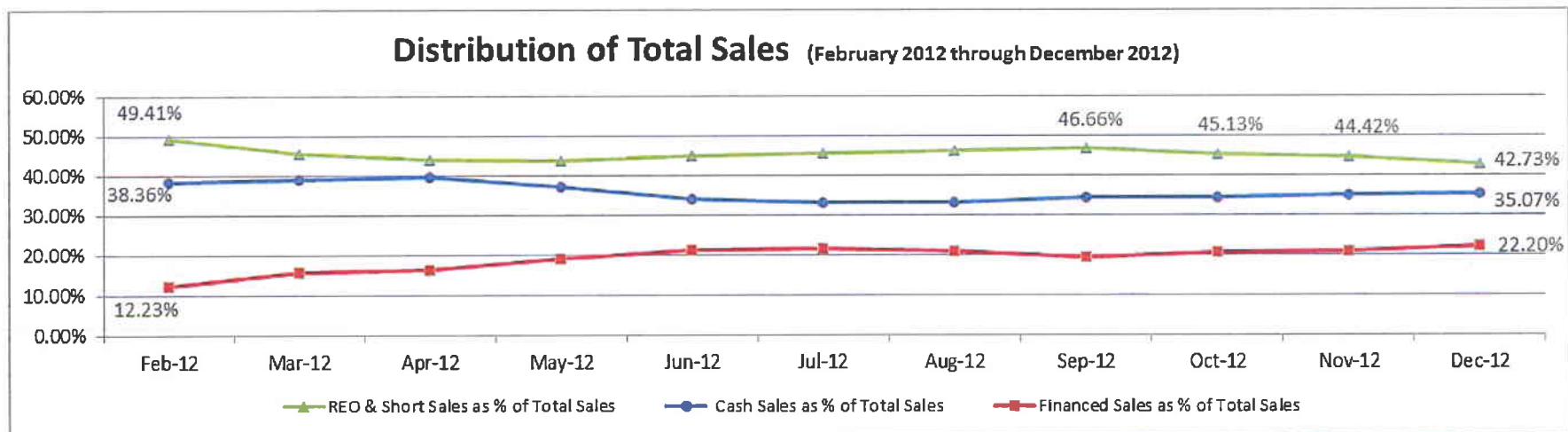
State	Del %	FC %	Non-Curr %	Yr/Yr Change in NC%
National	7.0%	3.4%	10.4%	-12.3%
NH	6.5%	1.6%	8.1%	-8.5%
KS	6.2%	1.7%	7.9%	-10.1%
IA	5.2%	2.6%	7.8%	-7.5%
OR	4.4%	3.2%	7.7%	-9.4%
UT	6.0%	1.6%	7.6%	-13.2%
CA	5.8%	1.6%	7.4%	-26.5%
ID	4.7%	2.5%	7.2%	-11.7%
AZ	5.4%	1.6%	7.0%	-32.1%
MT	5.8%	1.6%	7.0%	-11.1%
ND	5.8%	1.6%	7.0%	-8.0%
SD	5.8%	1.6%	7.0%	-19.1%
NE	5.8%	1.6%	7.0%	-15.3%
WY	5.8%	1.6%	7.0%	-8.1%
AK	5.8%	1.6%	7.0%	-8.6%
VT	5.8%	1.6%	7.0%	-10.8%
VT	5.8%	1.6%	7.0%	-16.9%

State	Del %	FC %	Non-Curr %
National	7.0%	3.4%	10.4%
FL	7.5%	11.4%	18.9%

“Optimists point to declining home inventories in relation to sales, but they are looking at an illusion. Those supposed inventories do not include about 5m housing units with delinquent mortgages or those in foreclosure, which will soon be added to the pile. Nor do they include approximately 3m housing units that stand vacant – foreclosed upon but not yet listed for sale, or vacant homes that owners have pulled off the market because they can’t get a decent price for them.”  
*Financial Times*

# Sales Mix Points to Lower Prices

**REO price running  
44% lower than  
normal price; short  
sale price running  
36% below**

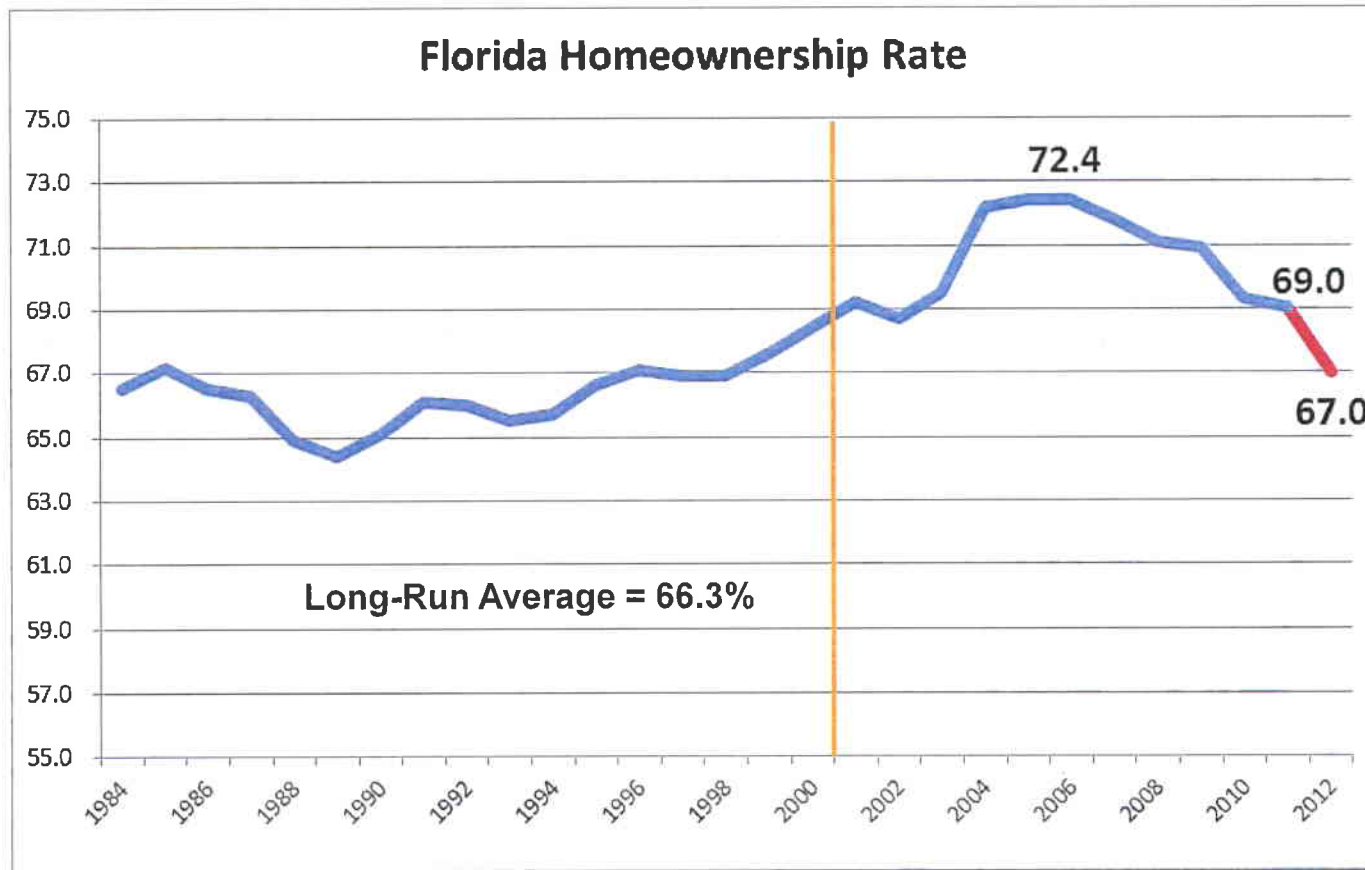


Data from LPS: Lender Processing Services

- Financed sales have been growing as percentages of all sales, cash sales have stayed relatively flat—while the percentage for REO & Short Sales has been declining.
- While short sales have been increasing in some states, that is not yet the case in Florida. There were 7,841 short sales in February 2012, and only 7,516 in December 2012.
- To the extent short sales increase, the foreclosure pipeline will be reduced.



# Homeownership Rate Back to Normal



The 2012 percentage is the lowest since 1998.

# Credit Conditions Remain Tight

Question to Senior Loan Officers:

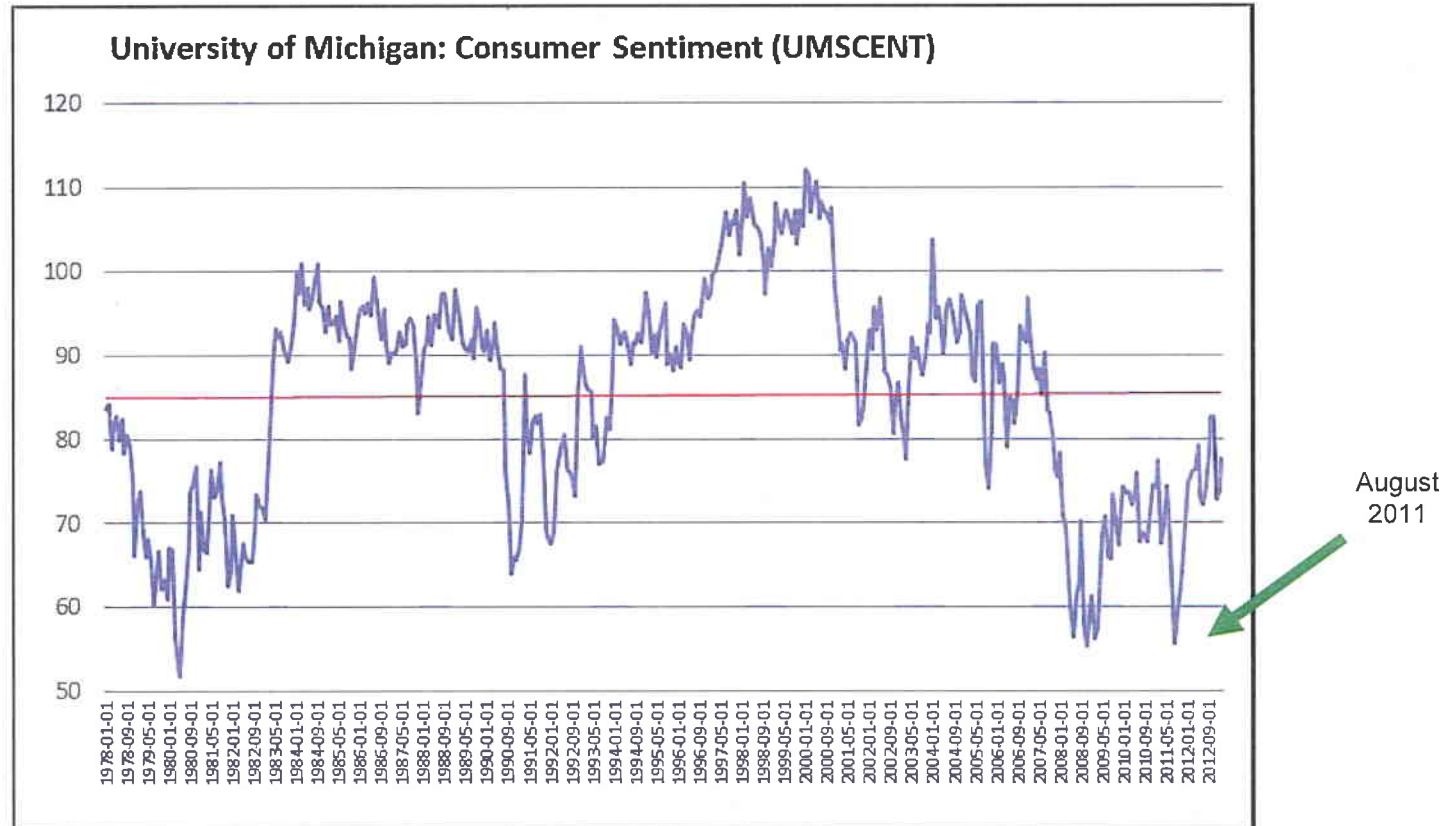
Over the past three months, how have your bank's credit standards for approving applications from individuals for **prime residential mortgage loans** to purchase homes changed?

All Respondents									
	Jan '13 %	Oct '12 %	July '12 %	Apr '12 %	Jan '12 %	Oct '11 %	July '11 %	Apr '11 %	Jan '11 %
Tightened considerably	0.0%	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0
Tightened somewhat	1.5%	3.1	1.6	5.6	0.0	4.2	5.7	3.8	3.7
Remained basically unchanged	92.3	92.2	93.4	90.7	94.3	91.7	86.8	92.5	94.4
Eased somewhat	4.6%	4.7	3.3	3.7	5.7	4.2	7.5	2.0	1.9
Eased considerably	1.5%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Total</b>	<b>100%</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

July 2012 Senior Loan Officer Opinion Survey on Bank Lending Practices (Federal Reserve Board)

Banks reported that they were less likely than in 2006, to varying degrees, to originate mortgages to any borrowers apart from those with the strongest credit profiles. Downpayments of 20% also a strong requirement.

# Perceptions Recover After 8/2011 Dive



- Nationally, consumer sentiment had been improving, but fell in August 2011 to near the lowest level of the Great Recession and not far from the lowest level ever posted. The index reading dropped in December and showed little improved in January as concerns about the Fiscal Cliff took hold. (77.6 in February 2013).
- According to Moody's Dismal Scientist: "The Index unexpectedly plummeted in March's preliminary reading to its lowest level in more than a year. The final reading ought to have recouped a significant chunk of the initial 5.8-point decline, settling at 75, but still end up down from February's 77.6."

# Economy Recovering

Florida growth rates are gradually returning to more typical levels. But, drags are more persistent than past events, and it will take a few more years to climb completely out of the hole left by the recession. Overall...

- The recovery in the national economy is well underway. While most areas of commercial and consumer credit are strengthening – residential credit still remains sluggish and difficult for consumers to access.
- The subsequent turnaround in Florida housing will be led by:
  - Low home prices that begin to attract buyers and clear the inventory.
  - Long-run sustainable demand caused by continued population growth and household formation that has been pent-up.
  - Florida's unique demographics and the aging of the baby-boom generation (2011 marked the first wave of boomers hitting retirement).



# Upside Risk for Construction

- The “shadow inventory” of homes that are in foreclosure or carry delinquent or defaulted mortgages may contain a significant number of “ghost” homes that are distressed beyond realistic use, in that they have not been physically maintained or are located in distressed pockets that will not come back in a reasonable timeframe. This means that the supply has become two-tiered – viable homes and seriously distressed homes.
- To the extent that the number of viable homes is limited, new construction may come back quicker than expected.



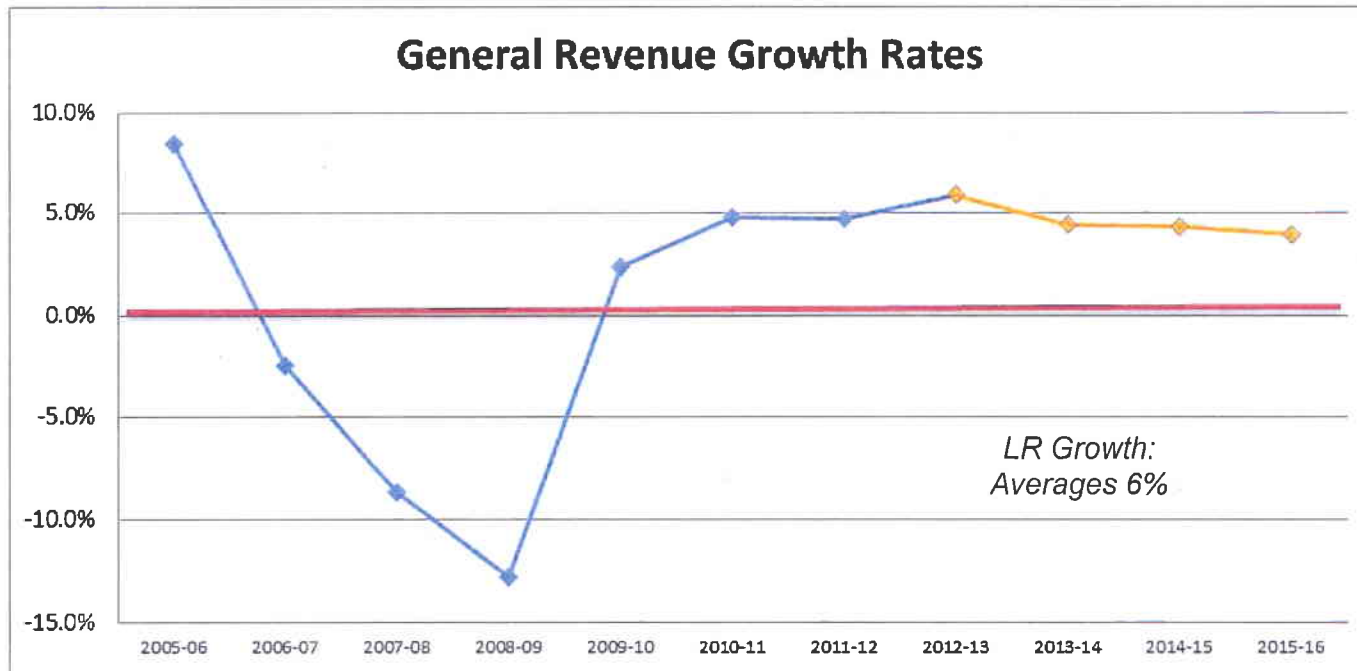
# Eurozone Problems Still Persist

- The sovereign debt crisis in the Eurozone has led to banking instability with spillover effects on the global credit market. Liquidity threats have diminished, but solvency issues still exist, especially for the Greek banks facing strict recapitalization requirements by April or nationalization.
- Cyprus has become the fourth eurozone country to receive a sovereign bailout after Greece, Ireland and Portugal. Spain has also required €40bn in EU aid to shore up its banking system.
- Austerity measures have proven problematic.
- The United Kingdom has called for a referendum on EU membership..
- The latest data for the third quarter of 2012 shows that the Eurozone is officially back in a recession. The economies of Greece, Italy, Spain, Portugal, Austria and the Netherlands are contracting sharply. It now looks likely that even Germany will experience a decline in the fourth quarter of 2012.
- These conditions are negatively affecting the United States:
  - Tighter credit conditions already exist, especially for businesses with foreign interests.
  - Reduced exports and corporate earnings already exist. The Greater Miami area is experiencing a significant reduction in exports to Spain (Florida exports to Spain fell nearly 30% last year).

# “Sequester” Issues

- **Automatic Sequester provisions were extended to March 1, 2013 prior to taking affect and are now expected to be in place until September 30, 2013**—While it is clear that there is no meaningful support for the current sequester provisions, agreement has not been reached on a replacement. Moreover, additional revenue changes are still on the table.
  - FY 2013 federal discretionary domestic and defense spending are currently subject to a continuing resolution (CR) through March 27, 2013. To avoid a shut-down, the House and Senate have introduced and passed H.R. 933. It reduces discretionary spending by \$85 billion to accommodate the Sequester. Therefore, states can expect domestic discretionary accounts not exempt from sequestration to be reduced by 5% for the remainder of FFY 2013 and defense discretionary accounts to be reduced by nearly 8% for the same time frame.
- **Statutory debt ceiling fight delayed**—the House and Senate have passed and the President has signed HR 325 (“The No Budget, No Pay Act”) to waive the statutory debt limit through **May 18**, allowing the Treasury to borrow above the current \$16.4 trillion limit until then. The bill also would temporarily impound House or Senate paychecks if the respective chamber fails to adopt a congressional budget resolution by April 15.

# General Revenue Forecast



Fiscal Year	December Forecast	March Forecast	Difference (March - Dec)	Incremental Growth	Growth
2005-06	27074.8				8.4%
2006-07	26404.1				-2.5%
2007-08	24112.1				-8.7%
2008-09	21025.6				-12.8%
2009-10	21523.1				2.4%
2010-11	22551.6				4.8%
2011-12	23618.8				4.7%
2012-13	24867.6	25020.6	153.0	1401.8	5.9%
2013-14	26028.4	26134.9	106.5	1114.3	4.5%
2014-15	27240.7	27269.6	28.9	1134.7	4.3%
2015-16	28383.6	28347.9	(35.7)	1078.3	4.0%