



Building Community®

Your Not-for-Profit Community Owned Utility

*Some insights into the future cost of utilities
and the potential for growth in our local economy*

US Green Building Council

North Florida

September 29, 2011

Dr. James M. Chansler, P.E.

3 Predictions for 2025 --The Energy Sector

JANUARY 27, 2010

**DR. JAMES M. CHANSLER, P.E.
CHIEF OPERATING OFFICER, JEA**

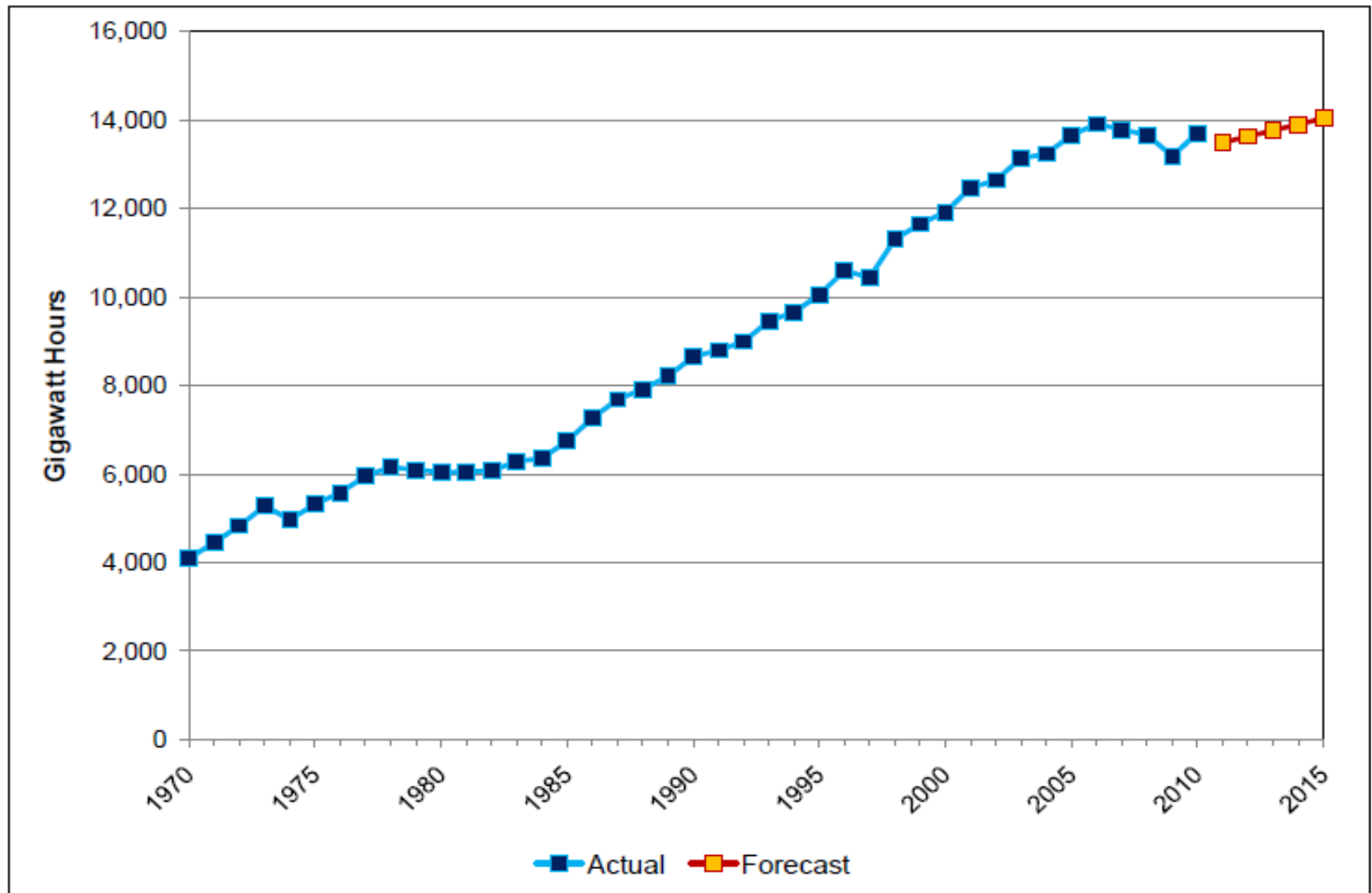
Company Overview

- ▶ **8th largest electric public utility in U.S.**
- ▶ **Serves Duval and portions of Clay, Nassau, and St Johns Counties**
- ▶ ***Five Utilities***
 - ▶ ***Electric System: 419,000 customers***
 - ▶ ***Water System: 306,000 customers***
 - ▶ ***Sewer System: 232,000 customers***
 - ▶ ***Reclaimed Water System: 13 MGD***
 - ▶ ***20% of Wastewater Flow***
 - ▶ ***Distributed Energy System (chilled water service): Four plants***
- ▶ ***Annual Revenues = \$ 2 billion***



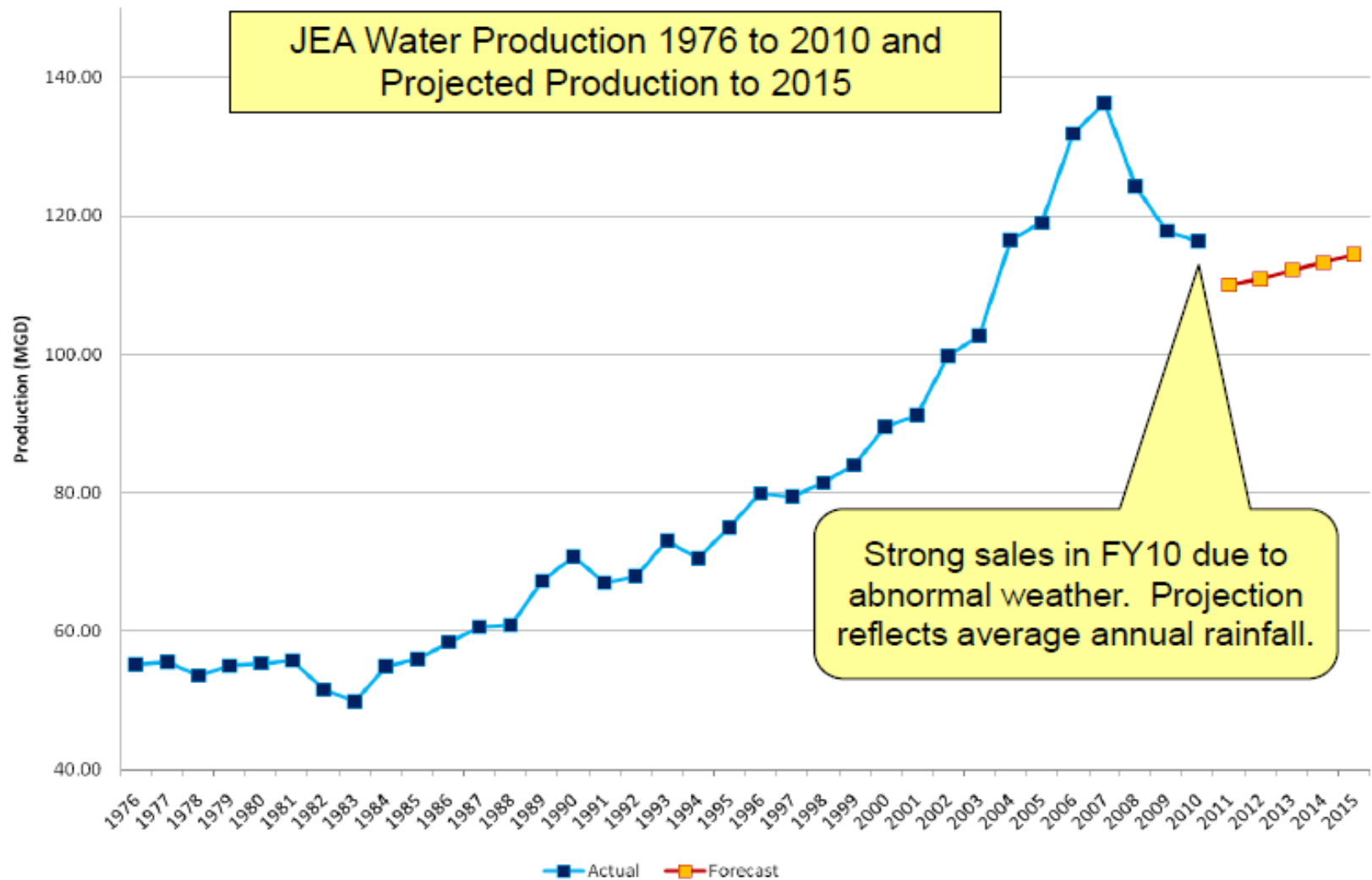
Financial Projections: FY2011 – FY2015

Electric System: Net Energy for Load



Financial Projections: FY2011 – FY2015

Water and Sewer System: Water Production



FY2012 Electric System Budget: MWh Sales Analysis

	Actual											Budget		Five Year Projection		
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011 YTD ¹	2011	2012	2013	2014	2015	
Duval County Housing Starts	5,593	6,308	7,183	8,360	6,667	3,484	2,981	1,333	1,574	594	1,500	1,800	2,100	2,400	2,700	
Monthly Residential kWh	1,238	1,349	1,317	1,323	1,318	1,253	1,223	1,201	1,288	1,127	1,189	1,183	1,177	1,171	1,166	
Residential Acct Change	6,052	6,826	5,247	7,977	8,093	7,052	1,348	2,232	1,223	170	1,500	1,800	2,100	2,400	2,700	
MWh Sales	11,999	12,830	12,666	13,092	13,441	13,231	13,233	12,676	13,180	5,907	12,928	13,057	13,188	13,320	13,453	
Residential	-	-	-	-	-	-	-	(1.2%)	7.7%	(5.7%)	(6.5%)	0.0%	0.0%	0.0%	0.0%	
Commercial & Industrial	-	-	-	-	-	-	-	(2.5%)	0.9%	(2.1%)	1.0%	1.2%	1.5%	1.5%	1.3%	
Interruptible	-	-	-	-	-	-	-	(28.3%)	3.8%	13.4%	5.5%	6.0%	5.0%	4.0%	4.0%	
Wholesale	-	-	-	-	-	-	-	(7.3%)	3.2%	(4.9%)	1.0%	1.0%	2.0%	2.0%	2.0%	
Total	0.8%	6.9%	(1.3%)	3.4%	2.7%	(1.6%)	0.0%	(4.2%)	4.0%	(2.9%)	(1.9%)	1.0%	1.0%	1.0%	1.0%	

Discussion and Analysis

- Duval County Housing Starts of single-family residential building permits per NE Florida Builders Association.
- EIA projected U.S. electricity consumption to decline by (3.3%) in CY2009 and then grow by 1.3% in CY2010 , with 0.7% long term growth. FY2010 was impacted by weather.
- Revenue impacts of total MWh sales are dependent on customer class.

¹Through March 31, 2011

FY2012 WATER AND SEWER SYSTEM BUDGET: KGAL SALES ANALYSIS

	Actual										Budget		Five Year Projection		
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011 YTD ³	2011	2012	2013	2014	2015
Territorial Housing Starts	6,286	7,090	8,073	9,533	7,313	4,001	3,292	1,365	1,847	716	1,800	2,160	2,520	2,880	3,240
Monthly Residential kGals	6.7	6.5	6.9	6.5	7.0	7.0	6.4	5.9	5.8	5.6	5.8	5.8	5.9	6.0	6.0
Residential Acct Change¹	23,890	16,267	13,101	9,326	10,647	7,430	239	617	1,334	285	1,800	2,160	2,520	2,880	3,240
kGal Sales²	32,493	33,745	37,360	37,093	41,236	43,101	39,610	36,846	36,750	17,386	34,749	34,888	35,212	35,564	35,920
Residential	-	-	-	-	-	-	-	(6.8%)	0.2%	7.5%	(6.1%)	0.0%	0.9%	1.2%	1.0%
Commercial & Industrial	-	-	-	-	-	-	-	(5.1%)	(0.8%)	3.2%	(0.6%)	2.3%	2.1%	2.4%	2.4%
Irrigation	-	-	-	-	-	-	-	(10.5%)	(0.6%)	23.3%	(12.1%)	(1.0%)	(1.0%)	(1.0%)	(1.0%)
Total	13.9%	3.9%	10.7%	(0.7%)	11.2%	4.5%	(8.1%)	(7.0%)	(0.3%)	8.4%	(5.4%)	0.4%	0.9%	1.0%	1.0%

Discussion and Analysis

- ✦ Territorial Housing Starts from Duval County single-family residential building permits per NE Florida Builders Association with a prorated portion for Nassau County and St. Johns County.
- ✦ Each one percent change in unit sales is projected to represent \$2 million in revenues in FY 2012.
- ✦ Sales are budgeted for a (5.4%) decrease from FY2011 budgeted unit sales, with the FY 2011 YTD unit sales trending approximately 17% below FY 2007 peak unit sales, unit sales remain a significant risk potentially mitigated by the four-year rate structure modification implemented at the beginning of FY 2010.

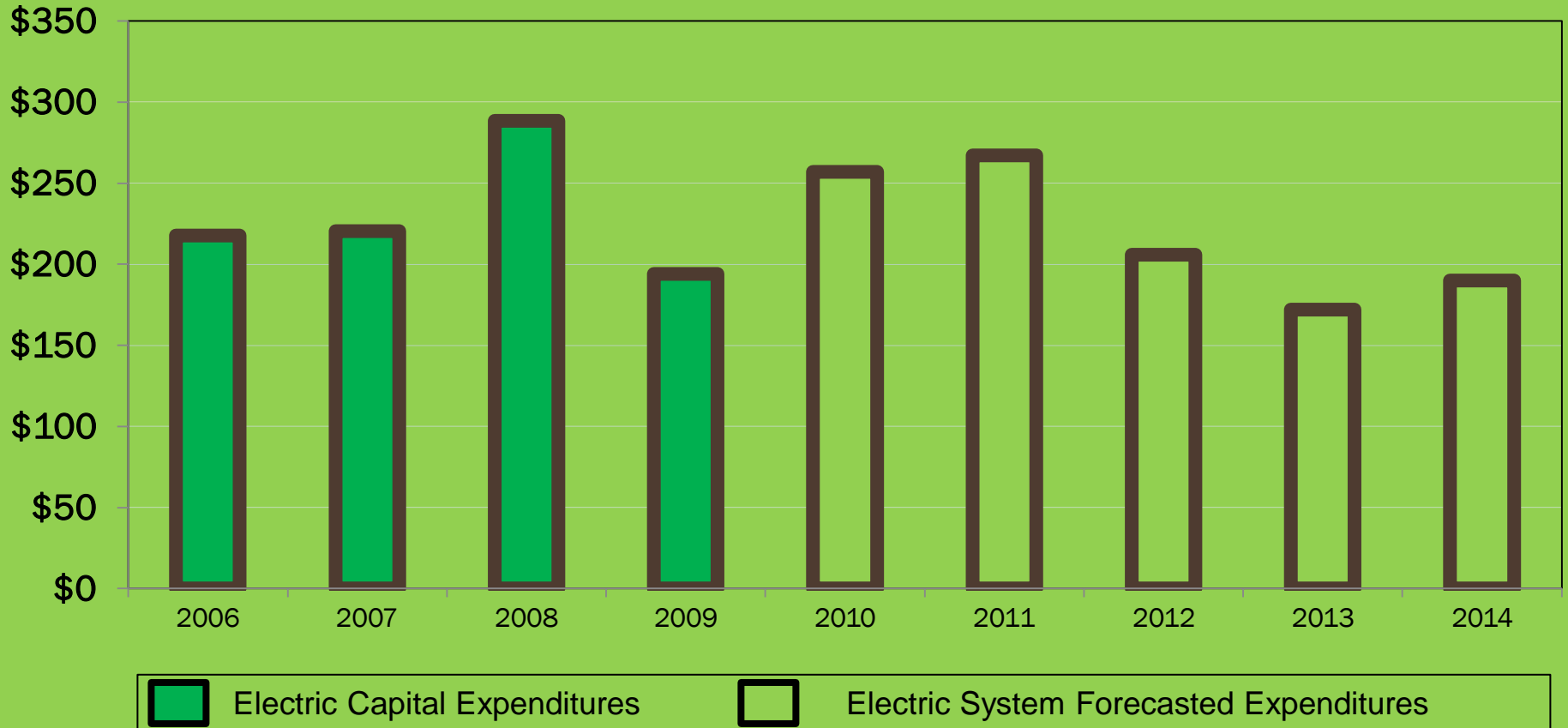
¹JEA Residential Account growth in FY2002 – FY2004 reflect utility acquisitions

² in thousands

³Through March 31, 2011

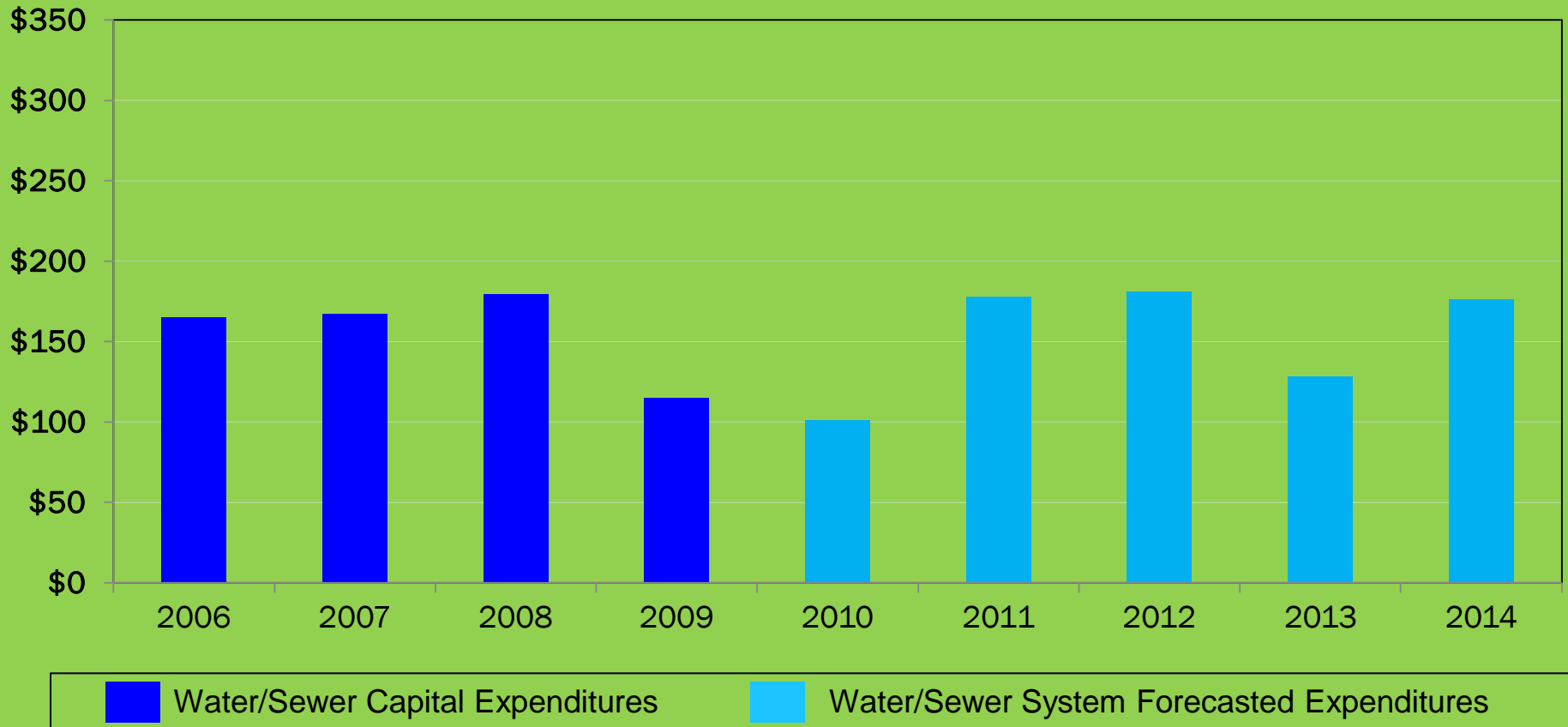
ELECTRIC SYSTEM CAPITAL INVESTMENT

(\$ IN MILLIONS)



Water/Sewer System Capital Investment

(\$ in millions)



1

YOU WILL HAVE A 1 IN 10 CHANCE OF DRIVING A HYBRID OR ELECTRIC PERSONAL VEHICLE IN 2025.

- Gasoline
- Diesel
- HEV - Hybrid Electric Vehicle
- BEV - Battery Electric Vehicle
- PHEVg - Plug-in Hybrid Electric Vehicle (gasoline)
- PHEVd - Plug-In Hybrid Electric Vehicle (diesel)

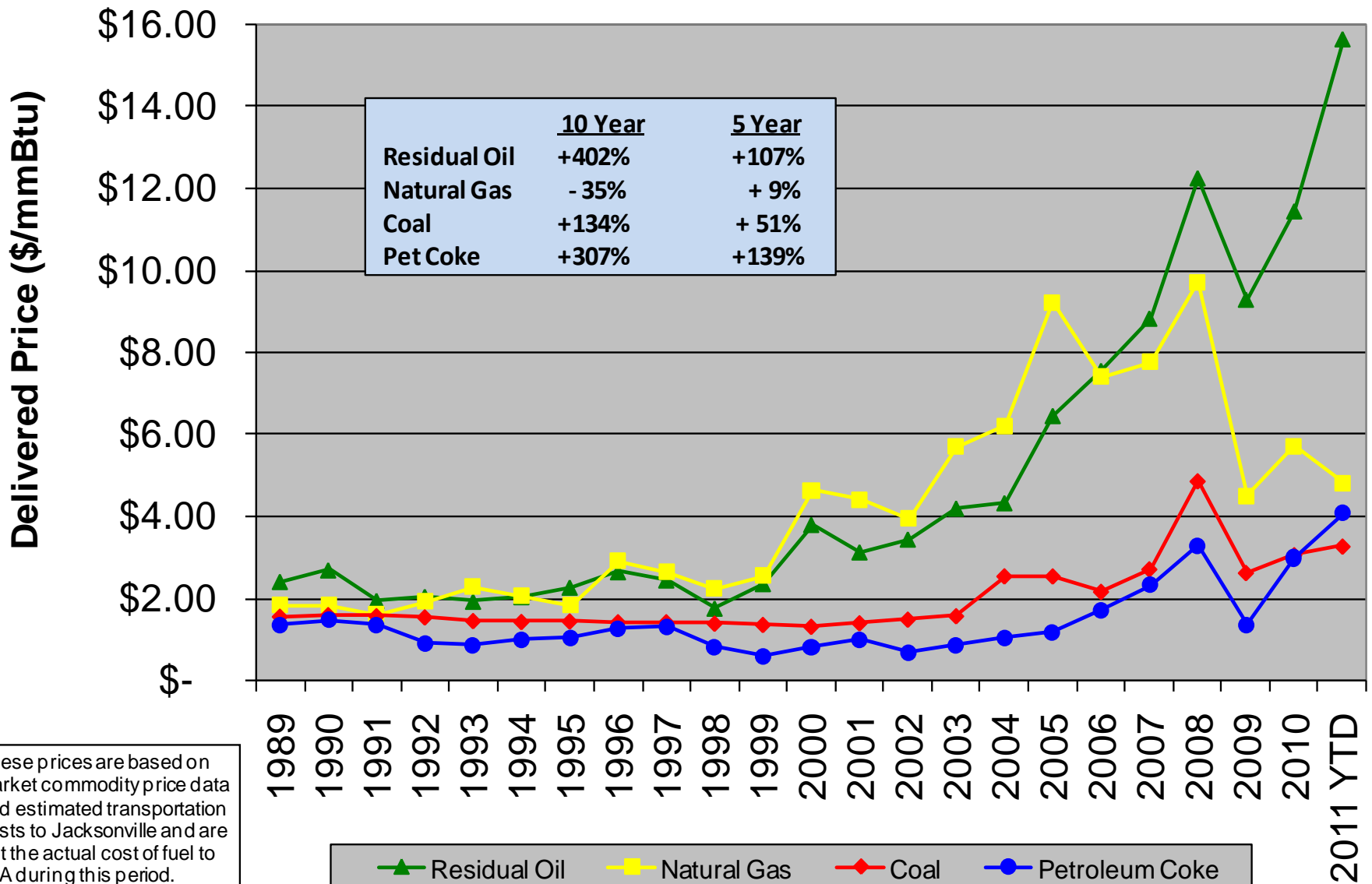
Electric Vehicles Are Mixed/Slow to Catch On

–U.S. Actual/Projections–

	1995		2010		2025		
	Unit Sales	Percent	Unit Sales	Percent	Unit Sales	Percent	Total Units in Operation
Total Vehicles	15,000,000	100%	11,600,000	100%	17,000,000	100%	111,500,000
HEVs	0	0%	368,000 '10: 275,000 '11: 255,000	3.2%	1,500,000	8.8%	6,980,000 (6.3%)
PHEVs	0	0%	0 '11: 3,500	0%	600,000	3.5%	2,860,000 (2.6%)
BEVs	0	0%	1,000 '11: 3,500	0.01%	400,000	2.4%	1,540,000 (1.4%)

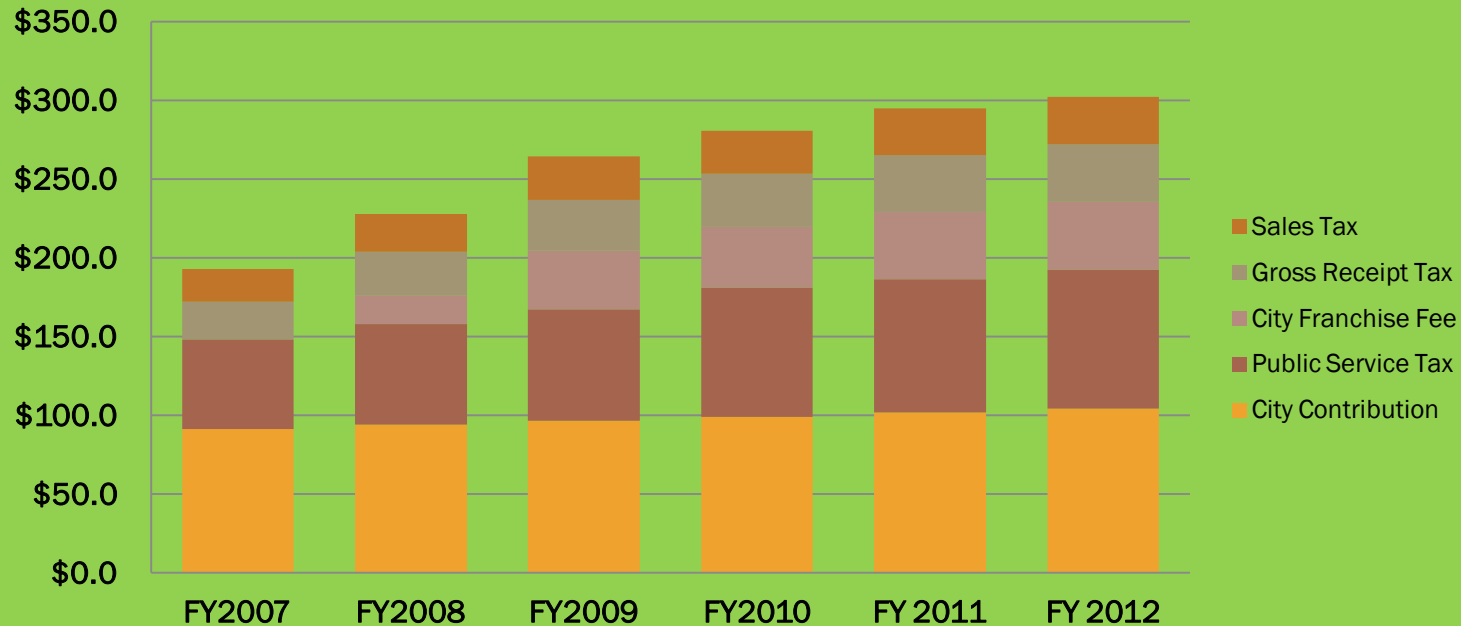
- HEVs – Hybrid electric Vehicles
- PHEVs – Plug-in Hybrid Electric Vehicles
- BEVs – Battery Electric Vehicles
- Sept., 2011 Updates in Green

Index Prices of Various Fuels (Commodity + Transportation)



These prices are based on market commodity price data and estimated transportation costs to Jacksonville and are not the actual cost of fuel to JEA during this period.

GOVERNMENT TRANSFERS VIA THE JEA BILL

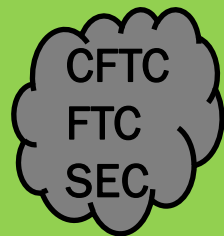


Description	Paid To	FY2007	FY2008	FY2009	FY2010	FY 2011	FY 2012
City Contribution	COJ	\$91.4	\$94.2	\$96.7	\$99.2	\$101.7	\$104.2
Public Service Tax	COJ	56.9	63.6	70.5	82.0	84.8	88.7
City Franchise Fee	COJ	-	18.3	37.5	38.6	42.6	43.7
Gross Receipt Tax	State	23.7	27.6	32.1	33.5	36.1	36.5
Sales Tax	State and COJ	20.6	24.1	27.5	27.5	29.7	30.0
Total		\$192.7	\$227.8	\$264.3	\$280.8	\$294.9	\$303.0
Percent increase from FY2007			18%	37%	46%	53%	57%

\$237 to COJ

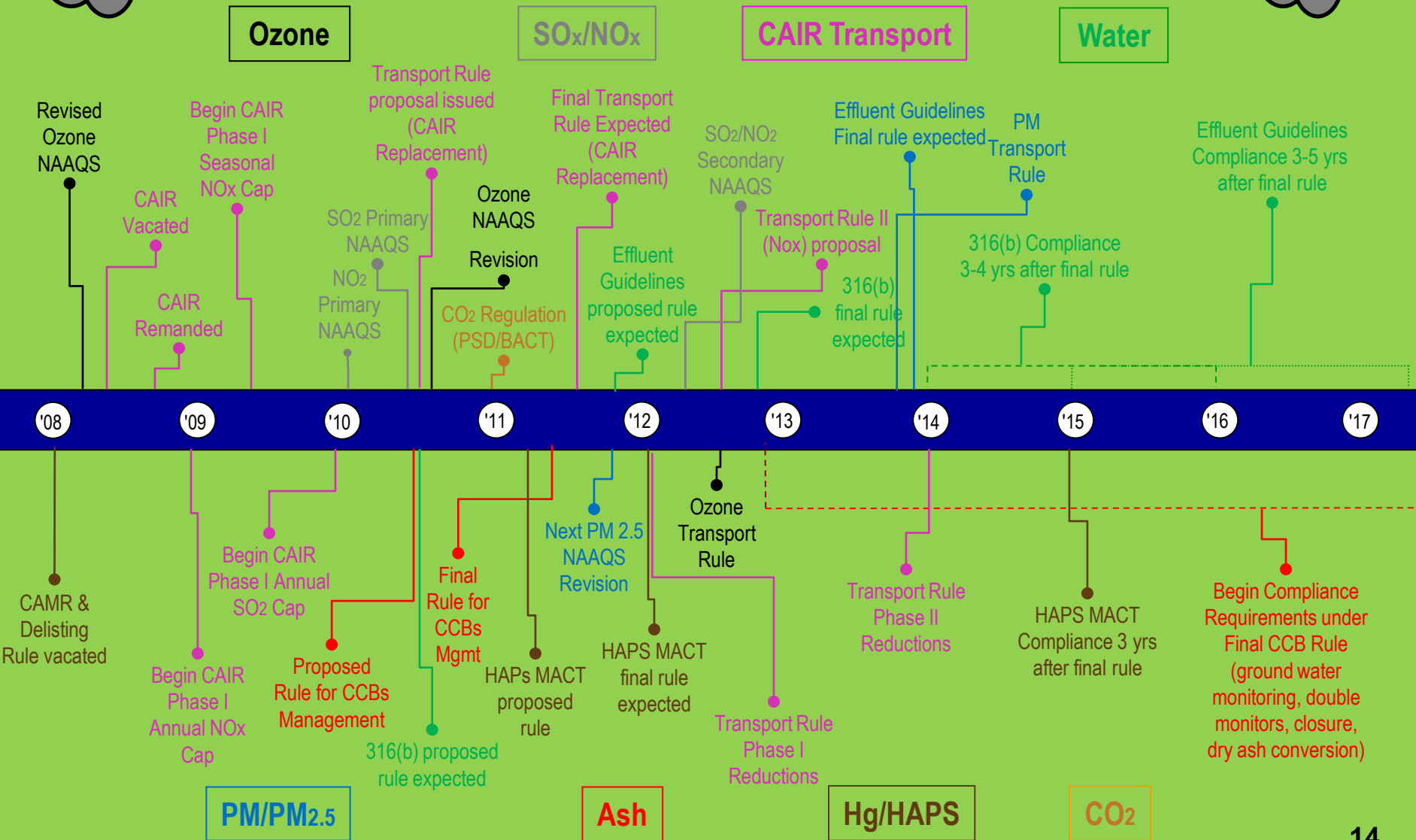
Discussion and Analysis

- ✦ JEA transfers to the City of Jacksonville have grown from \$148 million in FY2007 to a projected \$237 million in FY2012



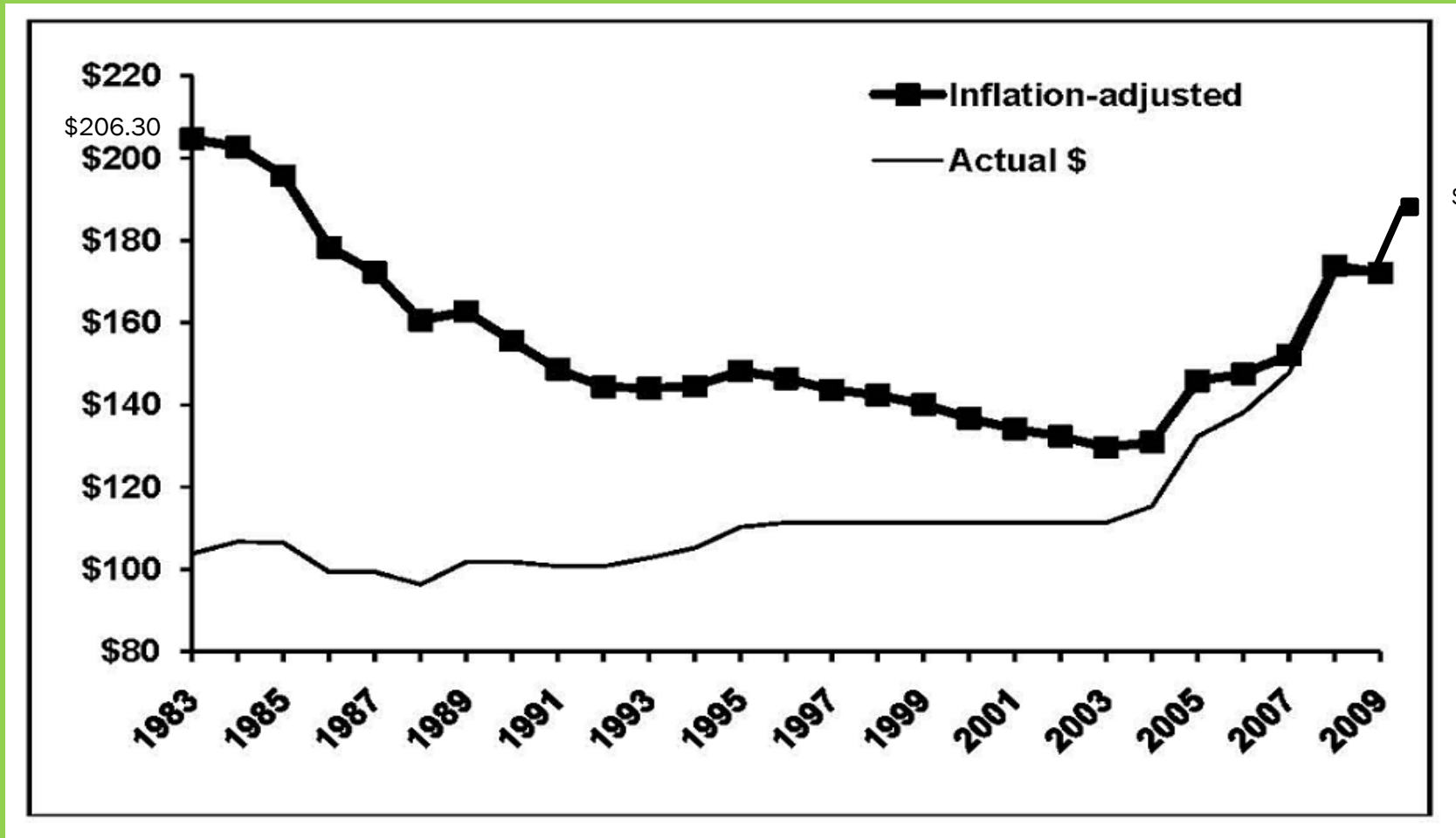
An Industry Under Regulatory Siege

Timeline for Anticipated Environmental Regulatory Requirements for the Utility Industry



-- adapted from Wegman (EPA 2003) Updated 10.26.10

JCCI 2009 Quality of Life Progress Report



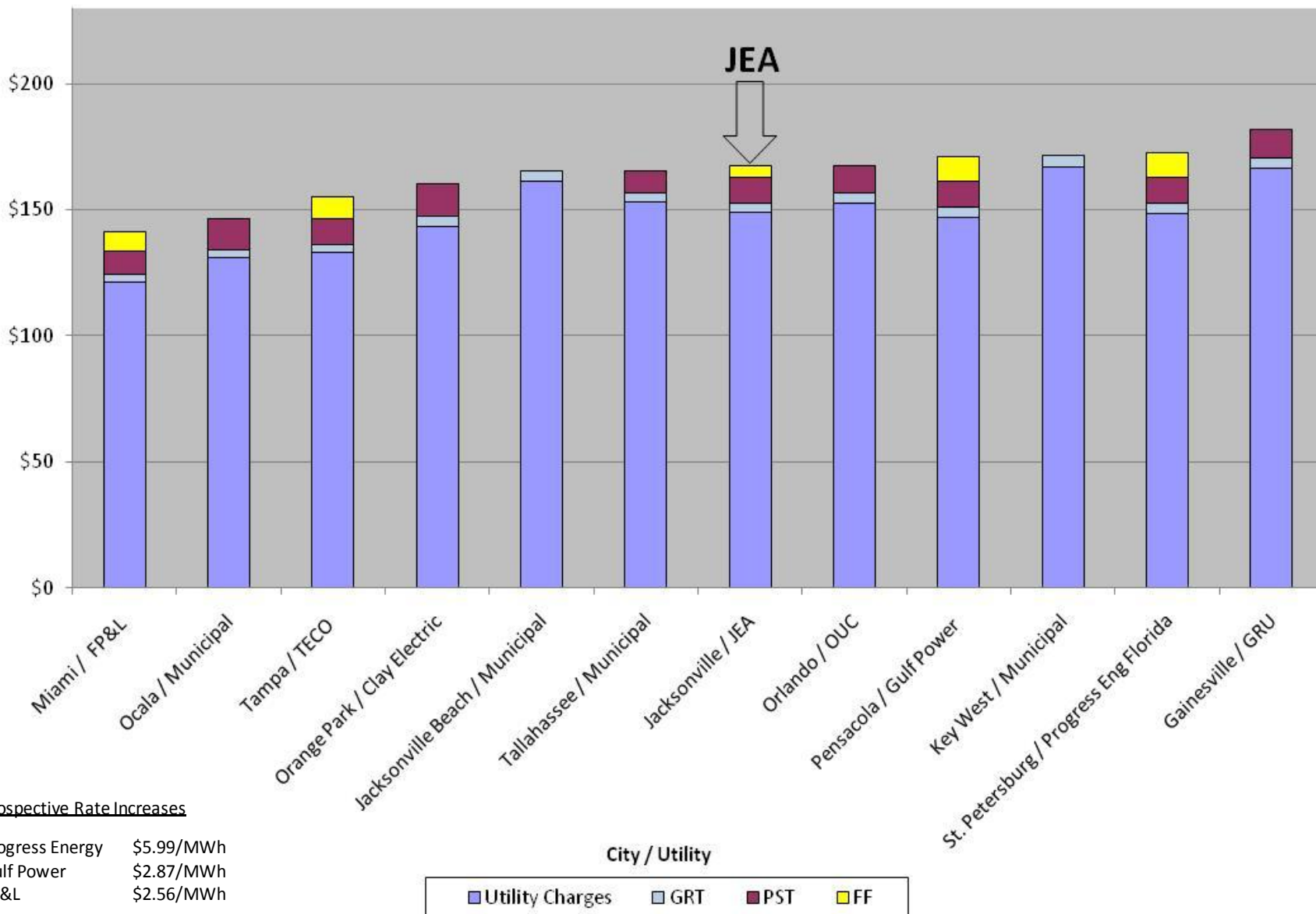
Indicator: Typical Monthly Household Costs for JEA Utilities

Description: This indicator measures the residential cost of 1,000 kilowatt hours of electricity, including the residential basic rate and fuel adjustment charge; and of residential water and sewer services, based on 900 cubic feet of water consumption, adjusted for inflation.

Florida Utilities Monthly Residential Electric Bill Comparison

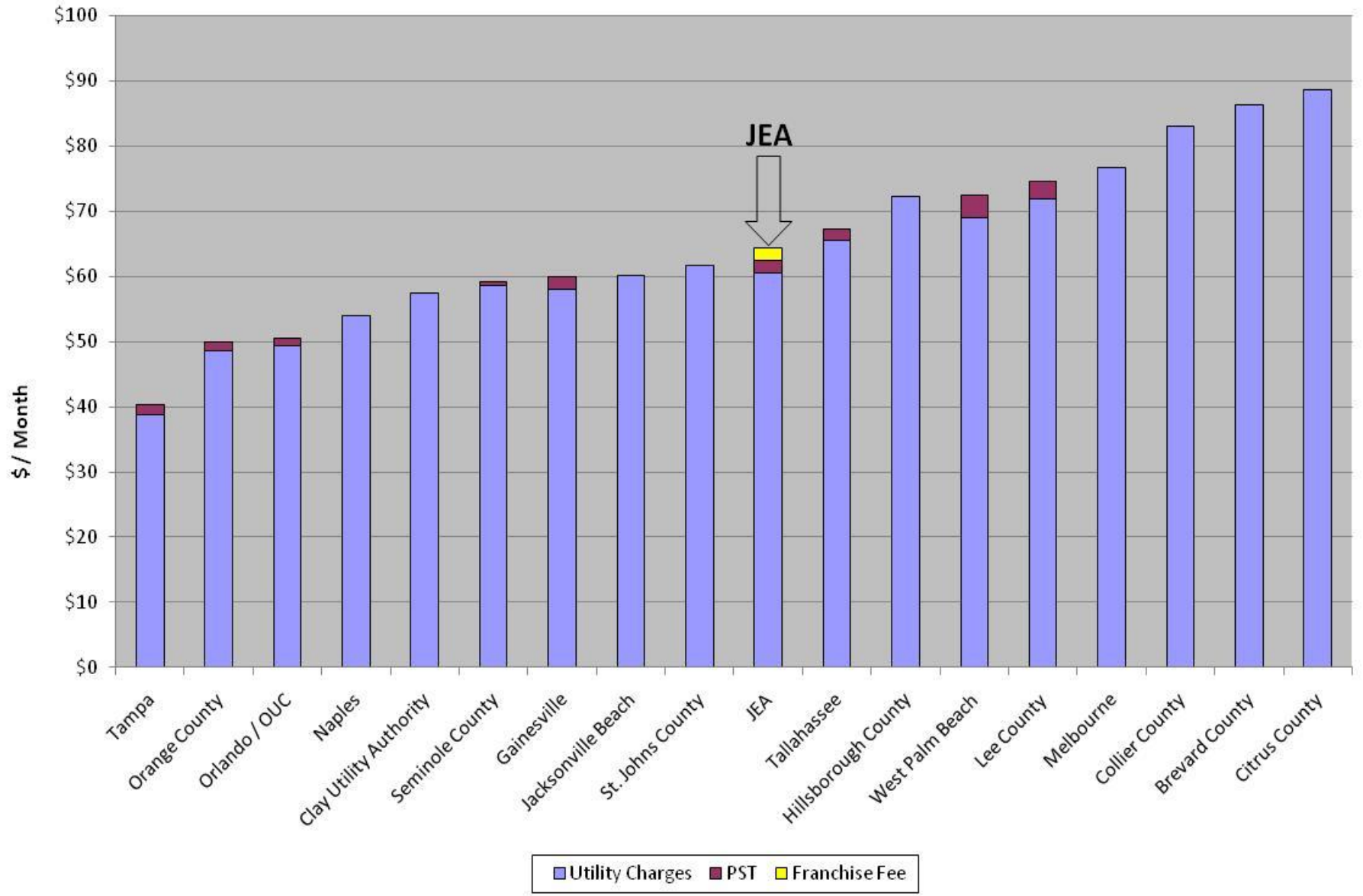
(Consumption @ 1,250 kWh)

Residential Rates as of September 2011



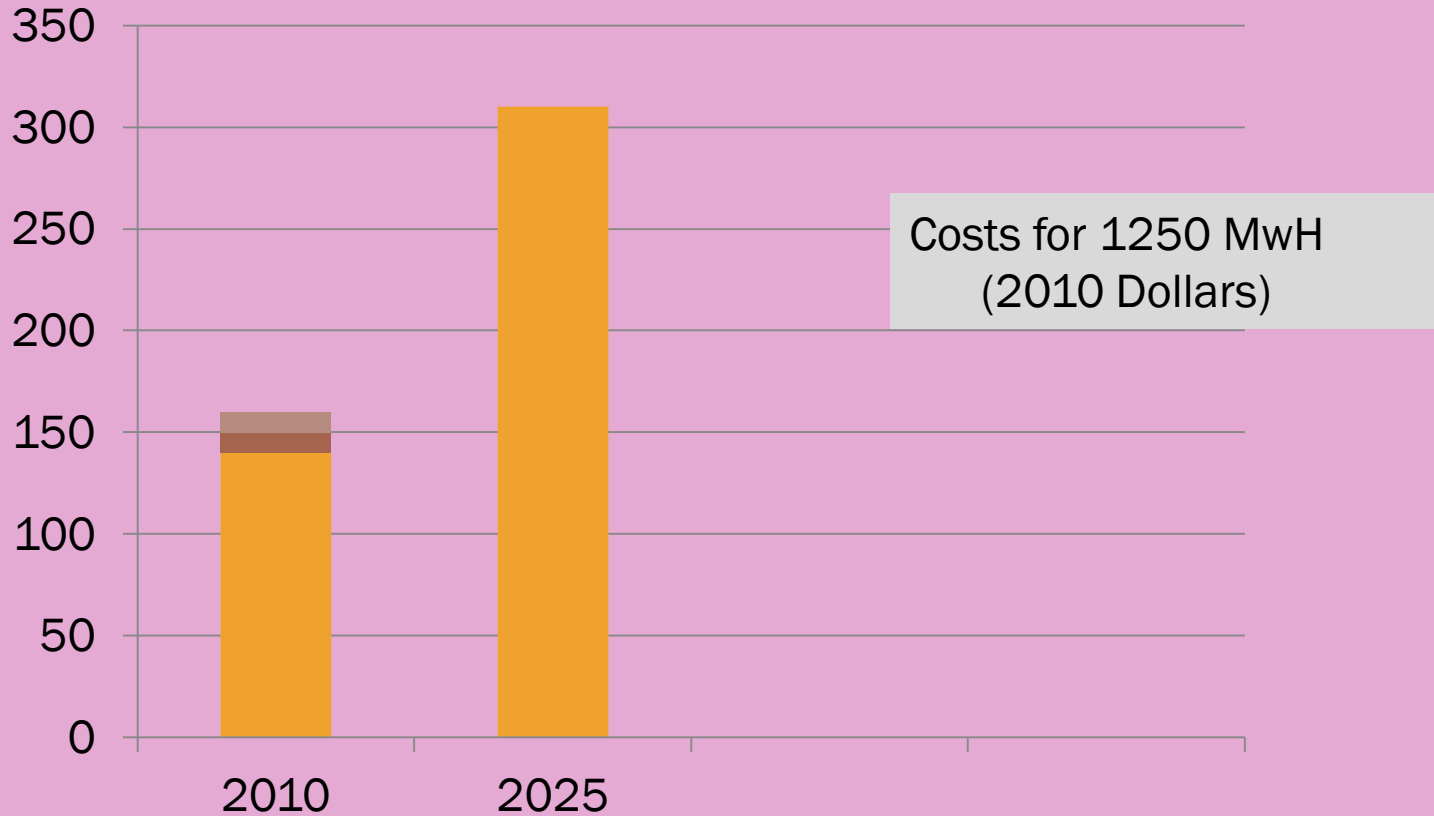
Water & Sewer Rates in Florida

Residential Service with a 5/8" meter and 6 kgals of Consumption
Residential Rates as of September 2011



2

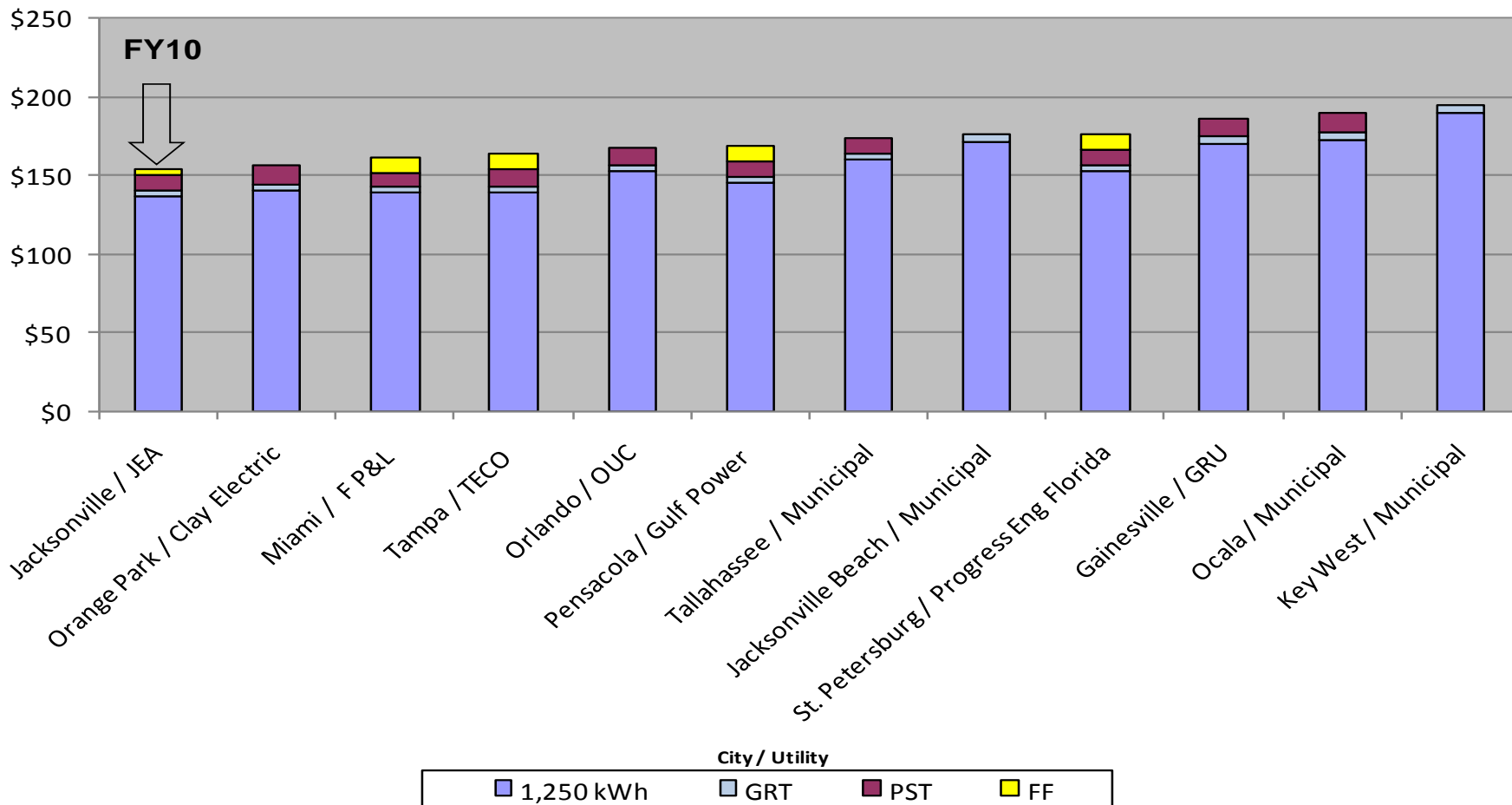
Your residential electric bill will double by 2025.*



*If current CO₂ and renewable energy, and other regulatory discussions leads to moderate legislative standards w/o modified user behavior, electric bill will double.

Florida Utilities Monthly Residential Electric Bill Comparison

(Consumption @ 1,250 kWh)
Residential rates as of January 2010



- For the five years ended October 2009 residential rates per 1,000 kWh increased from \$68.15 (Base \$49.65/Fuel \$18.50) to \$110.46 (Base \$65.68/ Fuel \$44.78)...plus GRT and PST...and a 3% COJ franchise fee was added in April, 2009.

REDUCING ELECTRIC CONSUMPTION

- Energy Awareness

- Energy Audits
- HVAC set points
- Clothes washing/drying
- Water heating
- Maintenance
- Building materials
- Ceiling fans
- Fireplace use
- Shading devices

- ...and technology

- Landscaping
- Distributed Generation
- Efficient Appliances
- Smart Appliances
- Insulation
- Smart HVAC Controls
- Building/Room sizes
- CFLs
- LEDs



2004 = 10 MW



2006 = 9.6 MW

2012 = 9.6 MW



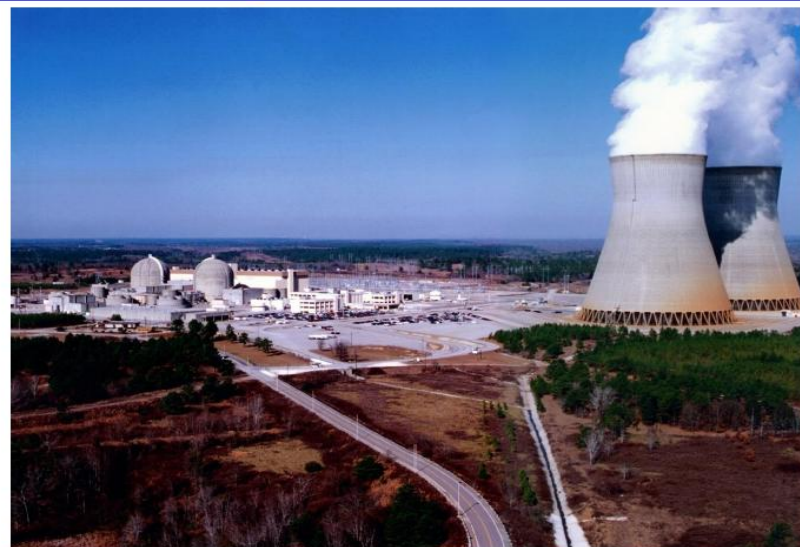
Duke Energy:
2021 = 206 MW
2022 = 206 MW



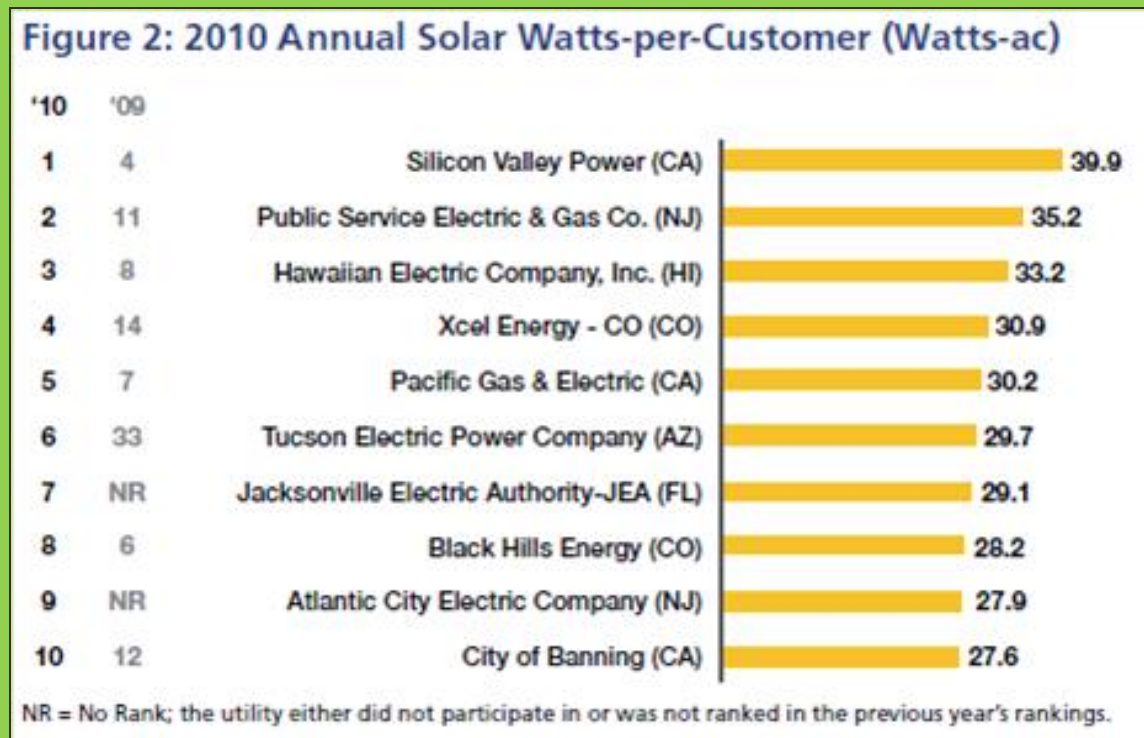
2010 = 12.5 MW

2016 = 103 MW & 2017 = 103 MW

MEAG PPA – Plant Vogtle

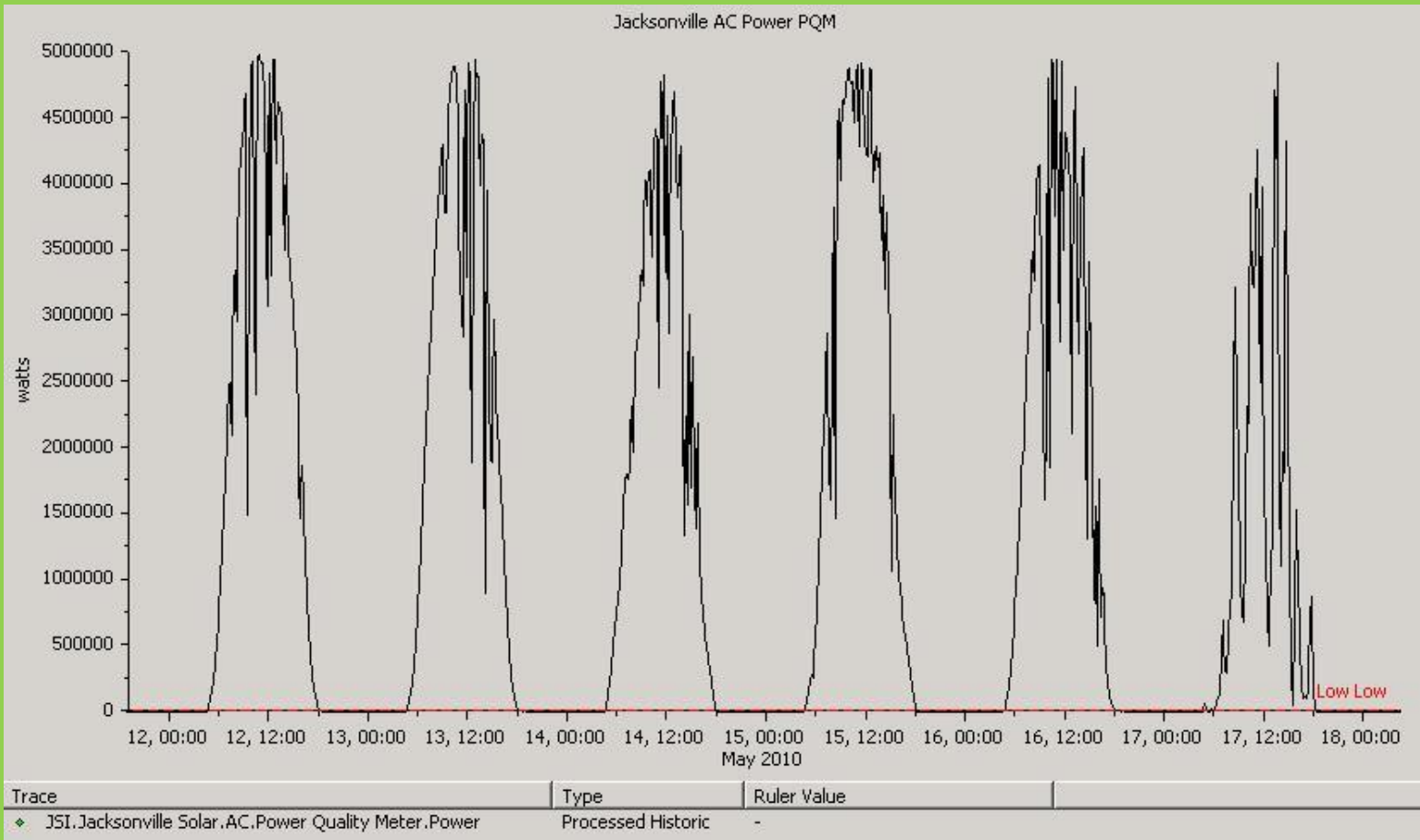


Solar Electric Power Association TOP 10 UTILITY SOLAR RATINGS 2010



“Jacksonville Electric Authority, in Florida, was the second-ranked municipal utility after installing a centralized 12 MW facility. Kauai Island Utility Cooperative, in Hawaii, and Kit Carson Electric Cooperative, in New Mexico, were the highest ranked cooperative utilities at #12 and #17.”

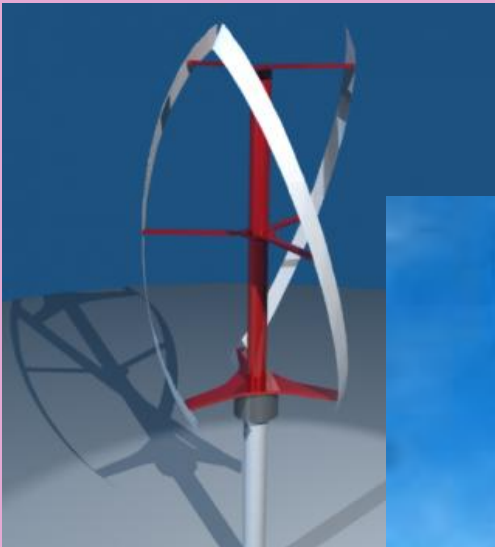
JACKSONVILLE SOLAR POWER OUTPUT VS. TIME MAY 12 - 18, 2010



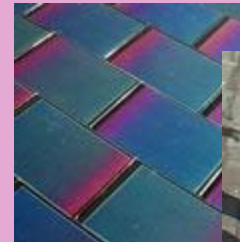
3

**YOU WILL HAVE A 1 IN 50 CHANCE
OF HAVING DISTRIBUTIVE GENERATION AT
YOUR HOME IN 2025**

+ WIND



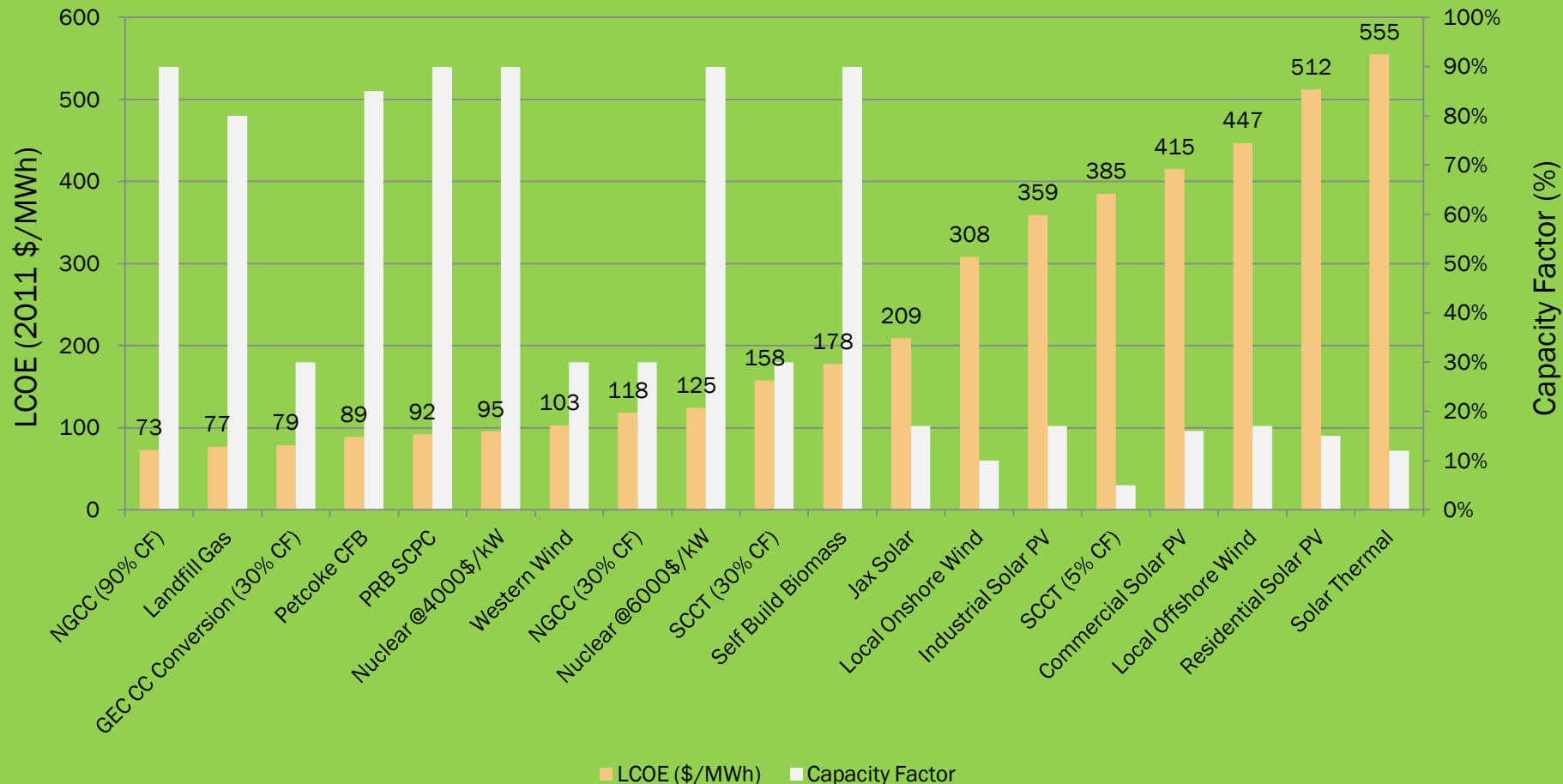
SOLAR



RESIDENTIAL DISTRIBUTED GENERATION: SOLAR & WIND

- ✘ PV/Solar Passive – Currently 606 in Jacksonville
 - Commonly cited number is 10% solar energy by 2025
 - The average availability of sun energy is 20% in FL
 - **Sept., 2011 Update: 877 in Jacksonville**
- Wind – Currently 2 units in Jacksonville
 - DOE looked at 20% by 2025: “It won’t be easy” reads as “It’s very expensive.”
- ✘ Residential Wind & Solar Energy Units will grow to 10,000 by 2025

ESTIMATED LEVELIZED COST OF ENERGY (LCOE) FOR VARIOUS RESOURCE OPTIONS (LEVELIZED 2011 \$/MWh)



All numbers are estimates generalized to approximate specific local conditions.

May 2011

I CAN REMAIN AFTER THE MEETING FOR.....

QUESTIONS?