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Southern Alliance for Clean Energy

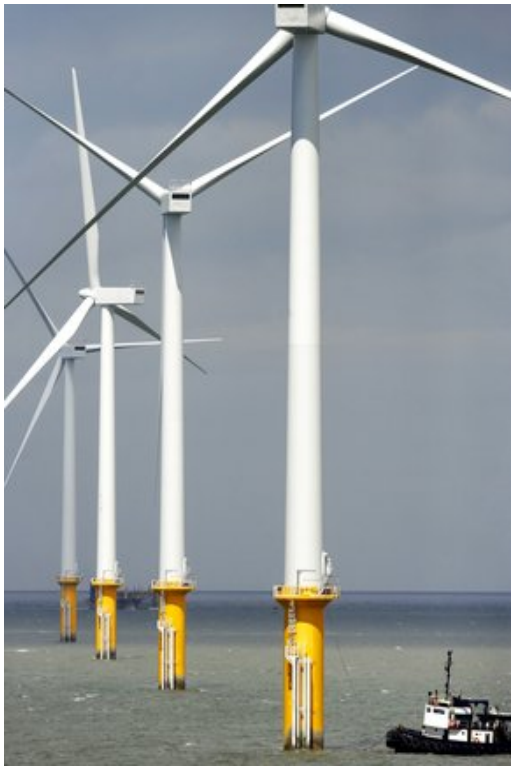
1% Energy Efficiency Target

October 24, 2012

About Us

- ***SACE promotes responsible energy choices that create global warming solutions and ensure clean, safe and healthy communities throughout the Southeast.***

- ***SACE has been a leading voice for energy policy to protect the quality of life and treasured places in the Southeast for over 25 years. Founded in 1985, SACE remains the only regional organization primarily focused on developing clean energy solutions throughout the Southeast.***



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Today's Presentation

Where did we start from?

Utility electric energy efficiency impacts in the Southeast were insignificant until about 2009

What does a 1% goal look like?

From mid 2009 to today, there has been a 270% increase in spending on efficiency and savings have gone from 0% - 0.70% of annual sales.

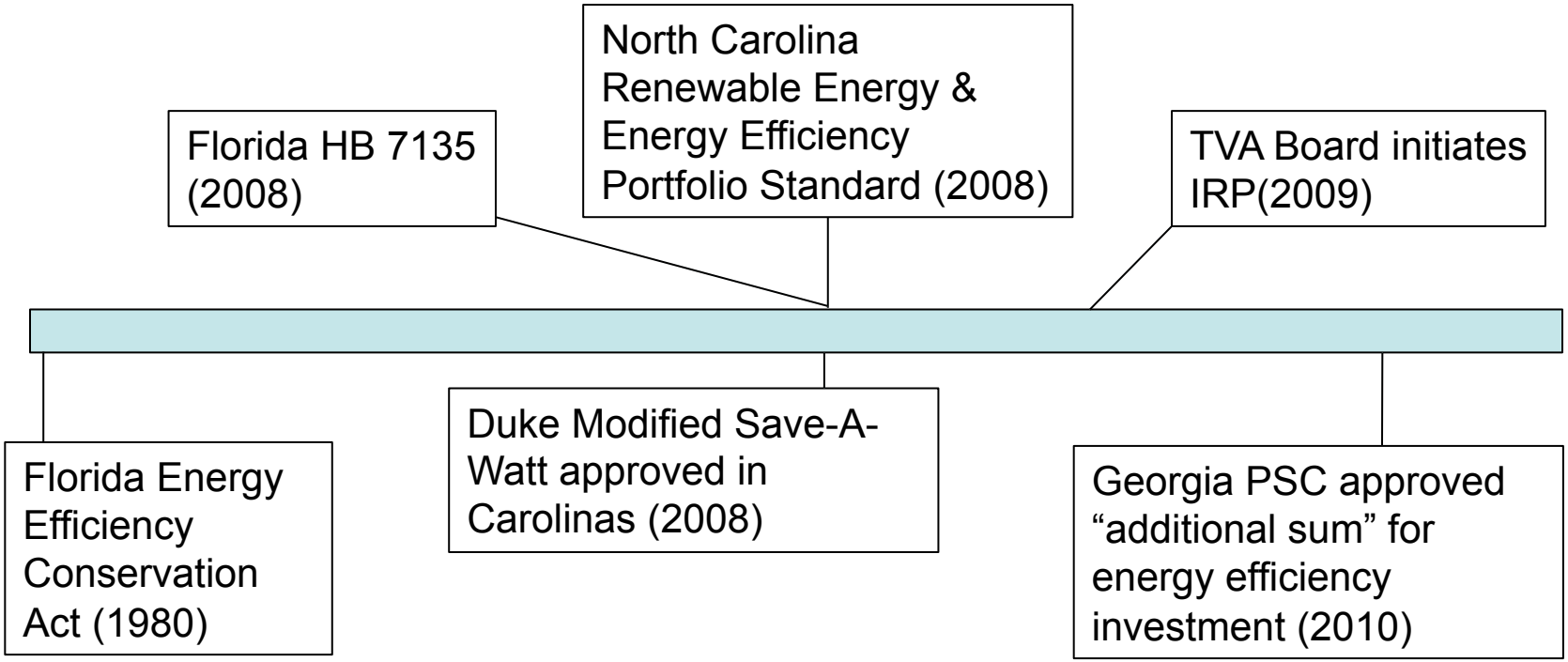
What are additional opportunities in the SE

Many opportunities remain for efficiency to be evaluated as a resource, transparency, program development and implementation.

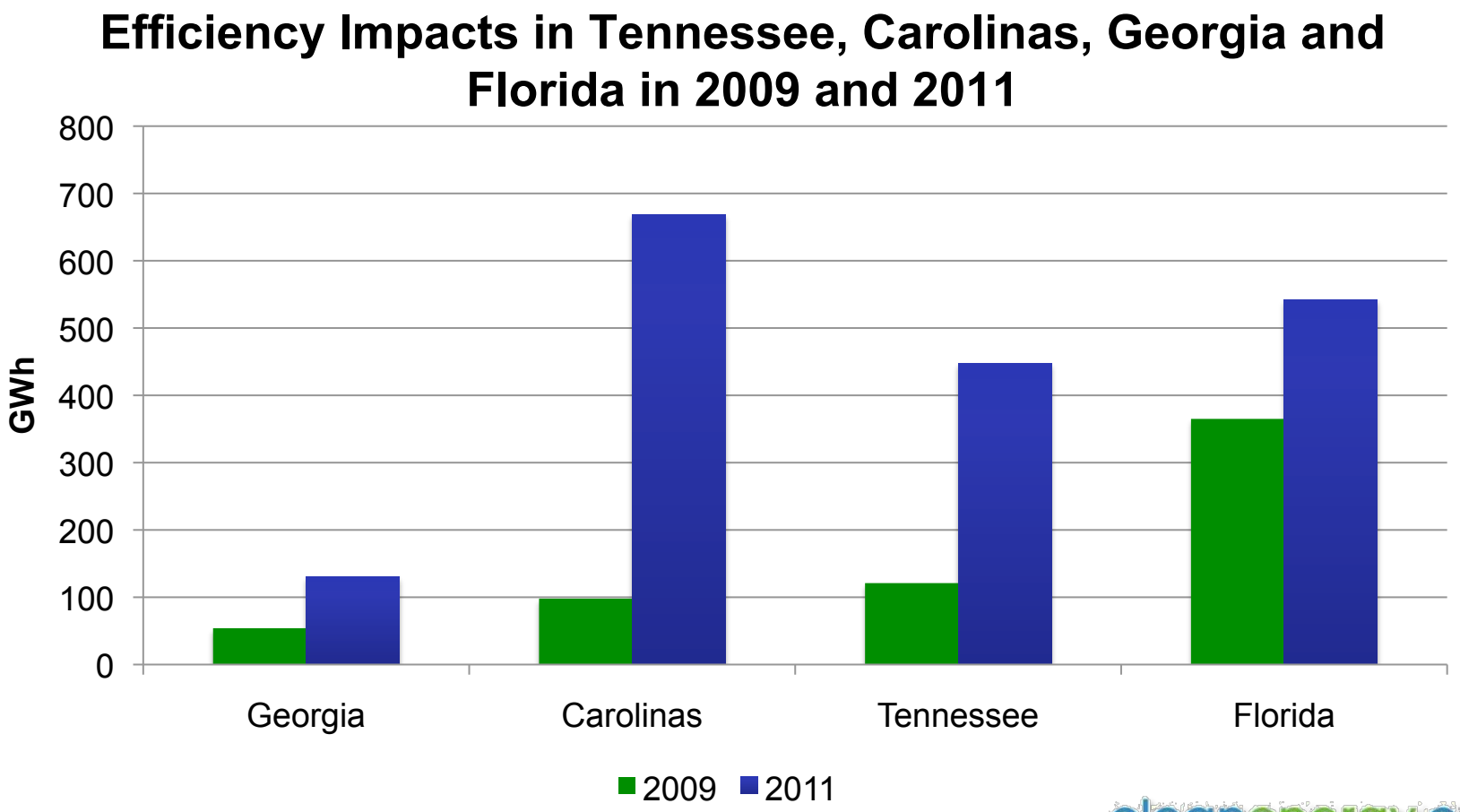
Efficiency impacts prior to 2009 were insignificant in the Southeast

- Few Southeastern states had supportive policy that required or provided incentives for utilities to save energy.
- Integrated Resource Planning was not Board policy for TVA (and still is not required in Florida).
- Five states (Tennessee, Carolinas, Florida, and Georgia) collectively spent less than $100M on EE in 2007.

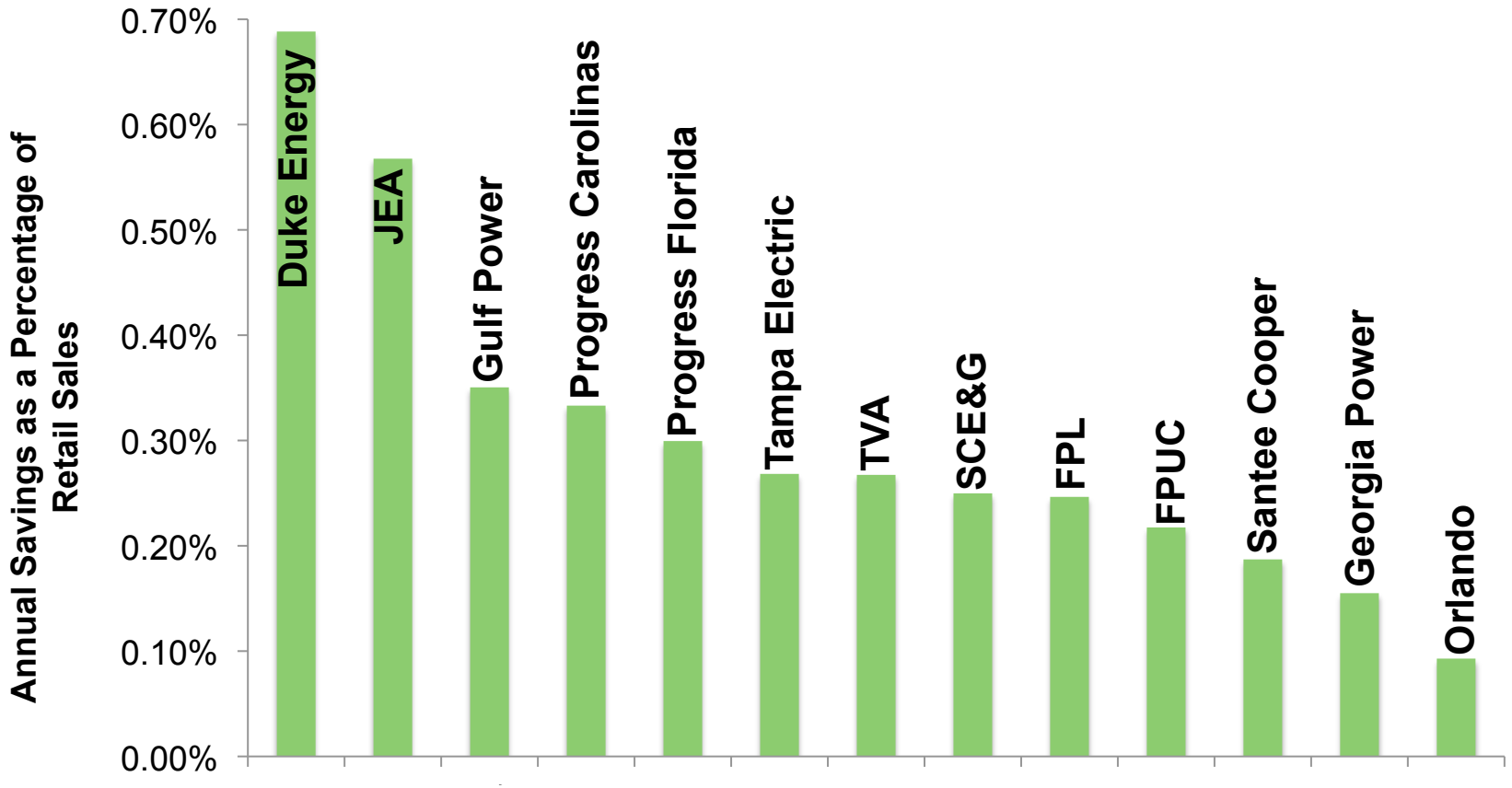
The policy tide began to shift in 2008



Since 2009, efficiency impacts in the Southeast have more than doubled



SACE's recent analysis on 2011 efficiency impacts puts Duke Energy as the leader in the Southeast



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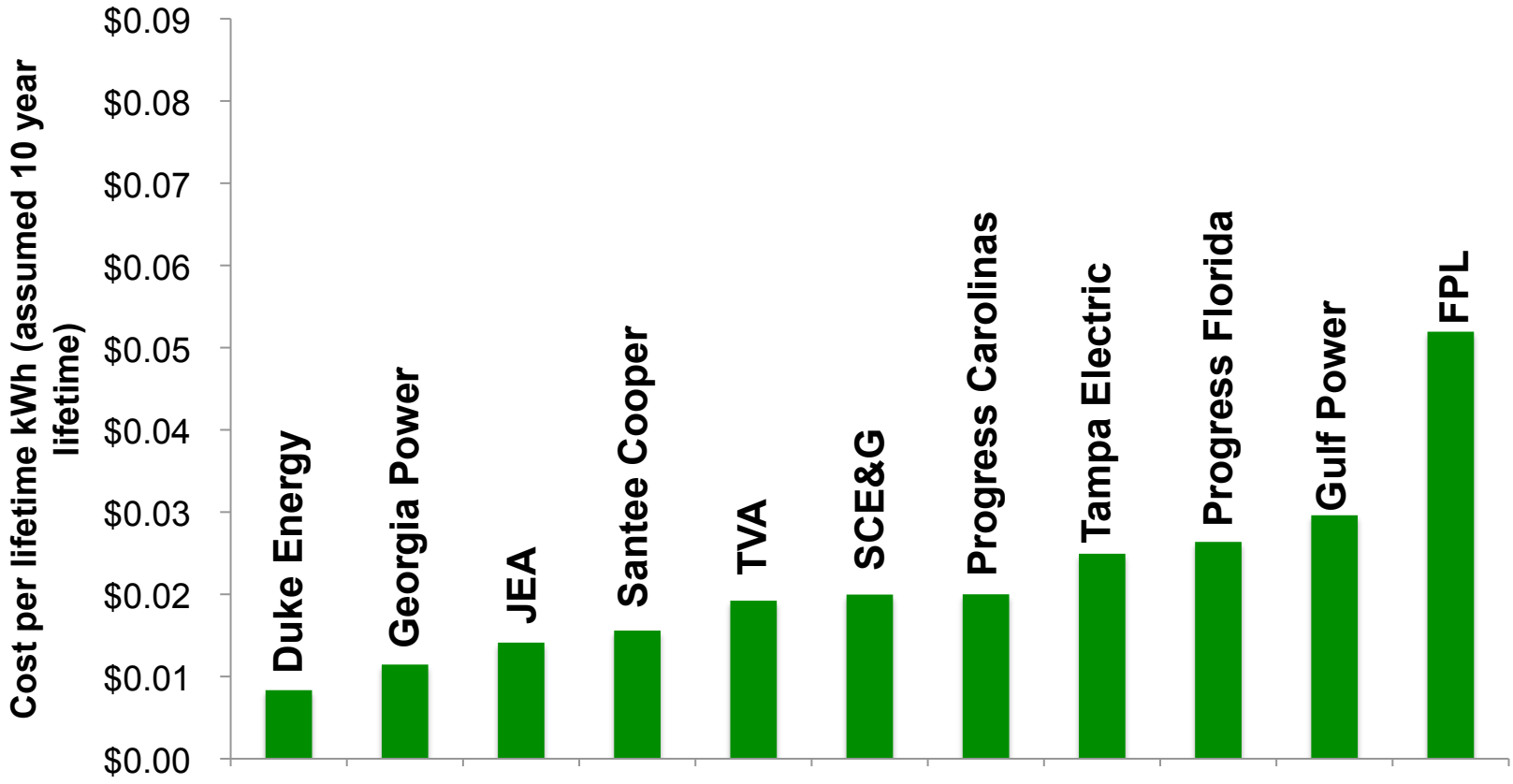
Duke Energy is also the leader in the Southeast in low-cost savings



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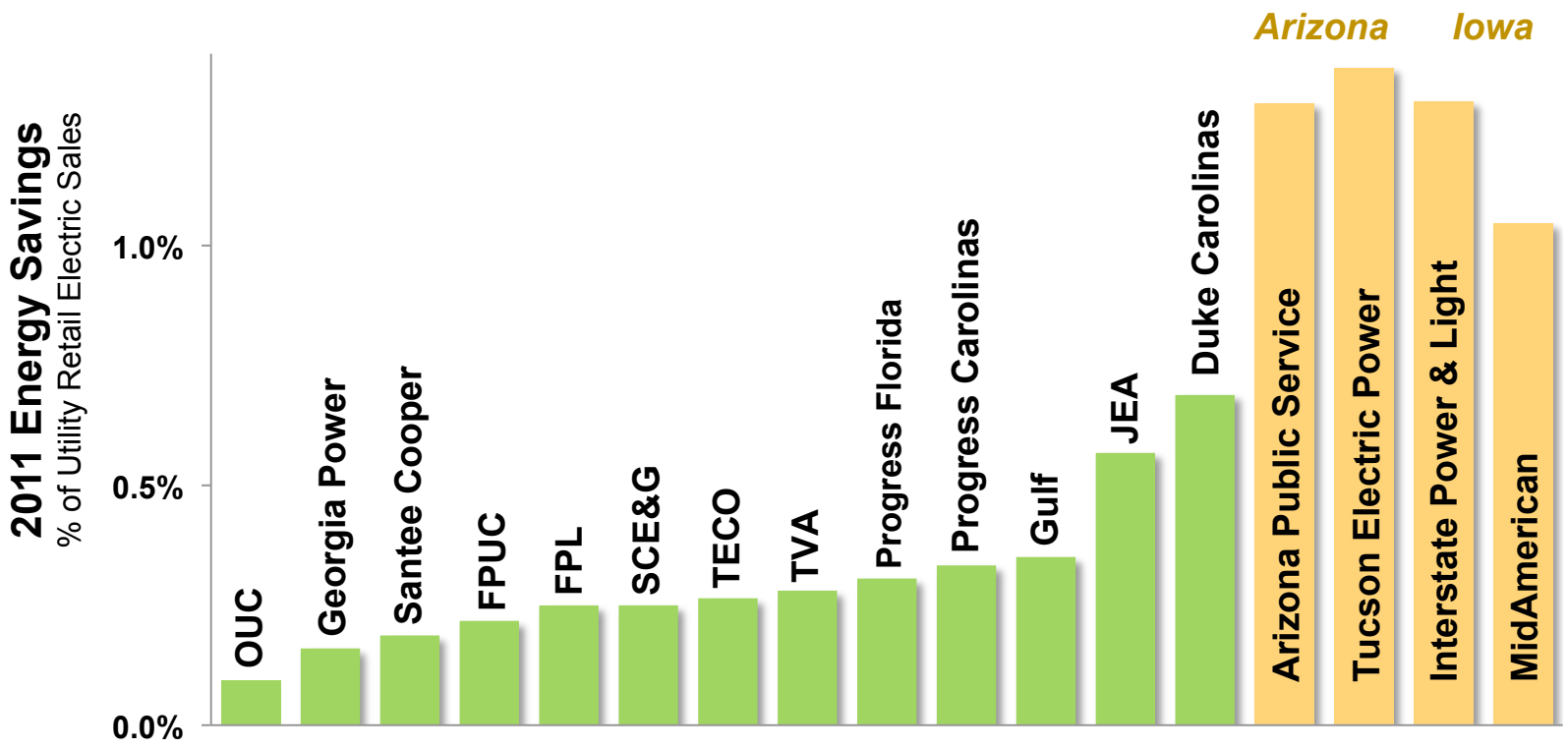
While much progress has been made, the leaders in the Southeast are still behind



SACE calculations based on 2011 program cost and energy savings reports filed by each utility.
Utility retail electric sales based on most recent publicly available retail sales data (ideally for 2011).

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1%

What is a 1% energy efficiency goal?

- **Capture enough energy efficiency to equal 1% of annual utility sales**
- **Can be 1% of utility sales in prior year, or 1% of year in the future**
- **Easier to calculate 1% savings of sales in prior year because**
  - Utility knows goal at beginning of year if based on prior year sales
  - More accurate than a sales number off in the future (for example, load projections changed significantly with economic downturn)

Can TVA achieve a 1% goal?

- **According to to TVA's energy efficiency potential study:**

Achievable High case forms the upper bound on the range of achievable potential. It is 7494 GWh in 2015, which represents 5% of the baseline forecast. By 2030, the cumulative savings are 35,781 GWh, 19.8% of the baseline forecast, for an annual average of just over 1% per year. By 2030, Achievable High completely offsets growth in the baseline forecast.

What is 1% of TVA's 2010 sales?

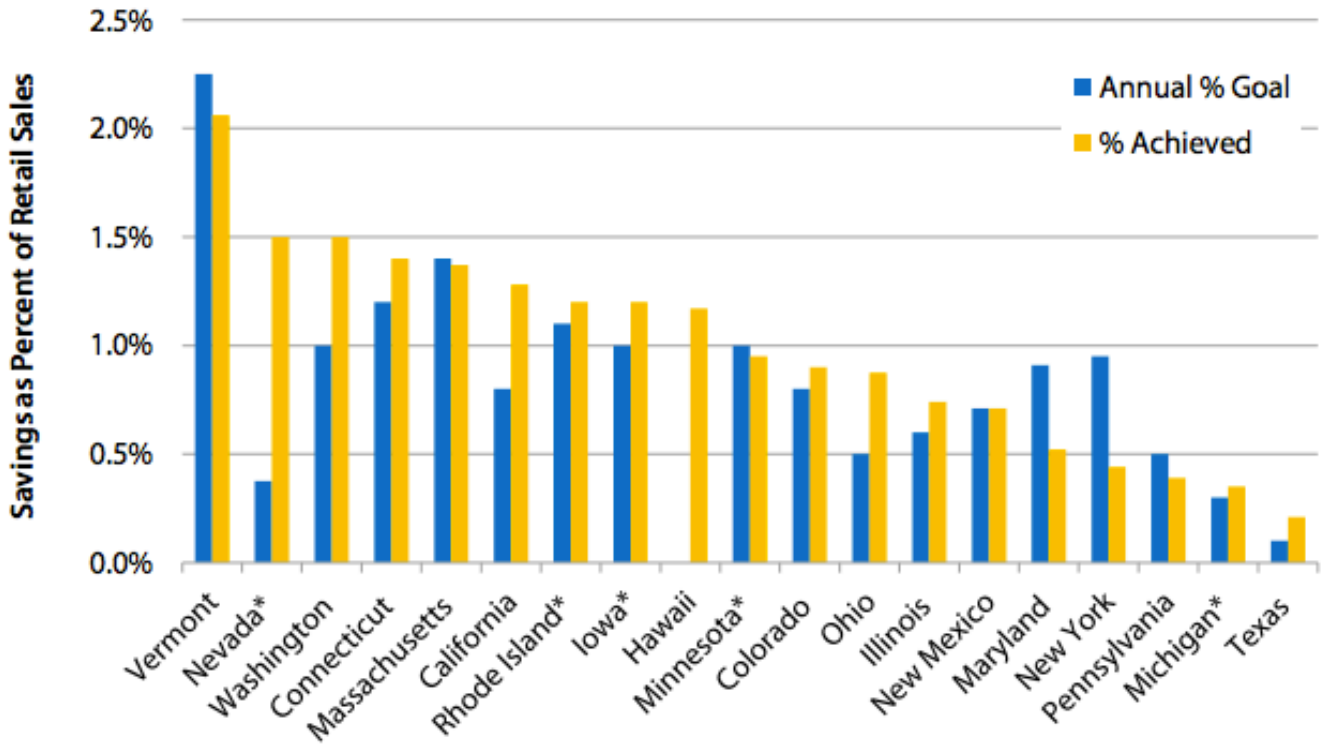
- Sales in FY 2010 were 147,421 GWh
- To achieve 1% of 2010 sales in 2011, TVA need to save 1475 GWh
- In 2011, TVA reported saving 426 GWh, excluding demand response
- This is about 0.29% of 2010 sales, or one third of the way to the goal

What is 1% of TVA's 2011 sales?

- Sales in FY 2011 were 167,730 GWh
- To achieve 1% of 2011 sales in 2012, TVA would need to save 1678 GWh
- In recent IRP meeting, TVA said they saved 560 GWh in FY12, or at about 0.33% of 2011 sales
- We won't know more about TVA's efficiency goal until after the 10K report is filed

Many states have achieved 1% of savings or have it as a near term goal

Figure 1: State EERS Targets vs. Achieved Savings in 2010[2]



*Base year for savings is 2009

From ACEEE, State Energy Efficiency Resource Standard Policy Brief, updated 2012


FUTURE

Regulators will play an important role in advancing efficiency

- Cost recovery on efficiency investment
- Return and/or performance incentive on efficiency investment
- Prudency review of new generation or power purchase agreements
- Approval of Integrated Resource Planning processes, which provide the 3-5 year vision of utility expenditures and planning
- Identify efficiency as a priority resource in the loading order

Moving forward, efficiency must play an increasing role in system planning

- **Coal retirements will play an important role in the SE in the near term**
  - 7700 MW of coal scheduled to retire by 2020
- **Efficiency must be used to replace coal, or at minimum offset load growth**
  - Need about 500 GWh of efficiency a year to offset the energy generated by 7700 MW*

* Assuming that coal retires and efficiency comes online linearly over the next 8 years. For discussion purposes only.

Increased transparency is critical to assessing efficiency impacts

- **Southern Company, in particular Alabama Power and Mississippi Power need to increase transparency on all aspects of energy efficiency**
- **TVA is not a IOU regulated utility so more difficult to obtain information if they do not readily provide it**
- **Florida lacks transparency on EM&V and utilities inconsistently report information**

Utilities must continue introducing new programs and use innovative implementation

- **Plug load programs**
- **On-Bill Financing and flexible loan terms**
- **Targeted Rebates**
- **Right-sizing and Quality Installation incentive**

Industrial efficiency and CHP are required to achieve our clean energy future

- **Few required industrial efficiency programs in the Southeast**
- **Industrial efficiency is often the lowest cost resource of all efficiency, and may be least captured by utilities in Southeast**

State	Percentage Lost Coal Capacity Potentially Replaced with CHP
Alabama	51%
Georgia	40%
North Carolina	56%
South Carolina	100%

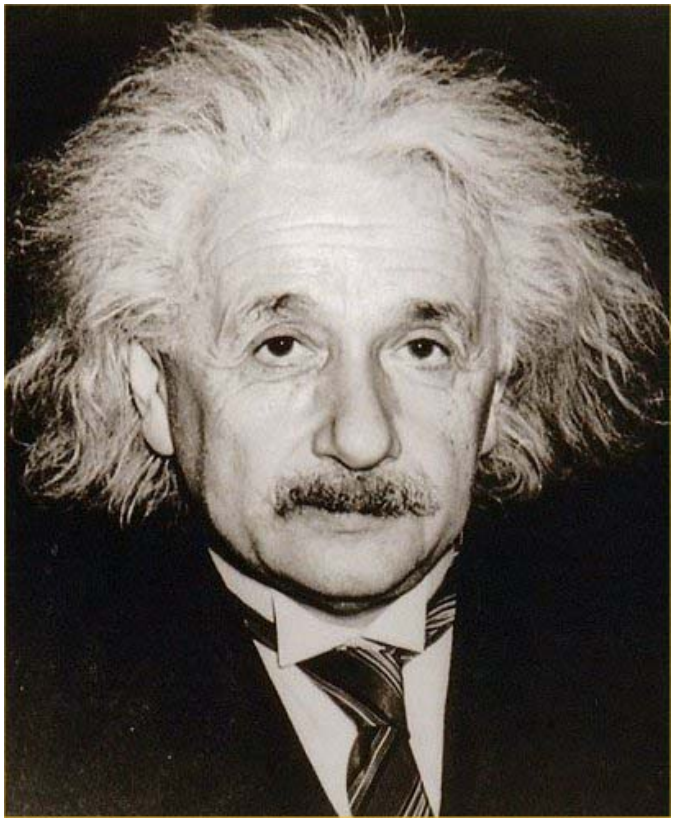
Increased emphasis on distribution planning and smart grid infrastructure

- **Distribution planning provides insights into the real value of efficiency (and distributed resources)**
- **Efficiency deployed in an area of constrained distribution may be worth much more to the utility**
- **Two-way communication infrastructure will enable demand response to be a dispatchable resource**

SACE remains engaged on many of the efficiency issues in the Southeast

- **Rate Impacts**
  - Fairness / cross subsidization
  - Free market ideology
- **Utility Financial Incentives**
  - Shareholder return
  - Lost revenues
- **Resource Planning**
  - Value of energy efficiency
  - Priority of energy efficiency
- **Accountability**
  - Verification
  - Cost management
- **Program Planning**
  - Scope of programs
  - Customer engagement
- **Large Customers**
  - Resistant to rate impacts
  - Necessary for success

Questions?



The important thing is not to stop questioning. Curiosity has its own reason for existing.

Albert Einstein

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