

# Challenges for Municipal Electric Utilities (like Tallahassee) to Address Pending Energy Policies

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# Electric Utility Overview

- 113,000 Electric Customers
- 221 Sq. Mile Service Territory
- 620 MW Peak Demand
- 800 MW of Generation
- FY 2008 Revenue \$405 million

# Energy Policy Issues

- Climate Change
- Renewable Portfolio Standards
- Energy Efficiency & DSM

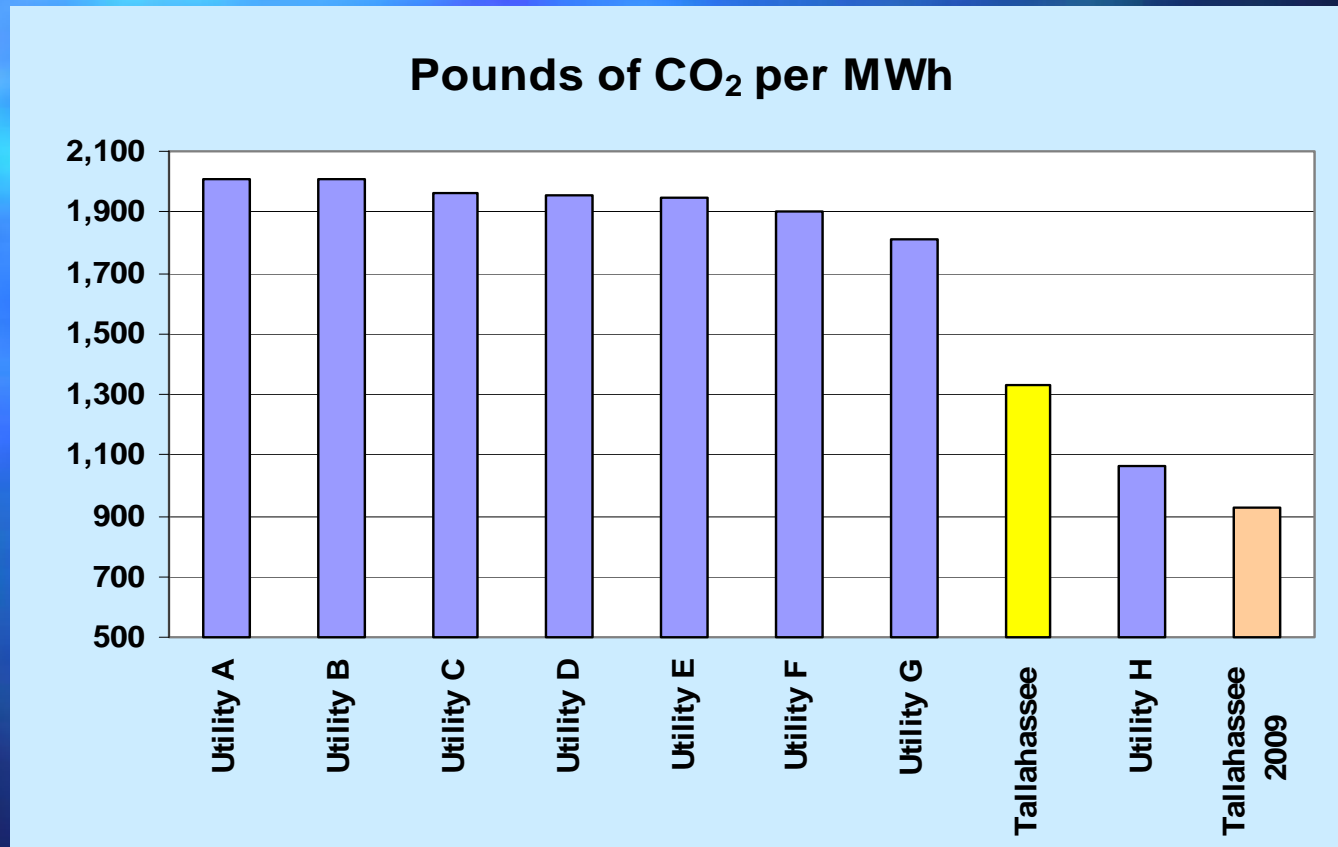
# Issue: Climate Change – Carbon Regulation

- Tallahassee Generating Fleet:
  - 98% Natural Gas + small hydro and solar
  - 75% of the fleet - average age 3.5 years
  - 75% of the fleet – average Heat Rate of 7,900 btu/KWh
  - Carbon intensity for 2009 projected at 930 lb/MWh



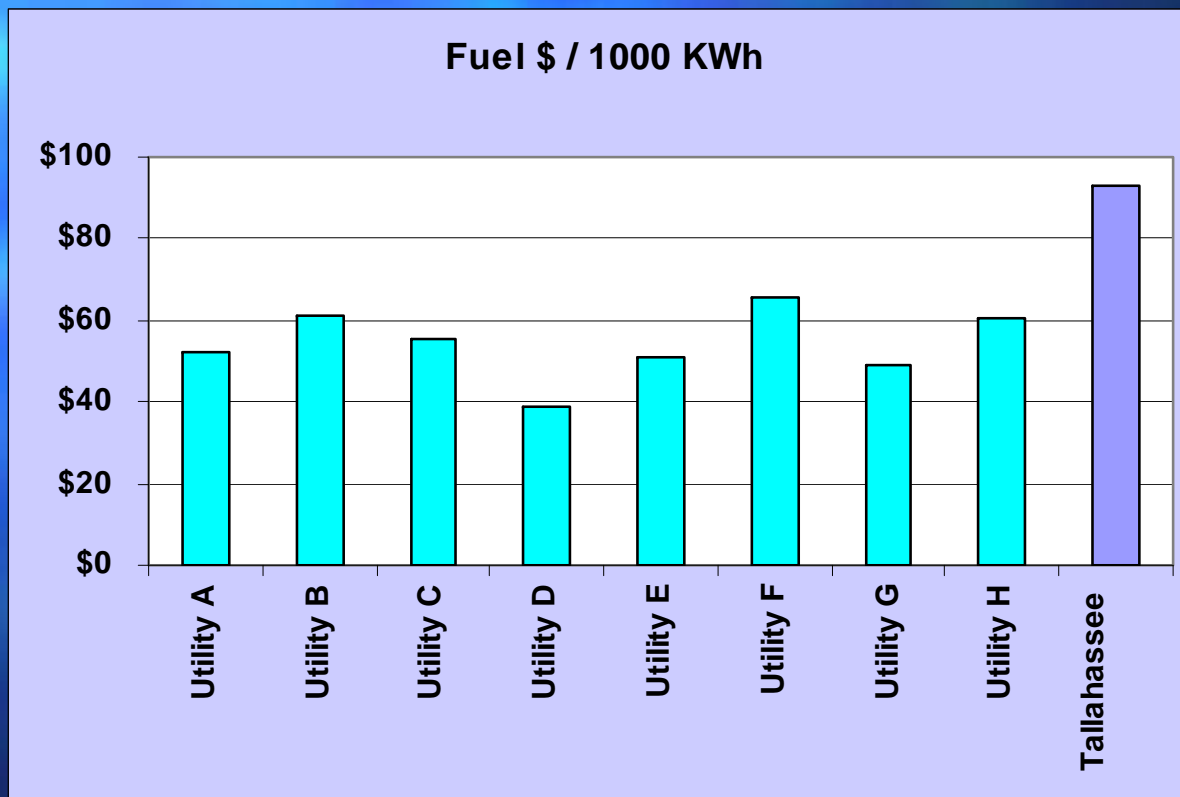


# Issue: Climate Change - Carbon Regulation



Source: Carbon Monitoring for Action (CARMA) Website.

# Issue: Climate Change - Carbon Regulation



Source: FMEA Rate Comparisons November 2008



# Challenge: Climate Change – Carbon Regulation

- Tallahassee vs. Florida Large Utility Average
  - Residential customer (1,000 KWh/month):
    - 10,000 lbs less CO<sub>2</sub> per year
    - \$460 more per year
  - Commercial Customer (15,000 KWh/month)
    - 162,000 lbs less of CO<sub>2</sub> per year
    - \$7,000 more per year

# Challenge: Climate Change - Carbon Regulation

- Tallahassee vs. FL Large Utility Average
  - Very large customer (230 GWh per year)
    - 104,000 tons less CO<sub>2</sub> per year -  
equal to parking > 14,000 cars per year
    - \$8.9 million more per year

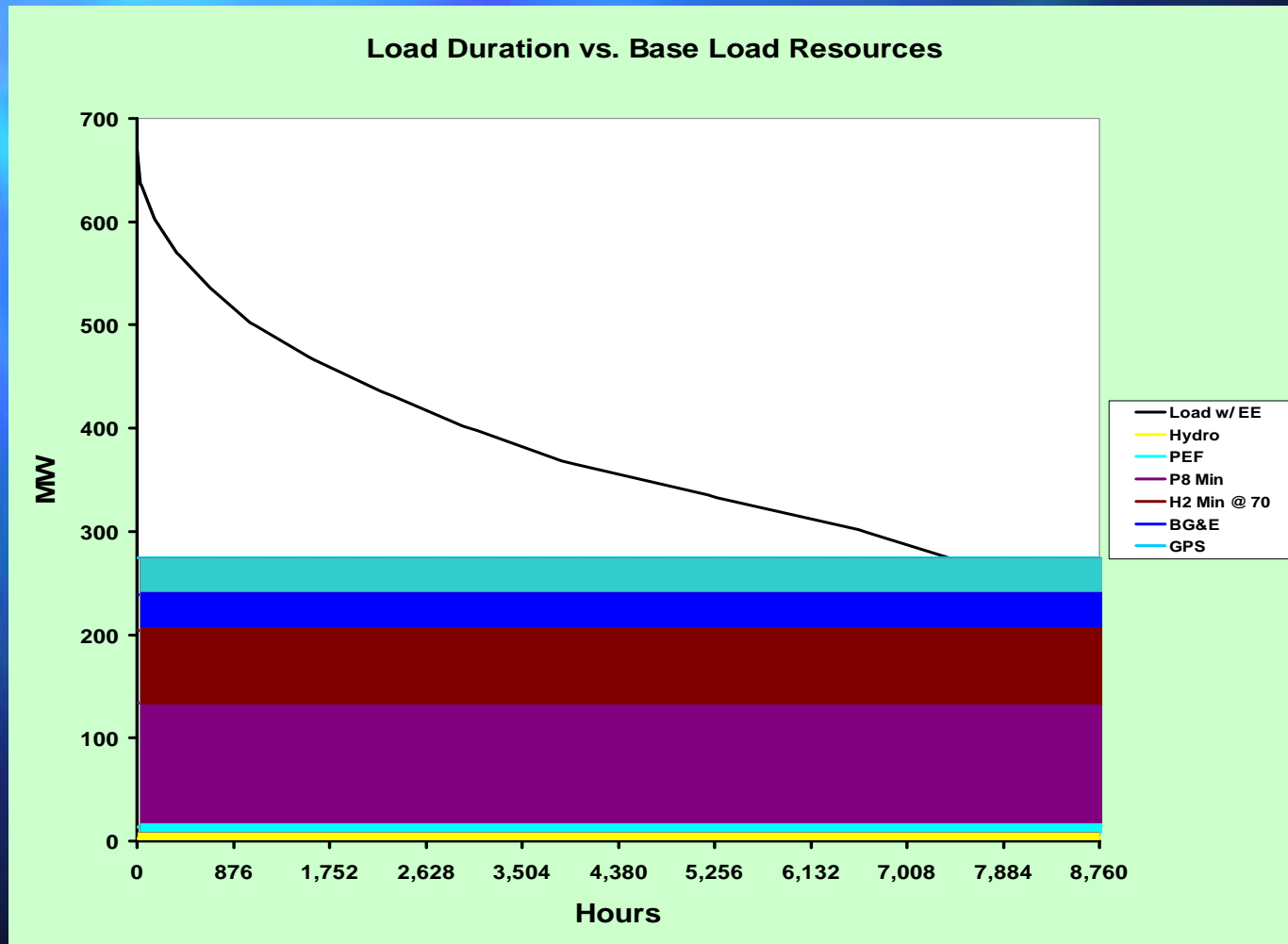
# Issue: Renewable Portfolio

- Tallahassee Renewable Resources
  - 11 MW Hydro
  - 50 KW Utility owned PV
  - 200 KW Customer owned PV
  - Schools on Solar
  - Contracts for energy from 2 Biomass Facilities (75MW)





# Challenge: Renewable Portfolio



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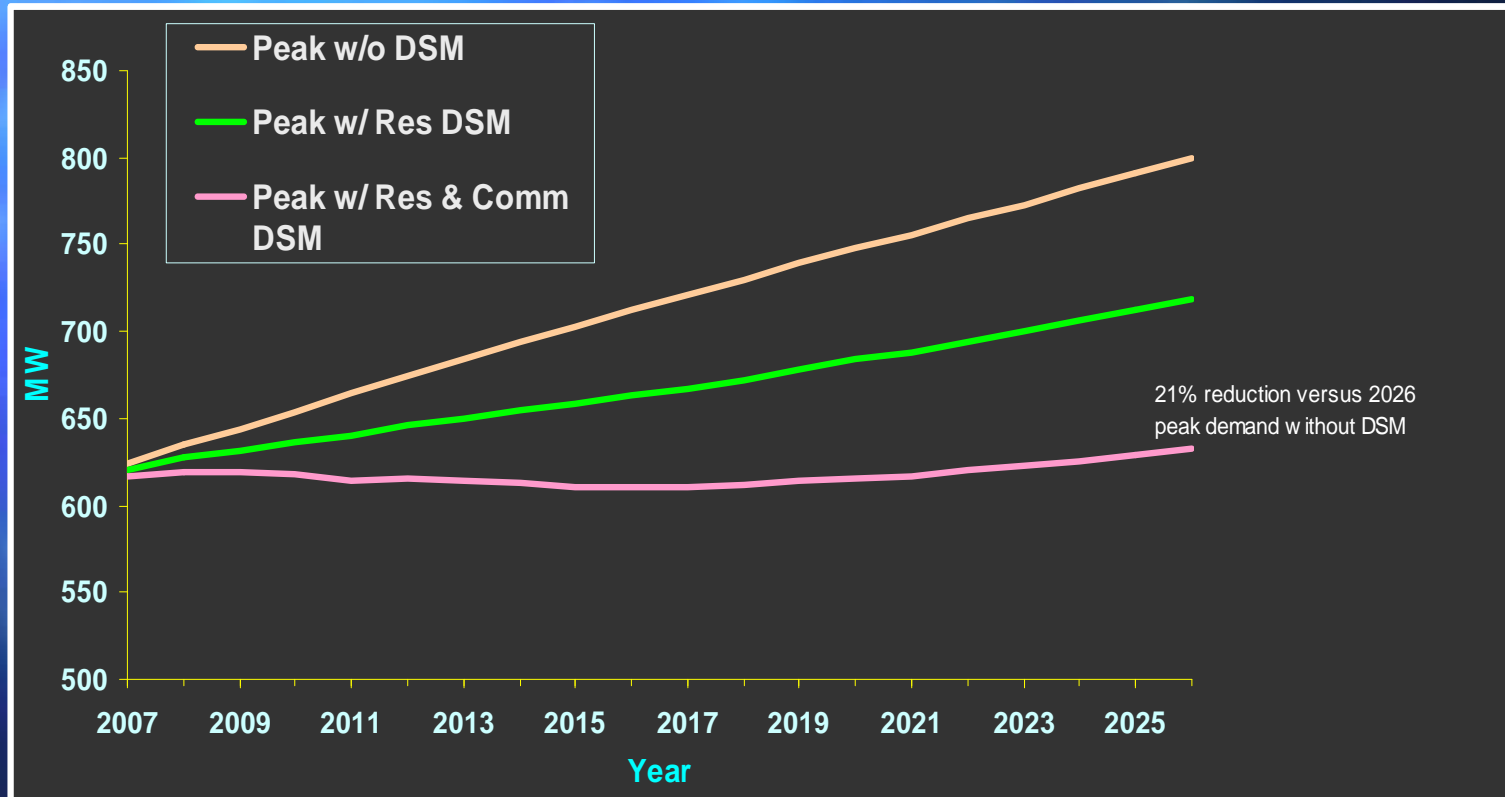
- Cost
- Availability
- Siting
- Reliability
- Impact on Dispatch

# Issue: Energy Efficiency and Demand Side Management

- Tallahassee 20 year DSM Plan projected to provide significant benefits
  - Demand savings of 167 MW (21% of 2026 peak)
  - Energy savings of 561 GWh (14% of 2026 sales)
  - Eliminates need to add resources until 2016 based on latest load forecast



# Issue: Energy Efficiency and Demand Side Management



# Issue: Energy Efficiency and Demand Side Management

- Electric Peak Reduction: 59 MW (year 5)
- Energy Savings: 146,000 MWh (year 5)
- Annual Spending: \$10 million/yr (avg.)
- Fuel Savings: >\$10 million (year 5)
- CO<sub>2</sub> Reduction: 125,000 Tons (year 5)

# Challenge: Energy Efficiency and Demand Side Management

- Cost
  - Smart Metering - \$35 million
  - 20 year DSM program cost ~ \$150 million NPV
- Customer Acceptance
- Technology Availability & Support

# Representative Tallahassee Sustainability Programs

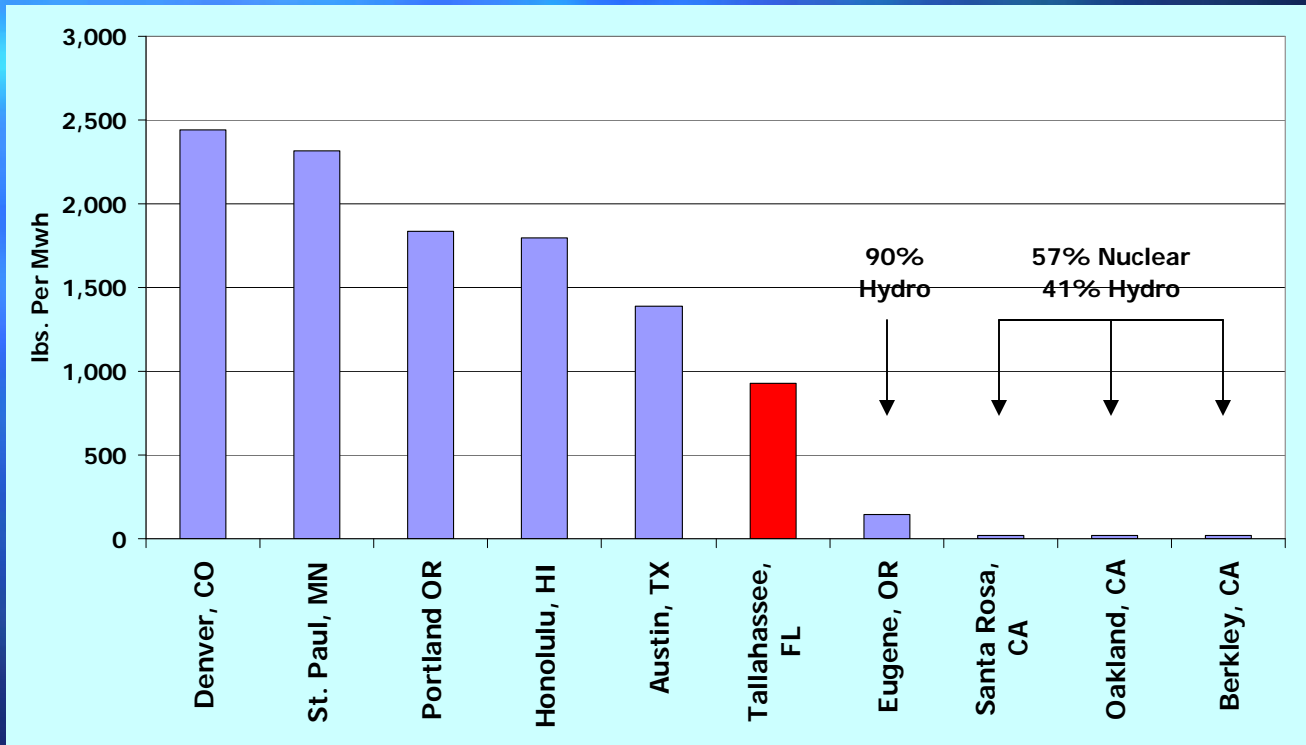
- Hopkins Generating Station Unit 2 Repowering Project
- C.H. Corn Hydroelectric Generating Station
- Smart Metering
- Biodiesel Fleet Fuel Processing Plant
- CFL Distribution and Retail Discount Programs
- Mayors' Energy Conservation Challenge
- Schools on Solar
- Tallahassee Neighborhood Energy Challenge
- Building Efficiency and Demand-Side Management
- SmartBill

# Tallahassee Sustainability Awards

- U.S. Environmental Protection Agency's First Excellence in Site Reuse Award
- U.S. Green Building Coalition's Leadership in Energy and Environmental Design Award
- Florida Green Building Coalition's First Green City Gold Certification
- Sustainable Florida's Best Practice Award (Government)
- Recycle Florida Today's Waste Reduction Awards (Government & Partnership)



# Top 10 Green Cities in the U. S. Utility CP<sub>2</sub> Emission Rates



Source: National Geographic "Green Guide" 2006; and CARMA – Carbon Monitoring for Action Website



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Questions?