Utility Losses – A Florida Prospective

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Commissioner
Florida Public Service Commission

Florida Public Service Commission

Gubernatorial Appointees Confirmed by Senate

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Eduardo E. Balbis

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The PSC was established in 1887 and regulates:

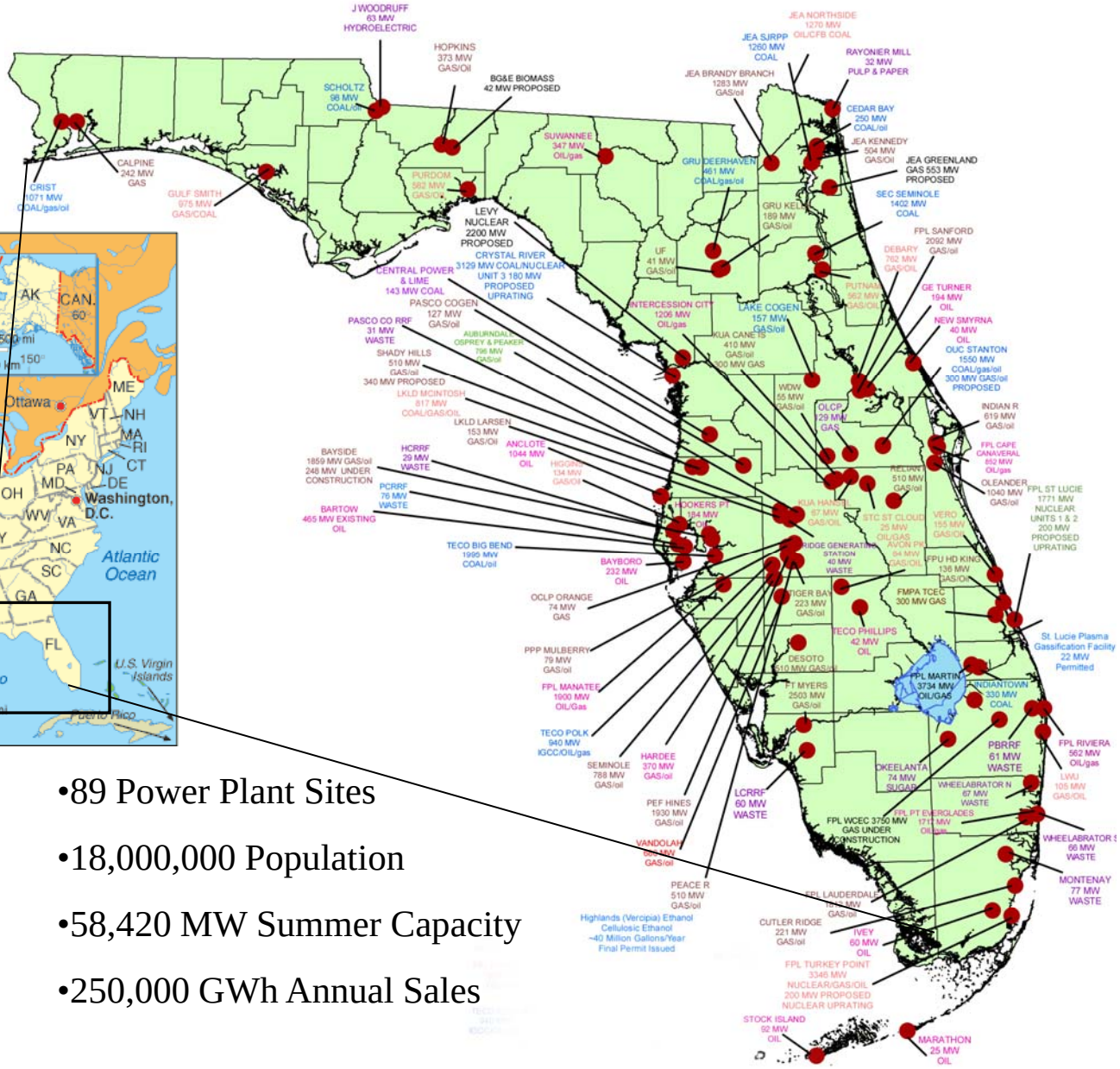
Electric

Natural Gas

Water & Wastewater

Telecommunications

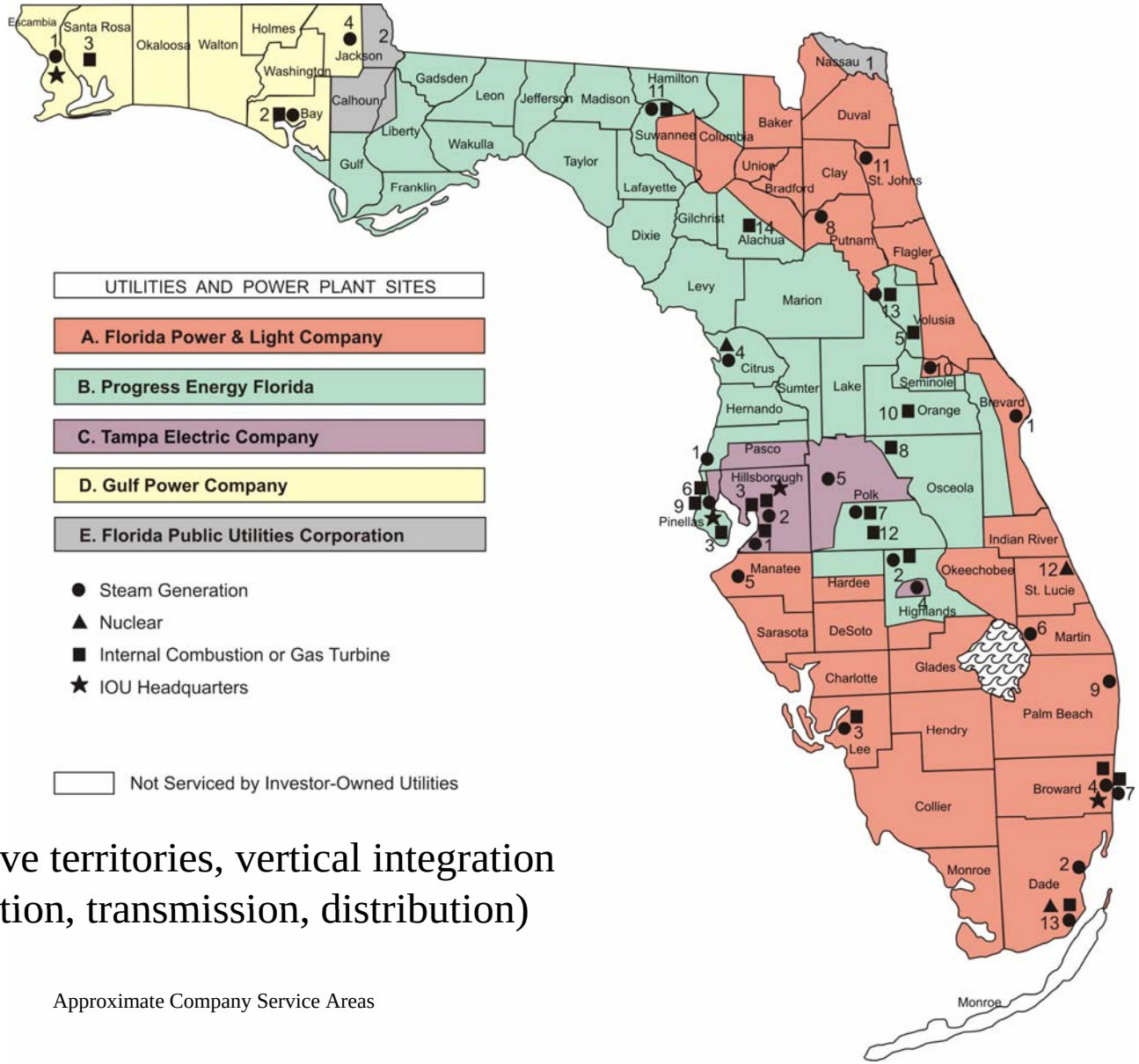
Florida Statistics



- •Peninsula
- •Very little interconnection
- • 88% Fuel is imported

- •89 Power Plant Sites
- •18,000,000 Population
- •58,420 MW Summer Capacity
- •250,000 GWh Annual Sales

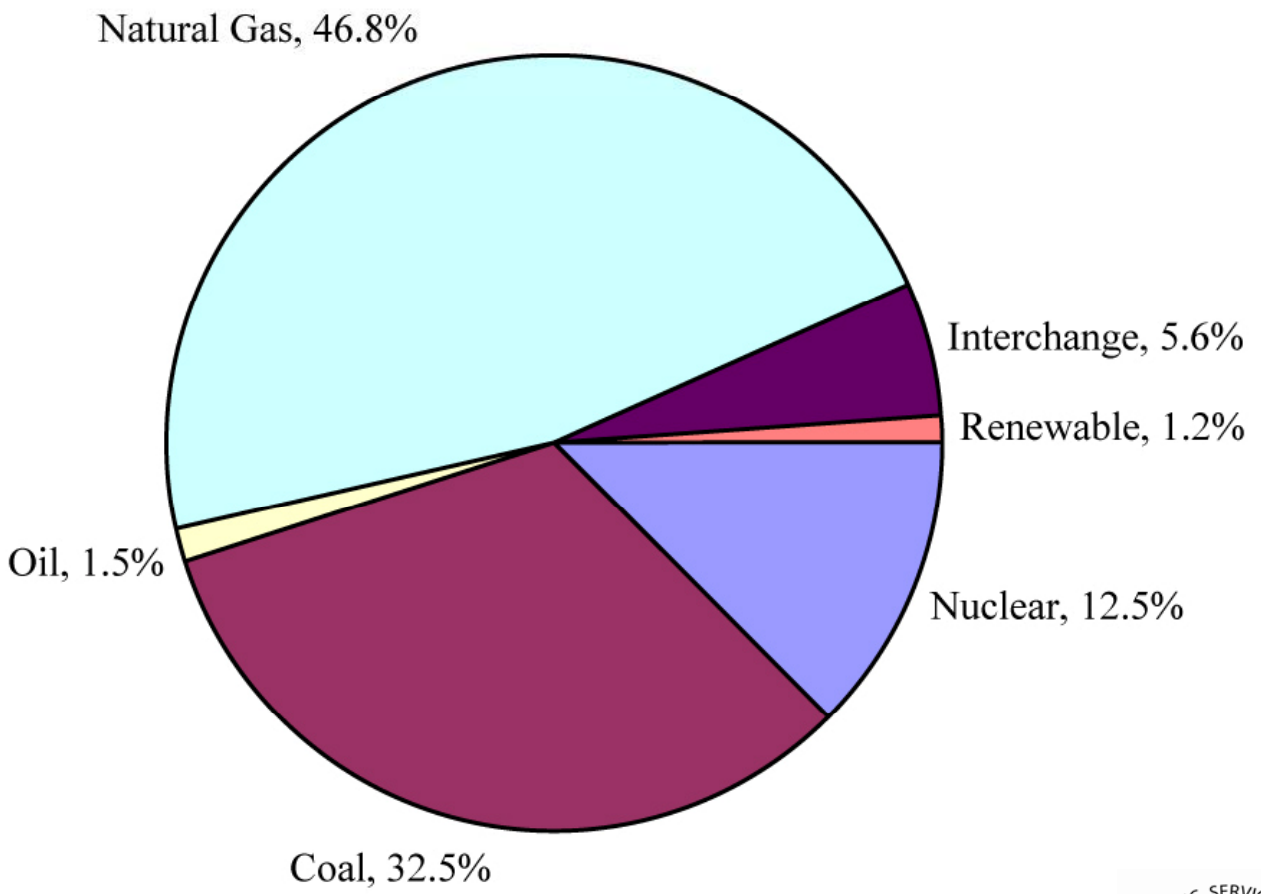
Investor-Owned Electric Utilities



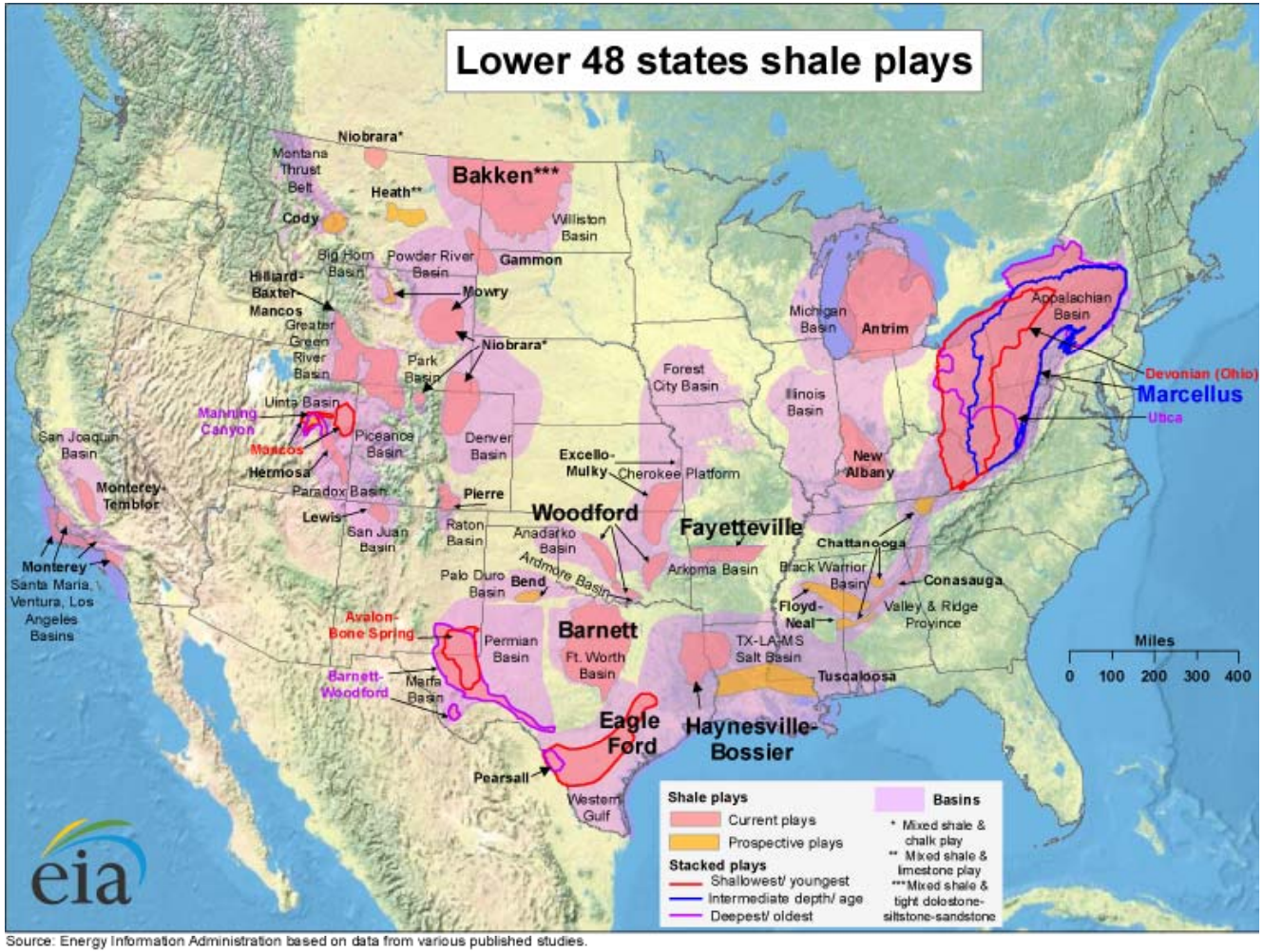
Exclusive territories, vertical integration (generation, transmission, distribution)

Approximate Company Service Areas

Statewide Generating Fuel Portfolio – 2011



Shale Gas Developments – Location of Shale Gas



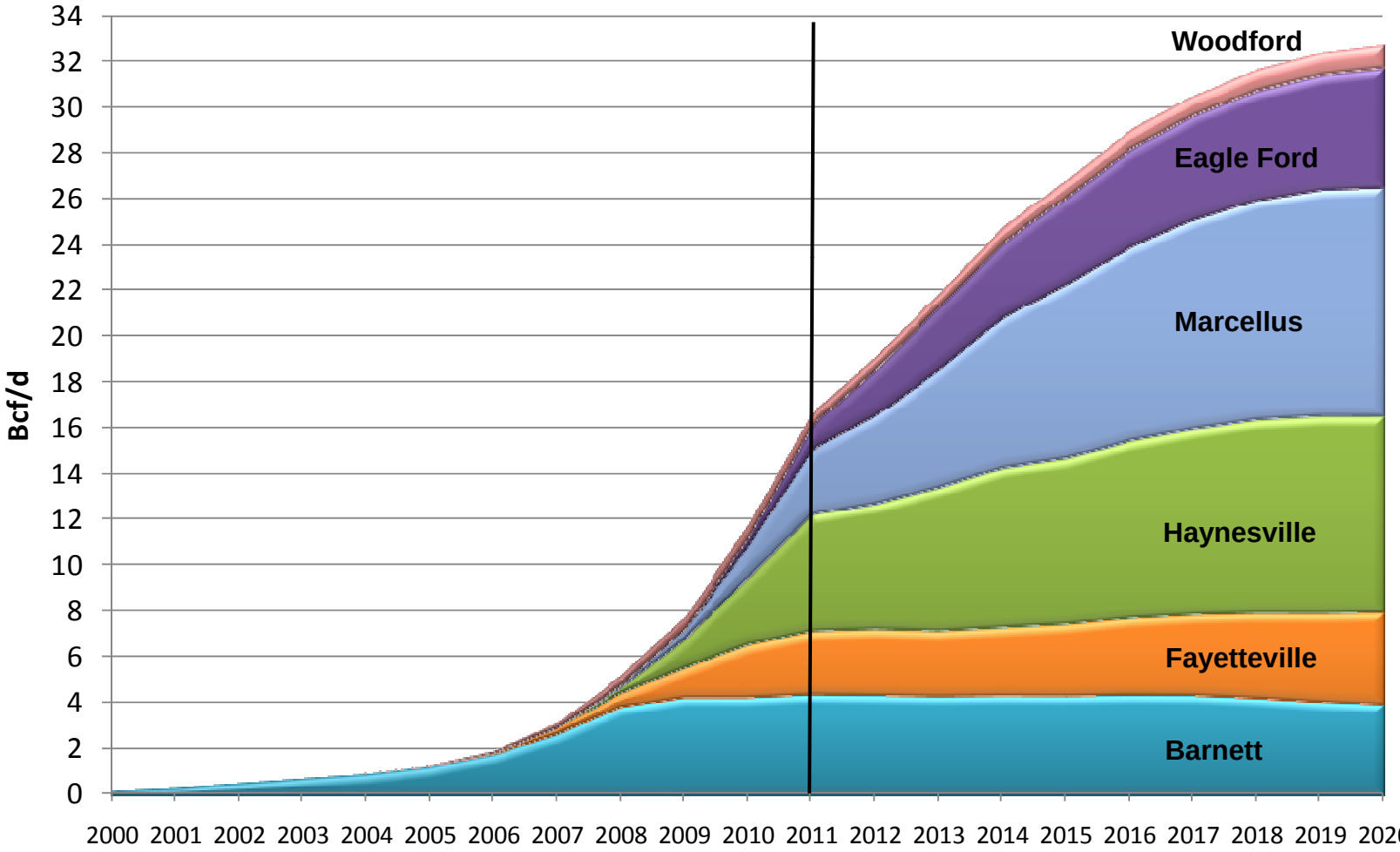
Source: Energy Information Administration based on data from various published studies.
Updated: May 9, 2011

Current
Major Shale Plays:

- Barnett
- Fayetteville
- Haynesville
- Marcellus
- Eagle Ford
- Woodford

Shale Gas Developments – Estimated Growth by Basin

Estimated growth of nearly 15 Bcf/d from 2005 to 2011



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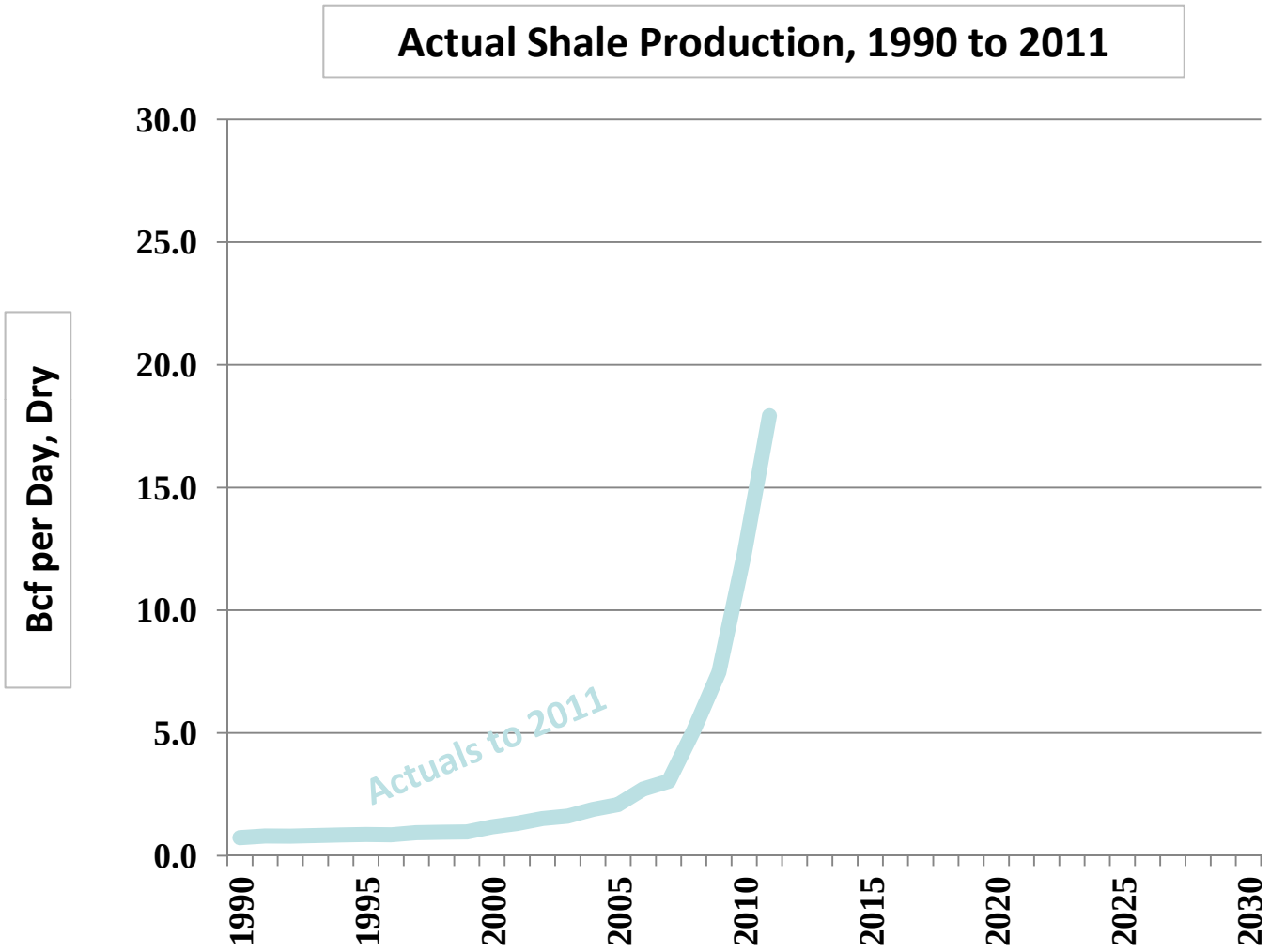
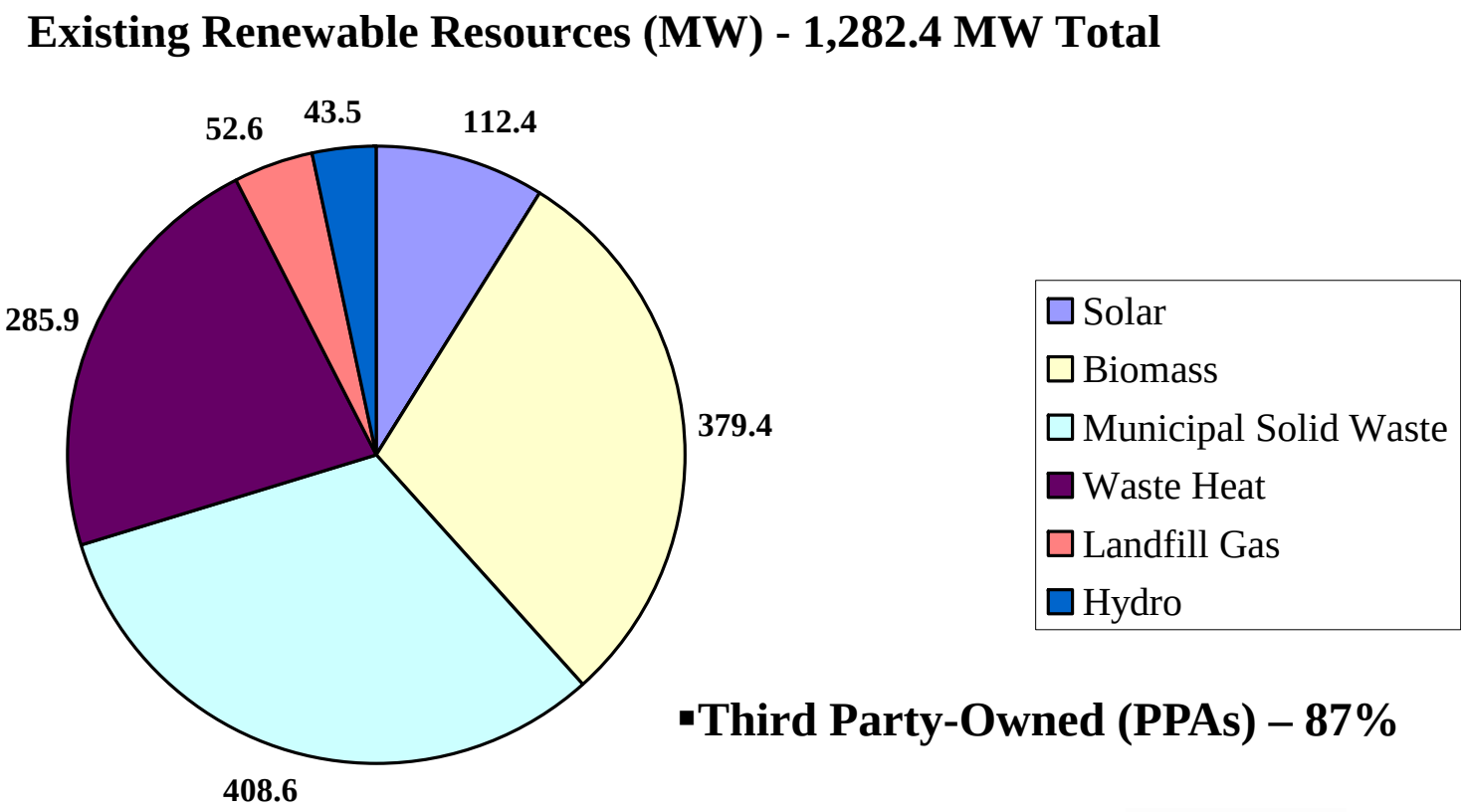
Source: Wood Mackenzie



Existing Renewable Resources in Florida



- **Third Party-Owned (PPAs) – 87%**

Tools to minimize losses

- Generation Losses/Efficiency – Generating Performance Incentive Factor (GPIF) – Day 2 presentation
- Transmission Losses – Revenue Driven
- Distribution Losses – Revenue Driven

Transmission Losses

- Progress Energy Florida
  - 1.6 million customers
  - 11,800 MW Summer Generating Capacity
  - 5,000 Miles of Transmission Lines (up to 500kv)
  - Transmission Losses = 1.66% (US Avg = +/-2%)

Transmission Losses

- Progress Energy Florida Loss Reduction Tools
  - Constant Failure Modeling at Dispatch Center
  - Cost/Benefit Analysis of Voltage Upgrades
  - Annual Load Flow Calculations
  - **Revenue Driven – Loss Reduction = Additional Revenues**

Distribution Losses

- Progress Energy Florida
  - 18,000 circuit miles of overhead lines
  - 13,000 circuit miles of underground lines

Distribution Losses

- Progress Energy Florida Loss Reduction Tools
  - Constant goal of increasing voltage levels (4kv to 22kv)
  - Individual load calculations on each conductor
  - Distribution load flow models
  - Power factor analysis (voltage profiles)
  - Focus on high load centers for opportunities

Distribution Losses

- Progress Energy Florida Loss Reduction Tools (Continued)
  - Electronic meters (tamper resistant)
  - Identify theft

Questions?