



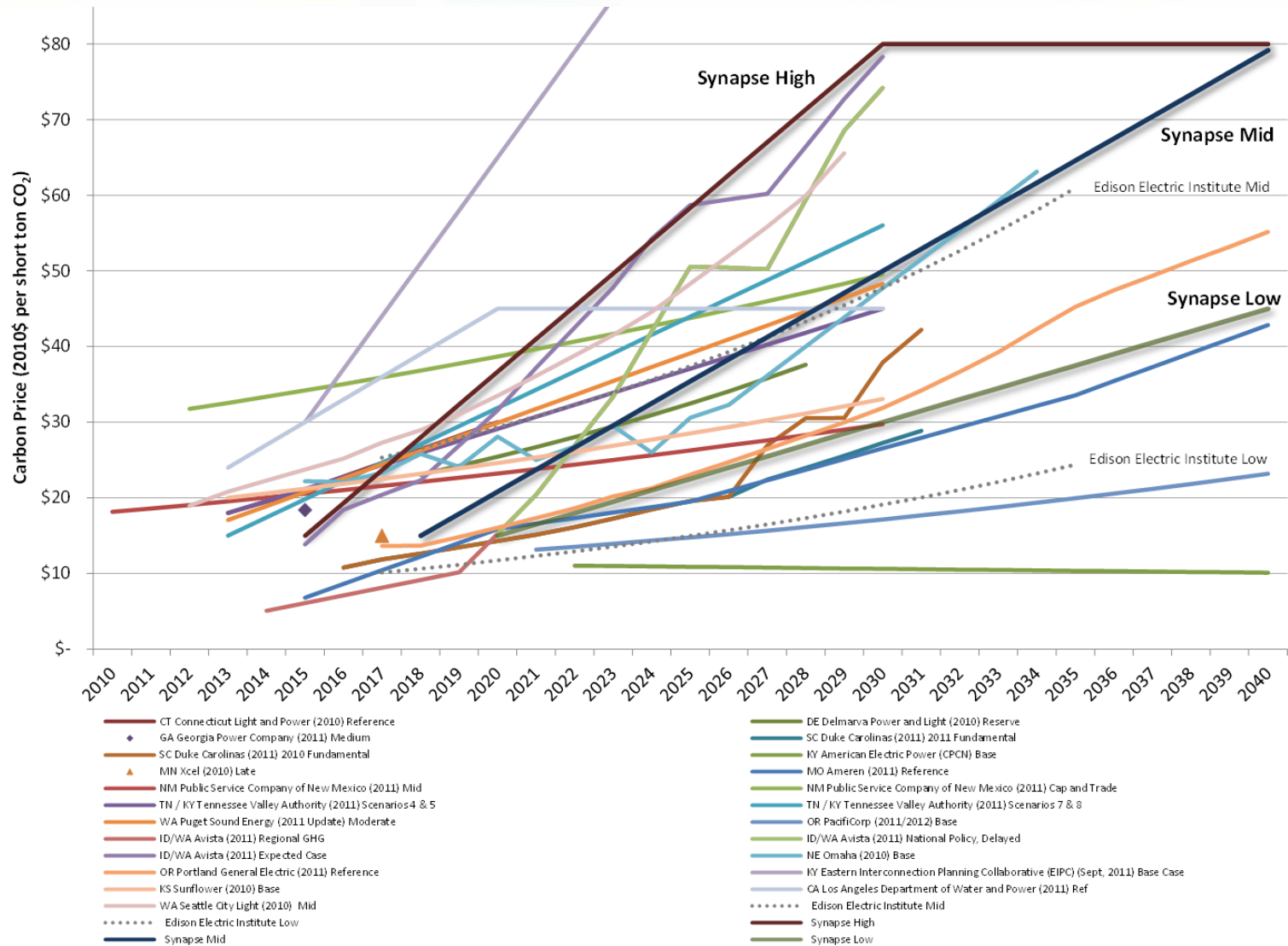
**Synapse**  
Energy Economics, Inc.

# Saving Consumers Money by Closing Uneconomic Coal Units

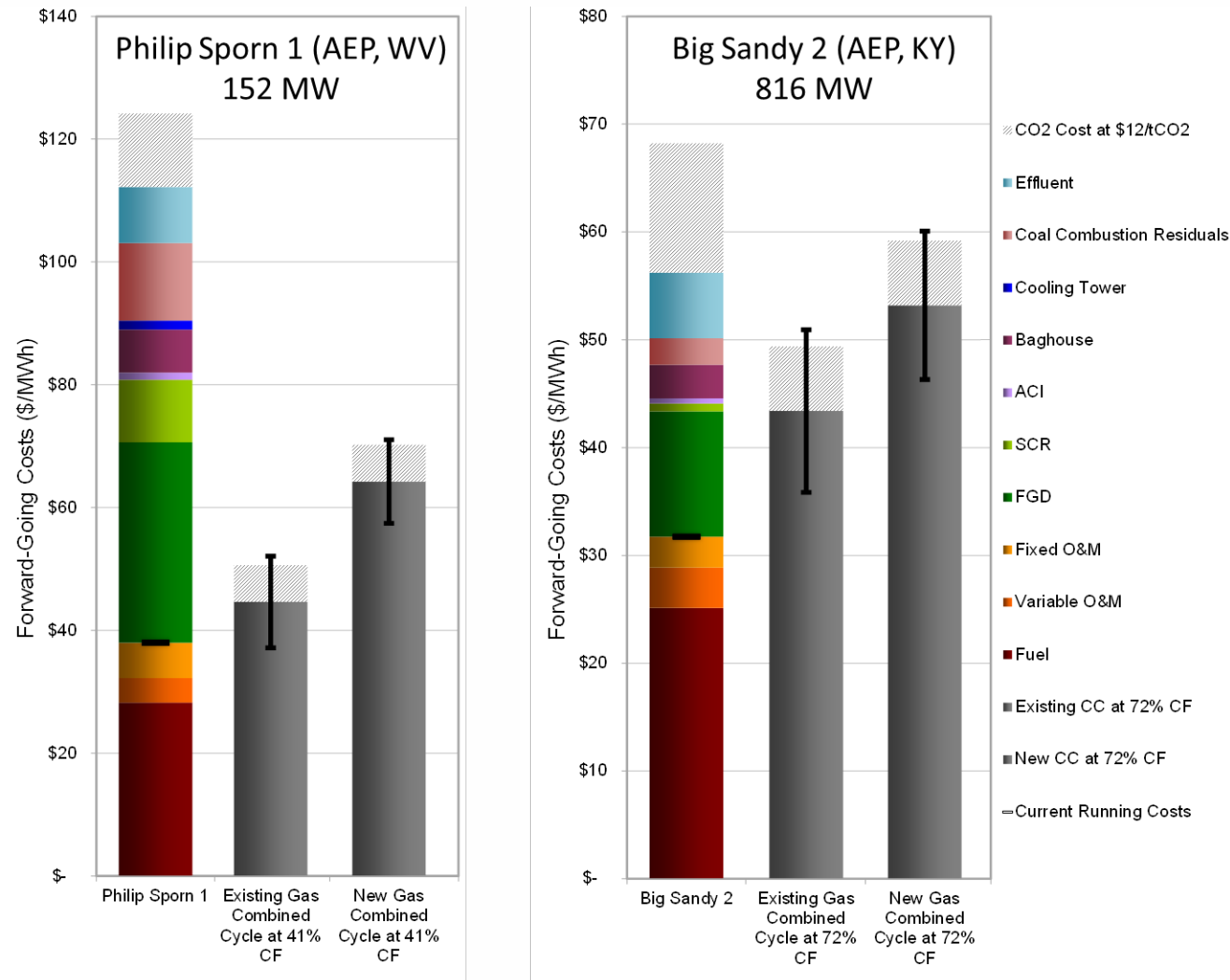
Bruce Biewald  
2012 NASUCA Meetings  
Charleston, SC  
June 25, 2012

- What is up with coal plant economics?
- What should be done about it?

# Carbon Price Forecasts

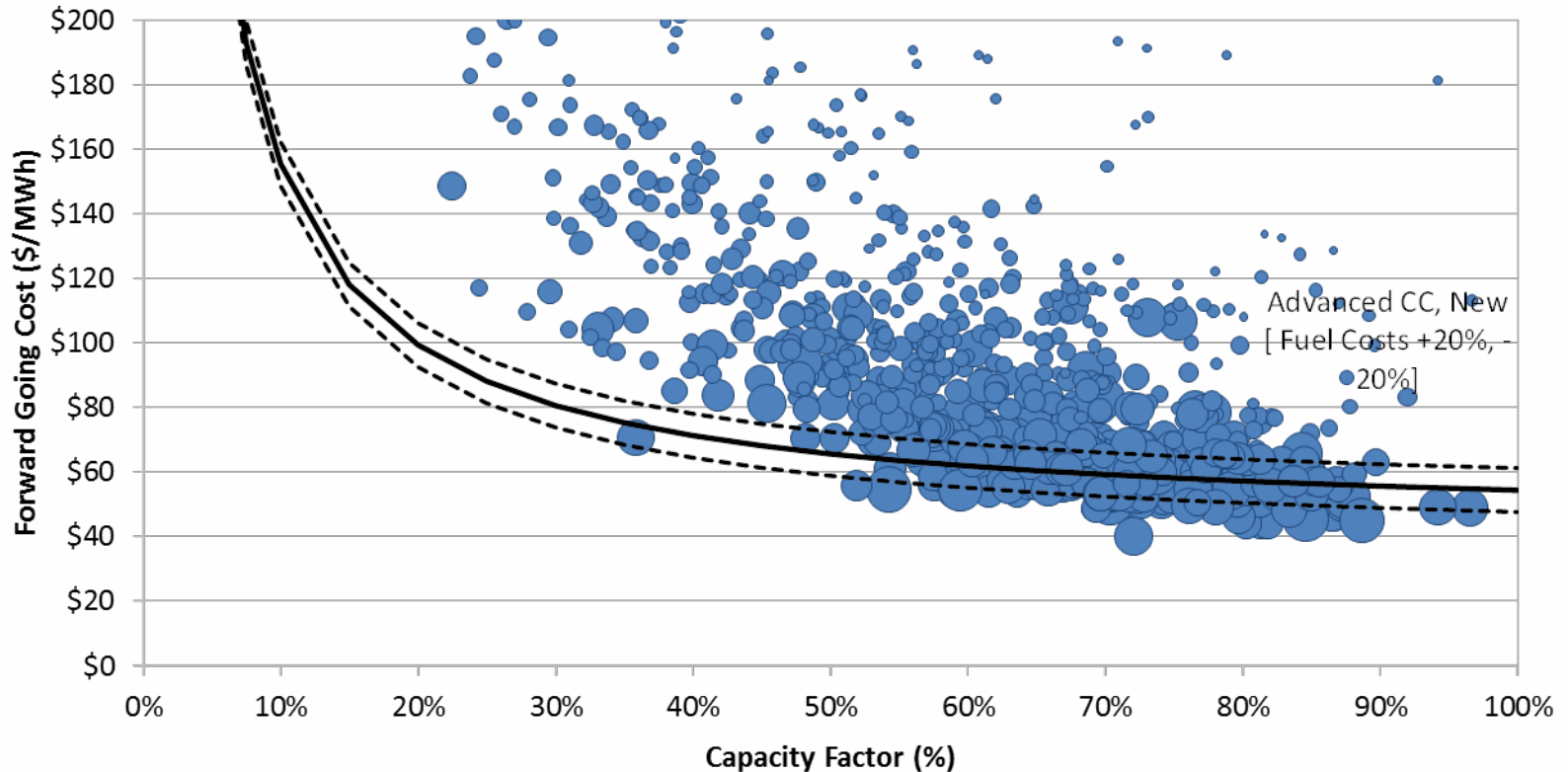


# Coal Unit Forward Going Costs: Two Examples



# Existing US Coal Fleet Forward Going Costs

Forward Going Costs of Existing US Coal Units by Capacity Factor (\$/MWh)  
Relative to estimated cost of a new natural gas combined cycle unit



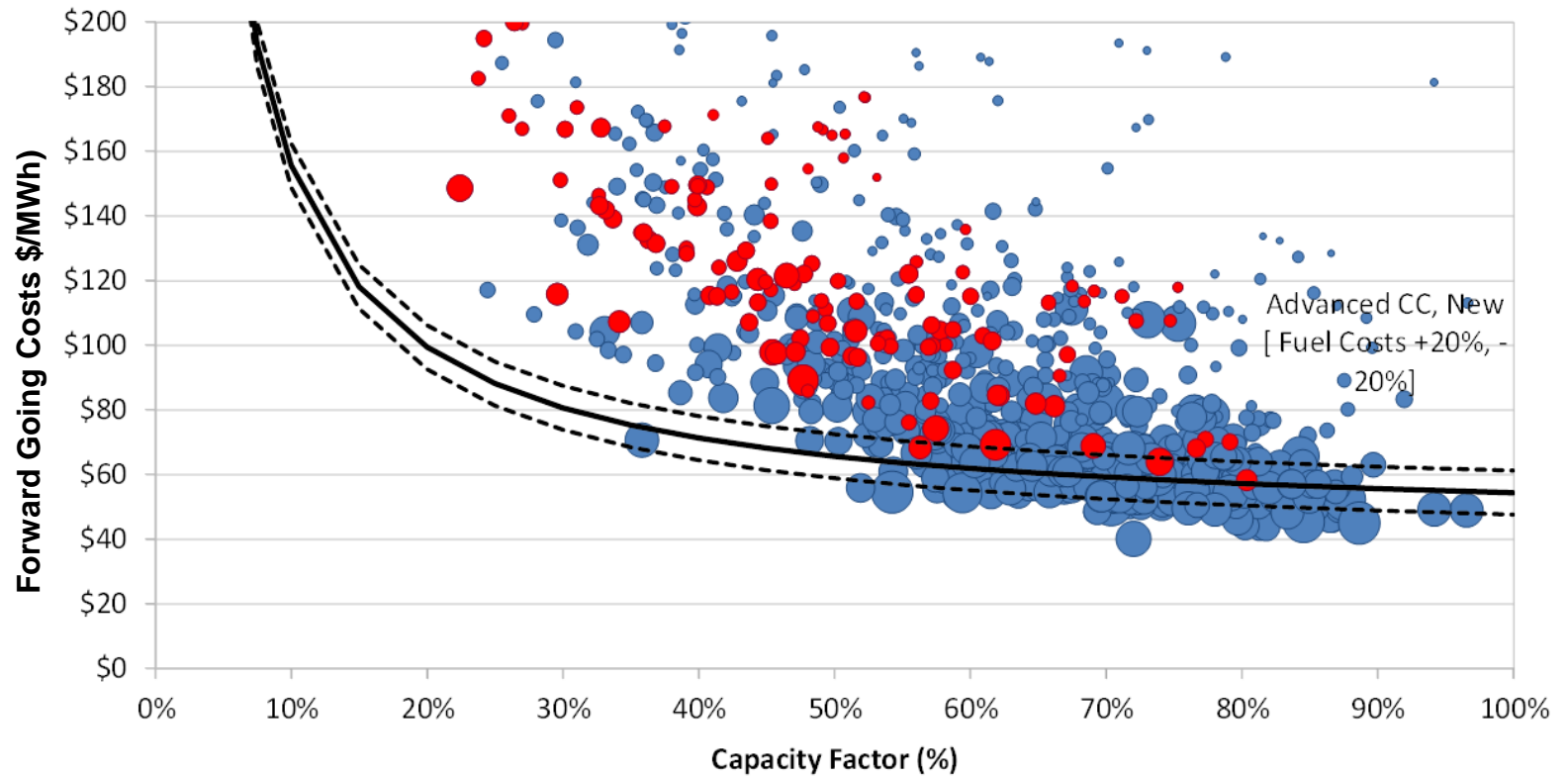
● Current Forward Going Cost + FGD + SCR + Baghouse + ACI + Cooling + CCR + Effluent + CO2 @ \$12/ton (\$/MWh)

Analysis based on Synapse database



# Announced Retirements of US Coal Fleet

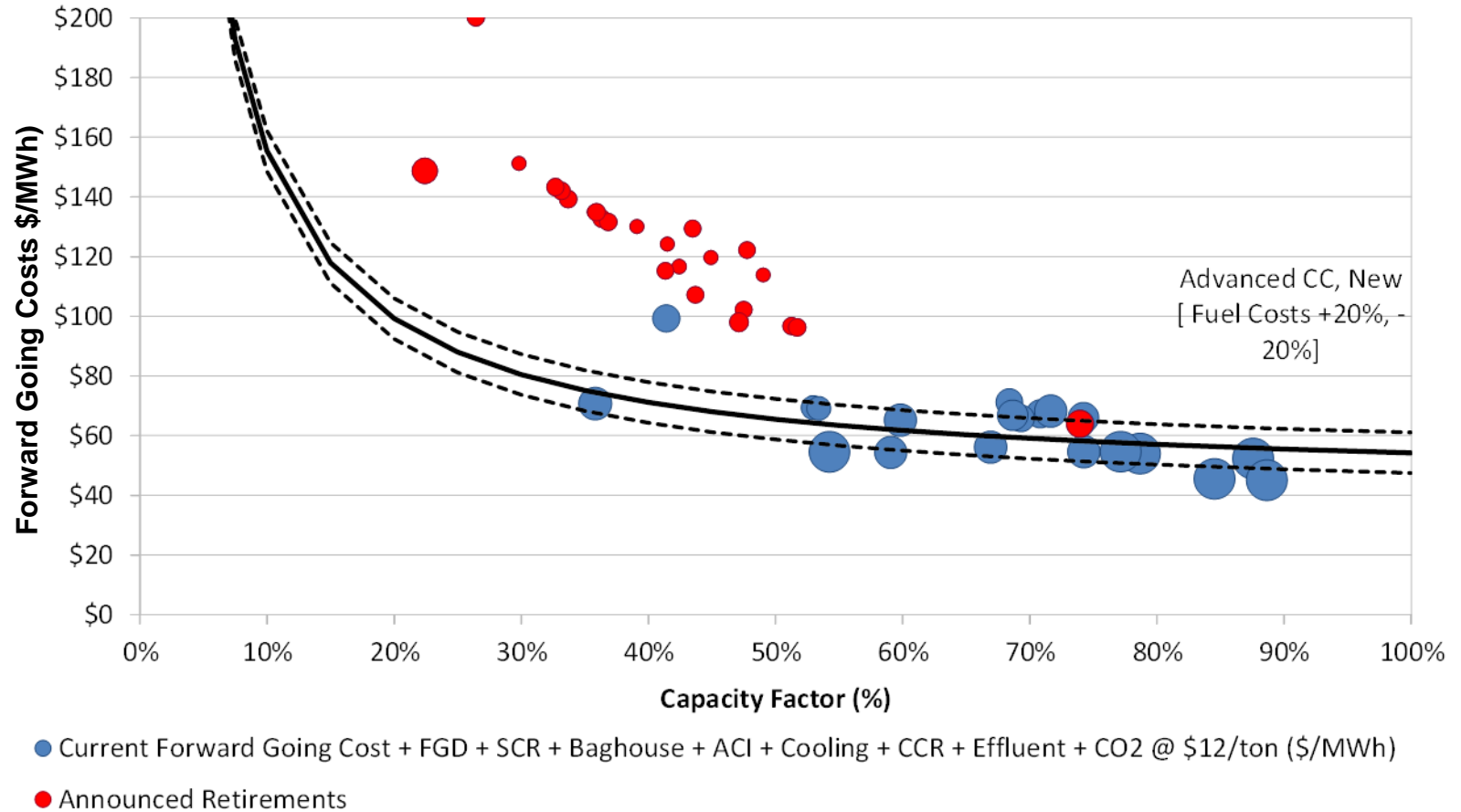
Forward going costs of existing US coal fleet by capacity factor (\$/MWh)  
Relative to estimated cost of a new natural gas combined cycle unit



- Current Forward Going Cost + FGD + SCR + Baghouse + ACI + Cooling + CCR + Effluent + CO<sub>2</sub> @ \$12/ton (\$/MWh)
- Announced Retirements

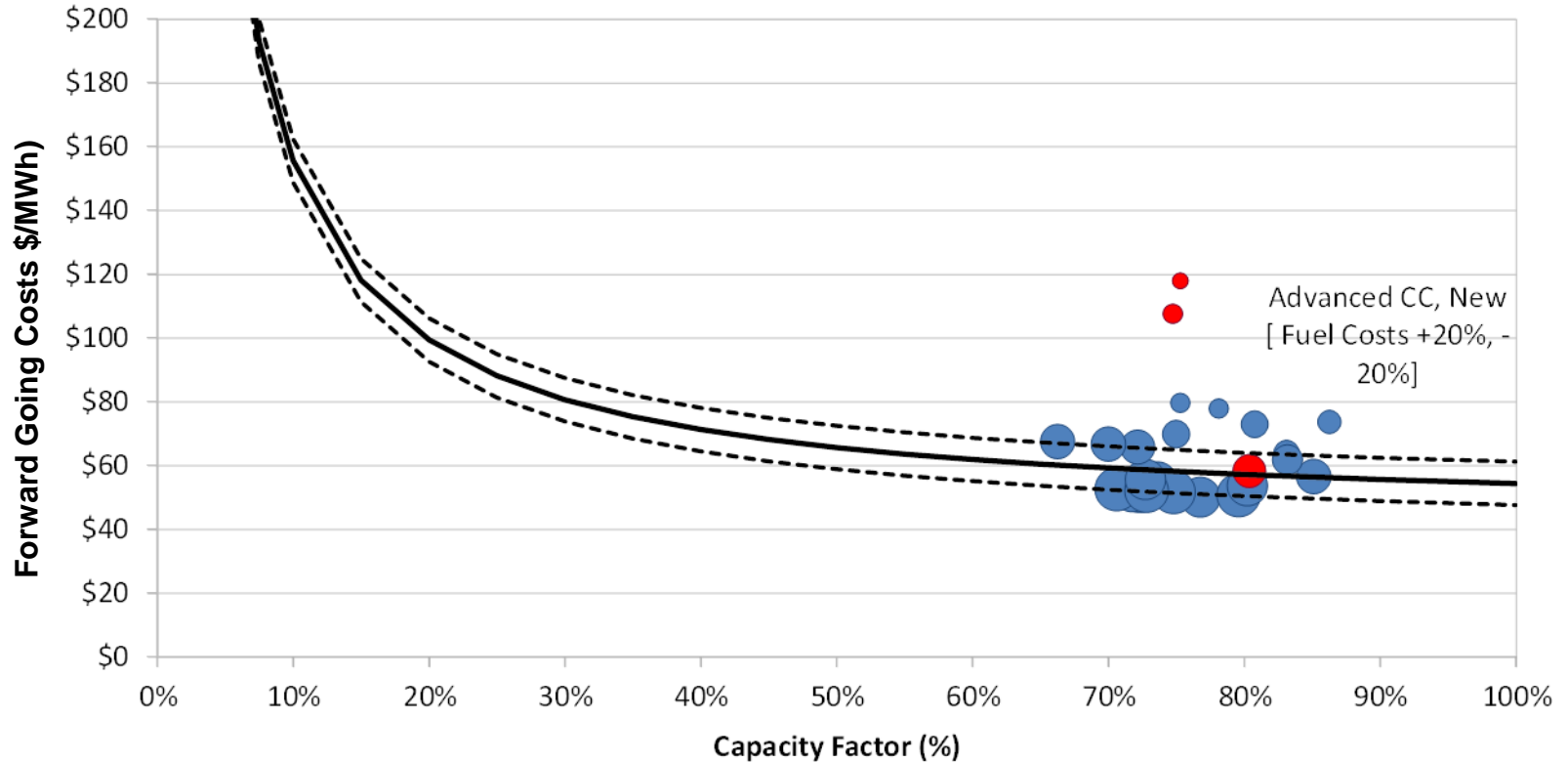
# American Electric Power Coal Units

Forward going costs of existing coal fleet by capacity factor (\$/MWh)  
Relative to estimated cost of a new natural gas combined cycle unit



# Pacificorp Coal Units

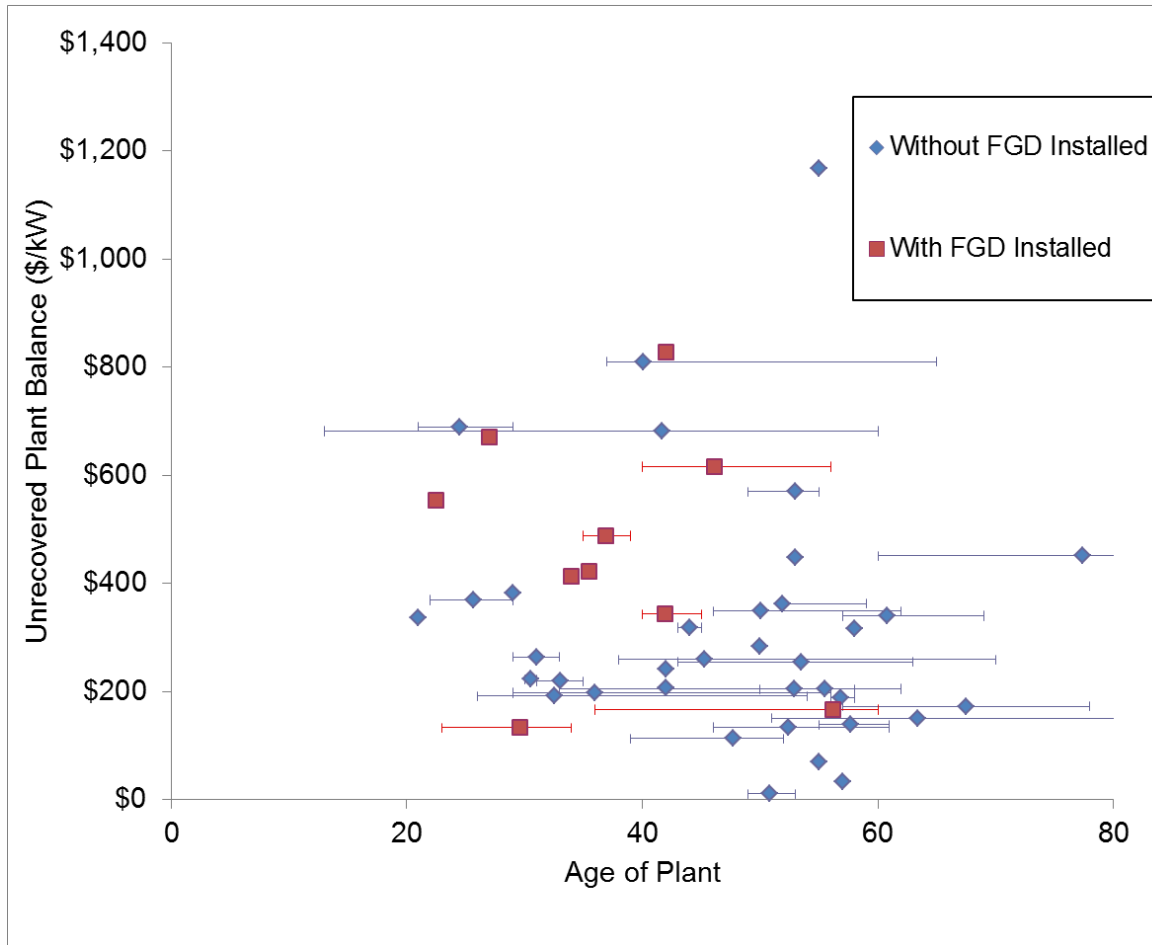
Forward going costs of existing coal fleet by capacity factor (\$/MWh)  
Relative to estimated cost of a new natural gas combined cycle unit



- Current Forward Going Cost + FGD + SCR + Baghouse + ACI + Cooling + CCR + Effluent + CO<sub>2</sub> @ \$12/ton (\$/MWh)
- Announced Retirements



# Old Coal Plants Have Significant Investment in Rate Base



- Data from data collected from 41 coal plants owned by eight utilities.
- Average plant age weighted by capacity: ~45 years
- Average plant capacity: ~636 MW
- Average unrecovered plant balance: ~\$347/kW
- Average unrecovered balance as a percentage of Total Cost: ~50%

# Regulatory Treatment of Retired Power Plant(s)

## Ohio

- Docket 10-1454-EL-RDR
- Order: January 12, 2012
- Ohio Power sought approval for a rider to recovery unamortized plant balance of \$58.7 million for Sporn Unit 5 (450 MW, 1960)
- Commission dismissed the case citing closure not subject to approval and no statutory basis for recovery of closure costs

## Alabama

- Docket U-5033
- Order: September 7, 2011
- Alabama Power sought authorization to establish regulatory asset treatment and amortization schedule for generating units to be retired early as a result of EPA regulations
- Commission approved request

## Part 1: What should be done?

- **Utilities** should save their customers money by retiring the coal units that are uneconomic on a forward-cost basis.
- Prudent utility system planners must:
  - collect current and relevant information (don't wait for information to come to you)
  - anticipate reasonably expected market conditions and environmental regulations (not piecemeal or head-in-the-sand approach)
  - consider a reasonably wide range of resource options

## Part 2: What should be done?

- **Regulators** should:
  - insist on prudent planning
  - open comprehensive compliance planning dockets
  - include retrofit versus retire analysis in all planning dockets
  - consider prudence and "used and useful" in rate cases
  - disallow imprudently incurred costs
  - disallow costs that are not used and useful, unless there's good reason not to disallow

## Part 3: What should be done?

- **Consumer Advocates** should:
  - encourage the utilities and regulators to do their jobs (see previous slides)
  - insist on retirement of uneconomic plants
  - argue for disallowance of imprudently incurred retrofit investment(s)
  - argue to remove from rate base existing plant that is not "economically used and useful" (whether or not the plant is operating)