



U.S. Domestic Coal Production, Producers, Outlook

Energy Finance 2015
Panel 12



**Institute for Energy Economics
and Financial Analysis**
IEEFA.org

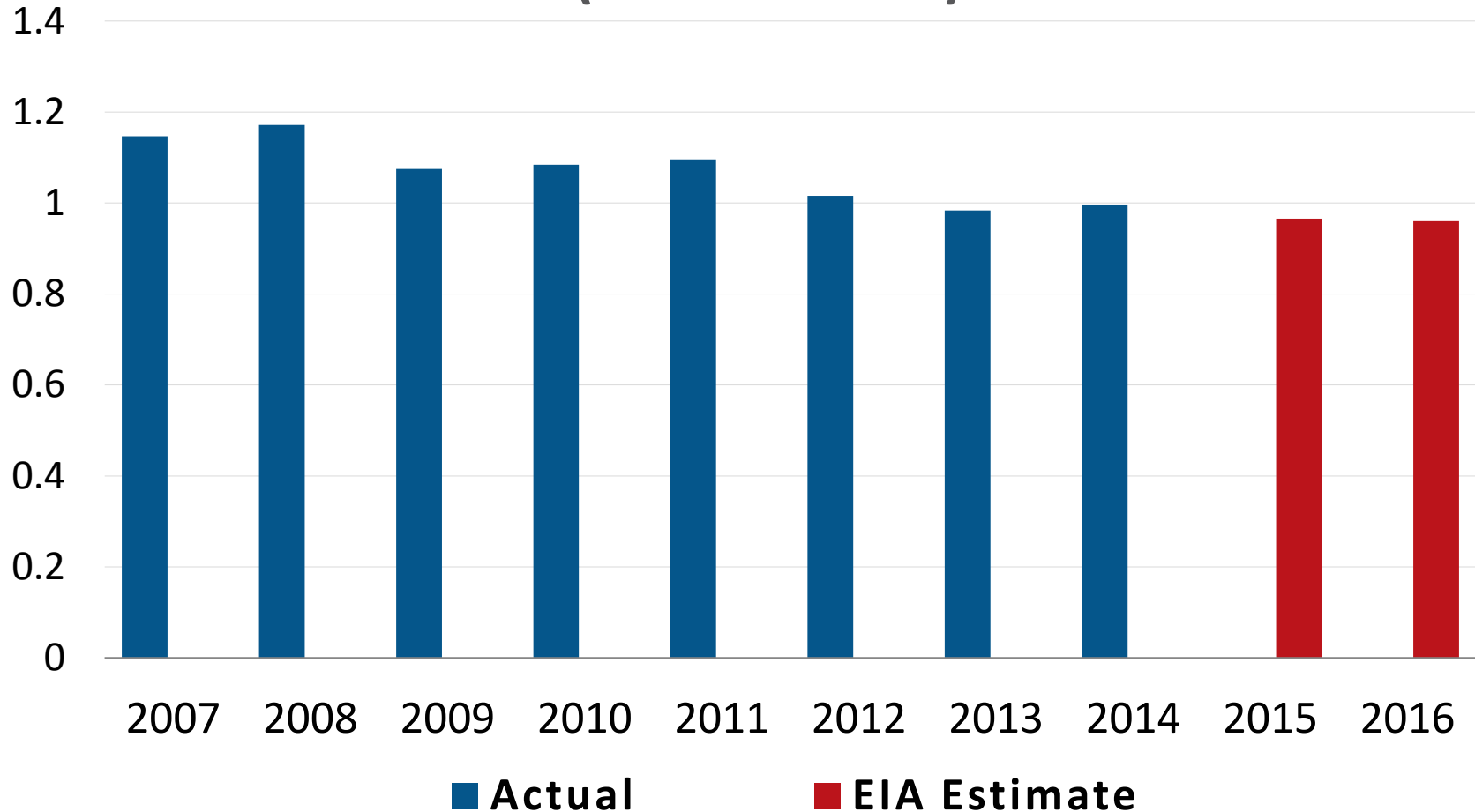
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U.S. COAL PRODUCTION AND USE DOWN

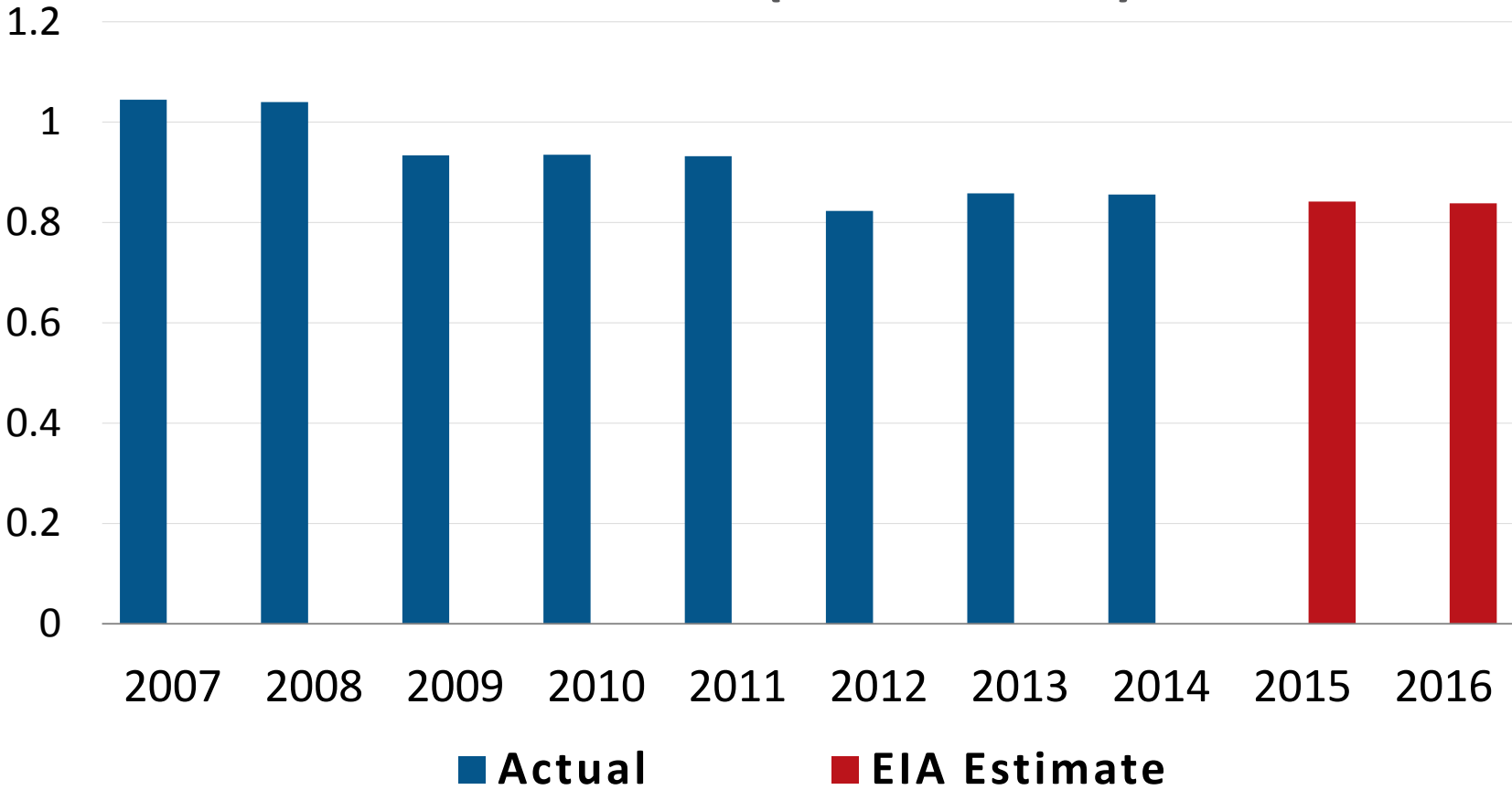
Production down 212 mtpa from '08

U.S. Coal Production (2007-2016) (billion tons)



Consumption for Electricity down 200 mtpa since 2008

U.S. Coal Consumed for Electric Generation (2007-2016)



EIA Long Term Expectations

- Overall, through 2030 flat, coal market share declines from today 38% to 32% of electricity market; thermal exports mid 30 mtpa range.
- Illinois Basin gains (gains)
- Powder River Basin (small gains)
- Northern Appalachia (small gains)
- Central Appalachia (significant losses)

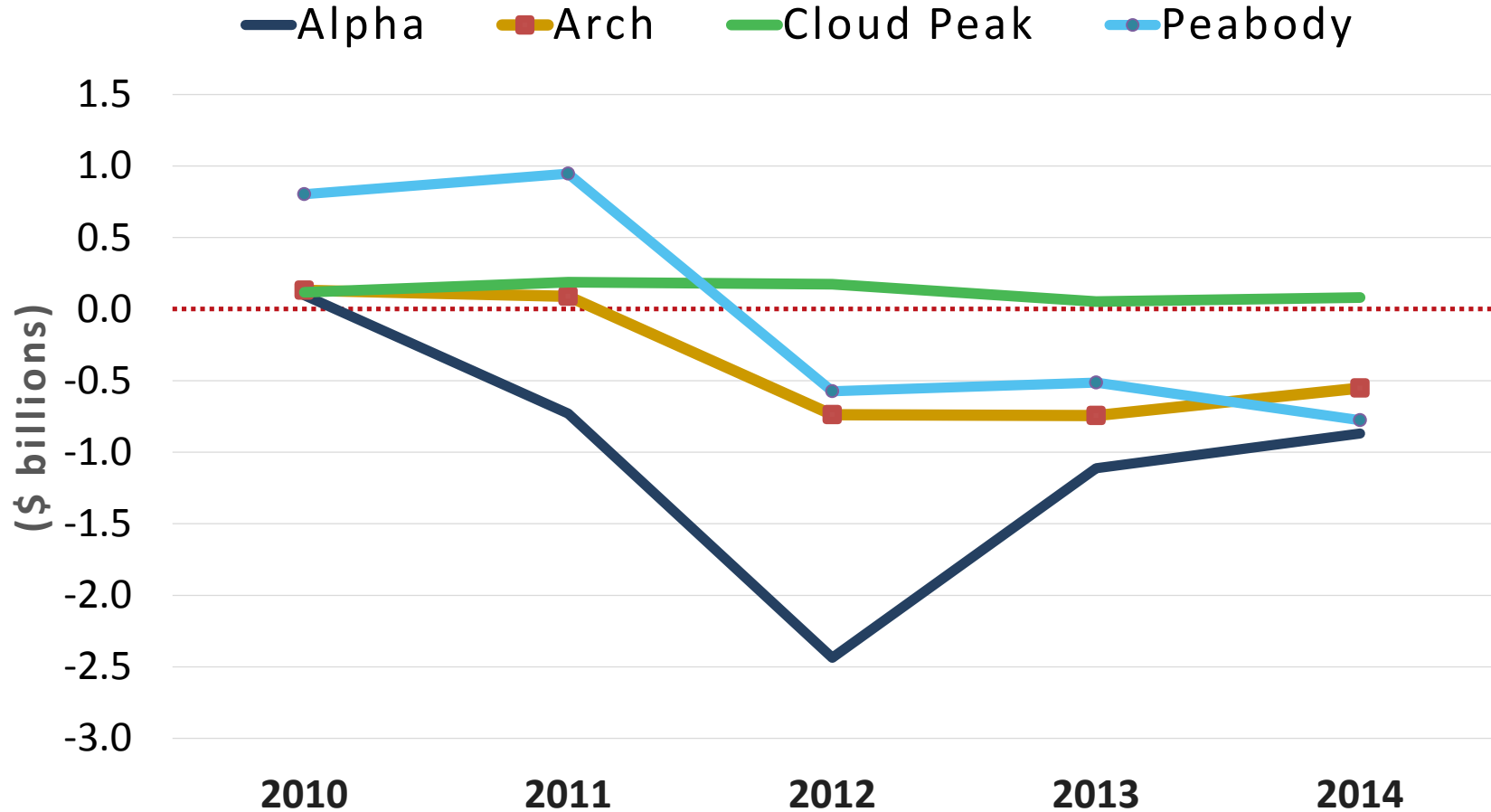
Observations

- Pace of coal decline too slow
 - 2015 important year; losses larger
 - Only Peabody selling more coal than last year
- Companies/Industry shrinking little upside
- NatGas/renewables downward price pressure
- Rising costs pressure upward- lax demand
- Looming Debt Problems
- Tight Margins more losses
- Company and market change
 - Combination, diversification

U.S. COAL PRODUCERS WEAK

Large Companies Posting Large Annual Losses

Alpha, Arch, Cloud Peak, Peabody:
Net Income/(Loss) 2010-2014



Leading Stock Prices Collapse

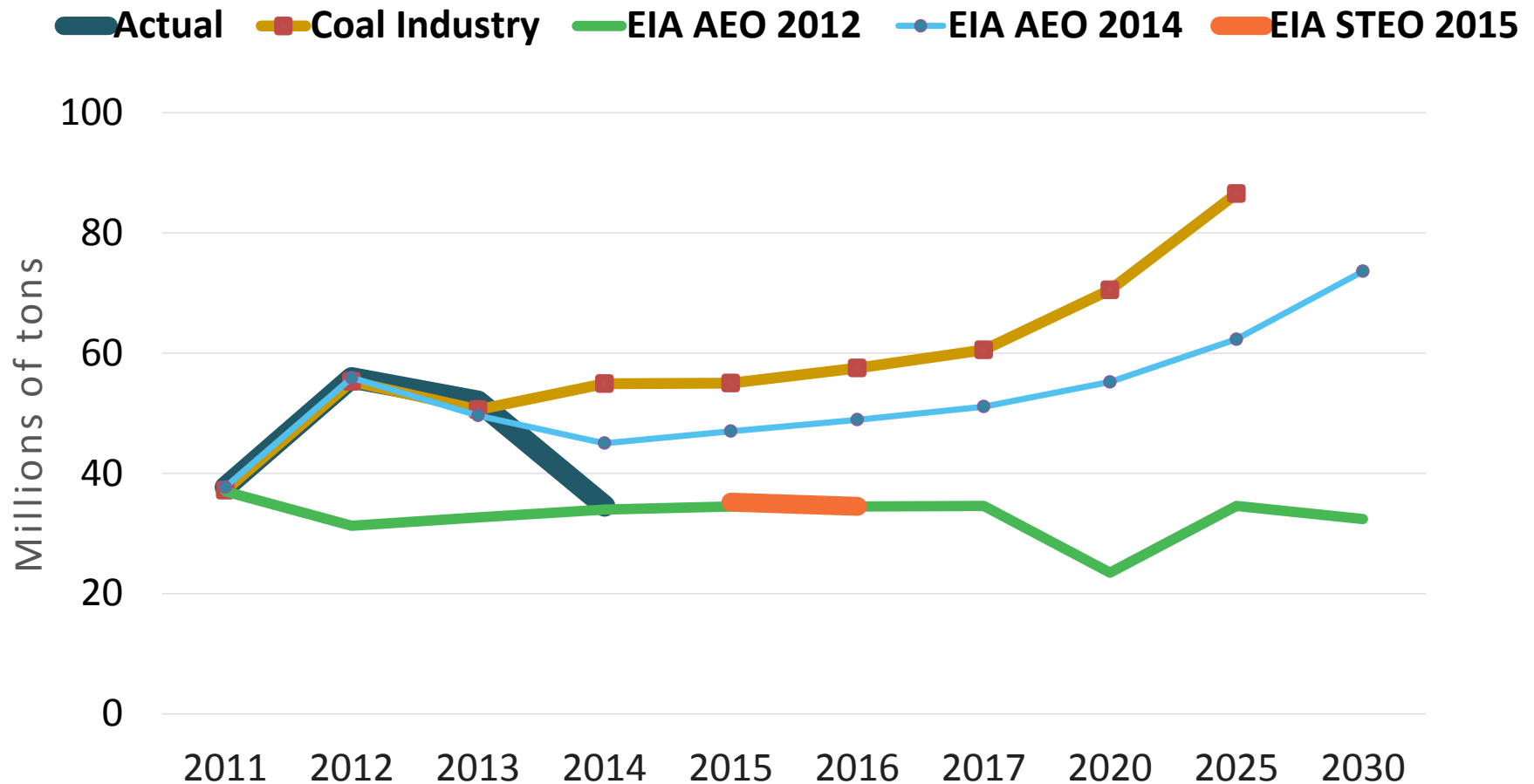
Arch Coal, Inc. - Price Change (%)



EXPORT POTENTIAL DIMINISHED

Actual Exports Decline, Estimates Following Market

Table VI: U.S. Thermal Coal Exports: Actual vs. Arch, EIA Projections 2011-2030



Observations

- Weak Markets Persist; Efforts to Continue
 - Keeps undermining credibility
 - Royalty regulation discussion
- U.S. Coal Producers acknowledging challenge
 - Now see India as bright spot – 800,000 thermal last year
 - Cloud Peak looking 2020 and beyond for growth
- Look for export projects as part of asset/liabilities in company workouts
- Investors should be concerned about losses from stalled/failed export investments.
 - Arch: \$50 million liquidated damages; \$50 million South Hilight; \$5-\$6 million annually for Otter Creek and MBT Terminal.

COAL'S RESURGENCE

A Comeback Plan

- Republican control of Congress and Presidency
 - Control of regulatory process
- Manage liquidity until markets turn around
 - Cut costs, no capex, push out costs
- Greater Utilization of remaining fleet
 - Contingent on natural gas prices
- Technology
- Consolidation/Mergers and Acquisition
 - Recapitalize remaining mines, start new ones
 - Natural Gas – CONSOL, Alpha, Murray Energy

Final Observations

- 800 mtpa of coal burn annually is still a market
- Too many producers chasing too little demand
 - Mismanagement of shrinkage
- Market, technological and political disruption creates opportunity:
 - Why permit mines for production 30 years from now?
 - Why permit plant retrofits for unstable coal supply?
 - Why partner with companies & industry that might not be there?
 - Why invest in industry with large downsides?
 - Why permit ports for shipping 30 years from now?