A photograph of a coal power plant. On the left, two tall, white smokestacks with red horizontal bands rise into the sky, emitting thick white plumes of smoke. In the foreground, two large, cylindrical cooling towers are visible, also emitting white steam. The background shows a cloudy sky with some blue patches. The overall scene is industrial and somewhat hazy.

How PSCs and PJM subsidize existing coal plants

Cathy Kunkel
March 19, 2014



Outline

- Subsidization of coal plants by ratepayers
 - AEP and FirstEnergy coal plant cases
- Subsidization by PJM capacity markets
 - Background on capacity market
 - PJM rule changes to limit participation in capacity market
 - Opposition to state-supported new generation
 - Opposition to bidding demand resources into capacity market

Coal plant transfer cases

1. Allegheny Energy Supply (FirstEnergy) → Mon Power (FirstEnergy)
80% of Harrison coal plant ✓
2. Ohio Power (AEP) → Kentucky Power (AEP)
50% of Mitchell coal plant ✓
3. Ohio Power(AEP) → Appalachian Power (AEP)
67% of John Amos Unit 3 coal plant ✓
50% of Mitchell coal plant ✗
4. Ohio Power (AEP) → Wheeling Power (AEP)
50% of Mitchell coal plant ?

FirstEnergy case

- Transfer approved (2-1 decision) October 2013
- FirstEnergy Q3 2013 earnings call, November 2013:

[O]ur competitive operations have been challenged ... by capacity and energy markets that do not support investment in, or in some instances, the operation of generating units. While we can debate for reasons this is occurring, the fact is, **power prices have been weak for the last couple of quarters and we may be facing continued soft power prices for at least the next several years.** As a result, we began to reposition our competitive business in 2012 and now through a series of even more aggressive actions have better positioned this business for the future. For example, we have reduced the size and mix of the fleet by closing and selling competitive units... [W]e completed the Harrison and Pleasants transfer this quarter.

AEP cases

1. Ohio Power (AEP) → Kentucky Power (AEP)
50% of Mitchell coal plant
Kentucky PSC approved
2. Ohio Power(AEP) → Appalachian Power (AEP)
50% of Mitchell coal plant
67% of John Amos Unit 3 coal plant
Virginia SCC only approved Amos
3. Ohio Power (AEP) → Wheeling Power (AEP)
50% of Mitchell coal plant
Proposed to West Virginia PSC

Common themes

- Financial health of parent company as primary motivation. No serious attempt to evaluate other alternative sources of generation for regulated subsidiaries.
- Questionable assumptions and projections
- Higher prices obtained for plants than would have been possible in a market transaction
 - Declines in coal plant valuations, 2008-2013 (Fitch):
 - Ohio Power (AEP): 59%
 - FirstEnergy: 63%

Market sales vs. affiliate sales

Date	Participants	Price (Millions)	Capacity (MW)	Average Age of Units	Price per kW
03/14/13	Ameren to Dynergy	\$825	4,561 coal	44	\$180.88
03/11/13	Dominion to Energy Capital Partners	\$650	2,686 coal 1,424 gas	49	\$130/kW for coal units
08/08/12	Exelon Corp. to Riverstone Holdings	\$400	2,265 coal	35	\$176.60

AEP inter-affiliate sale: \$702/kW

FirstEnergy inter-affiliate sale: \$565/kW

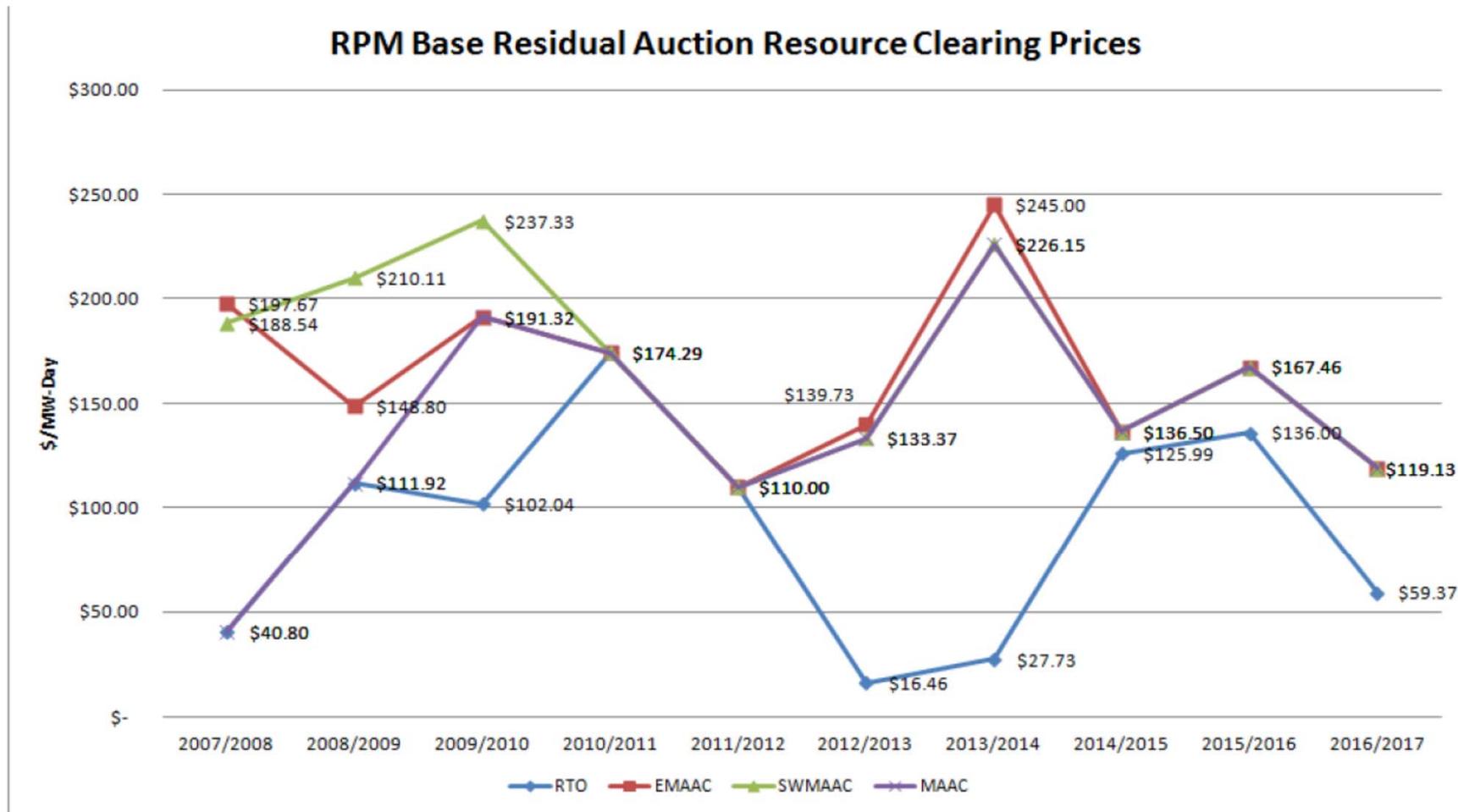
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Intro to PJM capacity market

- 3-year ahead forward auction
- Implemented in 2007
- All generators paid market clearing price

PJM capacity market prices



Problems with market for capacity

- Capacity resources are not all the same:
 - 1 MW of demand response vs. 1 MW of baseload coal
- Capacity comes in large chunks – new entrants can affect price
- Sites for new power plants are limited and frequently controlled by incumbent generators.
- 3-year forward price does not provide appropriate signal for long-term capital investment

Subsidizing Existing Generation

- “most of these administrative [capacity] payments would be made to generators which have no need for these revenues to satisfy their capital requirement” (Synapse Energy Economics, 2006)
- “For PJM we find that approximately 95% of the capacity market revenues have gone to existing generation. Moreover, 61% of all revenues have gone to existing coal and natural gas plants... [M]uch of the so-called “new” generation that has bid into capacity auctions has actually been increases in the capacities of existing generation, or old generation being brought out of retirement” (Synapse Energy Economics, 2011)

PJM Power Providers Group

- Organization of PJM generation companies that represents more than half of capacity in PJM
- Recent actions:
 - Support PJM's restrictions on demand response
 - Support PJM's capacity import limits
 - Opposes Maryland Offshore Wind Energy Act
 - Opposes state-supported generation in NJ and MD

PJM rule changes

- Limit capacity imports from other regions
- Limit amount of demand response that can bid into the market
- Together, if approved by FERC, these changes expected to increase PJM capacity prices \$20-\$30/MW-day (i.e. up to 50% over most recent price) according to Market Monitor

Opposition to state-supported generation

- Consistently high capacity prices in NJ and MD, but capacity market does not provide stable, long-term signal for investment
- In 2011, NJ passed law requiring its electric utilities to contract with new in-state generation facilities
- In 2012, MD PSC issued order requiring its electric utilities to contract with a new in-state natural gas plant
- Both struck down by federal courts in 2013

Bidding EE into capacity market

- FirstEnergy opposed to bidding EE savings into PJM capacity market
 - Artificially inflates capacity market prices because not bidding in low-cost resource
 - Estimated that for 2015/16, FE's failure to bid energy efficiency cost ratepayers several hundred million dollars

Conclusion

- Utility companies use regulated and deregulated systems to maintain their market power and subsidize the continued operation of their coal plants. Recent examples from PJM include:
 - Transferring coal plants to regulated subsidiaries
 - Advocating for restrictions on PJM's capacity market to drive up capacity prices

Thank you!

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