

Thinking Outside the Capacity “Markets” Box

Resource Adequacy Reconsidered:
Mandates & Markets

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The Usual Disclaimer

I am speaking today in my personal capacity and the opinions expressed here are my own; they should not be attributed to APPA as an APPA position.

Mandates v. Markets?

- Administrative constructs, not “markets.”
- Extensive market mitigation is required to ensure “competitive outcomes.”
- Rule changes that impede new entry are justified in the name of protecting “competition,” i.e. “buyer-side market power” or “out of market resources.”
- Reframe the question: What mechanisms best enable Load Serving Entities (LSEs) to meet resource adequacy and other public policy requirements *at a reasonable cost*?

Unanswered Questions About Capacity Constructs

- Are reliability standards being met at least cost in RTOs with mandatory capacity markets?
- Are crucial resources retiring that should be retained? Will new resources be sufficient to replace the retiring resources?
- How do proposed changes to energy and ancillary services markets interact with changes to the capacity markets? What is the total cost of all the changes?
- How will states implement CAA § 111(d) without control over capacity resource decisions?

APPA Power Plant Study: Capacity Constructs Do Not Incent Resource Development

MW of New Capacity Starting Operation in 2013

	Purchased Power Agreements		Ownership		Market Sales	Total	
Biomass/Biogas	435.7	4.5%	187.4	4.0%	1.4	624.5	4.3%
Coal	925.0	9.5%	618.0	13.3%		1,543.0	10.5%
Fuel Cell	15.0	0.2%	13.8	0.3%		28.8	0.2%
Geothermal	83.0	0.9%	-	0.0%		83.0	0.6%
Hydropower	120.1	1.2%	63.0	1.4%	131.8	314.9	2.1%
Landfill Gas	129.2	1.3%	11.8	0.3%	3.6	144.6	1.0%
Natural Gas	3,473.5	35.8%	3,468.6	74.9%	181.0	7,123.1	48.5%
Oil			31.2	0.7%		31.2	0.2%
Solar	3,277.6	33.8%	209.4	4.5%	10.2	3,497.2	23.8%
Wind	1,243.0	12.8%	29.5	0.6%		1,272.5	8.7%
Flywheel					20.0	20.0	0.1%
Total	9,702.1	100.0%	4,632.7	100.0%	348.0	14,682.8	100%
% of Total	66.1%		31.6%		2.4%		

Only 2 % of new capacity was built solely for market sales.

Source: http://appanet.files.cms-plus.com/PDFs/94_2014_Power_Plant_Study.pdf

What is the Optimal Role for Demand Response? (My Own Opinion...)

- D.C. Circuit Court decision's rationale in *EPSA v. FERC* also applies to capacity markets.
- Demand Response is not a wholesale supply-side product, but a retail demand-side resource.
- DR can participate in RTO markets on the demand side as a reduction in the LSEs' energy needs/resource adequacy obligation.

Pro-Capacity Market Arguments & Responses

Claim: Goal is not just to incent new resources, but to obtain the least-cost resources, such as by preventing retirements.

Reality:

- Not clear that those plants that are retained are the ones that are most needed for economic and public policy reasons—for example, we are seeing retirements of no-carbon base load nuclear plants.
- Bad resources drive out good?

Pro-Capacity Market Arguments & Responses:

Part II

Claim: Provide a price signal for the bilateral market.

Reality:

- Auction prices are volatile from delivery area to delivery area and year to year—often for seemingly arbitrary reasons.
- Bilateral markets function without mandatory capacity markets in non-RTO regions.
- Minimum Offer Price Rules (MOPRs) hamper free ability to develop bilateral contracts and self-supply.

Claim: Provide needed revenue to cover fixed costs.

Reality:

- Generators' fixed costs vary significantly by age and technology type, yet all receive the same payments.
- New generation requires a steady stream of payments over a longer term that these markets do not supply.

Pro-Capacity Market Arguments & Responses: Part III

Claim: New merchant plants are being built within capacity market footprints.

Reality:

- About 7,600 MW of new merchant CC plants cleared PJM's auctions for 2016/17 & 2017/18.
- Not all is under construction & many financed with a larger equity share/more exotic financing, with resulting higher costs even if built.
- Who will contract for and build needed new pipeline capacity? What will be the impact on natural gas prices? (e.g., MD natural gas share will increase from 29 to 47%)

Pro-Capacity Market Arguments & Responses: Part IV

Claim: Restructured markets shift the risks from consumers to investors.

Reality:

- Generators facing a loss of profits claim that price signals are too weak to incent investment and often obtain rule changes to increase prices.
- Examples: MOPR and buyer-side market power rules; creation of new zones; RTO switching; shifts in the demand curve; creation of new capacity products; and offer cap increases to cover fuel security.

APPA's Concerns About Capacity Markets

- Restrictions on self-supply and threats to public power business model.
- Higher and more volatile costs, frequent rule changes.
- Semi-Kafkaesque stakeholder processes.
- Financial benefits accrue to owners of existing capacity if the markets are *more* constrained.
- No long term planning for generation diversity or public policy goals, and every MW is paid the same, regardless of technology, fuel access, age, emissions, etc.

What is the Future of Capacity Markets?

Are the RTO-operated markets best suited for achieving the most “efficient” use of existing resources in the short-term, rather than producing an optimal mix of resources needed by the industry and society over the long term?

If so, a new paradigm is needed for the long term.

APPA Capacity Market Reforms

- Transition from mandatory market to voluntary, residual capacity procurement mechanisms.
- Resource adequacy standards with penalties for non-compliance.
- FERC/state working group evaluates seller-side market power and if needed, places appropriate restrictions on pivotal sellers.
- LSEs able to self-supply through ownership and bilateral contracts without constraints.
- RTOs and states determine the most economic and efficient options to relieve transmission constraints.

Conclusion

- Capacity “markets” are not now and should not be the primary means to support needed capacity.
- FERC needs to think outside of capacity “markets” box and seek new solutions.
- APPA’s proposal: transition from mandatory capacity markets to voluntary residual markets with the primary procurement of capacity conducted through bilateral contracts/LSE ownership.