

ERCOT's Capacity Market: What If It Already Exists?

Robert J. Michaels

Texas Public Policy Foundation and
California State University, Fullerton

rmichaels@fullerton.edu

Senate Natural
Resources Committee
Nov. 25, 2013

The Seeming Controversy

- Will ERCOT's "energy-only" market provide adequate capacity as is?
 - Or with minor addenda?
- Or must major changes be made to ensure that generators receive income for both energy and capacity?
 - Most likely, with a forward capacity market like those of northeastern RTOs

The reality: ERCOT Already Has a Capacity Market

- ERCOT's Balancing Market is indeed an energy market
- It transacts short-term power flows with no associated commitments
- The balancing market handles no more than 10% of ERCOT throughput
- The rest flows under contracts between generators and retail energy providers ("REPs")
 - Analogy : most of the mass of the universe is so-called dark matter, about which we know nothing

If “energy-only” is just 10%, what’s the rest?

- Markets are places where parties evaluate alternatives, negotiate transaction characteristics and write contracts
- Markets are not just about commodity flows
- Contracts exist, and all known generator / REP relationships are based on them
- Terms are confidential – they reward people who succeed in finding superior arrangements to govern their relationships
- We know of REPs that have failed by trying to resource themselves exclusively in the Balancing Market
- And I know of no generators who have obtained finance on a promise that all sales would be in the balancing market

What do we know about the contracts?

- Basically, nothing
- But whatever their terms they contain commitments (trades of risk, provisions for payment, contingency terms) that allow the parties (and their financiers) to feel secure in their relationships

Resolving the paradox of profitability

- Capacity market advocates claim generators can't make a living under the current system
 - Peaker Net Margin is not a valid measure of profit
 - Our work has shown that modifications indicate profitability
 - PNM was devised for totally different reasons
- At the same time investors are building and planning thousands of MW of new plants
- The terms of their contracts allow both sides to benefit and take commitment risks
- Why not say that the contracts originate in a capacity market, since capacity is actually what is being produced, financed and allocated here

What capacity is “adequate”?

- Introducing a numerical requirement ignores the fact that REPs compete on the basis of their costs.
- No consensus on Value of Lost Load (VOLL) that might help determine this margin
- But Texas is rapidly introducing demand management for all types of customers and scarcity-related prices
- Customers who can manage loads are essentially producing capacity, their numbers growing
- Few if any major outages can be linked to inadequate system-wide generation investments

What is lost with a forward capacity market

- Whatever it achieves, it's not simple
 - Compare PJM's 50 volumes of protocols with ERCOT's voluntary contracts
 - These rules are formed by politics as well as economics (MOPRs)
 - Concerns about voting bloc changes in PJM
 - Lack of constant tweaks in ERCOT means greater certainty for all
 - How to value different types of capacity?
 - How to value transmission
 - How to value location

Construction and Operation

- Difficulty of enforcing commitments to construct in PJM means “certainty” is ephemeral
- Difficulties in ISO-NE re generator fuel decisions and responses to operating orders
- In ERCOT a generator is only paid if it is operating, less likely success from gaming
- 93% of payments since inception of PJM have gone to incumbent generators
 - What could have the \$50 billion purchased?

What about Retail Competition?

- In Texas, numerous successful retail competitors who do not own generation or who own amounts sufficient for part of load
- If these are forced to make costly arrangements for a predetermined capacity, an important part of retail competition may be disadvantaged or vanish
- And where's the capacity problem? Since 1999 ERCOT has constructed far more new generation than PJM, despite PJM having 3X the load

Resource Adequacy: Only a Seeming Simplicity

- REPs compete by choosing resource mixes they believe best for their competitive situations
 - Demand characteristics, risk management
- What qualifies as a resource (a call option?), what are equivalent values (think Texas wind)?
- What fraction of which load measure, what about transmission?
 - Load forecasting issues, markets for surpluses and deficits
- No reason to expect less complexity and gaming than FCMs in other RTOs
- And lots of reasons to expect same effects on generation investment and retail competition

Conclusion

- Texas got it right, has in fact made adequate arrangements for capacity and will continue to do so
- It will do so because generation investors and REPs achieve security and predictability through contracts
- Texas has done well because regulators have stepped aside and let markets work
- This is today's challenge – to realize that markets in ERCOT continue to work, and that all but minor interventions can only reduce the consumer benefits of a competitive system unlike any other in the world