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Energy Economics, Inc.

Illinois Post-2006 Procurement Process: How to Serve Bundled Utility Service Customers

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June 28, 2004

Prepared on behalf of the Illinois CUB, the City of Chicago,
and the Office of the Cook County State's Attorney

Presentation Overview

- Recommendations for Illinois
- Priority Issue: Market Power
- Scenario 3: Horizontal Products
- Scenario “3a”: Smart Portfolio Management
- Smart Portfolio Management for Illinois

**For more detailed discussion, see CUB, the City, and CCSAO
Comments of 4/23/04.**

Recommendations for Illinois

- Deliver on Illinois law: ensure just and reasonable rates, and reliable, environmentally safe, adequate, efficient electricity supply.
- Assess and address market power problems: an essential prerequisite to reasonable retail rates.
- No competition for competition's sake: competition is a means to just & reasonable rates, not an end in itself.
- Apply Smart Portfolio Management in post-2006 procurement: (1) to manage Basic Utility Service rates; (2) to help reduce market power and price volatility for the long haul; and (3) to encourage adequate supply investment.

Illinois Law Provides:

- Any regulatory and/or market-based regime for provision of these bundled services must assure the adequate, efficient, safe, reliable, environmentally safe, and least-cost supply and delivery of electricity. (220 ILCS 5/9-102).
- The rates for consumers must be just and reasonable, whether the Commission relies on regulatory or market mechanisms -- or some combination thereof -- to achieve that result. (220 ILCS 5/9-101).

The Threshold Issue: Wholesale Market Power

- Highly concentrated generator ownership in most utility service areas, without:
 - incentives for diversified generation ownership
 - incentives for independent generator entry
 - incentives for adding transmission import capacity
- Concerns about adequacy of the existing transmission system to support imports & ability to “game” markets or prices
- Concerns about transparency of the current wholesale market design.

Addressing these concerns will be an essential prerequisite to assuring reasonable retail rates.

Getting It Right for Bundled Utility Service Is Critical in Illinois

- A large majority of Illinois retail consumers depend on Bundled Utility Service
- It is unlikely that this will change in the near- or medium-term.
- For residential and small commercial customers, there is a functional monopoly, since there is no effective competition in those markets.
- Experience in other states does not indicate that mass migration of residential or small C&I customers will occur in the near or medium-term.
- ❖ The vast majority of residential and small C&I customers need low-cost, reliable, bundled utility service.

Competition Statistics

<u>Percentage of customers receiving electric delivery services</u>	<u>Residential</u>	<u>Small C&I</u>	<u>Large C&I</u>	<u>Governmental</u>	<u>Other</u>	<u>Total</u>
Ameren CIPS	0%	1.0%	29.1%			0.20%
Ameren UE	0%	0.00%	0.00%			0
Commonwealth Edison	0%	5.1%	72.0%		1.0%	0.50%
Illinois power	0%	1.6%	15.8%	0.2%		0.20%
Interstate Power and Light	0%	0%	0%			0%
MidAmerican Energy Company	0%	0%	0%			0%
Mt. Carmel Public Utility Company	0%	0%	0%			0%
South Beloit Water, Gas and Electric Company	0%	0%	0%			0%

- As of February 29, 2004, < 5% of IL small C&I customers and no residential customers are served by competitive suppliers.
- No state currently has > 15% of residential customers served by competitive suppliers
- Even for those who have taken service from competitive suppliers, there is no assurance that the wholesale supply backing that service is competitively priced.

What should the Commission do?

- Verify that there is no reasonable prospect that wholesale generators will be able to exercise market power in Illinois wholesale power markets at any time, taking into account all the wholesale products that bundled service providers will need to purchase.
- Examine whether existing generation combined with new supplies from *likely* market entrants will be sufficient to meet the need for both bundled and unbundled service, plus a reasonable margin.

Favorable resolution of market power issues should be a prerequisite to either BUS auctions or RFP processes.

Scenario 3: Horizontal Products

- Market-based acquisition by “horizontal” tranche or wholesale market segment.
- Utility divides load into “horizontal” segments either by product type or by resource characteristic (e.g., baseload, intermediate, peaking)
- Regulatory approval of product type and term
- Seeks wholesale suppliers for each segment
- Winning suppliers, affiliated or otherwise selected based on segment auctions or based on an RFP process

-- per “Final Scenarios” document

Scenario 3: Characteristics

Similar to traditional LSE function:

- Utility assesses its load shape and obligations and acquires individual products as needed to fit that shape.
- Utility appears to be at risk for market decisions and outcomes (aside from definition of products approved by regulator)

Different from traditional LSE function:

- Individual products subject to mandated competitive bidding (auction or RFP)

Scenario 3: Pros and Cons

Pros

- Focuses procurement on specific elements needed
- Gains most benefits of competitive procurement (other than removing utility risk)
- Could provide highly customized portfolio, but utility must “tailor” it

Cons

- Excludes "pre-packaged" offers that fit load shape and other obligations more closely
- LSE must manage load fluctuations
- Possible added transaction costs
- Substantial portfolio risk retained by LSE or its customers

Factual Issues

- Does not address procurement of hedges

- **Scenario 3 is inadequate without major enhancements**

Scenario 3a: Smart Portfolio Management

- Selects and coordinates a comprehensive portfolio of resources to manage risk and maximize short- and long-term benefits for consumers
- Considers a wide variety of financial and non-financial products
- Places priority on diversity and encouraging new entry of generators and marketers as a means to provide stable and low consumer prices and reliable service
- Can incorporate “vertical tranches” approach where appropriate, but takes a broader view, flowing more benefits to consumers over time by including long-term products.

Scenario 3a: Smart Portfolio Management Features

- A laddered portfolio of contracts--full requirements, commodity, or residual contracts, as needed
- Can include load following components when and if that is the best choice
- Renewables
- Energy Efficiency
- Fuel diversity
- Technology diversity
- Mix of contract lengths
- Use of spot and short-term markets
- Regular monitoring of need and markets with opportunities to revamp portfolio over time

Scenario 3a: Smart Portfolio Management: Laddering

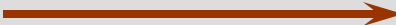
Like Scenarios 1 & 2, can *include* laddering and load-following components, as shown in following “Basic Laddering” example:

- 3-5 segment ladder with annual maturations
- Initialize ladder with staggered contracts
- At each expiration, adjust amounts renewed
- Utilize either RFP or auction process

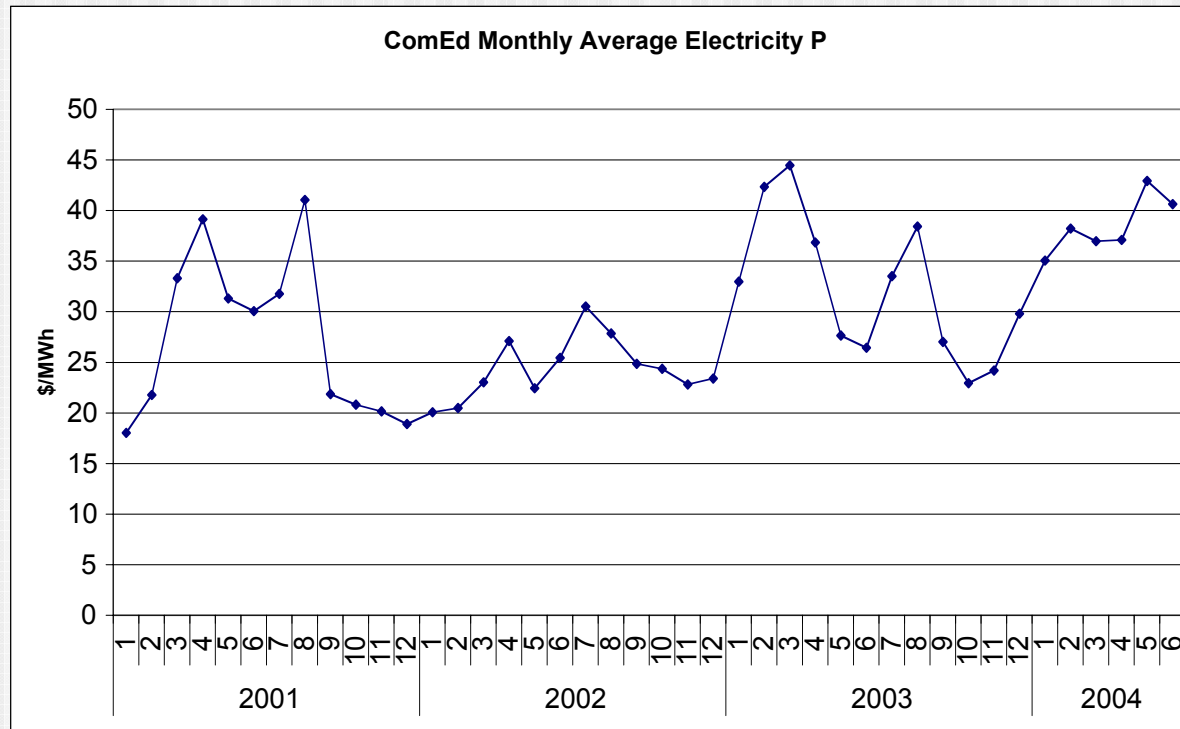
For a 5-year ladder, every year, 20% of the ladder expires and 20% of the ladder is newly purchased after initialization.

Example: Basic 5-Year Ladder

Year	1	2	3	4	5	6	7	8	9	10	11
20%											
20%											
20%											
20%											
20%											

	Original Contracts
	Rollover Contracts
	Subsequent Contracts
	New 5 year contract starts

Like Scenarios 1 & 2, can reduce exposure to wholesale market price volatility but allows more flexibility in term lengths and sizes



By contracting supply at many price points, exposure to price volatility is minimized.

NJ and Maryland have Moved in the Right Direction.....

- Both diversify acquisition dates through laddering of overlapping purchases.
- Both employ procurement practices that are reasonably transparent and orderly.
- Both may apply RPS requirements to default service suppliers.
- Both can provide temporary price stability to end users.

However....

- Neither addresses market power issues.
- Neither is designed to “fail softly” in anomalous markets.
- Both restrict bids to an arbitrary 3-years.
- Neither sets an upper price limit.
- Neither makes use of the spot market
- Neither utilizes long-term contracts to encourage renewables/long-term stability and new investment
- Neither is clear on demand response programs.
- Neither is tested under tight capacity environments.

...NJ and Maryland procurement approaches are not perfect.

Oversight and transparency problems in NJ & MD...

- Neither provides for state regulatory control nor transparency of the process.
- Inadequate provision is made for consumer review, input or oversight
- Both appear to assume that auction process outcomes are by definition just and reasonable.
- The simultaneous declining clock auction is difficult to monitor. Other auction structures should be considered.
- Process for selection of Auction Manager and Auction Supervisor needs to be considered as well as how the design of the auction may affect universe of candidates.
- Both scenarios absolve the utilities and the regulators from any responsibility for the outcome with price risk on customers.

Alternate schemes may prove more beneficial to customers.

Even with broader scope, as in the above example, laddering alone has limitations

- No long-term resource acquisition
- Does not deliver long-term benefits of any renewables procured to consumers
- Does not deliver efficiency benefits
- Only one term length (except during initialization)
- Places all migration and demand risk on providers, even if utility is better able to manage it

Enhanced Laddering as *one* part of Smart Portfolio Management

Options include:

- Reserve part of load for short-term or spot market
- Solicit very long-term or life-of-fleet renewable supply for part of load
- Solicit and procure efficiency resources
- Reserve part of load for short-term contracts
- Solicit longer, laddered contract terms for residual
- Adjust allocations as load and markets evolve
- Use suitable benchmark price
- Contract for fixed amounts of commodity (with ancillary services included) in ladder and hedging risk of load change

Example: Enhanced Portfolio Ladder

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
20%										
20%										
20%										
20%										
10%										
10%										

Quantities are examples.
Efficiency and short-term allocation not shown.

	Original Contracts
	Rollover Contracts
	Subsequent Contracts
	New 4 year contract starts
	Spot market flexibility
	Long-term, renewable contracts

Market power risk diminished under Smart Portfolio Management

- Multiple, laddered, longer-term forward contracts reduce exposure to market power of large generation holders by reducing exposure to short-term manipulations and by making bidding more feasible for small and medium-size generators.
- Serving a portion of the need from efficiency and new renewables can reduce market power of large generation holders by reducing their market share.
- Multiple, laddered, longer-term forward contracts reduce exposure to market power of large generation holders by providing a predictable, longer-term revenue stream for potential new market entrants

Risks due to future environmental regulations decline.

- Uncertainty about the type and extent of environmental regulations that may be imposed in the near- to long-term future is a significant risk factor.
 - Utilities and wholesale vendors of electricity already must comply with sulfur dioxide (SO₂) and nitrous oxides (NO_x) emission requirements.
 - Most groups recognize that some form of regulation of Hg and CO₂ is highly likely.
- Planning for such uncertainties and hedging against those price risks is both feasible and vital.
- Smart Portfolio Management addresses these risks in several ways.

Smart portfolio management encourages a mix of emission profiles.

Peak cost risks due to extreme weather decrease.

- Efficiency and most types of renewables can reduce peak prices and price volatility for all
- Some types of Smart Portfolio resources are *more* available on-peak than off-peak
 - Photovoltaics (PV), though expensive to install, generate the most electricity during midday in the summer season - just when electric load and price is highest for most regions -- potentially making them cost-effective
 - Demand response and efficiency targeted at on-peak end uses can be powerful market modifiers

Through smart portfolio management, efficiency and renewables that are especially powerful at reducing peak prices and increasing reliability, can be encouraged.

System reliability risks decrease.

- Portfolio management offers significant reliability benefits by encouraging new entry and diversification.
- Diversification can take the form of varied fuels, technologies and a mix of generation, transmission, demand-side resources, and energy efficiency.
- On average, with diversification, each resource represents a relatively smaller proportion of the total

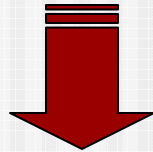
Relying on many resources is inherently more stable than relying on a portfolio made up of one or a few resources subject to unique risks.

Smart Portfolio Management for Illinois

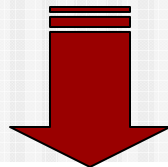
- Can use either auctions or RFP (with improvements)
- Can shift as much or as little risk onto wholesale suppliers as desired
- Over time, provides more robust protection against wholesale market flaws

Take aways...

The majority of residential customers need low-cost, reliable bundled utility service.



Smart portfolio management can help ensure this result.



To protect consumers, we must first resolve issues around wholesale market power.