

Commission Watch

New York Throws a Curve

ISO's new ICAP scheme seen as subsidy for the gen sector.

By BRUCE W. RADFORD

For evidence that electric restructuring has lost its way, look no further than ICAP—the dubious idea that to guarantee reliability and low prices, regulators should create a market not just for trading the finished commodity, but also for buying and selling ownership rights in the future ability to produce.

How else to describe the idea of forcing utilities (also known as load-serving entities, or LSEs) to buy “capacity”—the present right to the future output of a generating plant—even if they already have purchased enough energy (the product) to sell to customers?

Listen to Francis Pullaro, manager of regulatory affairs for New York State for Strategic Energy, a firm that provides consulting services related to fuel and energy management: “Capacity has no value in today’s market. Thus no demand exists for it.”

And yet ICAP (installed capacity) has played a prominent role in the design of emerging power markets in New York, New England, and PJM, which typically set a certain level of capacity that utilities must have on hand. Thus, as Pullaro argues, the regulators have had to create “an artificial demand” for ICAP by requiring LSEs to purchase it. “The only value to a purchaser comes from the avoidance of a penalty for not purchasing it,” he says.

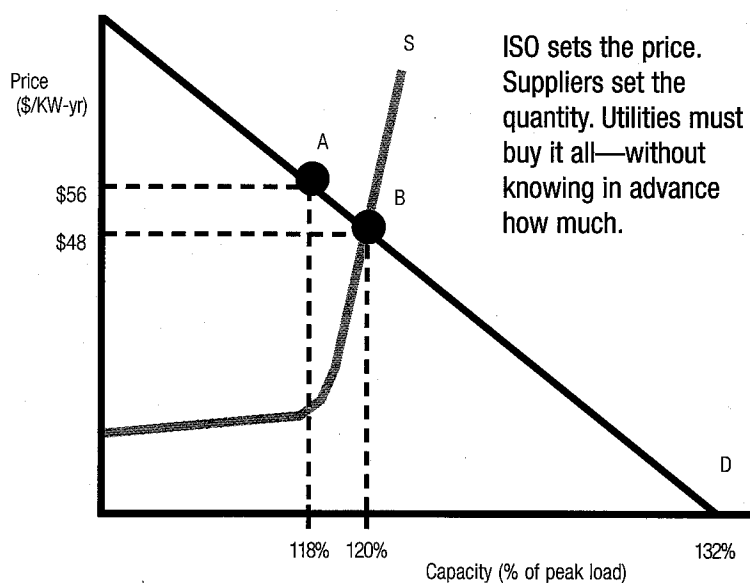
Back in Washington, D.C., Federal Energy Regulatory Commission Chair-

man Pat Wood III thought he had put the matter to rest last year when he killed ICAP from the FERC-proposed standard market design (SMD). He opted instead for a concept more akin to a traditional reserve margin, known in SMD parlance as RAM, or regional

adequacy model. And indeed the three regional operators have convened a working group (RAMWG) to devise a coordinated and seamless capacity solution for the Northeast, based on FERC’s vision. (But Mirant says that while PJM and New England have raised their reserve margins above 30 percent, New York is “fast approaching” deficiency conditions, and cannot wait as long as it would take for the RAMWG to complete its work.)

Now comes the New York Independent System Operator, endorsed by the state public service commission (PSC) and merchant power producers, with its new and improved ICAP scheme, known as the “demand curve.”

FIG. 1 GEN CAPACITY—AN UNHEDGEABLE RISK?



The figure shows how the New York ISO’s “demand curve” plan would restructure capacity prices in the ICAP market.

The straight line running from upper left to lower right depicts a hypothetical demand curve created not by actual “buy” bids, but by administrative fiat. The line is designed so that capacity prices will approximate \$56/kilowatt-year when available capacity equals 118 percent of peak load requirements.

The curved line running from lower left to top-center depicts a sample supply curve created by actual bids by power producers to supply capacity.

Under the ISO plan, utilities must purchase capacity at the price and quantity shown where the two curves intersect. Opponents claim that creates an unhedgeable risk, because suppliers are the only active market players, and utilities cannot know in advance how much capacity they will be required to purchase.

Source: Affidavit of Dr. Thomas S. Paynter, FERC Dkt. No. ER03-647, filed Apr. 11, 2003, by the New York Pub. Serv. Comm’n.

(See FERC Docket No. ER03-647, tariff filed March 21, 2003.) The New York plan presumably would eliminate the extreme volatility that has plagued capacity prices in the region. Prices of late had fallen as low as \$0.10/kilowatt-month (\$1.20/kW-yr), for upstate areas outside New York City and Long Island. Yet if utilities come up short, they can be made to pay hundreds of times more as a make-up penalty. To smooth out those peaks and valleys, the New York ISO has proposed a gently self-moderating “curve” of prices.

The New York Plan

The plan would set target ICAP prices at \$56.24/kW-yr. for upstate capacity (climbing to \$67.49 in year two). Prices would run considerably higher for New York City and Long Island, but still below the level of the current deficiency penalties: \$104.37/kW-yr. (\$123.94 in year two) for Long Island; \$127.89/kW-yr. (\$151.14 in year two) for New York City.

Yet, it is the guaranteed nature of these prices—guaranteed by the linear demand curve—that has drawn protests. For example, rural cooperatives claim to have evidence that generators already are withdrawing capacity (1,300 MW) from PJM markets for sale into the New York ISO at a higher price.

Why the New Scheme?

According to testimony presented by ISO market advisor David Patton and PSC witness Thomas Paynter (economist and regulatory analyst), the old ICAP scheme tended to produce a vicious cycle of gyrating boom/bust prices. It forced utilities to acquire capacity equal to 118 percent of load (with certain other locational purchase obligations to secure downstate load in New York City or Long Island), or else pay a severe penalty for falling a frac-

tion short of that benchmark. But it provided no special rule for exceeding the mandatory margin. Thus, ICAP prices climbed at auction as long as utilities needed to buy it to reach the cutoff point at 118 percent, up to a *de facto* cap equal to the deficiency penalty the ISO would assess against utilities for falling short. (Under current rules, the penalty would hit \$255/kW-yr. for upstate capacity, and a whopping \$477/kW-yr. for a capacity shortfall within the New York City load pocket.)

To make matters worse, prices then collapsed the moment utilities had bought enough ICAP so that margins passed the 118 percent level. Generators found they could hardly earn a cent on the next increment of capacity that exceeded the benchmark. Gas turbine peaking plants faced a double whammy. First, with energy prices collapsing, the ISO dispatched the turbines in fewer hours (merchants built the turbines in expectation of periodic price spikes of \$250 or higher per megawatt-hour, to recover costs.) Second, those plants had counted on ICAP revenues, but they found that prices there had collapsed also.

For example, the 1,700 MW Oswego plant in upstate New York was designed for baseloads but ran only 3 percent of the time in 2001. “It is doubtful that this plant is making money at today’s ICAP prices,” writes PSC staffer Mark Reeder, in a recent study.

But, according to experts like Patton and Paynter, an extra dollop of plant capacity beyond the required margin—let’s say an extra one percent, up to a 19 percent reserve margin—could conceivably reduce energy price spikes enough to produce up to \$100 million annually in consumer savings. Surely, they argue, capacity that exceeds the minimum required engineering standard to assure reliability has substantial economic value, and ought not go for \$1 per kW.

To fix the problem, the ISO proposed to create an artificial sloping demand curve to represent the prices a hypothetical utility might be willing to pay for ICAP if there were no preset “cliff-like” benchmark at 118 percent, but utilities instead paid a true-value price. In other words, the ISO set an artificial linear demand curve, sloping in such a way that capacity prices would fall gently as generators submit bids to supply more (up to a saturation level of 132 percent—a 32 percent reserve margin). Similarly, prices will rise gently as capacity margins tighten. The ISO designed the curve so that the clearing price at the target level of capacity (118 percent of load) would just equal the estimated actual installed capacity cost of a new gas turbine, after backing out any net profits from sales of energy or ancillary services (see Figure 1).

But look at what happened. With its demand-curve idea, the ISO has abandoned a model based on an engineering standard of operational reliability (18 percent reserve margin). In its place the ISO has adopted an economic model that seems crafted solely to save generators from ruin. That puts the ISO in the business of making political decisions, says attorney Phillip Marston, representing the Retail Suppliers Alliance, one of dozens of companies and groups that have attacked the plan. Here is a rough breakdown of why they say FERC should reject the ISO plan:

1. **Unlawful.** Violates rate-making principles. Is neither cost-based nor incentive-based.
2. **Unethical.** ISO concedes certain voting irregularities that occurred in the approval process at the management committee.
3. **Unnecessary.** No evidentiary proof that the current ICAP market is not already working. Low capacity

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prices under current regime stem quite logically from New York's current (but diminishing) capacity "cushion" of five percent above 18 percent margin required for reliability by engineering standards.

4. **Expensive.** Will force retail rates up without any assurance that merchants will use the cash to invest in new generating capacity.

5. **Unmanageable.** Creates risk that cannot be hedged, and tends to force utilities out of forward markets and into shorter-term spot cash market—exactly opposite of intentions—since utilities cannot discover ahead of time how much capacity they will be required to buy.

6. **Inefficient.** If more capacity is needed, why not just issue an RFP to solicit new plants for specific geographic areas, as New England has done for southwest Connecticut, and as Con Ed has proposed recently for NYC. (See *N.Y.PSC Case 02-E-1656, seeking prior approval for costs for capacity purchases.*)

7. **Bureaucratic.** Imposes a top-down, administrative pricing regime in place of a functioning bid-based market. Creates subsidy for merchant generators. Creates political role for ISOs in managing gen capacity not just for reliability, but also to manipulate energy prices to achieve socio-economic goals.

8. **Inconsistent.** Encouraging generators to build reserve margin greater than 18 percent runs counter to FERC proposal in SMD for 11 percent margin.

9. **Windfall.** Designed to make sure merchant generators can recover fixed costs, and thus runs counter to last year's

First Circuit ruling (*Sithe New England Holdings v. FERC, 308 F.2d 71*) that says ISOs cannot use ICAP markets to help merchant generators recover costs already sunk.

10. **Wrongheaded.** Policymakers instead should look to energy markets to provide revenues for generators. (The New York ISO has already taken steps for summer 2003 to remove some price caps to allow gens to recover fixed costs through scarcity pricing.)

A One-Armed Market

The most troubling critique comes from Consolidated Edison, and from testimony that it offered from its expert witness, William Hieronymus, of Charles River Associates.

As ConEd and its witness point out, the ISO's demand curve is not a demand curve at all. It does not represent a summation of bids submitted by the utilities that buy capacity. Instead, it represents an administrative determination of what the ISO says that utilities ought to bid if they were acting in the best interest of the consumers, as defined by the ISO.

In fact, as Hieronymus points out, the utilities as purchasers cannot even participate in this new demand-curve ICAP market. Merchant generators, submitting supply bids, are the only active participants in the market. That, in turn, forces utilities to undertake an obligation to buy capacity at a floating price to be determined in the future by generator behavior. It also forces utilities to buy all the capacity that generators want to sell at that price. In other words, utilities cannot know in

advance how much capacity the ISO will require them to buy.

And, as Hieronymus, ConEd, and attorney Marston put it, this situation creates an unhedgeable risk; without knowing the quantity term, there is no way to take a long or short position to counterbalance the risk of a future price increase or drop. Thus, they predict that the New York demand curve plan will cause utilities to abandon bilateral forward markets in favor of New York's cash-market spot ICAP auction—exactly opposite to the effect that the ISO and the PSC predict.

"This proposal is not designed to bail out merchant generation, as some may claim," writes Dawn K. Jablonski, general counsel for the New York Public Service Commission, defending the plan.

Back at Strategic Energy, Francis Pullaro sees New York's demand curve scheme as nothing more than a tax, like the taxes and user fees imposed by states to build highways, airports, and a convention center.

But unlike those taxes, Pullaro adds, "the ICAP tax has no requirement that the recipients use the revenue to build generation."

"If this problem of peaking units being uneconomic actually exists," Pullaro adds, then "lift the price caps ... to reflect the true value of energy."

And yet again, generators might not be much better off even if regulators abandon ICAP, remove the price caps, and rely on energy prices alone to recover fixed costs for merchant plants.

According to Keyspan, research calculations have shown that with an energy-only market design, we would have to endure price spikes of up to \$30,000/MWh to assure enough capacity to preserve reliability. ■

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