



Overseer's Undercurrent Ten Years After: The Evolving Energy Marketplace, Part I

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When California first embarked on its risky experiment in restructured electricity services 10 years ago, we had a simple, maybe even simplistic concept of what an energy market should be.

The thought was that arm-twisting regulated utilities into divesting most of their power plants would help create a more robust wholesale power market. It was also believed that the introduction of "direct access" at the retail level would launch dozens, perhaps even hundreds of new energy service providers. There would be a transparent price for power, publicly derived by a Power Exchange and reported in the trade press or maybe even in the daily newspapers for all to see.

We somehow convinced ourselves that these actions would exert downward pressure on energy prices, make the entire system more efficient, and spur innovations in technologies and services.

There was plenty of academic theory behind the new paradigm, but not a whole lot of experience. Nearly 100 years of monopoly control over generation, transmission, and distribution beget little understanding of or appetite for real competition, even here in California, where independent power producers were grudgingly allowed to chew at the edges of the utility resource portfolios.

The closest we ever came to competitive procurement was the ill-fated Biennial Resource Plan Update (BRPU). Utilities hated it. Everyone else complained about the BRPU for its quite imperfect approach to competitive bidding. This system was supposed to replace the previous "gold rush" of giving standard-offer contracts to any and all power developers fitting the criteria for "qualifying facilities" under the federal Public Utility Regulatory Policies Act. But it still amounted to a "monopsony" system of a single buyer per territory controlling the marketplace.

Some history: Up until the mid-1990s, the Western wholesale power market typically took the form of a tight pool of utilities moving power among themselves. The Pacific Northwest's traditional model, called the Intercompany Pool, was composed of power traders from each of the regional utilities sharing an office in Spokane. Each day, they waited for the Bonneville Power Administration to set its daily marginal rate for surplus hydroelectricity, then proceeded to fill in each utility's power needs for the day. Occasionally, there would be a true-up of the transactions, but it was mostly an accounting exercise. Money rarely changed hands.

California utilities had purchase agreements for Northwest energy, but the preferred model was an exchange program, in which BPA or others sent surplus energy down the Intertie during summer and California returned the power the next winter, often at a 1:1.2 ratio that reflected a discounted value for the abundant hydroelectricity.

The Intercompany Pool lasted nearly 50 years, until the U.S. Department of Justice issued a few subpoenas to investigate whether this was, in effect, an anticompetitive market-sharing scheme. The interregional exchanges fell by the wayside as the new competitive model attached a price tag to all transactions. The BRPU was abandoned with the introduction in April 1994 of California's "Blue Book" proposal for restructured markets.

Of course, restructuring didn't exactly work out the way we expected.

In retrospect, it's easy enough to identify the many market failures that contributed to the Western Power Crisis: Channeling wholesale transactions through a single Power Exchange at first reduced perceived prices and maximized utility capture of "stranded costs," but it built up an explosive pressure. Eventually blowing up in our faces was the imbalance between the PX's day-ahead market and the new markets for last-minute power and previously unmonetized reliability services at the California Independent System Operator, and the financially disastrous mismatch between frozen retail rates and unconstrained wholesale prices.

I don't need to recount all the painful details of market collapse, but in rapid order the manipulative gaming, the dissolution of the Power Exchange, the emergency return to long-term contracting under an ill-equipped state water agency, the suspension of direct access, the undermining of wholesale markets, the eventual restoration of utility procurement, and the long-drawn-out redesign of California Independent System Operator markets all left us with what some people call a "hybrid" marketplace.

I just call it a mess.

Far from the single, unified marketplace that was expected to flow through the PX, what we actually have now is a plethora of markets and transaction schemes never contemplated in the Blue Book.

To be sure, there are still vestiges of the wholesale market that developed in response to California's program, and on any given day, you can find a price and make a deal at regional hubs like COB, Palo Verde, or SP15. Though NYMEX had briefly abandoned its Western electricity futures market, you can once again enter contracts for power futures as a financial hedge at these hubs.

This system may be supplanted in-state by the multiple LMP (locational marginal price) markets that come with the grid operator's redesign. It will become increasingly difficult to answer the question "What's the price of power today?" because there will be so many different answers.

California's regulated utilities are back into resource procurement (as well as the "build, buy, and own" business), with both "all-source" bid programs and specialized solicitations for renewable resources to meet the renewables portfolio standard mandates. Soon, there may be

"capacity" markets in addition to all this.

These are joined by public power solicitations, mainly for renewables but increasingly for other energy-related products - efficiency, peaking power, and the like.

The record-setting summer is spurring a greater emphasis on demand-response programs, and there is an effort to create more competitive markets for negawatts as a replacement for megawatts under peak circumstances.

Meeting the renewables portfolio standard goals will dictate reliance on markets for both renewables-derived electrons and renewable energy certificates (RECs). There is already a burgeoning marketplace for "green tags" nationally for compliance with renewables standards in other states, as well as to back up voluntary commitments for green energy.

Anyone who has tried to build a big power plant in the state, or even expand an industrial operation, has already dipped into the emissions offset market for regulated pollutants, SO_x, NO_x, and particulates. The accepted value of offsets differs by air-quality district and by availability; often developers have to apply ever-changing formulas to show regulators that a reduction of one emission type is comparable to another. In places like the South Coast and San Joaquin Valley, where both smog and costly regulations to curb it abound, one can already make the case that the value of avoided emissions exceeds that of the generated electrons.

With the strong potential for cap-and-trade mechanisms as a way to achieve grand goals for greenhouse gas reductions, there will be further interplay among energy trading, RECs, and offset markets, as ingenious brokers slice and dice power transactions into energy, green attributes, carbon reductions, and other revenue streams.

So we've come a very long way from the old notion of energy markets. After all, it's only been for a decade or so that one could even discover what the price of electrical energy was at a given time or location, via a Dow Jones Index, an Intercontinental Exchange, or a trade-press survey.

Now the single price signal has given way to a diffuse and complex calculation of values set by market transactions, and it's bound to become even more complicated as time goes on. Next time: New Challenges and Opportunities.

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