

AIC Conferences

Hedging Electricity Pricing Risk

April 27, 1995

A Competitive Electricity Market with POOLCO

By

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Thank you John/Linn and good afternoon. It is a real pleasure to have the opportunity to share our views on a very interesting and timely topic. The electric utility industry is at the early stages of a transition from a regulated, vertically integrated structure to a competitive electric market. Change is being driven by new technologies, competition, markets and customers. In this change process, it seems as though we have spawned a whole new industry.....conferences to debate the merits of POOLCO and bilateral contract models. The focus on POOLCO versus bilateral contracts, however, misses the point. Our focus has to be on bringing the benefits of competition

to all consumers; a market system that produces lower costs through competitive efficiencies and not zero-sum games of cost shifting and cost avoidance; a transparent and open market that provides opportunity for all to compete to serve customers.

Well, for the many in this room who came to hear the standard Edison speech about why POOLCO is better, I am going to disappoint you. Instead, I am going to take you in a time machine to the year 2005 and look around to see what the electric industry looks like and how customers' electricity needs are met. And don't be too surprised if we happen to encounter a POOLCO-like creature in our travel to the future.

As we start our journey forward, let's spend a minute to take stock of how things are now in 1995. Let's think back to just twelve short months ago, before the California "bluebook" was published, and ask ourselves:

- How many of us here were attending and speaking at conferences that were focused on managing electricity price risk? OR.....

- How often did the discussions inside our respective companies deal with issues like electric rate swaps, price discovery and transparency, or POOLCOs? OR FOR THAT MATTER.....
- How many of us would have dreamed we would be here now listening to two West Coast utility executives present their visions for moving to a competitive electricity marketplace?

Well, the lesson here is quite obvious and should be kept in mind as we explore the future of the electric industry. **Concepts that may have been foreign yesterday are very likely to be the realities of tomorrow.**

OK, let's strap on our seat belts and proceed at warp speed to the early part of the next century, only 10 years away.....Whew! That was a fast trip!

Now, one way to understand the way our market structure has evolved is to first take a quick look at the typical electricity customer and see how his or her world has changed. Here's what we see:

Electricity customers, big ones and little ones, can now choose:

- Who to buy electricity from.
- Among different electricity markets -- the daily, monthly and yearly bilateral contract market, the futures market and the real-time hourly/day ahead spot market.
- To take a “hassle-free” bundled service....OR.....aggressively manage each element of their energy portfolio.
- Among a wide variety of pricing options, including time-of-use spot market prices, fixed prices, or prices tied to the price of the product they sell.....a customer’s imagination is the only limiting factor here.
- When to consume and when to conserve based on market price signals.

In addition, customers are now assured that:

- Whether they “order” too little or too much electricity, their lights will stay on with the deficits or surpluses automatically settled at visible real-time spot market prices, without imposition of economic penalties.

- They will receive timely delivery of electrons through transportation of power across utility networks regulated by state and federal agencies.

Looking a little closer at the customer segment, let's focus specifically on a large industrial energy user.....a company whose energy bill is a significant element of their overall cost structure and thus has a direct impact on its competitive position. In the old regulated world, decisions on the make-up of the power portfolio were made in litigated regulatory proceedings.

Customers saw a utility tariff, and their freedom to manage their energy bill was limited to "working against the tariff". Here in the new competitive world, their strategy for managing their electricity costs is through customized bilateral contracts with utilities, marketers or producers. The large industrial customer can build a diversified energy portfolio which consists of several elements. Depending on the nature of the company's risk profile and sensitivity to price variations, that portfolio might include:

- Physical electricity supplied under yearly, monthly and daily bilateral contracts.

- Spot market, real-time-of-use electricity traded through the POOLCO.
- A wide variety of financial products which provide protection against fluctuations in the spot market prices.

The bottom line is that customers have the flexibility to construct their energy portfolios any way they see fit. It is also interesting to note that while they have these choices, it is different from buying other raw material for their business in one very important way. If, for example, they don't order enough boxes to package their product for shipping, they are out of luck until the new supply is ordered, shipped and received. With electricity, if they don't order enough through their bilateral contracts, the rest of what they need is supplied through POOLCO instantaneously at the prevailing real-time spot market price. How nice!.....having the flexibility to choose among many supply options without the risk of mis-forecasting demand.

Well, from the customers' standpoint, this sounds great. Now let's focus on the supply side of the equation to see how the generation business has changed.

As we sit here in the initial years of the 21st century, the most noticeable change is that most electricity generation and supply is no longer a regulated utility function. While the prices for delivering electricity over the wires to customers are still set in a regulated environment, the price of the electrons is freely determined in the marketplace. If supplied under bilateral contracts for physical supply, the price is negotiated between buyer and seller. The hourly spot market cash price is determined when generators and marketers submit supply bids to the POOLCO which are then economically dispatched in quantities sufficient to ensure that projected demand is met for that hour. The spot market price paid to the suppliers is the market clearing price....the last bid accepted to meet demand.

Sitting here in the year 2005 and looking back to the mid-1990's, there was an exhaustive debate on POOLCOs and market structure. Most of this debate resulted from a misconception of the role POOLCO would play in the competitive world. Some argued it would severely limit the choices generators would have in marketing their product. Some argued it would not provide customers with real choices of whom to buy their electricity from.

Some even argued there was no place for bilateral contracts in a POOLCO world.

As we can see now, those arguments were really a combination of misunderstandings and marketing hype.

For those here, however, who are not really familiar with POOLCO's role in the competitive market structure, we should take a little closer look at how the POOLCO actually operates, what POOLCO is, what it isn't, what POOLCO does and what it doesn't do.

So, what is POOLCO? Well, POOLCO has turned out to be exactly as it was described in concept by the U.S. Department of Justice way back in 1995.

The Department of Justice said that a POOLCO could be an “excellent mechanism for helping to complete the transformation of the electric power generation industry from the series of regulated monopolies it once was into a series of interconnected, openly competitive and efficiently unregulated markets”. Simply put, POOLCO is an independent entity, not affiliated with any utility, that makes a real-time spot market in electric power, dispatches

supply to meet demand, ensures that energy users always have access to a reliable, competitively priced supply, provides open and comparable access to transmission, and separates the financial transactions from the physical operation of the system.

Even more specifically, POOLCO does this by:

- Accepting nominations from generators and loads wanting to schedule physical transactions on the system, much as an air traffic controller regulates takeoffs and landings to ensure passenger safety.
- Evaluating nominations to determine if they are all simultaneously physically feasible during periods of grid congestion.
- Matching supply of and demand for electricity.
- Settling electricity imbalances at real-time spot market prices.
- Competitively purchasing ancillary system services such as reactive power and spinning reserve necessary for reliable system operation and billing retailers for their use of these services.

Looking at it from a different perspective:

- Is POOLCO a central purchaser of electricity? **NO!**
- Is POOLCO a clearinghouse for spot market transactions? **Yes!**

- Is POOLCO a market participant? **NO!**
- Is POOLCO a market? **YES!**
- Does POOLCO supersede or replace bilateral contracts? **NO!**
- Does POOLCO facilitate growth of financial markets? **YES!**
- Does POOLCO buy or sell electricity for itself? **NO!**
- Does POOLCO allocate resources based on price signals? **YES!**
- Does POOLCO make these price signals open to the public? **YES!**

OK.....enough specific focus on POOLCO. To complete our view of how the electricity market has evolved, I've attempted to construct a pictorial overview of how all the market participants interface. I know this looks a little complicated at first but hopefully it will clarify any remaining questions you may have.

As you can see.....

- Generators can choose to sell their electrons directly to anybody they want.....an end user, a utility, a marketer, or in the real-time spot market through POOLCO, and in any combination they desire.

- End users can choose to buy their electrons from anybody they want.....a utility or non-utility generator, a marketer, or from the real-time spot market, and in any combination they desire.
- End users can manage their electricity price risk by purchasing a physical supply bundled with a financial instrument (or hedge), or they can purchase their physical electricity on the real-time spot market and hedge with purely financial transactions.
- All market participants have equal access to the transmission grid in order to complete their energy transactions.
- All energy users can be assured of a competitively priced supply of electricity. Also, they do not assume the reliability risk of under-contracting for delivery under bilateral contracts.
- Consumers, not utilities or regulators, make supply decisions.
Consumers benefit from smart deals and pay for dumb deals.

While the additional choices generators and users now have sounds like there is significant added complexity when making energy decisions, retailers with strong customer focus have profited by successfully providing needed

simplicity, also known as “rebundling”, for those who would rather focus on running their businesses than having to become “experts” at buying, moving and managing price risk of electricity.

Well, as our journey into the future ends and we return to 1995, I hope each of you has gained a clearer view of the competitive electricity market structure which we believe is most likely to evolve, including the role of a POOLCO in that market.

As I conclude, lets do a little reality check on how we get from here to there. The path from a regulated structure to a competitive market is unlikely to be straight or smooth. Customer choice at the retail level requires resolution of important policy issues -- full recovery of prudently incurred costs under the current regulatory structure; jurisdictional clarity between federal and state regulatory authority; and size, scope and recovery of costs associated with energy policy programs.

There is a growing consensus on transitioning to a pool-based competitive electric market as a means for fostering additional wholesale competition in

the near term, and to provide the necessary foundation for facilitating choice for customers. This direction is supported by the fact that every regulated electric power system around the world that has transitioned to a competitive electric market has relied on a pool-based system for power operation and dispatch, including the U.K., Norway, New Zealand, and Alberta, Canada.

The future of our industry will see some shifts to new structures, new institutions and new technologies. The vertically integrated bundled service portfolio of utilities is likely to evolve to a competitive, unregulated generation segment, a federally regulated bulk power segment for transmission and POOLCO, and state and local regulation over distribution. Electricity trading, power marketing and service bundling will emerge as new competitive unregulated offerings. We at Edison look forward to this future and to winning over customers by beating the competition.

Thank you again very much and I look forward to responding to any questions you may have.

