What Determines the Price You Pay for Power? (Knowing the answer can reduce your costs)

By Bob Wooten, Director, C.P.M., CEP

For the free market to work its magic in establishing prices through the force of supply and demand, you have to have several key ingredients – one of which is an informed buyer. As a buyer of energy, this means that to have the best chance of success in achieving the best pricing, you must be informed. If you were to take all the various factors that contribute to the establishment of the retail price of energy, they could all be put in to one bucket comprised of the wholesale market. Another way of viewing this dynamic is to understand that the number one thing that affects the price you pay for energy as a retail buyer is the price your retail supplier pays for energy on the wholesale market. So for you, the buyer, to be fully informed, you must understand what the wholesale energy market is, and how it determines retail energy prices.

Understanding the Wholesale Market

If the price you pay for energy as a retail buyer is based primarily on the price of that same energy in the wholesale market, then the next logical question is to ask what determines the price of energy in the wholesale market. To understand this, we must look at several key factors:

What are the Transactions?

Wholesale energy is a commodity, meaning that it is fungible (one Dth of gas can be substituted for another Dth of gas in all transactions) and that the buying and selling thereof results in price discovery and transparency. Energy commodities are traded both on exchanges such as the NYMEX, as well as off exchanges through the “Over the Counter” (OTC) market. These transactions, which may represent a commodity contract ranging anywhere from one day to several years, manifest themselves in one of two ways:

- **Physical**: Physical trading means that the parties are directly concerned with delivering the commodity from one location to another for the purpose of then using the commodity. An example of a physical transaction is when a retail supplier of electricity procures wholesale power for the purpose of selling it to a consumer who will then use that power.
- **Financial**: Financial transactions occur in much more frequency than physical transactions, and the goal here is to earn money or provide financial protection for the party conducting the transaction. A financial institution may purchase a futures contract for natural gas, for the sole purpose of then selling that same contract as prices rise – which may be part of a larger financial strategy making up a fund of some sort for investors. Hedging is another financial strategy that can be used where the buying or selling of a futures contract is used to provide financial protection for price exposure from both producers and suppliers.

Who are the Players?

Those who participate in the wholesale energy markets range from parties interested in the actual physical delivery of the commodity to those whose interest is purely financial. As markets get active, you could have thousands of buyers and sellers all trying to transact. A seller announces the price they are willing to sell their commodity for while at the same time buyers have shown the price at which they are willing to buy. In Off-Exchange activity (which again accounts for about seven times the transactions as Exchange transactions), this buying and selling is facilitated by intermediaries/brokers which bring the parties together. This function not only helps establish the price but also adds transparency to the market by ensuring participants see the prices.
- **Utilities**: Utilities are the entities that you, as the consumer, interact with to provide you the commodity (in deregulated markets, this service is split out such that retail suppliers sell you the commodity itself while the utility retains a regulated role of transporting and delivering the commodity). In a regulated environment, a utility may buy wholesale energy for physical delivery to its customers.

- **Retail Suppliers**: In a deregulated market, it is the retail supplier that provides you with the commodity. Suppliers physically buy this commodity from a generator in the wholesale market so that they can in turn sell it to their customer. To protect the price exposure resulting from the contracts they have with customers for supply, Retail Suppliers may also hedge their exposure by buying futures contracts. Much of how a supplier hedges their position depends on the nature of the retail supply contract they have with their customer (a fixed all-in contract is handled differently than a pass-through contract).

- **Energy Generators**: The generator’s sole responsibility is to produce the energy for purposes of selling it to those who will then use it. So generators are interacting with both utilities and retail suppliers as they sell their production for physical delivery. As with suppliers, they may be hedging their price exposure by selling their output in a futures contract.

- **Financial Institutions**: These parties, such as banks, hedge funds, and trading companies, are frequently referred to as speculators. The goal here is to provide revenue growth for their organizations or investors. The expectation is that once a position is taken, the value of the contract will rise resulting in a profit upon sale. If you have one party thinking prices may rise, and another party thinking prices may fall – you have your counterparties. There is no intention of physical delivery with these players.

- **Intermediaries**: Whether for physical or financial purposes, it is the broker that the majority of the time is bringing the buyer and seller together, and then reports the transaction to the exchanges. Intermediaries are not taking a position for themselves and never take title to the commodity, creating a non-biased impartial participant in the market. It is this intermediary role that perhaps more than any other player, has the most holistic, balanced view of market dynamics.
Conclusion:
While the wholesale price of energy is one of the key determining factors in establishing the price you pay as a retail consumer of energy, it is not the only factor. Anyone who pays a bill for electricity or natural gas will even see many other components appear on their bill, as well as other components that are wrapped up in the retail commodity price itself. These factors can include such items as capacity/congestion charges, transmission/distribution charges, line losses, and other ancillary costs. But with this article, we wanted to focus on the key ingredient which underlies all of this, and that is the wholesale cost of the commodity and how that translates in to the retail cost you pay. And when you are in the position of a buyer, understanding the “what” and “why” of the wholesale market will make you much more informed and in a much better position to procure the commodity for your retail use. This is the deciding factor that leads many organizations to engage the services of an energy advisory firm – particular one with a significant presence in the wholesale market. If you have an understanding of why prices are going higher because of activity taking place by the players in the market, then you will be much better situated to make decisions on when you will transact. We aren’t suggesting you try to “game the market,” but we do strongly encourage you to understand these dynamics to assist you with knowing when to buy and what factors to be aware of that can move the price over time.

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