



National Energy Marketers Association

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NEWS MEDIA BRIEF

Winter 2014: Impact on the Energy Marketplace

This winter we've seen some of the harshest weather in years. Energy costs have skyrocketed, catching many homeowners and business owners by surprise.

One of our goals at NEM is to help consumers understand how the wholesale and retail energy marketplace works, and what happens to energy costs – and prices -- in times of extreme weather and energy demand.

To understand how the weather effects demand for energy and how increased demand drives consumer prices higher, it is important for consumers to understand the basics of the electricity marketplace, and the role each of these entities below plays in how the market works.



Buying Electricity Today – Consumer Retail Choice

In many states, deregulation opened up the marketplace for consumers to choose how and from whom they buy their energy. The local public utility, which owns and services the distribution lines that carry electricity to your home or business, is no longer the only supplier choice for consumers.

Today, there are many **retail energy marketing** companies that offer flexibility and value to smart consumers who want to manage their energy costs. These retail energy marketers are able to acquire electricity at the best price possible from the competitive wholesale marketplace.

The retail energy marketers create a value proposition for their customers by offering different rate price options and the flexibility to switch between different plans. Some customers choose **variable rate plans** that adjust monthly to the energy market, so they can manage their costs directly on a month-to-month basis. Other customers prefer **fixed rate** plans to lock in rates for an extended period. Depending on the location, retail energy suppliers can often offer plans at a lower cost than what the local regulated utility charges (the local utility rates are set by the state government). Additionally, many retail energy suppliers offer value added products and services beyond the commodity.

These retail suppliers compete for residential and business customers by offering a broad range of pricing choices. In a competitive marketplace, consumers have many retail energy marketers

from which they can choose (or they can continue to purchase their energy through their local utility). This competition in the open market requires retail energy marketers to maintain extensive customer service programs to ensure their customers have all the information they need to make informed decisions about their plans, and manage their costs.

How Electricity is Distributed – ISOs/RTOs and the Wholesale Market

The electricity that retail energy marketers sell to consumers is acquired from **Independent System Operators (ISOs)/Regional Transmission Organizations (RTOs)**, which are independent, federally regulated entities responsible for the electric transmission system (grid) in a particular region. In the Northeast, there are three prominent ISOs/RTOs:

- **PJM** – Serves the electricity grid in DE, MD, NJ, OH, PA, VA and WV and parts of IL, IN, KY, MI, SC, and TN
- **ISO-NE** – serves CT, MA, ME, NH, RI and VT
- **NYISO** – serves NY

The ISO/RTO determines how much electricity generation is needed to meet their forecast of hourly demand for the regions they supply. The ISOs/RTOs set the price of electricity based on bids received from **power generators** (the companies that own the generation plants). The power generators submit bids to their regional ISOs/RTOs for generated electricity for every hour of the day, on the day before it is needed.

ISOs/RTOs then sell electricity to the retail energy marketers and to the local utilities through what is known as the **wholesale market**.

How Electricity Prices are Set – Power Generators and Market Pricing

Power generators who own generation plants produce electricity for the ISOs/RTOs (i.e. the wholesale market). Electric power is a commodity that is priced according to the cost of generation and the demand, both of which vary widely by geographic region and time of year. Multiple factors impact the cost to produce electricity, but the largest factor is the type of fuel used to run their plants (i.e. coal, natural gas, nuclear, wind, etc.).

The federal government set up the system to reward power generators who can produce electricity most efficiently and at the lowest cost. Power generation companies set their bids to the ISOs/RTOs based on their individual production costs. The most efficient power generators benefit if they are able to keep their production costs low.

Here is a hypothetical example of how the system works:

- If the ISO/RTO determines that 26 generation plants are needed to supply enough electricity to meet the hourly demand for their region, they will accept price bids from 26 different power generators.
- For Generators A through Y, the average bid was around \$50 per megawatt-hour (MWH). These generators were very efficient and managed their production costs wisely, especially their fuel costs, even with the extreme weather and high demand.

- Generator Z's bid to the ISO/RTO was \$500 per MWH. For any number of reasons they were not able to produce as efficiently as Generators A through Y, most likely due to higher than expected fuel costs to run their generation plants.
- But when the ISOs/RTOs have all the electricity they need, according to the federal rules the PRICE is SET to the **last bid** accepted from the **last power generator to bid** that day. The ISO/RTO has to accept the HIGHEST bid (the one from Generator Z at \$500 per MWH) so ALL 26 power generators who bid are paid \$500 per MWH.
- Generators A through Y can realize a significant profit margin, by keeping their production costs low, because they get a much higher price for their electricity than they bid. Their profit potential is substantially higher during these periods of extreme weather and high demand because the system is set up to reward their efficient production.

The pricing system may seem counterintuitive, but it is designed to reward low cost producers and encourage generation efficiency.

What Happened This Winter – Higher Production Costs = Higher Wholesale Prices

In the Northeast, natural gas is the fuel used by the majority of the power generators producing electricity for the ISOs/RTOs (the grid). Over the past five years, power generators have moved increasingly to natural gas as their fuel of choice. Concurrently, many homeowners and businesses have converted to natural gas. This increased demand is placing significant stress on the natural gas transmission system, as certain areas of the country (e.g. New England) do not have adequate pipeline capacity to carry the volumes required.

During this “winter of the polar vortex,” the extreme weather created even heavier demand for natural gas across these regions. At some locations in the Northeast and Mid-Atlantic, average spot gas prices were substantially higher, peaking as high as 10 times normal on the coldest day (January 27, 2014). These natural gas price increases impacted electricity prices substantially.

For example, in Pennsylvania the average wholesale price of electricity in January 2014 was estimated at \$148 per MWh, versus \$44 per MWh in December 2013, a 336% increase over one month. Government agencies and regulators at the federal and state level are actively working to determine the cause of these shortfalls and determine what, if any, policy changes are needed.

Power generators using natural gas to fuel their plants were hit hard by the resultant price increases, which raised their production costs. This subsequently affected the pricing of their bids to the ISOs/RTOs, electricity the power generators sell to the wholesale electricity market, which is where the retail energy marketers acquire electricity to supply their customers.

As retail energy marketers were forced to pay higher wholesale prices for electricity in the market, they still had to provide electricity to their residential and business customers at the contracted rate. These energy marketers actually *lost money* on their retail customers who had fixed rate contracts, because the wholesale cost they had to pay for the electricity had skyrocketed.

For customers who had variable rate contracts, their monthly electricity costs increased, sometimes dramatically, as the rate they were paying reflected the increase in wholesale costs that the retail energy marketers were forced to pay. Energy marketers began reaching out to customers as early as December to warn them of possible rate increases, and many have dedicated additional customer service resources to help their customers find a different plan or to use a budget billing plan.

Hitting Home – Consumers Have the Power of Choice

This has been a challenging winter for both energy consumers and energy marketers. Both of these segments of this market – retailers and customers – have been hit by extraordinary cost increases due to a combination of higher demand (due to increased usage) and higher production costs for energy producers (due to increased fuel prices, especially for natural gas).

Fortunately, for consumers who have chosen to purchase their electricity from retail energy marketers, there is a bright side. By taking advantage of the deregulated free market for energy, consumers have the ability to change their rate plans or even change providers.

Or, they can shop around with different retail marketers and choose a plan that better suits their situation. If they prefer, they can go back to their local public utility and pay the electricity rates as set by their state regulatory agency.

Energy consumers that choose to shop for a retail energy marketer can minimize the impacts of market anomalies. Whatever choices consumers make, it is clear that the deregulated energy marketplace delivers value to them over time, and the extraordinary events of the winter of 2014 should not be viewed in isolation and reacted to in a manner that detracts from the underlying value of choice programs.

About NEM

NEM is a not-for-profit trade association representing both leading suppliers and major consumers of natural gas and electricity as well as energy-related products, services, information and advanced technologies throughout the United States, Canada and the European Union. NEM's membership includes independent power producers, suppliers of distributed generation, energy brokers, power traders, global commodity exchanges and clearing solutions, demand side and load management firms, direct marketing organizations, billing, back office, customer service and related information technology providers. NEM members also include inventors, patent holders, systems integrators, and developers of advanced metering, solar, fuel cell, lighting and power line technologies.

For more information go to <http://www.energymarketers.com>