**Independent Power Producers of New York, Inc. (IPPNY)**
*"Competition Works for New York"*
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# How Energy Pricing Works in New York State

***What types of generating facilities exist in New York State?***

New York has maintained a fuel diverse generating portfolio utilizing a wide variety of fuels, including oil, natural gas, hydro, nuclear, coal, wind, plant and forest products, and wastes. Independent power producers (IPPs) produce approximately 75 percent of all electricity generated in New York State.

***Who sells and distributes the electricity to residential and commercial consumers?***

Traditional utility companies, as well as energy service companies (ESCOs), sell electricity to consumers and businesses in New York. Utilities are entities that have an obligation to provide the public with essential services (electricity, natural gas, water, telephone service) and the infrastructure to store, deliver, manage, and sell those commodities. ESCOs are companies that provide integrated energy services to their customers. Utilities and ESCOs are collectively known as Load Serving Entities (LSEs).

***How do LSEs obtain the electricity that they sell to consumers?***

LSEs obtain the electricity that they sell to consumers from generators and power marketers. Power marketers are companies that sell electricity that they generate themselves, purchase from others, or both. There are three ways that LSEs purchase power in New York.

**- Bilateral contracts**

Approximately 45 percent of the electricity in New York is secured through bilateral contracts. The terms of the contracts are determined by the generator/supplier and the LSE, but, in general, a generator/supplier agrees to supply electricity to a LSE based upon an agreed price structure for a certain period of time. Contract lengths can range from as brief as one day to as long as ten years or more.

**- New York Independent System Operator (NYISO) Day-Ahead Market**

LSEs will estimate how much electricity they think they will need the next day and may purchase that electricity from suppliers in NYISO's Day-Ahead Market, which is a

clearing house where suppliers submit bids to provide electricity and LSEs submit bids to purchase electricity. The NYISO is a federally regulated, nonprofit corporation established to operate the state's high-voltage electric transmission system and administer the state's wholesale energy markets. About 51 percent of electricity is purchased through the Day-Ahead Market.

**- NYISO's Real-Time Market**

The smallest part of the market (less than 5 percent) is electricity purchased in the Real-Time Market. If purchases under bilateral contracts and day-ahead electricity supplies aren't enough to meet an LSE's actual electric needs, the LSE buys the remainder of their electricity requirements from the NYISO at the hourly price at that time that they consume the power.

***How is the price determined in the Day-Ahead and Real-Time Markets?***

The wholesale electricity market administered by NYISO operates as a uniform clearing auction. In the Day-Ahead Market, generators bid into the market the quantity of electricity that they are prepared to produce for each hour of the next day and the price they wish to receive for that electricity. Generators' bids are subject to bid caps and mitigation rules, both of which are designed to limit the total bid that may be submitted for each unit. LSEs decide how much electricity they wish to purchase for each hour of the next day and how much they are willing to pay for the electricity. The NYISO then selects the proper mix of generators to supply the hourly demand at the least cost while meeting applicable requirements to maintain a reliable electric system.

In selecting the generators, the NYISO begins at the lowest offer and progresses through the higher offers until there is enough generation to meet demand. Each selected bidder is awarded the bid price of the last unit chosen (which will be the highest of all selected bidders). This is referred to as the uniform clearing price (UCP).

The process in the Real-Time Market is the same as that in the Day-Ahead Market, with suppliers offering a quantity of electricity for a price, and the NYISO choosing the lowest-priced suppliers until demand is met. Real-Time prices can be more volatile than Day-Ahead prices because the Real-Time price can be affected by unexpected events such as unit forced outages and transmission outages.

***Why are bidders paid the bid amount of the highest selected bidder and not the actual amount they individually bid?***

This mechanism is employed because it keeps bid prices and, therefore, the price paid for wholesale electricity lower than it would be otherwise. Under a competitive market using a UCP, suppliers and capacity resources have a very strong incentive to bid only their marginal costs

(marginal costs only include variable expenses required to produce more energy). The generator receives a contribution to its fixed costs and a return on equity if it can run its facilities when units with higher marginal costs set the price that is paid for energy.

If the market didn't pay the uniform clearing price, then generators would have to factor the recovery of fixed costs and a reasonable return on equity into their bid price. Generators would look at their operating costs, and then estimate a price that would ensure recovery over the year of all of their annual fixed costs and some reasonable level of profit. With a system based upon paying all generators the uniform clearing price, generators are given the incentive to lower their own costs, run their units as efficiently as possible, and bid based upon their operating costs

Economists who have studied these issues in the electricity industry generally agree that a UCP approach leads to greater efficiency and lower overall cost to consumers compared to a system which pays each supplier the amount of its own bid.