

Mandatory Hourly Pricing Becomes Reality

Effective May 1st, Mandatory Hourly Pricing (MHP) became a reality for large Commercial and Industrial customers in Con Ed and other NY State utility service territories. Con Ed Customers with a peak demand over 1,500 KW are effected. Under the new tariff, customers will pay an hourly Day Ahead Market (DAM) price but will not be subject to Real Time (RT) pricing despite the fact that, due to the nature of wholesale purchasing, Con Ed will have to buy a certain amount of power in the Real Time market. This may be good news for consumers since there tends to be a much higher degree of price volatility in the NYISO's RT market as compared to the DAM. In implementing MHP, the Public Service Commission hopes to further its goal of allowing large consumers to respond to true price signals by curtailing load during peak periods. In theory, MHP should result in lower cost to

those consumers with the ability to shed load while also increasing system reliability and alleviating the need for costly new generation facilities. However, MHP only effects those customers taking full service from Con Ed and other utilities. Customers buying power from an ESCO under Retail Access still have the ability to purchase their power requirements under whatever supply structure best fits their needs and risk tolerance profile. Con Ed offers an online tool to help customers understand the impact MHP will have on cost by providing a historical analysis comparing DAM prices versus Con Ed's Market Supply Charge (MSC). Generally speaking, those customers with higher load factors should fare best under MHP because they use more power during off peak periods when prices are lowest. The tool for developing this "look back" analysis is called DMS and can be found online at www.conedisondms.com. Call your Con Ed service rep to get

a password. MHP presents some real challenges to customers facing a switch to hourly pricing. Consider this - there are 8,760 hours per year and 744 hours in a 31 day month. Each of these hours can have a different price, so verifying bills and understanding the impact MHP will have on your facilities is certainly more complicated than before. Compounding this complexity is the fact that Time of Day (TOD) meters are notoriously fallible and the methodology for reproducing missing data is anything but simple. In addition, Con Ed is only required to post MHP pricing by 4pm, so the window for reducing load the next day is pretty tight. Hourly pricing is posted on the DMS web site and can be found under the "EEM Basic" module in the section entitled Trend Comparison (that information alone will probably save you hours of searching).

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Proposed Con Edison Steam Settlement

On June 2, Con Edison, PSC staff, Consumer Power Advocates (CPA) and other interested

parties filed a Joint Proposal to freeze base rates and settle all the issues raised in Con Edison's recent request for an increase in its steam service rates. As Con Ed had originally requested an increase of over \$100 million annually, this represents a victory for all steam customers. We are pleased to report that CPA intervention efforts were successful in that

all of its major policy objectives are addressed in the Proposal. Instead of the originally proposed average annual cost increase of 10.2%, the Proposed Settlement provides for a two year base rate freeze, although fuel cost increases will continue to be allowed. In addition, the Proposal requires Con Ed to maintain capital and O&M spending levels, enhance customer service, and continue developing a strategic plan for

the success of the steam business or to face financial penalties for non compliance. Con Ed has also agreed to simplify

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Quotable Quote:

"Take the attitude of a student, never be too big to ask questions, never know too much to learn something new"

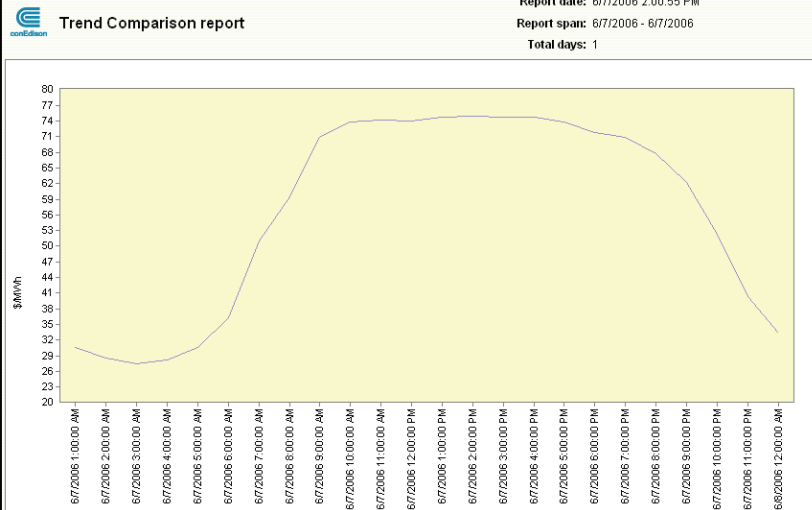
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Mandatory Hourly Pricing

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If you haven't done so already (and the PSC thinks that you should have), we encourage you to begin developing the tools to manage hourly pricing as soon as possible. Why? Because the supply structures that ESCOs will be offering to replace their MSC discount products will be based upon NYISO hourly pricing and also because hourly pricing represents a savings opportunity for customers that can effectively manage their load. The chart to the right, taken directly from the DMS system, should give you a good idea of the price swings typical on even an "average day". You can also export hourly data as an Excel file so you can use the data in your own analytical models. We suggest attending the Con Ed



during peak periods is the key to saving money under an hourly price supply structure. Clearly, you'll want to buy hourly under an ESCO supply agreement so you don't lose the 1 mil Retail Access Credit and the lower Gross Receipts Tax (GRT) rate. But before you decide that hourly pricing is right for you, a fair

amount of due diligence and analysis is necessary to understand your usage profile and how you can reduce load when prices are highest.

training sessions since there are lots of system shortcuts and information that may not be immediately apparent to first time users. Ultimately, your ability to shed load

amount of due diligence and analysis is necessary to understand your usage profile and how you can reduce load when prices are highest.

New Con Ed System Wide Program

A new System-Wide Demand Reduction Program, established as part of Con Edison's March 2005 electric rate case settlement, offers rich incentives to defray the high capital costs associated with the implementation of energy efficiency measures. Administered by NYSERDA, the program has a goal of reducing load by 150 megawatts in the Con Edison service territory. To realize this goal, NYSERDA has substantially increased program incentives which encourage customers to invest in energy efficient equipment and pursue peak load reduction strategies. Here are some key NYSERDA programs and their new incentive levels.

New Construction (PON 1035).

Total incentives have been increased from \$300K to \$1.15 million. Single measure incentive caps grew from \$200K to \$500K while steam cooling measures are now eligible for incentives ranging from \$500/kW to \$1000/kW. The new cap is now \$1 Million.

Summer on-peak demand incentives have increased from \$100 to \$150 per kW. The maximum incentive available under NYSERDA's pre-qualified equipment list has been increased from \$50K to \$75K per project. Incentives for custom measures are now capped at \$1 Million per measure.

NYSERDA typically caps incentives at 60% of the estimated incremental cost of installing

higher efficiency equipment. However, projects that receive LEED® certification are now capped at 75%. A new incentive provides cost-sharing for Green Buildings up to \$50K to offset the administrative costs related to LEED certification.

Smart Loan Fund (PON 941)

Through this program NYSERDA encourages efficient and renewable technologies by buying down your lender's interest rate by 6.5% up to \$1 million spent on energy efficiency measures. The cap for Green Buildings is \$1.5 million.

Peak Load Reduction (PON 955)

A provision within this program provides funds for technologies and equipment that provide long-term, system coincident peak demand reduction. Incentives are

up from \$750K to \$1 million and provide a payment of \$150 per kW curtailed.

NY Energy Smart C/I Performance Program (PON 984)

NYSERDA program that requests energy service provider applications and encourages consumers to invest in energy efficiency equipment. The customer cap has been increased to \$1 Million and the ESCO cap increased to \$5 Million.

Clearly, amidst higher energy prices and increased NYSERDA incentives it's wise to re-evaluate measures that may previously have had marginal return rates.

What Makes a Good Hedge?

The term "Hedge" can be defined as an investment made in order to reduce the risk of adverse price movements in a commodity or security. In the case of energy hedging, the buyer has a net "short" position while the seller is "long", meaning he owns (or will own) enough power to cover the buyers short, or energy requirement. The seller uses futures contracts to meet the buyers requirements. For the purpose of this discussion, we will be talking about a 100% hedge otherwise known as a full requirements, fixed price supply contract. Other commonly used strategies include hedging at fixed intervals

(sometimes called dollar cost averaging) and the market movement model, that is, hedging when the price delta moves by a prescribed amount. For most institutional energy buyers, hedging is an attempt to meet budget expectations by locking in a fixed price thereby insulating the institution from price volatility. This strategy is based on the presumption that the energy price cycle is a mean-reverting process, or that it moves in cycles rather than consistently in one direction. Oil and gas forward curves exhibit consistent mean reversion characteristics, which, along with cyclical, can be understood well enough to

inform a hedging approach. Given this characteristic, it is possible to implement a hedging strategy that enables buyers to lock in prices at the low point in the cycle while capping prices at the high end to take advantage of eventual price declines. By thus eliminating price uncertainty, the remaining risk lies in usage uncertainty and, for many non-profit energy consumers, there is little usage deviation year over year (weather normalization techniques make this process relatively simple). So then, what makes a good hedge? There are certainly many definitions, but simply put, a good hedge is one that allows a buyer to meet cost (budget) expectations without paying too

high a premium for price insurance. So how do you know if the premium you are paying is too high? One indicator is found in your load factor. Generally speaking, the higher your load factor, the lower the premium the supplier charges because they typically buy power in Around the Clock (ATC) Megawatt blocks. The more your load profile mimics this block shape (i.e. the higher the load factor), the less the supplier has to manage the residual load above or below the block shape and therefore the less risk they assume. Less risk means lower premiums. A second, commonly used way to reduce premiums is to conduct

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Chocolate-Eating Bugs Provide Fuel of the Future

Chocoholic germs can provide hydrogen, the clean-burning energy of the future, *New Scientist* reports. Microbiologist Lynne Mackaskie and her colleagues at the University of Birmingham in the UK have powered a fuel cell by feeding sugar-loving bacteria chocolate-factory waste. The team fed *Escherichia coli* bacteria diluted caramel and nougat waste. The

bacteria consumed the sugar and produced hydrogen, which they make with the enzyme hydrogenase, and organic acids. The researchers then used this hydrogen to power a fuel cell, which generated enough electricity to drive a small (sweet smelling?) fan. The process could provide a use for chocolate waste that would otherwise end up in a landfill or at the offices of Luthin Associates.

What's more, the bacteria's job doesn't have to end once they have finished chomping on the sweet stuff. Mackaskie's team next put the bugs to work on a production line that recovers precious metal from the catalytic converters of old cars. Place the bacteria in a vat with hydrogen and liquid waste



from spent converters, and the enzymes again get to work. The same hydrogenase used to produce hydrogen splits the gas into its constituents, generating electrons that react with palladium ions in the solution. This forces the palladium out of the solution, and it sticks to the bacteria. The palladium-coated bacteria can then be recycled as catalysts for other projects, Mackaskie says.

Steam Settlement

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connection requirements for Combined Heat and Power (CHP) projects, to streamline the information requirements for proposals for SC5 Negotiated Rate Service, and to meet with customers to develop a more effective voluntary fuel cost hedging program. Perhaps most important to steam customers, Con Ed has com-

mitted to implementing Demand Charges for the largest customers by November 2007. Our analysis of billing data shows that high demand, high load factor customers will experience reduced bills if they are subject to Demand Charge rates. The County of Westchester is expected to oppose the settlement on the

grounds that steam service (which is not available in the County) is subsidized to the detriment of Westchester electric customers. In developing that position, the County not only ignored the benefit of reduced electric requirements for the Con Ed system caused by the use of steam energy, it actually suggested that the steam

system be sold for scrap! Westchester's positions were fully rejected within the proposal. After evidentiary hearings beginning July 12 and a period for comments, the Commission must act on the Proposal by October 1. The Commission may accept or reject the Proposal in whole or in part. We'll continue to keep

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Luthin Associates, Inc. is an energy management consulting firm serving Tri-State and national clientele with a variety of energy procurement services since its founding in 1994. Our core business is fossil fuel contract development; fuel, steam and electric negotiation and alternate rate opportunities, energy purchase management and customer education for deregulated markets. Our client experience includes strategic energy initiatives for major universities, state and local governments, numerous major healthcare facilities and real estate concerns. In our former positions, and as Luthin Associates, we have 85 years' collective experience in energy and financial management.



Web Resources

Electric Delivery & Tariff Rates:
www.coned.com/rates/elec-sched3.asp

Natural Gas "Bidweek" Final Dates:
www.nymex.com/ng_fut_termin.aspx

CPA Schedule 2006

July	August	September
CPA Meeting July 25	CPA Meeting August 22	CPA Meeting September 26
NYISO Mgmt Meeting July 17	NYISO Mgmt Meeting August 9	NYISO Mgmt Meeting September 13

Hedging Strategies

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a competitive purchase RFP and choose the lowest price. The premise of this process, of course, being that competition drives down the price and the associated risk premium. So let's look at an example. To implement a dynamic hedging strategy, a buyer may need to vary supply products over the energy price cycle. When energy is at a low point in the cycle, fixed price contracts are used because the likelihood of further price declines is not considered as probable as price

increases. The contract allows the buyer to lock in the relatively low price. In the mid-range of the cycle, collars are used to lock in a specified range of prices, giving up potential savings from price depreciation while hedging against further increases. When prices are at the top of the cycle, caps are used to prevent losses from further appreciation while allowing the buyer to take advantage of price decreases. This sophisticated strategy requires a substantial amount of monitoring

which is not always attractive to energy managers with competing priorities. ESCOs and consultants can provide this monitoring service but will add to the incurred costs. Perhaps one of the most valuable things you can do is recognize that hedging is not a core competency of your institution. In fact many believe that hedging may not save money in the long run but simply flattens out the bumps along the way. Inevitably, continued high prices will be felt during the next hedging cycle so hedging may provide a

short term reprieve but the impact of high prices cannot be avoided forever. Remember, hindsight is 20/20 and experienced professionals know that markets are hard to predict and can be humbling. If over the course of a 12 month period, you lock a gas price at, say \$12, watch it rise to \$14 for the next few months and then settle at \$11.50 you've probably done a good job. Avoid buyers remorse by making rational, defensible purchase decisions.

On a Personal Note

We are all aware of the seemingly ever escalating cost of energy. Conservative estimates place the geopolitical risk premium in a barrel of crude oil at \$15 while the consensus of opinion at a recent natural gas conference I attended was for crude to reach \$100 in the coming year under the right geopolitical conditions. Against this sobering backdrop, I think it appropriate to remind ourselves of the importance of energy efficiency—as if you needed to be reminded! Specifically, it's time to dust off those old pro-

ject proposals that had marginal ROI's and revisit them in light of today's costs. You may find that what was once a project that offered lackluster results is now a small gem. The good news for such an exercise is that, in all likelihood, the cost of updating the economic analysis is relatively small compared to whatever initial investment (if any) you made in developing the project scope. This trend toward increased focus on efficiency is clearly evident in the recent implementation of Hourly Pricing for large commercial

and industrial power customers (see our lead article in this issue). The New York Independent System Operator (NYISO) recently released it's forecast for a new system peak for the summer of 2006 following last summers record. This would be the first time since 1997 that a new peak has been set in consecutive years. Faced with such predictions, it's only common sense to assume continued high power prices making demand reduction initiatives an important weapon in struggle to manage high costs. James Schlesinger, the first US

energy secretary was once quoted as saying "we have only two modes of operation - complacency and panic. We can't afford to adopt this philosophy when it comes to energy management and purchasing decisions. A rational approach to our discipline will always produce a positive outcome. And such an outcome is always available to those who educate themselves and make informed, defensible decisions. Have fun!
Catherine Luthin, July '06