What is hourly pricing and what does it mean for you?

Customer Meetings May 2006

Catherine McDonough Project Manager 1 (315) 428-5641

Background

- In 1998, National Grid (NG) extended hourly pricing to our largest (>2 MW) non-residential customers
 - 240 SC-3A customers
 - Requested by customer advocates
 - Survey shows customer experience w/ hourly pricing has been favorable
- In response to the run-up in energy prices last fall, the New York Public Service Commission (NYPSC) directed National Grid to extend hourly pricing to SC-3 Customers
 - Begin with ~770 SC-3 customers (>500 kW) on September 1, 2006

Contents

- Background (p 2)
- Where do electric commodity prices come from? (p 4-to-5)
- What do NG's hourly supply prices look like? (p 6-to-7)
- How does hourly pricing work? (p 8-to-10)
- Why extend hourly pricing? (p 11-to-12)
- Why SC-3 Customers? (p 13)
- Who benefits? (p 14)
- Assistance from National Grid (p 15)
- Who is eligible? (p 16)
- What tariff provisions apply (p17)
- Some Advice (p 18)

Where do electric commodity prices come from?

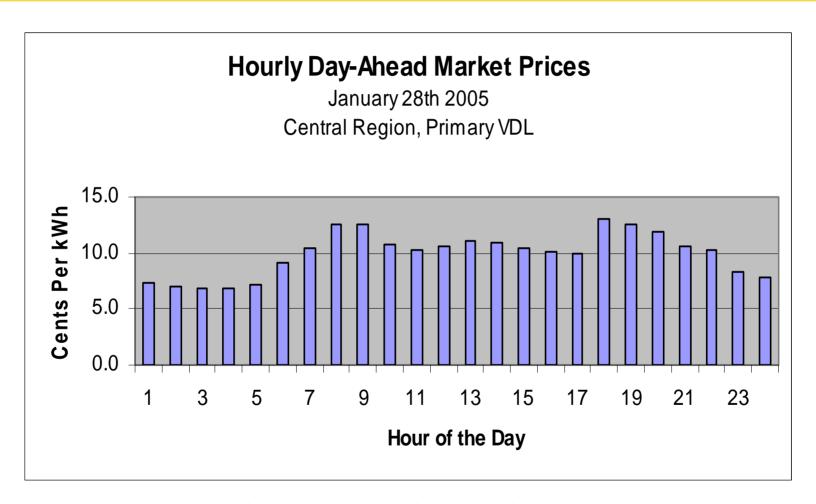
- The cost to generate electricity changes continuously throughout the day in response to demand and supply conditions in different locations.
- The primary responsibilities of the New York Independent System Operator ("NYSIO")—an independent non-profit corporation—are to:
 - Operate a reliable power system
 - Sell non-discriminatory transmission service
 - Facilitate an equitable wholesale market place
 - ✓ Location Based Energy Markets (Day-ahead, Real-time)
 - Ancillaries Markets (Operating Reserves)
 - ✓ Capacity Market (Generation Assurance)

Where do electric commodity prices come from?

(Cont'd)

- National Grid passes through the wholesale market costs of electric commodity to retail supply prices
 - Day Ahead Location-Based Marginal Price (DALBMP)+
 - Cost of Ancillaries +
 - Capacity Costs +
 - Adjustment for Line Losses (varies by voltage level)
- National Grid's retail supply prices
 - 24 prices for each ISO load zone (6) and Voltage Delivery Level (4)
 - Posted on NG's web site on day-ahead basis

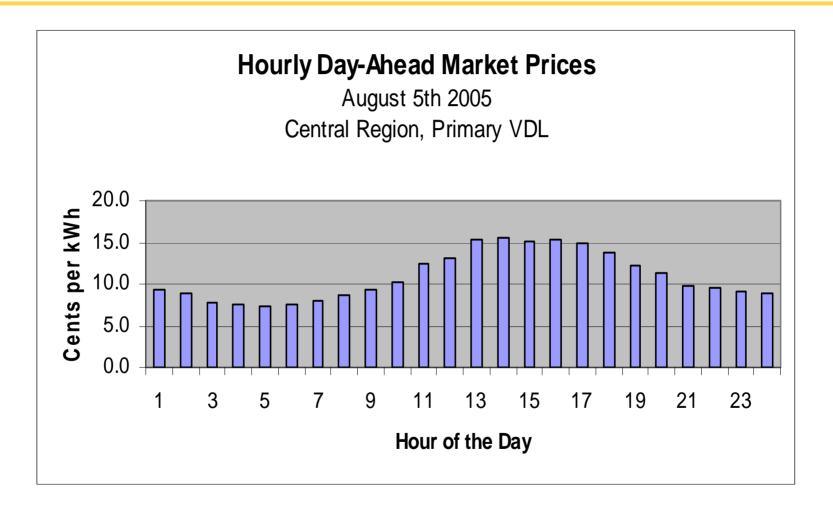
What do NG's hourly supply prices look like?



Each hourly day-ahead market price is determined by the supply and demand for electricity in that hour of the day.

What do NG's hourly supply prices look like?

(Cont'd)



Each hourly day-ahead market price is determined by supply and demand for electricity in that hour of the day

How does hourly pricing work?

- Most customers are billed for commodity based on their actual kWh use over the billing period X
 - Weighted average of NG's hourly supply prices over billing period where weights reflect hourly use of class, or
 - ESCo price for billing period, or
 - NYPA price for power allocations
- Hourly pricing customers are billed for commodity based on their actual hourly use X
 - National Grid's hourly retail supply price (cents/kWh), or
 - Hourly ESCO price, or
 - NYPA price for power allocations

Example: Current Method vs Hourly Pricing

	Supply Price	Grocery	Factory	Hourly Weight		Grocery	Factory
Hour	¢/kwh	kW	kW	(Class)		\$	\$
	а	b	С	d	d*a	e=b*a	f=c*a
1	9.3	150	50	0.031	0.292	\$14	\$5
2	8.8	150	50	0.031	0.276	\$13	\$4
3	7.7	150	50	0.031	0.242	\$12	\$4
4	7.5	150	50	0.031	0.234	\$11	\$4
5	7.3	150	200	0.031	0.228	\$11	\$15
6	7.7	150	250	0.031	0.239	\$11	\$19
7	8.1	200	250	0.046	0.370	\$16	\$20
8	8.8	200	250	0.050	0.438	\$18	\$22
9	9.3	200	250	0.054	0.502	\$19	\$23
10	10.2	200	250	0.054	0.550	\$20	\$25
11	12.5	200	250	0.054	0.676	\$25	\$31
12	13.2	200	275	0.054	0.712	\$26	\$36
13	15.4	200	275	0.054	0.832	\$31	\$42
14	15.5	200	275	0.054	0.839	\$31	\$43
15	15.2	200	275	0.054	0.821	\$30	\$42
16	15.3	200	275	0.054	0.827	\$31	\$42
17	15.0	200	275	0.050	0.749	\$30	\$41
18	13.7	200	200	0.046	0.629	\$27	\$27
19	12.2	200	150	0.031	0.381	\$24	\$18
20	11.3	200	150	0.031	0.354	\$23	\$17
21	9.7	200	100	0.031	0.303	\$19	\$10
22	9.4	150	100	0.031	0.295	\$14	\$9
23	9.2	150	50	0.031	0.287	\$14	\$5
24	9.0	150	50	0.031	0.280	\$13	\$4
Total		4350	4350	1	11.36	\$484	\$509
Cost w/ C	urrent Method	\$494	\$494				
	in commodity	-\$10	\$15				
Percent di	-2%	3 % ⁹					

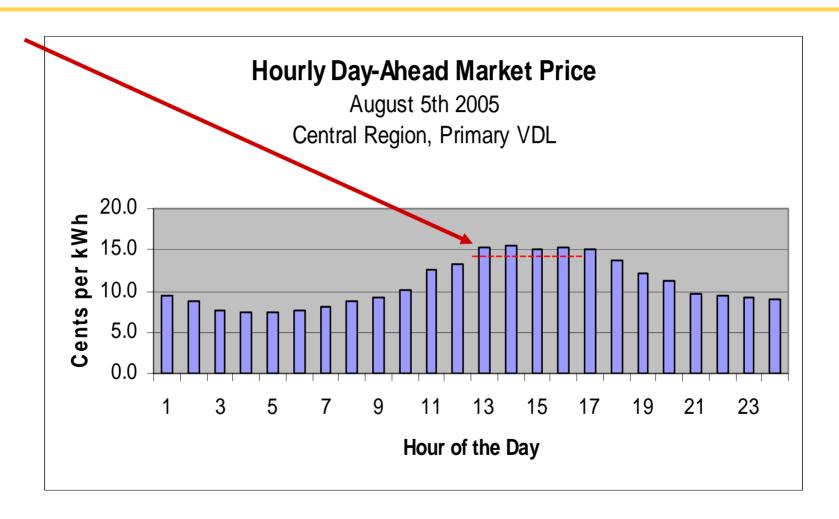
What if factory shifts 65 kW of load to morning?

hour	supply price ¢/kwh	Grocery kW	Factory kW	Hourly Weight Class		Grocery \$	Factory \$	
1	9.3	150	50	0.031	0.292	\$14	\$5	
2	8.8	150	50	0.031	0.276	\$13	\$4	
3	7.7	150	50	0.031	0.242	\$12	\$4	
4	7.5	150	50	0.031	0.234	\$11	\$4	
5	7.3	150	200	0.031	0.228	\$11	\$15	
6	7.7	150	315	0.031	0.239	\$11	\$24	
7	8.1	200	315	0.046	0.370	\$16	\$25	
8	8.8	200	315	0.050	0.438	\$18	\$28	
9	9.3	200	315	0.054	0.502	\$19	\$29	
10	10.2	200	315	0.054	0.551	\$20	\$32	
11	12.5	200	315	0.054	0.676	\$25	\$39	
12	13.2	200	210	0.054	0.712	\$26	\$28	
13	15.4	200	210	0.054	0.832	\$31	\$32	
14	15.5	200	210	0.054	0.839	\$31	\$33	
15	15.2	200	210	0.054	0.821	\$30	\$32	
16	15.3	200	210	0.054	0.826	\$31	\$32	
17	15.0	200	210	0.050	0.749	\$30	\$31	
18	13.7	200	200	0.046	0.629	\$27	\$27	
19	12.2	200	150	0.031	0.381	\$24	\$18	
20	11.3	200	150	0.031	0.354	\$23	\$17	
21	9.7	200	100	0.031	0.303	\$19	\$10	
22	9.4	150	100	0.031	0.295	\$14	\$9	
23	9.2	150	50	0.031	0.287	\$14	\$5	
24	9.0	150	50	0.031	0.280	\$13	\$4	
Total	-	4350	4350	1	11.36	\$484	\$488	
Cost w/ 0	Cost w/ Current Method = 4350 * 11.36 =							
Savings i	\$0	\$0 \$21 ¹⁰						
Savings i	Savings if factory shifts under Hourly Pricing =\$509-488							

Why extend hourly pricing?

- Removes cross-subsidies
 - Customers pay the actual cost of commodity used
- Additional way for customers to manage commodity bills
 - Customers can choose to shed or shift use from high price hours which they can see a day ahead
- Helps electric commodity market to function better
 - Creates incentive for customers to curtail use during high price hours (enables demand to be more elastic)
 - ✓ reduces potential for wholesale hourly price spikes
 - ✓ reduces dependence on natural gas peaking units
 - curbs potential for generators to exercise market power
 - reduces incentive to create excess generating capacity
 - enhances reliability

Hourly pricing helps to discipline market prices



Each hourly day-ahead market price is determined by supply and demand for electricity in that hour of the day

Why SC-3 Customers?

- SC-3's exposed to day-ahead market prices since Jan 2005
 - No mechanism to dampen impact of commodity price movements
- Currently billed for commodity based on a weighted average monthly price so can manage commodity bills by:
 - Conserving
 - Purchasing hedged commodity service from ESCo
 - Purchasing financial hedge
- Hourly pricing creates additional way for SC-3s to manage commodity bills and promotes development of wellfunctioning commodity markets

Who benefits from hourly pricing?

- Customers on Hourly Pricing
 - Customers who already use less power during high price hours than the class average will benefit—even if they do nothing
 - ✓ Will benefit even more by shedding/shifting load.
 - All other hourly pricing customers can benefit if they shed load during high price hours and/or shift load to lower price hours
- All other National Grid customers in New York
 - To the extent that shifting and shedding by hourly pricing customers helps to contain the hourly day-ahead market price

Assistance from National Grid

- Monthly electronic newsletter articles familiarizing customers w/ Hourly Pricing (since January 2006)
- Regular Email "Alerts" to eligible customers with up-dates
- Access to Energy Profiler On-line that enables you to clearly see how your energy costs vary by hour and how much you can expect to save by shedding or shifting hourly use
- One-on-one meetings with account managers

Who is eligible?

- Most SC-3 parent-class customers with
 - Billing demand 500 kW or greater for six consecutive months within the last twelve months beginning December 2005
- ~770 accounts as of April 2006 but more over time since customers will only roll off hourly pricing if they terminate service or migrate to SC-2 class
- Includes customers...
 - On standby service rates (SC-7)
 - Served by ESCo's
 - Served under SC11/12 contracts when contract expires or if customer volunteers

What tariff provisions apply?

- Customers who are eligible for hourly pricing will:
 - Take service under Special Provision L of SC-3 Tariff beginning September 1, 2006
 - Receive new state-of-the-art digital wireless interval meter that:
 - Records hourly demand required for hourly billing
 - Enables National Grid to provide customers with secure and economical access to interval meter data in near real time
 - Be subject to incremental monthly charge (less than \$50 per month)

Some Advice

- Hourly pricing creates a new way for you to manage commodity bills
 - Use Energy Profiler On-line to perform "What if?" analyses this summer so you can learn how to save money before hourly pricing begins in September
 - Talk to your account manager and ESCo
 - Learn about and participate in NYISO Demand Response Programs and NYSERDA Programs