

Markham Energy Conservation Office



Electricity Procurement Strategy

Presentation to General Committee – December 10, 2007
Viive Sawler, Manager, MECO

Overview

Purpose

- To obtain authorization to implement the Electricity Procurement Strategy outlined in the Report consisting of a Short & Long Term Strategy

Why?

- The Town of Markham consumes approximately 4 million kilowatt hours (kWh) of electricity per year at a cost of \$4 million
- An opportunity has been identified to implement an improved way of purchasing electricity for the Town that will result in an estimated savings of over \$300,000 per year

How?

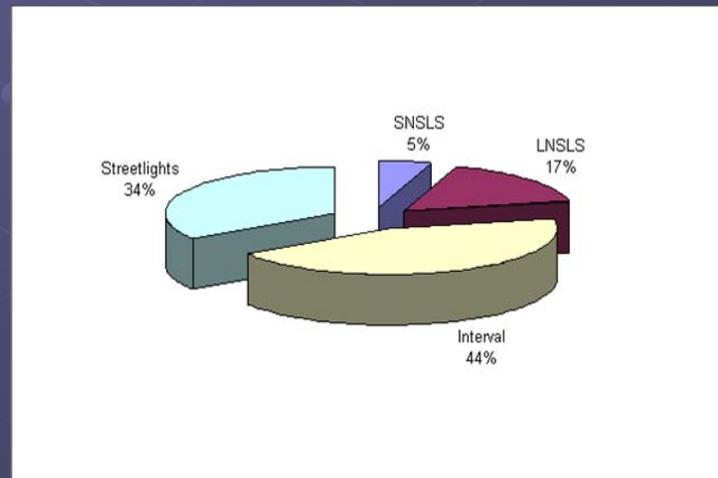
- Move select account types from the Regulated Price Protection (RPP) Plan to the wholesale spot market and/or spot market with a hedge

Regulated Price Protection (RPP) Plan

- Municipalities generally purchase electricity from the RPP, a two-tiered rate plan whereby a lower rate is charged for the 1st 750 kWh of electricity consumed and a higher rate for all consumption after that
- 1st tier rate is generally below market recognizing electricity as a basic necessity – the 2nd tier is intentionally set above market providing incentives for conservation
- MUSH customers subsidize electricity costs of residential and small commercial customers across all of Ontario
- RPP Variance Settlement – reflection of the consumer's share of any accumulated variance between the actual price paid to generators and the forecast price paid by price plan consumers
 - a one time credit or charge issued when leaving the RPP

Solution?

- Employ other procurement options depending on account type
 - Pure spot market (OEB requires use of retailer to access spot market for non-interval metered accounts)
 - Spot market with a hedge
- Account types: Street Lights - 1 account, 21,000 lights; Small Net System Load Shape (SNSLS) - 93 accounts; Large Net System Load Shape (LNSLS) – 40 accounts; Interval Metered – 8 accounts



Strategy

Street Lights

- April 2007 – Council approval to move street light energy account to the spot market under one year contract – will expire April 30, 2008 – will have to be renewed in order to continue savings
- RPP Variance Settlement (1 time credit) - \$37,123

| | August | | September | | October | |
|-------------------------------|---------------|--------------|---------------|-------------|---------------|--------------|
| | Consumption = | 1,169,685 | Consumption = | 1,169,685 | Consumption = | 1,432,229 |
| RPP | @ 6.2¢/kWh = | \$ 72,520.47 | @ 6.2¢/kWh = | \$72,520.47 | @ 6.2¢/kWh = | \$ 88,798.20 |
| Our price | -- | -- | @ 3.3¢/kWh = | \$38,784.52 | @ 3.8¢/kWh = | \$ 54,537.16 |
| Commodity Savings | | | 2.9¢/kWh | \$33,735.95 | 2.4¢/kWh | \$ 34,261.04 |
| Provincial Adjustments | | | @ 0.025¢/kWh | \$ 292.42 | @ 0.5¢/kWh | \$ 7,161.15 |
| Total Savings | | N/A | | \$33,443.53 | | \$ 27,099.89 |

Small Net System Load Shape Accounts (SNSLS)

- Consume <16,000 kWh of electricity/year – should remain on RPP

Short Term Strategy

January 1 – April 30, 2008

- Move LNSLS and Interval accounts to spot market
- Need to utilize a retailer for LNSLS
- Interval accounts can be moved directly to spot market through PowerStream at no cost
- RPP Variance Settlement (1 time credit) - $\$21,500 + \$56,478 = \$77,978$

LNSLS - Spot Market – Jan – Apr-08

Average Electricity Unit Cost *5.28 cents/kWh*

| | |
|------------------------------------|-----------------|
| 4 month saving over RPP | \$13,846 |
| RPP Credit (1 time) | \$21,500 |
| Billing Fee to Retailer | \$(15,000) |
| Total Savings over 4 months | \$20,346 |

Interval – Spot Market – Jan – Apr-08

Average Electricity Unit Cost *5.28 cents/kWh*

| | |
|------------------------------------|-----------------|
| 4 month saving over RPP | \$35,547 |
| RPP Credit (1 time) | \$56,478 |
| Total Savings over 4 months | \$92,025 |

Long Term Strategy

May 1, 2008 onward

- WattsWorth to assist town in determining best strategy going forward
- While short term strategy involves moving LNSLS and interval accounts to spot market – the longer term strategy includes adding a hedge*, or fixed price contract to a portion of the consumption
 - *Hedging is a strategy used to limit or offset probability of loss from fluctuations in the prices of electricity

| Account Type | Number of Accounts | Annual Consumption (kWh) | Average Commodity Price * | New Average Commodity Price | Estimated Savings |
|--------------|--------------------|--------------------------|---------------------------|-----------------------------|-------------------|
| SNSLS | 93 | 2 million | 5.27¢/kWh | 5.27¢/kWh | N/A |
| LNSLS | 40 | 6.7 million | 6.13¢/kWh | 5.63¢/kWh | \$33,500 |
| Interval | 8 | 17.6 million | 6.13¢/kWh | 5.5¢/kWh | \$110,880 |
| Streetlights | 1 | 13.7 million | 6.13¢/kWh | 4.91¢/kWh | \$167,140 |
| Total | 142 | 40 million | | | \$311,520 |

Commodity Price Hedging Policy & Reporting

- Requirement under the Municipal Act, 2001, Section 6(1) of O. Reg. 653/05 that a municipality adopt a statement of commodity price hedging policies and goals related to the use of financial agreements
 - See attached Commodity Price Hedging Policy
- Reporting requirement – Treasurer shall report to Council annually on the price hedging agreements in place
 - WattsWorth's service will include providing the Town with details related to our annual savings

Questions?