

THE RISING COST OF POWER IN ONTARIO: RESIDENTIAL RATEPAYERS

OCTOBER, 2009



BOX 931, CORUNNA, ONTARIO, N0N 1G0
(519) 862-9296

caealliance@sympatico.ca

www.caealliance.com

ADVOCATES FOR:

Cleaner Air

Affordable Energy Rates

Energy Supply Reliability

Responsible Management of Energy Resources

Preserving Economic Sustainability

THE RISING COST OF POWER IN ONTARIO IMPACT ON RESIDENTIAL CONSUMERS

Since the breakup of the former Ontario Hydro and the move to a market pricing formula (1999-2002), electricity prices for the average consumer increased 30%-50%. (4.3 ¢/kWh in 2002 to 5.8-6.7 ¢/kWh current)

In 2005 the provincial government began a program of further restructuring in the electricity system. The resulting changes have brought price increases which are just now being felt.

Another wave of changes – with the potential to create the most significant price increases – will hit over the next few years. Costs to all consumers will rise as a result of the Green Energy Act, Smart Meters, the Harmonized Sales Tax, and Private Power Generation Contracts.

BILLIONS upon BILLIONS of dollars is being spent on electricity restructuring and we will have little to show for it.

- \$45 billion for new/refurbished resources

- \$10.2 billion for conservation/demand management programs – with unclear and uncertain results

- \$9+ billion for transmission infrastructure

- \$20 billion stranded debt (although we have been paying \$1.085 Billion/year since 2001)

- \$2.3 billion for smart meters (plus monthly fees)

- \$18 - \$46 billion cost to consumers as a result of the Green Energy Act - Plus resulting job losses

The percentage increases on power rates to consumers is distressing:

- 30%-150% higher electricity costs from new power generation – 80% of resources are to be new or refurbished

- 30% increase in administration costs for the electricity system in 1 year (\$2.5 Billion 2007 - \$3.5 Billion 2008 - approximately 20% of electricity revenue is spent on administration costs)

- 8.8% -10.6% increase in delivery costs in 2009-2010 - 20%-25% in some areas

- 13.3% increase in delivery costs in 2011 **in addition** to the above rate increases

- 33%-60% increase on residential electricity costs during normal waking hours through the week

- 8% increase on bills when the HST is introduced next year

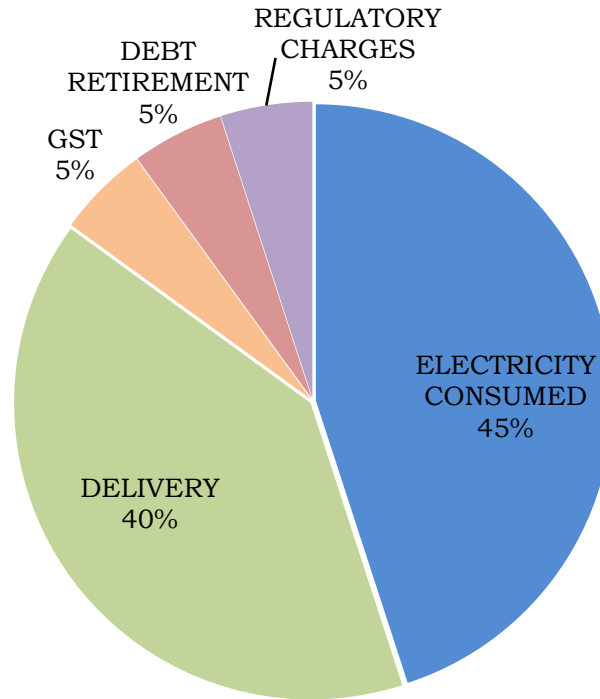
- 5+% increase for natural gas support payments

- 5% increase to fund conservation programs

These costs are indicative, not exhaustive.

In addition, homeowners will be impacted by the higher rates paid by industry, business, the farming community and the sector supported by taxpayer dollars such as hospitals, schools, municipal and government offices and agencies. Ontario's ratepayers will be reeling with the costs of an electricity system that is neither reliable, nor affordable. Industry and manufacturing will continue to move out or simply close shop.

YOUR ELECTRICITY BILL BREAKDOWN



The above chart shows a breakdown, by percentage, of the costs included on an average residential consumer's bill. Only ½ of the costs cover the actual electricity used. (Based on average homeowner use of 1,000 kWh/month)

REGULATORY CHARGES – Fixed rate of \$0.25/month (service administration charge) plus an additional charge of 0.65¢/kWh to operate the electricity system & market – 6 categories including Ontario Power Authority and Independent Electricity System Operator costs

DEBT RETIREMENT - 0.7¢/kWh – To pay down the debt of the former Ontario and other costs that were added to the debt (i.e. to offset costs associated with government funded price freeze).

GST – A 5% tax calculated on all the other categories of charges.



ELECTRICITY USED/CONSUMED (45% +/- of Total Bill)

Residential consumers pay for electricity used according to rates set by the Ontario Energy Board (Regulated Price Plan or RPP).

- ◆ Rates are reviewed and adjusted twice a year in the spring (May 1) and in the fall (Nov. 1).
- ◆ The set price per kWh of electricity use is based on a forecast of electricity supply costs anticipated for the upcoming year, as well as adjustments to account for the differences between what was paid and what the electricity supply actually cost over the previous 6 month period.
- ◆ In addition to price, the OEB sets a price threshold. Electricity consumption above the monthly threshold is priced at a higher rate.
- ◆ The monthly threshold for the lower price is set at 1,000 kWh per month during the winter season, from November 1 to April 30 and at 600 kWh per month for the summer season of May 1 to October 31.

Summer Cost (May 1- Oct 31)

5.8 ¢/kWh for the first 600 kWh in a month
6.7 ¢/kWh for each additional kWh

Winter Cost (Nov 1 – April 30)

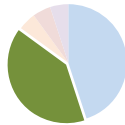
5.8 ¢/kWh for the first 1000 kWh in a month
6.7 ¢/kWh for each additional kWh

These rates, effective November 1, 2009, are 4% higher than last year and 17% higher than 2005 when restructuring began.

- ◆ Electricity consumed – shown on the electricity bill as kWh usage - is multiplied by an “adjustment factor” which is paid by consumers to compensate for “line losses” - electricity consumed by the transmission equipment, wires and transformers. This is calculated by Hydro One, comparing the total amount of electricity purchased from power generators to the amount of electricity delivered to customers. The difference represents how much electricity was lost during delivery. Adjustment factors are reviewed and approved by the OEB.

The present adjustment rate is:

- 1.078 cents/kWh for urban density;
 - 1.085 cents/kWh for high density residential users; and
 - 1.092 cents for every kWh for normal density residential users.
- (See below for explanation of density.)



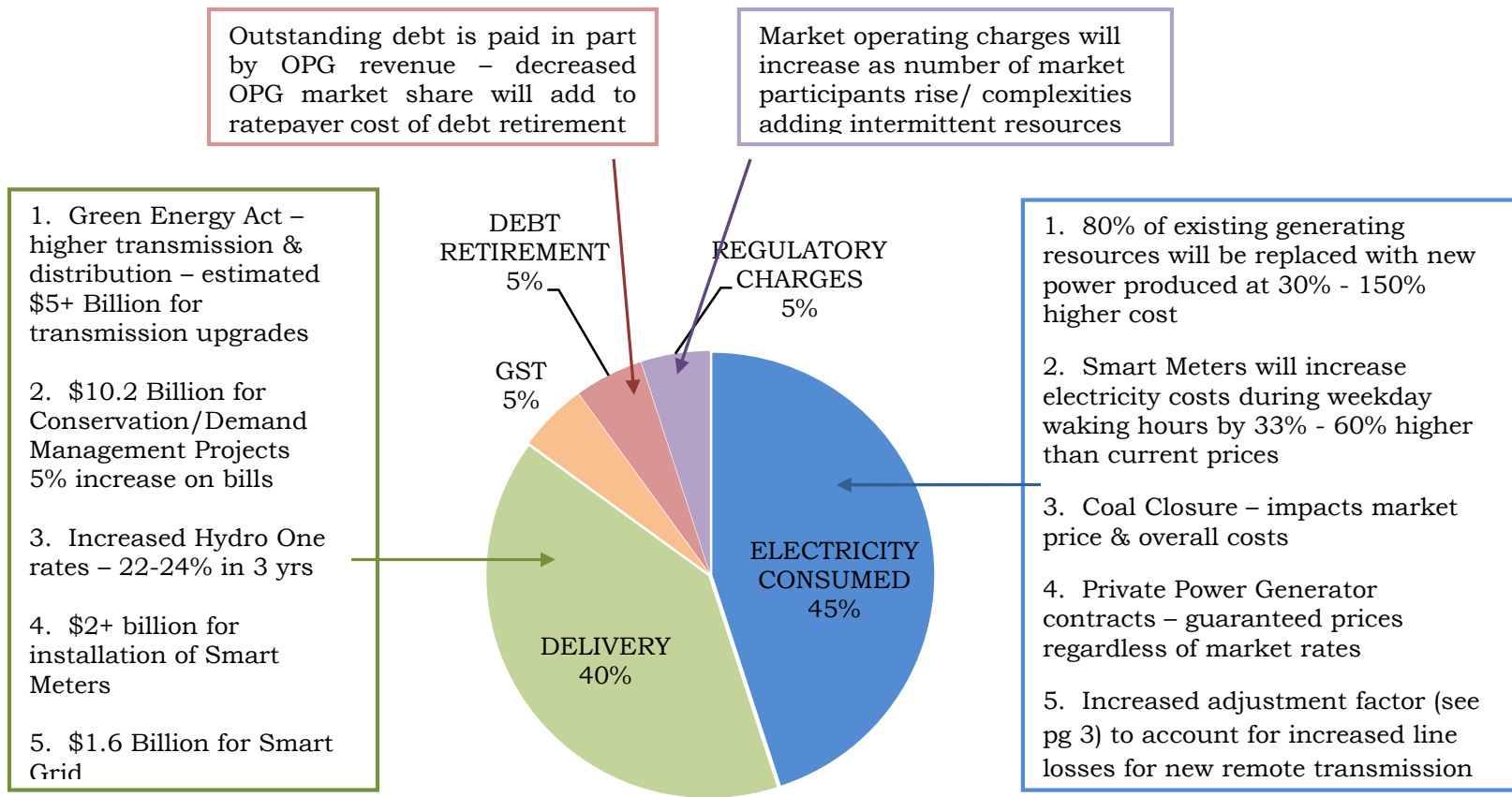
DELIVERY (40% +/- of Total Bill)

Delivery charges include transmission and distribution costs – from point of generation to home. The charge varies according to the classification or type of electricity service at your residence. The classification is based on customer density in your area – either urban, high residential density or normal residential density. Rates are higher in less densely populated areas. (Hydro One) Your classification is shown on your monthly bill.

A portion of your Delivery Costs are fixed regardless of how much electricity you use. Other charges are based on the volume of electricity used as follows:

	Urban Density	High Density	Normal Density
Delivery:			
- Distribution service charge Fixed Rate (\$/month)	\$16.35	\$21.31	\$27.16
- Distribution volume charge (metered usage - ¢/kWh)			
- Transmission connection charge (adjusted usage - ¢/kWh)	2.37¢	2.73¢	2.78¢
- Transmission network charge (adjusted usage - ¢/kWh)	0.47¢	0.48¢	0.45¢
	0.52¢	0.53¢	0.52¢

THE RISING COST OF POWER



The chart above shows the breakdown of items included on your bill. We have included an assessment of some of the costs that will impact each of these items. Further explanation is included on the following pages.

◆ An **8%** increase on the total bill will come into effect July, 2010 with the introduction of the Harmonized Sales Tax (HST)

FACTORS IMPACTING THE COST OF POWER

Electricity prices are rising for a number of reasons. Some of the factors cause a compound, cumulative effect. We have included the following 6 reasons. For further information, please review the full document available on our website.

1. HIGHER COST OF NEW AND REPLACEMENT RESOURCES

◆ Ontario operates on a market system where electricity is bought and sold, as required. The Independent Electricity System Operator (IESO) determines power needs and power generators determine how much of the required load they can supply, and at what price. Offers are accepted from lowest cost to highest bid until the electricity demands are met.

◆ In order to protect residential consumers from the constantly varying prices, the Ontario Energy Board sets a flat rate for power used, every 6 months. Those rates, revised in May and November, are based on the actual costs for power during the previous 6 month period, together with anticipated costs for the next period. Therefore, the residential consumer price is tied in to the price actually paid to the power producers.

◆ Power producers in Ontario include a mix of:

- Ontario Power Generation (OPG) – resources include nuclear, hydraulic, coal, natural gas;
- private power producers who had existing contracts prior to deregulation in 2002 (NUGS);
- private power producers who have made contracts with the Ontario Power Authority since 2004; and
- renewable electricity producers who are paid a set rate for each kWh of electricity generated, i.e. wind, solar.

◆ The cost to produce electricity is rising, as 80% of the resource supply will be replaced with higher cost renewable energy, natural gas, new/refurbished nuclear, conservation/demand management programs, example

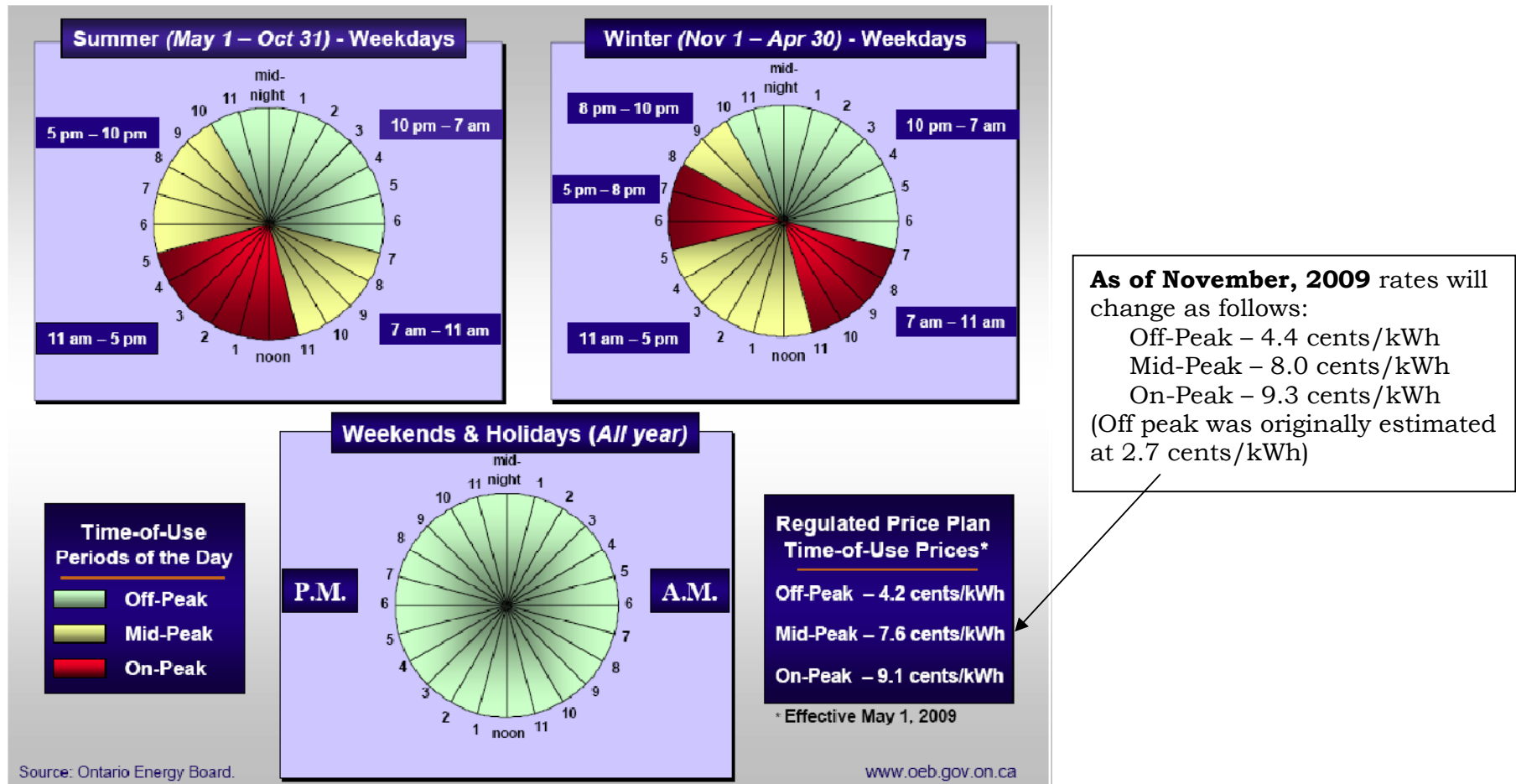
EXISTING		NEW	
Coal-fired	4.8 ¢/kWh	Natural gas-fired	10.0+ ¢/kWh
Hydro	3.3 - 4.8 ¢/kWh	Wind	13.5 - 19¢/kWh*
Nuclear	4.95 - 6.3¢/kWh	Solar	44.3 - 80.2¢/kWh

(*New renewable generation increases based on the Consumer Price Index)

◆ The Ontario Energy Board forecast that an additional \$25 million per month was required for conservation programs, natural gas-fired power contracts and the renewable energy to come into service by October, 2009.

2. SMART METERS – TIME OF USE PRICING

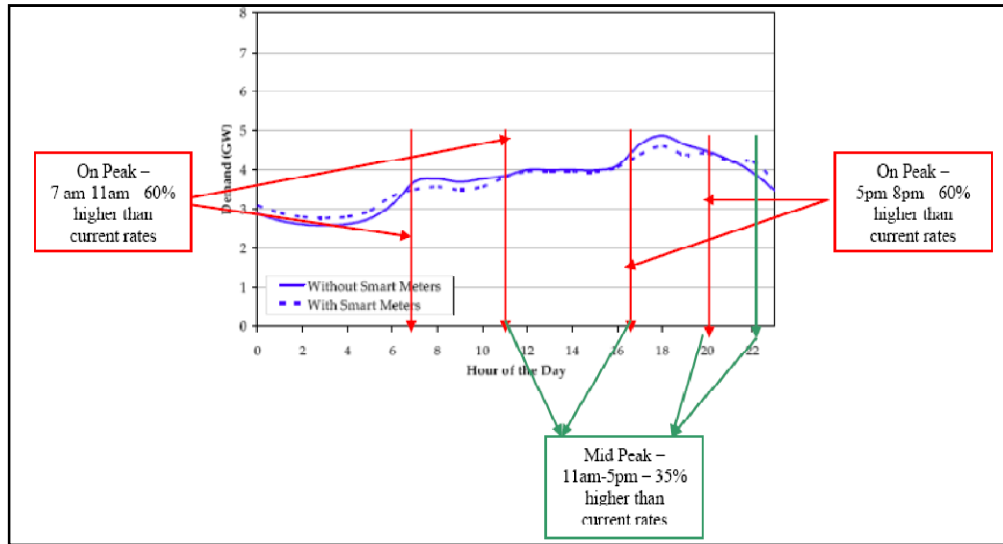
2010-2011, all residences and small businesses will be equipped with smart meters. Government regulations allow for the costs of smart meters to be recovered through the local distribution companies. The OEB has estimated that cost to be \$2.3 Billion, plus monthly fees for information processing. The following charts show the impact of time of use pricing.



The charts following show the impact of pricing during times of normal electricity. The dotted blue line shows the anticipated changes in power use as a result of smart meters (marginal). Small business will be tied in to the same pricing scheme resulting in significant cost increases during normal business hours.

Chart 1 – November 1 to April 30 – “Winter” Use

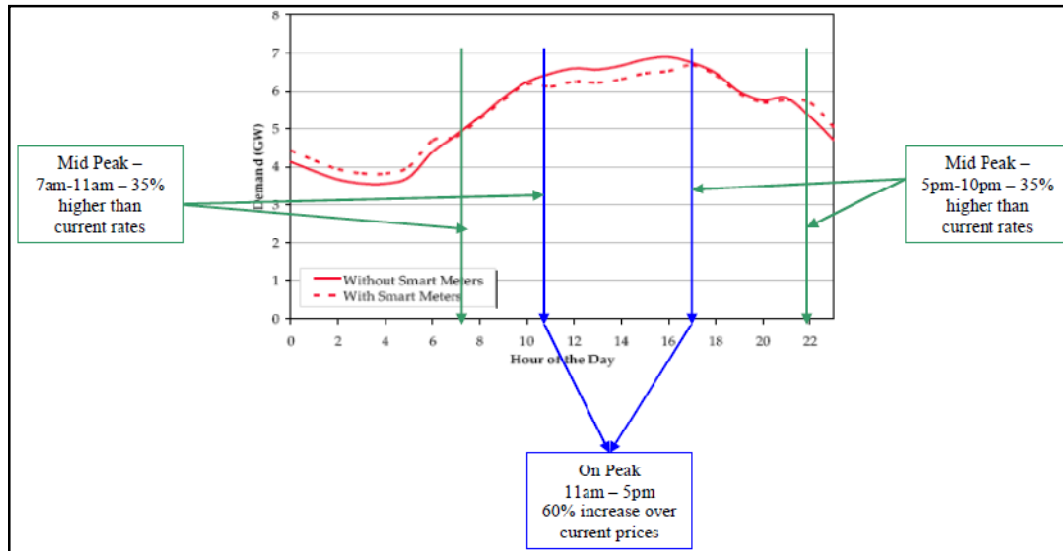
Average January Load Profile for Residential Users – With and Without Smart Meters



As this chart demonstrates, the highest TOU pricing coincides with increased demand in residential use due to normal activities during waking and pre-work/school preparation, etc. in the morning and arrival home, meal preparation, etc. during early evening hours. The blue lines, comparison of use with and without smart meters, shows that much of this energy use cannot be shifted.

Chart 2 – May 1 to October 31 – “Summer” Use

Average July Load Profile for Residential Users – With and Without Smart Meters



Managing summer and winter peak loads are two different challenges. Air-conditioning is the key focus in the summer and ratepayers have some ability to respond to demand. In the winter there is little opportunity to load shift and conservation is the target. The Smart Meter Program is a very expensive way to address these challenges and has marginal impact.

The cost of this program is approximately 50% more than the cost of refurbishing a nuclear reactor equivalent to the capacity of the “hoped for” demand reduction.

3. COST INCREASES RESULTING FROM COAL CLOSURE

- ◆ Coal - low cost supply – publicly owned, paid-for assets – mitigates the higher cost of other generating resources
- ◆ With coal removed, natural gas-fired generation will set the market price 85% of the time at much higher cost. For every 10% increase in natural gas prices, Ontario electricity spot market price rises 6% Although gas prices are low at present, they are not expected to remain so. Assuming a cost of \$7.50 to \$8.50/MMBtu for natural gas, the removal of coal power will result in an electricity price increase of \$6 to \$13/MWh.
- ◆ Ratepayer Impact - By 2015 natural gas generators contingent support payments will = \$10,000/MW/month – total annual payment \$775 million. The Global Adjustment impact = \$5.34/MWh = 5.1% (Aegent Energy Advisors)
- ◆ The premature retirement of coal fired units will incur decommissioning costs payable by ratepayers.
- ◆ OPA has initiated purchase of “Black Start” for system reliability which coal units currently provide. This cost is part of the “wholesale market charges”

4. COST IMPACTS OF THE GREEN ENERGY ACT

Impacts all of the cost items – electricity, transmission, delivery, regulatory

- ◆ Estimated \$18 - \$46 BILLION over a 15 year period
- ◆ Guaranteed right to connect into transmission – \$5+ BILLION to accommodate new renewable generation
- ◆ Price for power - Wind @ 13.5 - 19¢/kWh; Solar @ 44.3 - 80.2¢/kWh (Compared to existing Coal @ 4.8 ¢/kWh; Hydro @ 3.3 - 4.8 ¢/kWh; Nuclear 4.95-6.3 ¢/kWh)
Natural gas-fired @ 10.0+ ¢/kWh is being installed to replace coal and backup intermittent wind and solar.
- ◆ The Act allows for **all** the costs associated with all aspects of the government’s plans for the acquisition of renewable energy, conservation, the reduction of coal use, etc. to be fully recovered from ratepayers. This is – in effect – another tax without having any oversight by or approval of the Legislature. These costs will be high! These costs are totally at the discretion of the Minister of Energy, without any accountability, including the right to make loans and grants to whomever.
- ◆ Removal of safeguards for cost protection for Ontario consumers. As financial regulator, the Ontario Energy Board had a responsibility to review power projects and transmission expansion to ensure cost effectiveness and economic prudence. Now, the Board is tasked with promoting renewal energy development and delivery regardless of cost.

◆ Additional erosion of price protection includes:

- Decreased public assets – more for-profit private power generation
- Price setting will be via contract and tariff - removes competitive factor - public assumes some of risk that should fall to private generators
- Amending the Mandate of OEB so no agency accountable for protecting consumers re: price and reliability
- Inducements to encourage investment in green energy in Ontario at expense of ratepayers
- The government is making 20 year contracts for technologies that may well be obsolete or outdated in the near future. Renewable energy is expected to decrease in price and increase in technological advancement. We will be tied in to contracts for highly expensive, passé technologies with no financing available to pursue advancements.

◆ Studies (U.S., Germany, Spain) indicate that jobs created in the renewable energy sector are essentially expensive, non-productive adding cost to consumers not benefit to the economy. The economies of these countries has suffered as a result of much higher energy costs, and erosion of industrial base as a result. A Spanish study suggests 2.2 jobs lost for each “green” job added.

◆ New agencies to be created in addition to the \$3.5 billion/year spent on administration

5. PROVINCIAL BENEFIT/GLOBAL ADJUSTMENT

◆ Price guarantees – whether by contract with the OPA, by regulation of OPG’s assets, or by the new “Feed in Tariffs” promised to new renewable generators – will impact the rising cost of power regardless of the market price. According to the OPA, Global Adjustment “With each new contract for conservation and supply, the cost of electricity and GA may increase.”

◆ When market prices are high merchant power generators benefit but consumers pay higher prices. When market prices are low merchant power generators are guaranteed a set income regardless of whether they generate much, little, or none. The ratepayer makes up the difference.

◆ The Global Adjustment is also the mechanism for the OPA to recover costs of the Conservation/Demand Management programs and incentives – such as the “Great Refrigerator Roundup”, “PeakSaver” and the costs for commercial retrofits. Cost estimates suggest an additional 2.5% increase on consumer bills by 2008, and double that, or 5% by 2015. (Aegent Energy Advisors Inc.)

6. HARMONIZED SALES TAX

8% PST will be included in overall billing once the harmonized sales tax is introduced next year.

COMMENTS:

We are often asked to suggest a number - a percentage rise overall in electricity costs - going forward. Unfortunately, that is impossible. For example:

Costs are compounded – a 13% increase in Hydro One costs in 2011 will be on top of 10% increases in 2009-2010; HST at 8% will be on all costs as they rise, etc.;

Prices paid for new and refurbished generation are subject to increases based on the Consumer Price Index;

A significant amount of natural-gas fired generation is being added to the electricity supply mix. We will be dependant on this fuel which is considered the most volatile in terms of pricing and uncertainty in terms of future supply;

Contracts made with private power producers (not open to public scrutiny) and a lack of transparency regarding debt, assets and accounting in the provincial energy sector muddies any cost evaluations;

Ontario consumers are paying close to \$4 Billion each year for the administration of our electricity system, 5 agencies with overlapping functions. Recent changes will add more administration;

The Green Energy Act directs the Ontario Energy Board to pass on to ratepayers all costs associated with the development of renewable energy regardless of cost effectiveness or overall benefit to the province. International travel, PR functions and a host of other costs will be borne by ratepayers and taxpayers with little scrutiny and accountability.

What we have tried to demonstrate are the real numbers and percentages that are now impacting cost - and those on the horizon. The interaction of these costs, and the cumulative impact point to certain – hefty - increases that will impact homeowners, will impact the viability of industry and business, will drive up the price of consumer goods, and will become an additional burden on taxpayers who bear the costs of municipal governments, schools, hospitals and other vital services whose additional costs will be passed on.

Affordability and reliability of stable electricity supply are vital to this Province! Environmental gains are marginal, are overstated and can be achieved in other, more prudent and cost-effective ways.

Contact your MPP, contact your Premier and those responsible in the Ministry of Energy, the Ontario Energy Board and the Ontario Power Authority. Ask for answers! Ask for accountability!

For more information review the CAE Alliance Presentation/Submission to the Standing Committee on General Government regarding the Green Energy Act and the expanded version of this document, “The Rising Cost of Power in Ontario” which highlights concerns for all sector ratepayers on our website.