

# 2006 Ontario Budget

Submission of  
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To

The Honourable Dwight Duncan  
Minister of Finance  
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## Introduction

To create a strong and continuing era of economic growth, the Minister of Finance should phase-out the taxpayer-financed subsidies for nuclear power and electricity consumption and raise the price of electricity up to its full cost.

## Productivity and Prosperity – Ontario lags the pack

Ontario's Task Force on Competitiveness, Productivity and Economic Progress has identified 14 U.S. states that have a higher standard of living (Gross Domestic Product per capita) than Ontario among the province's 16 member peer group (states and provinces with a population of six million or more — see Figure 1). This prosperity gap is due to our lagging productivity, according to the Task Force.

Ontario and Quebec have the third lowest and the lowest electricity prices respectively amongst the

16 member group. Our two provinces also trail the pack in electricity productivity, with Ontario ranking 9th out of 16 and having one of the highest per capita electricity consumption rates in the world (see Figure 2).

Figures 3 and 4 show the price of electricity and electricity productivity for Ontario, Quebec and the 14 richest U.S. states and reveal that jurisdictions with

Fig. 1 The prosperity gap: Ontario trails in GDP per capita

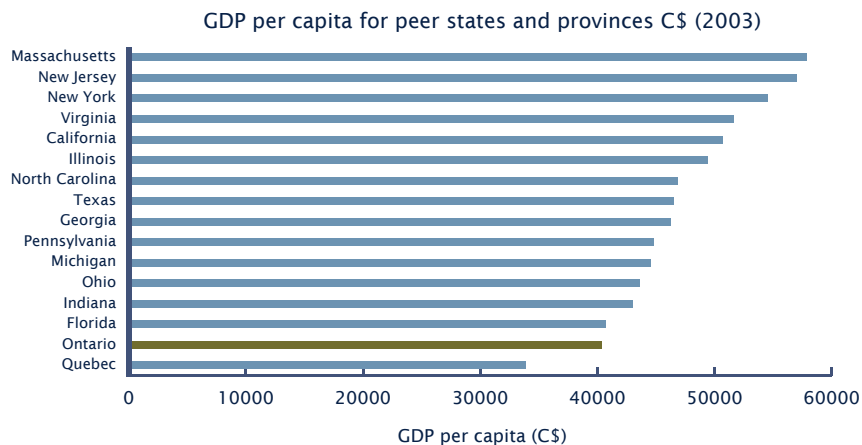
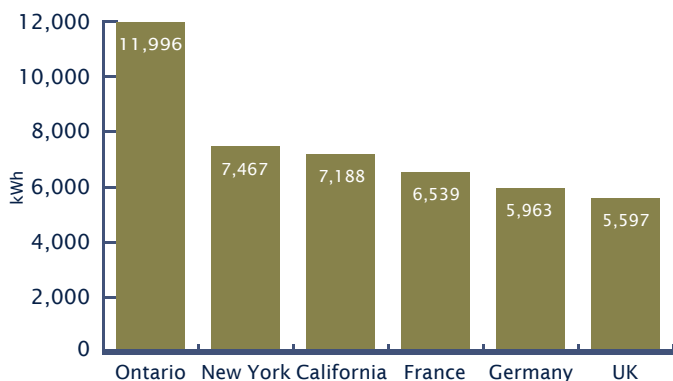


Fig. 2: Per capita electricity consumption in 2000



higher electricity prices have higher levels of electricity productivity. For example, New York State's price of electricity and its level of electricity productivity are both significantly higher than those of Ontario.

Our analysis (outlined in Figures 5 and 6) shows that there is a strong positive correlation between electricity prices, electricity productivity and living standards (GDP per capita). Four of the five richest jurisdictions in the 16 member peer group (Massachusetts,

New York, New Jersey and California) have the highest electricity prices and the highest electricity productivity ratios. Similarly three of the four poorest jurisdictions in the peer group (Ontario, Indiana and Quebec) have the lowest electricity prices and low electricity productivity ratios.

Clearly, Ontario can raise its electricity productivity and its standard of living by raising its electricity prices up to their full cost.

These figures demonstrate the importance of proper pricing to encourage high levels of electricity productivity. In Ontario, however, we still have an electricity price structure that is distorted by a number of hidden subsidies for nuclear power. We must eliminate these hidden subsidies and move to a real-cost structure in electricity pricing as a first step in developing a new electricity strategy for the three following key reasons:

- a) To increase our electricity productivity and raise our standard of living;
- b) To increase our security of supply; and
- c) To ensure inter-generational equity.

The four key actions that must be taken to reduce nuclear subsidies and raise the market price of electricity to its full cost are:

- a) requiring OPG to earn a competitive rate of return on its capital;
- b) raising OPG's water rental rates to their full market value;
- c) eliminating the Ontario Electricity Financial Corporation's unfunded liability; and
- d) eliminating any Government of Ontario responsibility for nuclear decommissioning and long-term storage of nuclear wastes liabilities for all nuclear plant restarts, retrofits or new builds.

These measures can also be used to provide the Ontario Government with increased revenues that it can use to finance public spending (e.g., schools, universities, health-care), deficit reduction or other public-interest measures.

#### *A Competitive Return on Capital*

A competitive rate of return on equity for OPG would be at least 15% after taxes. OPG's average return on equity was 2.35% between 1999 and 2004 inclusive. To earn a competitive return on equity (15%), OPG's after-tax return on equity must rise by 12.65 percentage points relative to this six year average. Assuming a 35% marginal income tax rate, its pre-tax return on equity must rise by 19.46 percentage points. Given OPG's 2004 shareholder equity of \$5.021 billion, this means that OPG's revenues would have to rise by \$977 million. (By comparison, in 2003 Hydro Quebec's return on equity

Fig.3 Electricity prices for 2003

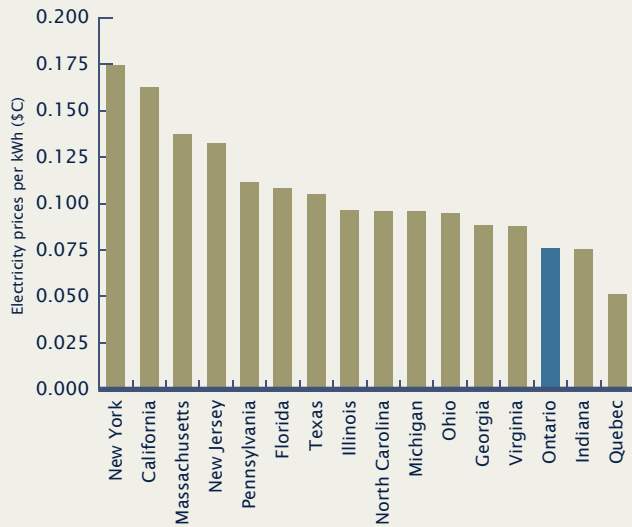


Fig.4 Electricity productivity for 2003

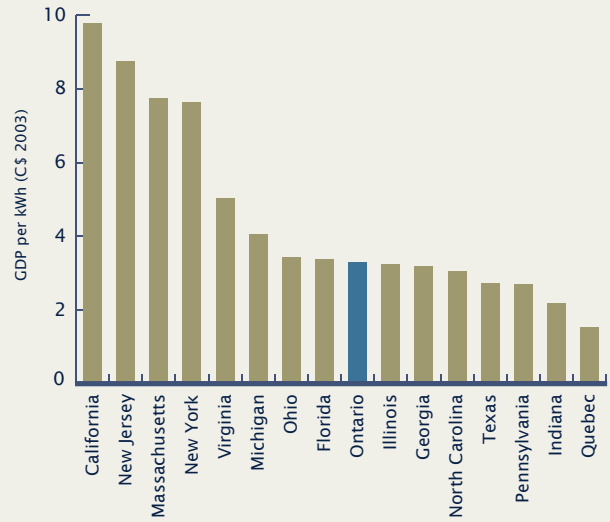
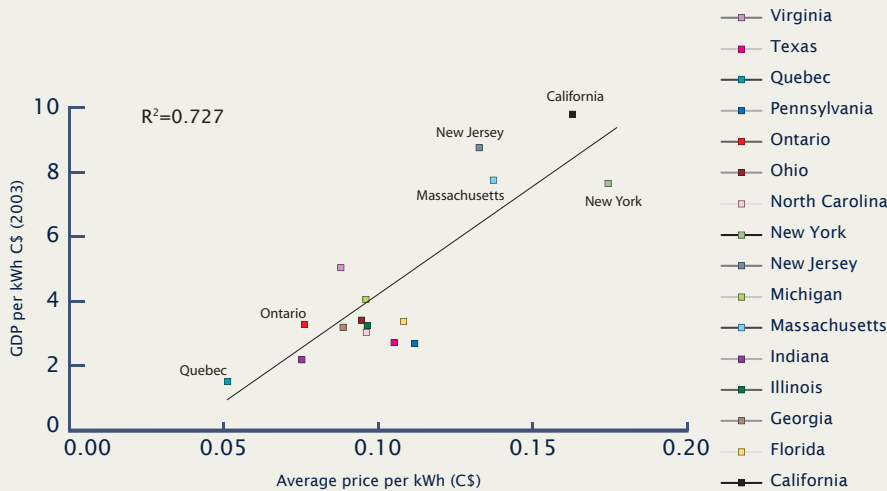
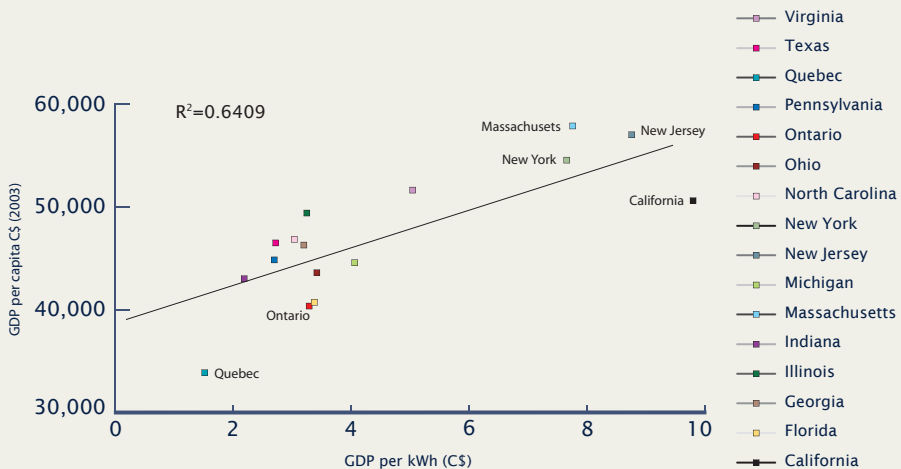


Figure 5: Relationship between electricity prices and electricity productivity



State/Province	GDP per kWh
California	\$9.79
New Jersey	\$8.75
Massachusetts	\$7.75
New York	\$7.65
Virginia	\$5.04
Michigan	\$4.06
Ohio	\$3.42
Florida	\$3.38
Ontario	\$3.29
Illinois	\$3.25
Georgia	\$3.20
North Carolina	\$3.04
Texas	\$2.72
Pennsylvania	\$2.70
Indiana	\$2.19
Quebec	\$1.52

Figure 6: Relationship between electricity productivity and GDP per capita



For sources and more information, please see the full New Electricity Strategy for Ontario report at [www.cleanairalliance.org](http://www.cleanairalliance.org)

was 13.2% and its dividend payments to the Province of Quebec were \$965 million.) A \$977 million rise in OPG's revenue requirement would raise Ontario's electricity rates by approximately 7.2%.

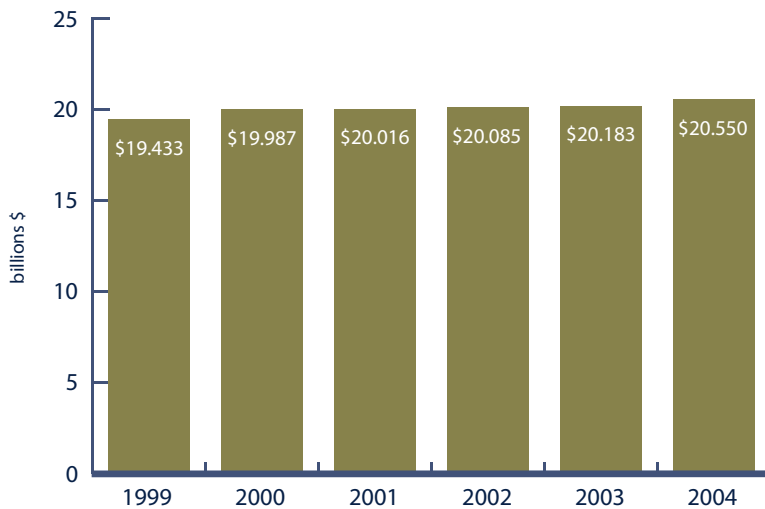
*Pricing Water at Its Market Value*

OPG uses provincially owned water resources to produce hydro-electricity. OPG produces approximately 22% of Ontario's electricity from its heritage waterpower facilities at a very low cost – less than 1 cent per kWh. The market value of these water resources equals the difference between the competitive price of electricity generation, 5.8 cents per kWh in 2003, and OPG's cost of producing hydro-electricity times its total annual hydro-electricity generation. In 2003, the annual market value of these water resources was approximately \$1.6 billion, however, OPG's actual waterpower payments to the Government of Ontario were only \$430 million. Therefore, below-market value water rental rates essentially provided an approximately \$1.2 billion subsidy to OPG's above-average cost nuclear generation. Eliminating this subsidy would raise electricity rates by approximately 9%.

*The Ontario Electricity Financial Corporation's Unfunded Liability*

In 1999, Ontario Hydro was broken up into five companies. All of its generation assets were transferred to OPG. In order to keep OPG solvent, \$19.433 billion of Ontario Hydro's debt or unfunded liabilities associated with electricity generation facilities was transferred to the Ontario Electricity Financial Corporation (an agency of the Government of Ontario) as "stranded debt" or "unfunded liability." The majority of this "stranded debt," \$15.147 billion, was nuclear-related.

Fig. 7: The Ontario Electricity Financial Corporation's unfunded liability



According to the Ontario Electricity Financial Corporation (OEFC), the government had "a long-term plan in place to retire OEFC's liabilities." The plan consisted of a nuclear debt retirement charge (0.7 cents per kWh) and using all of the province's corporate income, property and capital tax revenues from OPG, Hydro One and Ontario's more than 80 municipal electric utilities to pay off the stranded debts of the former Ontario Hydro. (For the year ended March 31, 2004 the OEFC received \$1 billion in debt retirement charge revenue paid by ratepayers and \$627 million in electricity sector tax revenues.)

There were two problems with this plan. First, as **Figure 7** reveals, the OEFC's unfunded liabilities have grown over time due to the poor performance of OPG's nuclear reactors (and therefore lower or negative returns from OPG) and the electricity rate cap.

Second, it is more economically rational and fair to use tax revenues from the electricity sector to pay for public services (e.g., schools and hospitals), while ensuring that debt repayment is undertaken directly by ratepayers. This ensures that we have real-cost pricing for electricity and, therefore, appropriate price signals for electricity consumers, not hidden subsidies in the form of foregone tax revenues to governments.

The OEFC's unfunded liability should be paid off by Ontario's electricity consumers, not taxpayers, over a reasonably short time frame in order to promote inter-generational equity. (In other words, the current generation of electricity consumers should not be allowed to shift the costs of their electricity consumption and generation onto future generations.) For example, starting in 2004 the unfunded liability could have been paid off over 10 years by raising electricity rates by approximately \$1.9 billion per year or approximately 14.1%.

#### *Long-Term Storage of Radioactive Nuclear Wastes*

According to the Nuclear Waste Management Organization, the cost for the long-term storage of Canada's radioactive used nuclear fuel is conservatively estimated to be about \$24 billion.

The responsibility for funding the long-term storage of Ontario's used nuclear fuel is described in the Ontario Nuclear Funds Agreement between OPG and the Government of Ontario. The limits to OPG's financial exposure under the Ontario Nuclear Funds Agreement with respect to the long-term storage and disposal of used fuel are as follows (all amounts are present value as at January 1, 1999): (i) OPG will bear all costs up to \$4.6 billion; (ii) OPG and the Province will share, on an equal basis, costs incurred between \$4.6 billion and \$6.6 billion; (iii) OPG will be responsible for 10% of the costs incurred between \$6.6 and \$10 billion and the Province will be responsible for the remaining 90%; (iv) the Province will be responsible for any costs above \$10 billion.

In 2001, OPG leased its Bruce A and Bruce B nuclear generating stations to privately owned Bruce Power. The lease has an initial term of 18 years and includes options to extend the lease for up to another 25 years. However, OPG (in conjunction with the provincial government through the Nuclear Funds Agreement) continues to assume long-term responsibility for the used fuel and low- and intermediate-level radioactive waste generated by Bruce Power, as well as responsibility for the eventual decommissioning of the Bruce nuclear reactors.

It is not appropriate for Ontario's taxpayers to subsidize an electric power company's costs of storing its long-term radioactive nuclear wastes. Therefore all nuclear re-start, retrofit or new build projects should be required to assume complete responsibility for the long-term storage of their wastes.

#### *Nuclear Decommissioning*

According to the Ontario Nuclear Funds Agreement, the Government of Ontario will provide financial guarantees to the Canadian Nuclear Safety Commission for OPG's nuclear reactor decommissioning liabilities in return for an annual guarantee fee equal to 0.5% of the amount guaranteed.

It is not appropriate for Ontario taxpayers to provide financial guarantees with respect to the liabilities of electric power companies. The Government of Ontario should not provide financial guarantees to the Canadian Nuclear Safety Commission with respect to the decommissioning liabilities of future nuclear power plants.

#### **Protecting Low-income Electricity Consumers**

Ontario's electricity rates must rise on average by approximately 30% to increase our electricity productivity, raise our standard of living and protect public health and the environment. However, these gains must not be achieved at the expense of low-income Ontarians.

In 2003, 14.3% of Ontario residents (or 1,733,000 persons) were living at or below the "pre-tax, post-transfer low income cut offs" (LICOs) – a widely accepted measure of poverty.

**Table 1: Electricity Spending by Ontario Households in 2003**

Ontario 2003	All classes	Lowest quintile	Second quintile	Third quintile	Fourth quintile	Highest quintile
	Median per household	Median per household	Median per household	Median per household	Median per household	Median per household
Electricity (spending \$)	\$936	\$480	\$804	\$900	\$1,140	\$1,368

**Table 1** shows the average electricity bills of Ontario households by quintiles. The average household’s electricity bill was \$936 per year in 2003; whereas for the 20% of Ontario households with the lowest incomes (the lowest quintile), the average annual electricity bill was almost 50% lower at \$480 per year.

The OCAA is proposing the following three-pronged strategy to ensure that rising electricity rates will not lead to a net increase in the energy bills of Ontario’s low-income households (homeowners and tenants).

1. Ontario’s municipal electric utilities, the Ontario Power Authority and Hydro One should develop aggressive energy conservation programs to increase the energy efficiency and lower the electricity bills of their residential consumers.
2. Ontario’s municipal electric utilities, the Ontario Power Authority, Hydro One, Enbridge Gas Distribution and Union Gas should implement programs to finance the conversion of homes from electric baseboard heaters to natural gas, propane or electric ground-source heat pumps for space heating. The upfront capital costs of conversion (as well as for conservation measures such as appliance replacement) should be financed by the utilities and recovered by monthly premiums on the participants’ utility bills that will be offset by their savings on total energy costs. This will ensure that low-income residents are able to switch to a lower cost option for space heating, etc., while enjoying an immediate net reduction in their utility bills.
3. The Government of Ontario should use a portion of its increased electricity-related tax and water revenues and dividends to finance an electricity rebate for all residential electricity ratepayers. The annual rebate for all residential ratepayers should equal the average bill impact for Ontario households in the lowest income quintile. Therefore, if electricity rates are raised by 30%, the electricity rebate for each residential electricity ratepayer would be \$144 per year (\$480 per year x 30%), an amount that can be credited to consumers on their electricity bill. All residential electricity ratepayers should receive the same rebate (e.g., \$144 per year) irrespective of their actual consumption. This will permit the cost/benefit of consuming/saving an additional kWh to equal its full (marginal) cost.

### **Natural Gas- and Biomass-fired Combined Heat and Power**

Virtually all of Ontario’s buildings and factories use natural gas for heating. However, it is much more-productive to use natural gas (or biomass) to simultaneously produce both heat and power (electricity).

The energy efficiency of a combined heat and power plant can exceed 80%; whereas the energy effi-

ciencies of nuclear reactors, coal-fired power plants and natural gas combined-cycle power plants are approximately 30%, 34% and up to 60% respectively.

According to a report prepared for the Ontario Ministry of Energy, Ontario's total combined heat and power potential in 2020 will be 16,514 MW. This is equivalent to 95% of Ontario's existing installed coal and nuclear generation capacity.

To facilitate the development of combined heat and power projects and to increase the competitiveness of Ontario's industries, the Minister of Finance should exempt new combined heat and power projects from the 0.7 cent per kWh nuclear debt retirement charge.

For more information please visit our web site: [www.cleanairalliance.org](http://www.cleanairalliance.org) and download our new report: *Increasing Productivity and Moving Towards a Renewable Future: A New Electricity Strategy for Ontario* or call Jack Gibbons at 416-926-1907 ext. 240