

2003 Federal Budget

Pre-Budget Submission

To: The Minister of Finance

September 2002

Table of Contents

Executive Summary

Introduction

Recommendations: CCA Rates

- (i) Generation Assets
- (ii) Transmission and Distribution Assets
- (iii) Treatment of Used Assets
- (iv) Class 43.1

1.0 Background and Emerging Trends

- 1.1. The Need for New Investment
- 1.2. Growth in Electricity Consumption in Canada
- 1.3. Trade in Electricity
- 1.4. Capital Investment Trends in Canada
- 1.5. Relationship of CCA Rates on Investment and Competitiveness
- 1.6. Accelerating Environmental Performance Improvement
- 1.7. Shrinking Reserve Margins

2.0. CCA System Issues

- 2.1. Inadequacy of Current Rates
- 2.2. Neutrality with Other Sectors
- 2.3. Competitiveness and International. Tax Comparisons
- 2.4. Treatment of Used Assets

3.0. Class 43.1 Objectives for Environmentally Preferable Power

- 3.1. Present Incentive Inadequacy of Class 43.1

4.0. Revenue Impacts

5.0. Conclusions

Executive Summary

Why Capital Cost Allowance (CCA) Rate Improvements are important?

After extensive analysis by Ernst & Young (E&Y) and in consultation with key stakeholders, CEA requests improvements to the CCA Rates for the electricity industry for the following key reasons;

- Higher CCA Rates for both new and used assets would allow the industry to *improve environmental performance*, such as reduce greenhouse gas emissions, by increasing the turnover of older capital stock and upgrading the efficiency of existing electricity assets more rapidly than would otherwise occur.
- The current CCA rates *do not* reflect economic lives of electricity assets. They were set at a time when the industry was not in a competitive structure without market competition. In the current environment, this inadequacy has become a serious deterrent to new investment in the industry.
- CCA rate improvements would assist in *enhancing security and reliability* of the overall electricity system by attracting new investment to reduce congestion, increase export capability, add capacity, and support competitive markets.
- Improved CCA Rates are vital if we are to *safeguard our competitive advantage* in electricity in North America through investment in more modern capital stock.
- Enhanced CCA rates will allow for *improved customer service* such as a wider choice of value added services at lower prices, power quality, and more tools to reduce energy consumption to improve environmental performance.
- Given steadily *growing demand* and *long lead times* to plan and bring new supply and infrastructure on line, a decision on CCA rates is urgently needed to allow utilities to build out infrastructure equivalent to approximately 35% of existing capacity over the next two decades.

What CCA Rate adjustments are specifically proposed?

- **Adequate CCA Rates to attract New Investment** - 8% for new generation investment and 4% for new transmission and distribution investment do not reflect the true economic life of these assets in today's competitive environment. E&Y's study supports rates of 15% to 20% for new generation assets, and 8% to 12% for new transmission and distribution assets.
- **Higher CCA Rates for Used Assets** – The electricity industry is the only sector that does not receive adequate tax treatment for *used* as well as *new* assets. With virtually all of the industry's assets trapped at a 4% rate companies cannot receive a "fresh start" upon the transfer from a tax-exempt to a taxable entity which is a key issue for companies restructuring into a more competitive market. Hence, CEA is recommending that used equipment receive a CCA rate of 10%-12% for generation, transmission and distribution assets to adequately reflect the remaining economic life.
- **Revisions to Class 43.1 to effectively promote environmental performance** – Expanding eligibility requirements, streamlining administrative processes and enhancing monetization rules will all serve to promote technology neutral investment. As Canadian Renewable Conservation Expenses (CRCE) is too constrained, all of the CCA claims should be eligible for flow through share treatment. Alternatively the Class 43.1 incentive should be replaced by an equivalent refundable investment tax credit of about 13%.

What is the cost to the Federal Government? Ernst & Young's estimates, shared with the Department of Finance, show that these improvements have a minimal impact on short-term federal tax revenues and, over time, provides a growing tax base.

Introduction

The Canadian Electricity Association (CEA) is the national voice of the electricity sector in Canada, representing almost 95% of all generation, transmission, distribution and retail services provided to customers. CEA was founded in 1891, and has been a leading industry association advocating important consensus policy positions to the federal government on issues such as climate change, fish and water management, market access, energy efficiency and innovative technologies including clean coal and electronic metering applications. Since the mid 1990s the electricity industry has been undergoing massive restructuring, including unbundling, increased competition, and greater regulatory oversight and environmental regulation, all while moving towards taxable status.

CEA has been engaged over the past five years in providing innovative technical analysis to the federal government on how tax changes could improve the environmental performance and competitiveness of the industry. CEA enlisted the support of Ernst & Young (E&Y) culminating in a report submitted to the Department of Finance in October, 2001. CEA members, foreign investors and independent power producers (see Appendix #1), all participated in a consultative study process that has led to this Pre-Budget Submission.

The following recommendations are viewed as absolutely critical by the electricity industry if the federal government expects to provide the tools by which the sector can remain competitive over the long term, while improving on, and accelerating its recent environmental performance including the reduction of greenhouse gases.

Recommendations: CCA Rate Proposal

(i) Generation Assets

CCA rates for new generation assets should be between 15-20% to adequately reflect economic lives. However, on the grounds of neutrality with other industries that manufacture their output, and the need for investment, a case could be made for the Manufacturing and Processing (M&P) CCA rate of 30%.

(ii) Transmission and Distribution (T&D) Assets

Based on changing market conditions, changes in useful asset lives and competitive conditions vis-à-vis the U.S., CCA rates of 8-12% is required for new T&D assets.

(iii) Treatment of Used Assets

For existing assets of exempt utilities, a “fresh start” principle should apply to establish appropriate CCA tax rates for existing assets upon privatization and upon a transfer of used assets to a taxable purchaser. On this basis CCA rates should be 10-12% to reflect the remaining economic life of these assets.

(iv) Class 43.1

Although the recent increase in small hydro eligibility from 15 MWs (average) to 50 MWs (rated capacity) in the December 10th 2001 economic update was a favourable improvement, we believe by further improving the Class it will encourage energy efficiency and the use of emerging renewable and low impact energy sources. The following recommendations serve to expand the eligibility under Class 43.1, and improve the effectiveness of the key federal government objective of reducing greenhouse gas emissions.

- Use of New Technologies – Currently only new equipment qualifies for Class 43.1. New and used equipment should both qualify if efficiency criteria are met.
- Removal of limitation of energy use to industrial process – Extend eligibility to systems that use waste energy for commercial and residential use.
- District Energy – Consideration should be given to allow for DE systems to include for all equipment and underground pipes within Class 43.1.
- Space Heating and Cooling – Extend eligibility in Class 43.1 for space heating and cooling technologies to qualify re commercial and industrial applications.
- Fuel Cells – A leading edge technology, fuel cells offer an alternative to distributed generation with heat recovery, and should be included in Class 43.1.
- Expanding List of Eligible Waste Fuels - Industrial flare gas should be included as a “specified waste fuel” in Class 43.1.
- Replacement or Upgrading of Hydro Turbines – These should be made eligible for Class 43.1 if they meet efficiency criteria and increase the capacity of the system by 3% without increasing the head or quantity of water used.
- Investment in turbines in spare or vacant bays for electricity production – Turbines resulting in diverting spillage should be made eligible within Class 43.1.

- Certification — New projects seeking Class 43.1 treatment should seek a “technical certification of compliance” from NRCan to remove investor uncertainty.
- Monetization – CRCE is too constrained in its effectiveness. All of the Class 43.1 CCA claims should be eligible for flow through shares treatment. Alternatively the Class 43.1 incentive should be replaced by an equivalent refundable investment tax credit of about 13% with these assets receiving the CCA rate that would be applicable to the current non-Class 43.1 generation, transmission and distribution assets. This credit would apply only to new investments with the existing Class 43.1 regime continuing for existing investments.

1.0. Background and Emerging Trends

1.1. The Need for New Investment

The Canadian electricity industry is facing increasing competition, aging infrastructure, growing demand for electricity, rising customer service expectations and requirements to improve environmental performance that include reducing greenhouse gas emissions and protecting fish habitat. These factors are requiring electric utilities to invest in new, more efficient and cleaner technologies. However, such investment is not currently occurring in the Canadian electricity industry, as the relatively low rates of return are no longer sufficient to offset the risk and uncertainty facing the investor. Investment in generation and transmission capacity has declined over the last ten years while growth in domestic demand for electricity continues to increase at 1.5% per year. Since the necessary additional and replacement generation and infrastructure capacity investment will largely come from private capital markets, changes to CCA rates will send the appropriate financial signals to investors.

1.2. Growth in Electricity Consumption in Canada

From 1990 to 2000, demand for electricity continued to grow at 1.5% p.a. in Canada. Projected demand for electricity in Canada by federal government sources such as the National Energy Board (NEB) and Natural Resources Canada (NRCan) from 2000 to 2010 would see demand in the 1.2% to 1.5% p.a. level. This conservative estimate effectively translates into a need to build and or replace about 35,000 MW by 2020, equating to 35% of Canada's installed capacity. Typically, large generation and transmission projects can take up to ten years to complete depending on the regulatory review process, consultation with local communities and planning, construction and commissioning phases of the project.

1.3. Trade in Electricity

Electricity trade typically averages 7%-10% of Canada's annual production, which represents about 1.2% of total U.S. consumption. Electricity sales are principally from BC, Manitoba, Québec, and New Brunswick. Much higher export potential exists from these and other provinces should investment in new supply and transmission ties for export be encouraged via improved tax rates. U.S. demand will continue to increase and given the complimentary nature of supply from Canada, owing to different peaking seasonal needs, will add value by improving reliability and efficiency of the North American power grid.

1.4. Capital Investment Trends in Canada

The electricity industry's historical level of investment has been highly cyclical with the last significant peak of \$12.5 billion in 1991. The severe economic downturn in the early 1990s brought a far greater contraction of electricity investment than other sectors such as the oil and gas industry and has yet to show sufficient signs of recovery. New supply and infrastructure is being built as either Class 43.1 i.e. cogeneration projects or these projects are being mandated by provincial regulators. Current investment trends therefore are not keeping pace with demand for electricity, and need to be improved to attract private capital in the range of \$10-\$12 billion

annually to replace aging infrastructure, improve environmental performance and meet new competitive realities including continued load growth and export opportunities.

1.5. Relationship of CCA Rates on Investment and Competitiveness

Current CCA treatment is not sufficient as rates do not reflect the useful life of electricity assets. Rules on treatment of new and used equipment also serve to impede industry restructuring by penalizing asset transfers and not allowing a “fresh start” that would encourage much needed new investment to remain competitive. The federal government has recognized the need for tax changes by allowing the electricity industry access to the M&P income tax rate and by increasing the CCA rates for generation assets from 4% to 8% in the February 2000 budget. Although this was an improvement from the earlier rates, as shown in the E&Y study these rates remain inadequate to reflect useful life. Merchant transmission line investors, for example, are seeking ten to twelve year paybacks on their investment which is equivalent to a CCA rate of between 15%- 20%.

1.6. Accelerating Environmental Performance Improvement

Existing CCA rates serve only to continue the slow rate of progress that can be achieved with respect to improving environmental performance such as the lowering of greenhouse gases, restoring fish habitat or reducing air quality emissions. Alternatively, higher CCA rates, in tandem with improvements to Class 43.1 would increase innovation, promote deployment of new technology and encourage capital stock turnover. These changes are particularly important if the Canadian electricity industry is expected to invest in and accelerate environmental performance improvements.

1.7. Shrinking Reserve Margins

The effect of low investment in Canada’s electricity sector is further illustrated by the decline in system reserve margins. System reserve margin is the reserve available to meet peak demand accounting for both theoretical capacity and variations caused by hydro reservoir levels, plant derates, outages, weather conditions or fuel availability. National reserve margins as measured against capability have declined by half from 31% in 1980 to 15.4% in 2001. In the past, regulated markets rates of return were essentially guaranteed by governments resulting in excess capacity being maintained at levels of 25% to 30%. Reserve margins fell precipitously as competitive market regimes dictated higher rates of return during and since the 1990s for inherently greater market and regulatory risks. The current system does not provide adequate financial incentives for the rebuilding of reserve margins to occur, and this could impact on the reliability of the system over time.

2.0. CCA System Issues

2.1. Inadequacy of Current Rates

Canada's CCA rate system is based on the asset's "useful life" to determine its depreciation of assets. In the case of the electricity sector, the useful life has been assessed in the past based on engineering considerations without any consideration to the asset's useful life. Although betterments are made to these assets, the impact on its useful life is minimal. The impact of betterments on the useful life is analogous to the outer shell of a building which can last a longer period than the inner core of moving parts such as boilers and lighting equipment which needs to be replaced and upgraded from time to time. The inner components of electricity assets also are replaced frequently due to plant shutdowns for repairs, changing regulatory including environmental requirements, and new technological advancements. In addition, the 4% CCA rate (now 8% for new generation equipment) was established when the majority of the industry was Crown owned and was not predicated on an in depth review of the useful lives of these assets. Now that the industry is moving towards taxable status, significant CCA rate changes that reflect the useful lives become even more critical.

2.2. Neutrality with Other Domestic Sectors

Historically, electricity has been denied tax preferences because the output was considered non-tradable and the fact that regulated suppliers passed on taxes to customers. Emerging trends in the new paradigm of electricity warrant a more neutral treatment relative to other sectors. Electricity is becoming highly competitive, tradable as a commodity, exposed to price volatility and taxability, and subject to capital mobility. Today, electricity is a manufactured good that transforms raw input fuels, and clearly is no different from any other manufactured commodity, and therefore should receive the same incentives as manufacturing, including the higher 30% CCA rate. The government has already begun the process by giving the industry the M&P income tax rate and should complete the process. However, the electricity industry is not seeking incentive CCA rates but higher CCA rates to achieve appropriate treatment for the assets useful life. CEA believes that its proposal on CCA rates accurately reflects the useful lives of its varied asset fleets as demonstrated in the E&Y tax study.

2.3. Competitiveness and International Tax Comparisons

Tax reform has been integral to market reform in other jurisdictions. A brief summary of these tax changes are found below:

CCA rates are more generous in the U.S. than in Canada. Most equipment (generation, transmission and distribution) is depreciated over 20 years (8% for new and existing assets), with exceptions for nuclear production plants and the distributed generation class for combustion turbines that are at 15 years (equivalent to a 12% CCA rate). Nuclear fuel assemblies are at 5 years (equivalent to a 30% CCA rate), as are wind, solar and biomass properties, as compared to Class 43.1 for Canada. The U.S. is now considering moving to a 7-year straight-line write-off (equivalent to a 25% CCA rate) for all electricity assets i.e. generation, transmission and distribution – to be on par with manufacturing assets and to ensure both reliability and its national energy security.

In the U.K. which underwent successful privatization and restructuring in the early 1990s, there are only three categories of treatment; 1) Buildings and Structures at 4% straight line; 2) Long Life Assets which are at 6% declining balance and 3) Plant and Machinery which receive a 25% declining balance treatment. Ernst & Young's review reveals that as much as 80%-90% of all assets in the electricity sector in the U.K. receive the higher 25% CCA rate.

In Australia, the Electricity Supply Association asked for and received on January 1, 2002 a key decision on the depreciation of new electricity sector assets to reduce investor risk from the Australian Taxation Authority (ATO). The decision by the ATO permits Australian power companies the right to "self assess" the effective lives of their assets. Australian industry cited the need for over US\$20 billion in needed investment, with technological, regulatory and environmental risks as reasons why the ATO had to alter the tax treatment of electricity assets.

2.5. Treatment of Used Assets

Economic lives for used assets are inherently shorter than for new assets. The same CCA rate for both new and used equipment would be neutral for transfers between taxable parties. However, the current income tax rules allow a CCA rate of 8% for new assets and only 4% for transfers of used assets from exempt to taxable utilities. E&Y's analysis shows that the current 4% CCA rate is inadequate for used assets. Used assets require an even higher rate to account for a far shorter remaining life of the asset.

3.0 Class 43.1 Objectives for Environmentally Preferable Power

The Canadian electricity sector is operating in a context of changing social and environmental expectations as the public increasingly values clean air and water, and the protection of ecological systems. Electric utilities and regulators are striving to meet these rising expectations. The development and adoption of new technologies that reduce greenhouse emissions is a key priority for this industry. All technologies however, have environmental consequences particularly at the scale of satisfying modern societal demands for power, and as such, ongoing improvement must be the guiding principle. In that regard, Class 43.1 is a powerful tool which the government has developed to provide incentive towards more benign electricity production, but it too requires updating to become more effective.

3.1. Present Incentive Inadequacy of Class 43.1

The objectives of Class 43.1 are to encourage both efficiency and environmental conservation by facilitation of low and zero greenhouse gas emitting electricity generation. This implies that there is no preference of new versus old technology, nor in the targeting of any one particular technology.

At present, Class 43.1 is the primary vehicle to provide incentive to new relatively small, low impact electricity generation in Canada. However, the class has been ineffective owing to limited eligibility of projects and technologies, and the insufficient form that monetization (i.e. the upfront cash value of the incentive) has taken in the form of the Canadian Renewable Conservation Expenses (CRCE). While the recent federal government announcement modifying CRCE for wind and other eligible projects is positive, CRCE still fails to level the playing field between electricity and the non-renewable resource sector wherein the rules are less generous than for non-renewables and the actual use of CRCE provision (1-3% of total costs) is extremely limited. To achieve fairness and neutrality, CRCE should either be expanded to include additional project costs or improving monetization by introducing technology neutral refundable investment tax credits.

4.0. Revenue Impacts

The following tables provide estimates of federal revenue impact of the changes proposed by the CEA. They are based on a detailed analysis provided by Ernst & Young. The tables also show the impact on federal revenues of a portion of electricity assets (in both generation and transmission and distribution) being transferred from tax-exempt provincial utilities to taxable entities. As can be seen, the revenue impact of the CCA changes is modest, reflecting the fact that the vast bulk of electricity assets are held by the tax-exempt provincial utilities which are not affected by the tax changes. If the improved CCA rates do encourage a partial transfer of assets from the tax-exempt to taxable entities, then there could be a significant gain in federal revenues, far exceeding the cost of CCA rate changes.

- **Revenue Impact of Increased CCA Rates for Currently Taxable Companies**

Estimated Federal Revenue Cost of Increased CCA Rates for Electric Power Generation and Transmission and Distribution Assets of Taxable Companies (\$ Millions)	2002	2003	2004
20% CCA Rate for Generation	1.2	3.0	3.9
12% CCA Rate for Transmission and Distribution	1.3	3.7	5.6
Total for both changes	2.5	6.7	9.5

- **Revenue Impact of Additional Taxable Companies and Higher CCA Rates**

Estimated Federal Revenue Impact of Higher CCA Rates, Assuming Additional Taxable Companies and Additional Taxable Generation Equalling 10%, and Additional Taxable T&D Equalling 5% of the Electric Power Industry (\$ Millions)	2002	2003	2004
Generation			
Revenue Cost: 20% CCA	(1.6)	(4.0)	(5.2)
Federal Corporate Income Tax from Additional Taxable Companies	120	120	120
T&D			
Revenue Cost: 12% CCA	(0.9)	(2.5)	(3.7)
Federal Corporate Income Tax from Additional Taxable Companies	60	60	60
Total			
CCA Changes	(2.3)	(6.5)	(8.9)
Federal Corporation Income Tax from Additional Taxable Companies	180	180	180

- **Revenue Impacts of Additional Taxable Companies Resulting from Changes to CCA Rates on Existing Assets***

Estimated Federal Revenue Impacts of Changes to CCA Rates on Existing Assets of Additional Taxable Companies	<u>2002</u> (\$ Millions)
No Change to CCA Rates	\$900
8% CCA Rate	\$450
10% CCA Rate	\$130
12% CCA Rate	Revenues deferred beyond 5 years
*Assumes additional taxable companies totalling 10% for generation capital assets and 5% for T&D capital assets	

5.0. Conclusions

As the above arguments show, our recommended improvements to the CCA tax rates and increasing the CCA rate for used equipment are fundamental to the ability of the industry to improve its environmental performance including reducing greenhouse gas emissions and related air quality impacts. Encouraging new investment in supply and transmission and distribution infrastructure is critical to avoiding potential shortfalls in supply, future peaking shortages, and price spikes due to system constraints. The changes recommended will align the CCA rates with the useful lives of electricity assets, while encouraging the much needed investment in the electricity sector. While the industry also faces additional challenges, tax changes remain the key signal to encourage investors to buy, build and upgrade electricity assets.

For more information or any questions, please contact:

Jan Stapleton, Chair, CEA Finance and Tax Committee at (416)-592-5600
Roy Staveley, Senior Vice President, CEA at (613)-230-9047

Appendix #1

Participants in the Ernst & Young Study completed September 28, 2001 entitled;

“CCA Rates for the Electric Power Industry: The Role and Importance of Capital Cost Allowance Rates and Incentives”

CEA Members

BC Hydro
Emera Inc.
ENMAX Corporation
EPCOR
Great Lakes Power Limited
Hydro One Networks Inc.
Hydro Ottawa
Hydro-Québec
Manitoba Hydro
New Brunswick Power
Newfoundland & Labrador Hydro
Newfoundland Power
Ontario Power Generation
SaskPower
S&C Electric Canada Ltd. (representing Manufacturers and Suppliers)
Toronto Hydro
TransAlta Corporation

Foreign Investors that participated:

British Energy
DTE/Probyn Energy Solutions
SITHE

Independent Power Industry participants:

Independent Power Producers Society of Alberta
Independent Power Producers Society of Ontario
Northland Power Inc.

Other Participants included:

Environment Canada
National Electricity Roundtable represented by Capstone Turbine Corporation
Natural Resources Canada