ONTARIO POWER GENERATION

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Via Courier and RESS

Ms. Kirsten Walli
Board Secretary
Ontario Energy Board
P.O. Box 2319
2300 Yonge Street, Suite 2700
Toronto, ON
M4P 1E4

Dear Ms. Walli:

Re: Comments on the Staff Discussion Paper on the Regulatory Treatment of Infrastructure Investment (EB-2009-0152)

In response to Board Staff's Discussion Paper dated June 5, 2009, Ontario Power Generation Inc. (OPG) offers the following comments on the proposed revisions to the Board's treatment of infrastructure investment. Enclosed are three copies of OPG's submission. OPG appreciates the opportunity to make such a submission.

Please direct any comments or questions in this matter to the undersigned.

Best Regards,

[Original singed by]

Colin Anderson

cc: Andrew Barrett, OPG

COMMENTS OF
ONTARIO POWER GENERATION INC.
ON THE STAFF DISCUSSION PAPER ON THE REGULATORY TREATMENT OF INFRASTRUCTURE INVESTMENT (EB-2009-0152)

1.0 Introduction

Ontario Power Generation Inc. (OPG), as a regulated generator, supports the initiative to review the regulatory treatment of infrastructure investments and recommends that such changes be implemented for all regulated entities.

In addition to these comments, OPG is a member of the Infrastructure Renewal Task Force (IRTF) and, as such, has reviewed and is fully supportive of the more detailed comments made by the IRTF in its submission.

2.0 Discussion of Issues

OPG is primarily concerned with the applicability of the modified regulatory treatments. Accordingly, OPG will limit its comments to this general subject area.

2.1 Issue for Comment #1:

Should the framework and mechanisms identified in this Discussion Paper apply to other rate-regulated entities? If so, why and for what types of projects?

In the Statements from the Chair (dated April 3 and June 1, 2009) the following excerpts are instructive:

> "…electricity utilities may need greater regulatory certainty prior to making significant capital investments. This would require consideration of whether

> modifications to the Board's approach to cost recovery for capital investment could better facilitate utility infrastructure investments."
>
> "The cost recovery initiative will consider more innovative approaches to cost recovery for electricity infrastructure projects. …. The cost recovery mechanisms developed through this initiative may also be available in relation to other types of projects in appropriate circumstances."

It is clear, in OPG's submission, that consideration of investments made by regulated entities other than transmitters or distributors was contemplated in the launching of the initiative. Further, OPG sees no justification for the exclusion of other regulated entities from access to the modified regulatory treatment simply based on the entity's position in the value chain. Whether or not a given infrastructure investment qualifies for the modified treatment should be based on whether the investment represents increased risk over other projects in the entity's portfolio, not by who happens to be proposing them. The factors driving these risks, within the context of new generation or refurbishment projects, can include the length of time the design and construction phases take to complete, the materiality of the costs associated with a given project, and the proportion of the regulated entity's rate base that the project represents, once brought into service. Clearly, construction of new generation facilities, or significant capital modifications to existing facilities, would qualify against these criteria. Further, any ratepayer benefits that are realized as a result of modifying regulatory treatments would apply equally to generation, transmission or distribution. For these reasons, the mechanisms identified in the discussion paper should be applicable to rate-regulated entities other than transmitters or distributors.

While the Statements from the Chair point to the *Green Energy and Green Economy Act* (GEGEA) as a catalyst for the proposed changes to the Board's regulatory practices, the Staff Discussion Paper appears to go further. It appears

to place an almost exclusionary criterion on the evaluation of investments; that is, the only qualifying investments are those that are in direct response to the GEGEA. While OPG understands the importance associated with the GEGEA, the real issue is the overall need for investment in energy infrastructure. Investments made in implementing the GEGEA should, of course, be considered for modified treatment, but so should other necessary infrastructure investments that may not be GEGEA-related. OPG urges the Board to view the removal of barriers for infrastructure investments through a broader lens.

2.2 Issue for Comment #2:
Are there other broad classifications for investment, beyond "routine", "non-routine incremental", and/or "GEGEA-related" that should be considered? If so, what are they and what are the specific underlying drivers for such investment?

Consistent with the points raised above, OPG submits that the broad classification of investments into categories is unnecessary when deciding whether a particular investment should qualify for modified regulatory treatment. This sentiment is echoed by Board Staff in its paper on page 5 where it states: "Precise breakdown of complex capital projects into "routine" versus "non-routine incremental" versus "GEGEA-related" investments may not be practical or absolutely necessary." OPG firmly believes that any such classification of investments is unnecessary and could degrade regulatory efficiency by diverting valuable resources to justifying and assessing the categorization of investments instead of reviewing the prudence of the investments themselves. Accordingly, OPG reiterates that infrastructure investments should be evaluated based on increased risk.

2.3 Issue for Comment #10:

Should the Board allow for full or partial CWIP to be placed in rate base during the construction of transmission facilities to accommodate the connection of renewable generation and/or develop the smart grid? Why or why not? Should the Board allow this particular treatment for distribution investment? If so, on what basis?

Since OPG has already advanced its position that the modified treatments should be available to all regulated entities (i.e. it should apply to generators, transmitters and distributors alike), comments on this issue will be limited to the content associated with inclusion of CWIP in rate base.

The Board should allow CWIP in rates. The Chair, in his Statement dated April 3, indicated:

> "The magnitude of current and future utility infrastructure investment has led me to consider how the Board could create conditions which would foster timely investment by utilities in required infrastructure."

As correctly concluded in both the Board Staff Discussion Paper and in the NRRI Report referenced within the Board's paper[1], inclusion of CWIP in rate base is consistent with the Chair's stated objective above and is an important mechanism that is widely used to reduce barriers to investment by utilities.

Many other jurisdictions have taken this step for the very same reasons. In the United States, the Federal Energy Regulatory Commission (FERC) has allowed a portion of CWIP to be included in rates since 1987. Further, pursuant to FERC

[1] National Regulatory Research Institute, *Pre-Approval Commitments: When and Under What Conditions Should Regulators Commit Ratepayer Dollars to Utility Proposed Capital Projects?* (November, 2008)

Order 697[2], FERC adopted rules to allow for 100% inclusion of CWIP in rate base, among other incentives, for certain qualifying investments. At the state level, a number of PUC/PSCs allow for recovery of CWIP in rates to facilitate investment in required infrastructure, including generation facilities[3]. In all cases the fundamental driver was the same – encouragement of investment in required infrastructure – which is completely consistent with the Chair's stated objective for Ontario.

In 2008, OPG commissioned Charles River Associates Inc. (CRAI) to prepare a paper entitled "The Economics of Integrating CWIP into Rate Base". The paper examines other jurisdictions, and discusses the general benefits associated with inclusion of CWIP in rate base, which are highlighted below.

First, inclusion of CWIP in rates has a mitigating effect on rate shock. In the absence of any modified treatment, CWIP is included in a holding account that captures the expended costs incurred in the design and construction of facilities that meet general capitalization rules and thresholds. When a facility is completed and ready for service, all capitalized costs are included in rates including all financing charges. This results in a step change in the entity's rate base which causes a large increase in rates in the year that the asset is brought into service. Inclusion of CWIP in rates during construction reduces this shock by allowing rate base increases during the construction phase of the project.

Second, the provision of CWIP financing costs in current rates is an important consideration for credit ratings agencies, particularly for those utilities with large assets under construction. The major credit rating agencies evaluate the ability of a utility to meet its debt obligations. These ratings decline with declining

[2] Order No. 679, FERC Docket RM06-4-000, Promoting Transmission Investment through Pricing Reform, Final Rule, July 20, 2006.
[3] OPG notes that the Staff Discussion Paper indicates "…it is staff's understanding that this treatment has been generally reserved for large generation facilities." Given this, it seems unusual that the OEB would exclude generation from consideration with respect to this treatment.

confidence that a utility can meet its obligations, a situation that can occur when significant capital projects are underway due to the required debt servicing. Entities with lower credit ratings will also pay a higher premium when accessing capital markets, which can manifest itself in higher rates once these higher capitalized interest costs are included in rate base. Even for those utilities with governmental support for their financing, a significant mismatch between utility cash flow and revenues could lead to credit quality concerns. Inclusion of CWIP in rates helps alleviate this effect.

OPG has attached the CRAI paper as Exhibit A to this submission.

2.4 Issues for Comment #16-20:
Multiple issues dealing with the subject of considerations and conditions that may apply.

OPG agrees with the Staff Discussion Paper recommendation that applications for alternative regulatory treatment be assessed on a case by case basis.

Regarding performance conditions and reporting requirements, while OPG understands the need of the Board to possibly impose conditions and request information to facilitate its assessment of proposed capital investments, the conditions should only be imposed to solve a specific perceived problem and information should only be requested if it is needed for some useful purpose. Any and all conditions imposed by the Board should be necessary for the Board to render a decision; they should not simply be part of an inflexible list or process that is required for all projects requesting consideration of alternate treatment. Unnecessary conditions and reporting requirements imposed on such projects will only add to the costs of regulated service and reduce overall regulatory efficiency.

3.0 Conclusion

For the reasons discussed above, OPG requests the following:

- That any modified regulatory treatments be applicable to all rate regulated entities, including regulated generators.
- That investments qualify for modified regulatory treatment on the basis of their incremental risk, not on who is proposing the investment or whether it is routine or non-routine or driven by the GEGEA.
- That inclusion of CWIP in rates be allowed during the construction phase for certain projects, including generation projects.
- That any performance conditions or reporting requirements be thoughtfully applied to solve specific concerns, not as a broad brush approach to all investments that qualify for modified regulatory treatments.

All of which is respectfully submitted,

[Original signed by]

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Att. Exhibit A “The Economics of Integrating CWIP into Rate Base”

Exhibit A

INTERIM REPORT

Prepared For:

Ontario Power Generation

The Economics of Integrating CWIP into Rate Base

Prepared By:

CRA International

1201 F Street, N.W.

Washington, D.C. 20004

Date: October 7, 2008 (DRAFT)

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1. EXECUTIVE SUMMARY

Including construction work in progress ("CWIP") in utility rates is a common and effective regulatory treatment to help avoid a significant increase in rates and a decline in utility credit quality during a major construction program. The practice of delaying rate recovery for new utility assets until they are placed in service can result in rate shock for large, capital-intensive assets. Similarly, without inclusion of CWIP in rates, the funding needed for a major construction program can lead to a decline in utility credit quality and a corresponding increase in utility borrowing costs and ultimately utility rates.

In response to these concerns and the current need for significant investment in base load capacity, particularly nuclear power, many U.S. states have passed legislation and/or put in place regulations to allow for CWIP to be placed in rate base during the construction of these facilities. As noted in the Ontario Energy Board's 2007-2010 Business Plan, "Ontario needs additional energy infrastructure, particularly in electricity generation and transmission" and "we will achieve this objective by … examining options to incent investment and/or mitigate risk for electricity transmission and generation infrastructure investments." Given that Ontario also requires significant new utility investment, it is similarly worth considering whether the inclusion of CWIP in rates would provide an overall benefit to the customers of Ontario utilities with extensive construction programs.

Historical concerns regarding the inclusion of CWIP in utility rates, including concerns about intergenerational issues and passing risks of construction to ratepayers, can be mitigated through review of the utility's proposed construction program and actual construction expenditures. Ultimately, these concerns need to be weighed against the benefits of including CWIP in rates, particularly for those utilities with significant construction programs.

2. INTRODUCTION

Construction Work in Progress ("CWIP") is a holding account that captures the expended costs incurred in the design and construction of facilities that meet general capitalization rules and thresholds. When a facility is completed and ready for service, the associated CWIP is transferred to the appropriate plant account.

A common ratemaking approach associated with CWIP is to capitalize the cost during construction and wait until the project is in-service to transfer the costs to rate base and commence recovery of the investment in rates. In turn, during the construction period, an Allowance for Funds Used During Construction ("AFUDC") is accumulated and included in CWIP. AFUDC is the carrying charge on these assets until they are transferred to utility rate base. For assets with multi-year construction horizons, additional AFUDC will compound upon prior years' AFUDC. When the project goes into service, the capitalized expenditures

on the project and the associated AFUDC are included in rate base and included in rates over the service life of the asset established for accounting purposes.

Under this ratemaking approach, over the life of the asset, utility investors recover the financing costs associated with CWIP in rates (presuming that AFUDC accrues at a compensatory rate). However, the recovery of these financing costs does not commence until the asset is placed into service. For utilities with capital expenditures that are a small percentage of the overall rate base, the lag in recovery of CWIP financing costs through rates is usually of limited concern.

In contrast, for utilities with significant expenditures on projects with long construction periods, the amount of funding required without timely recovery in rates can lead to decreased utility financial ratios, lower debt ratings, and in some cases financial distress. Moreover, the AFUDC accumulation can become large enough that a significant increase in rates (i.e., a "rate shock") can take place when the assets are placed into service. Recovery of CWIP in rates is a common and effective means to mitigate these effects. Including CWIP in rates prior to the asset coming into service allows the utility to recover the carrying cost on this capital investment, typically interest costs on debt and a return on equity.

3. REGULATORY TREATMENT OF CWIP IN RATEMAKING

The treatment of CWIP in rates by regulatory agencies varies across North America both today and historically. Policies vary across individual U.S. states, the U.S. Federal Energy Regulatory Commission ("FERC") and Canadian jurisdictions. Highlights of the policies in effect are captured below.

3.1. FERC

Since 1987, the U.S. Federal Energy Regulatory Commission ("FERC") has allowed 50% of CWIP to be included in rate base. Among other things, the FERC oversees electricity rates for U.S. transmission assets and the sale of wholesale power in the U.S. (i.e., "sale for resale"). The portion of CWIP placed in rate base by the FERC in setting rates is provided the same rate of return granted to the rest of the rate base. The remaining portion of CWIP accumulates AFUDC which is placed into rate base when the asset is placed into service. Effectively then, the portion of CWIP in rate base does not accumulate AFUDC and instead the financing cost is recovered through current rates.

The FERC noted "our policies regarding the recovery of CWIP seek to balance investor and consumer interests by allowing, in the typical case, 50% of CWIP in rate base. This policy balances investor and consumer interests in the ordinary case by permitting investors

recovery of some construction costs on a current basis while also protecting customers against full rate recovery before a particular facility is placed in service."[1]

Recently, to spur the construction of transmission facilities, the FERC adopted rules to allow for 100% inclusion of CWIP in rate base, among other incentives, for certain qualifying grid investments. The FERC noted that "where appropriate, the Commission will allow for the recovery of 100% of CWIP in rate base. Here again, we seek to remove an impediment – inadequate cash flow – that our current regulations can present to those investing in new transmission."[2] A number of grid investments have since been granted 100% inclusion of CWIP in rate base by the FERC.[3]

3.2. INDIVIDUAL U.S. STATES

The regulatory treatment of CWIP in individual U.S. states varies. State regulatory commissions regulate investor-owned electric utilities operating in their state, and set rates primarily based on cost-of-service principles for the retail electricity customers in their state.[4]

Starting in the late 1960s, costs of both construction and capital began to increase significantly for many U.S. utilities, and construction periods for major utility projects were greatly extended. Confronted with severe cash flow problems and inadequate coverage ratios, many U.S. utility regulatory commissions began to permit all or part of CWIP in rate base, although actual practices varied considerably.[5]

Today, following a long period in which U.S. utility construction expenditures have been relatively small, the practice is less common, but continues in some states, again with varying practices and limitations.[6] For example, Wisconsin continues to allow CWIP in rate base.[7]

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1 Order No. 679, FERC Docket RM06-4-000, Promoting Transmission Investment through Pricing Reform, Final Rule, July 20, 2006, paragraph 22.

2 Ibid, paragraph 29.

3 For example, United Illuminating Company (ER07-653), Xcel Energy Services (ER07-1415), and PPL Electric Utilities Corporation (EL08-23).

4 In certain U.S. states, the rate for the generation component of retail electricity service is set at a competitive market rate, not by cost-of-service regulation. States sometime apply incentive ratemaking approaches that can differ from cost of service.

5 The Regulation of Public Utilities, Charles Phillips, 1993, page 354.

6 In certain U.S. states, CWIP is included in rate base, but the associated AFUDC is included in the estimation of utility rate base earnings. This offsetting approach does not provide recovery of CWIP financing costs in current rates.

7 Annual Report of Wisconsin Electric Power Company, December 31, 2006.

However, recent proposals by utilities to construct large base load facilities, particularly nuclear facilities, have resulted in further legislative and regulatory activity regarding the inclusion of CWIP in rate base in a number of states, as highlighted in Table 1.

Table 1: States with Recent CWIP in Rate Base Activity

State	Project Specific or Blanket?	Supporting Legislation and Regulations?	Other Associated Provisions	Notes
Florida	Nuclear	Both	Annual CWIP update during construction; can recover costs for transmission for new nuclear plants during construction.	June 2006 and June 2008 legislation, Feb. 2007 regulations
Georgia	Nuclear	No		Pending request
Kansas	Nuclear	Legislation	Construction costs included in rates before operation.	May 2008 legislation
Louisiana	Nuclear	Regulations	Annual CWIP update during construction	Adopted May 2007
Mississippi	Nuclear	Legislation		May 2008 legislation
North Carolina	Nuclear	Legislation	CWIP recoverable as part of general rate proceeding	August 2007 legislation
South Carolina	Coal and Nuclear	Legislation	Annual CWIP update during construction	May 2007 legislation
Virginia	Nuclear	Legislation	Enhanced ROE	April 2007 legislation

As a general matter, the legislative and regulatory activities noted in Table 1 were not required for the state regulatory commission to permit the inclusion of CWIP in rate base. Instead, the actions were generally designed to provide greater certainty regarding rate treatment in the resource planning performed by the states' utilities. Each state in Table 1 is summarized in further detail below.

Florida. The Florida legislature passed a law in June 2006 encouraging utility investment in nuclear power plants. Subsequently, the Florida Public Service Commission adopted regulations that allow for the inclusion of CWIP in rate base with the associated financing costs to be recovered through an annual Capacity Cost Recovery Clause proceeding.[8] Additional legislation was enacted in June 2008 that allows utilities to recover costs of building transmission lines for new nuclear plants during construction.[9]

8 Order No. PSC-07-0240-FOF-EI, Nuclear Power Plant Cost Recovery, March 20, 2007.

9 SB 1544/HB 7135

Georgia. An application was made on August 1, 2008 by Georgia Power to the Georgia Public Service Commission for the approval of two new units at the Vogtle nuclear station and inclusion of CWIP for the two units in rate base. The application notes that the Georgia Power share of the costs of the new units would decrease by about 30% (from $6.4 billion to $4.4 billion) if CWIP were included in rate base.[10]

Kansas. The Kansas legislature enacted a bill in May 2008 that eliminated the exclusion of nuclear power from facilities eligible for the recovery of CWIP in rates, and allows the costs of nuclear plant construction to be included in customer rates before the plant is operational.[11]

Louisiana. The Louisiana Public Service Commission established an incentive cost recovery rule for nuclear power generation that requires three phases of certification of a nuclear plant 1) siting and licensing, 2) design and development, and 3) construction to commercial operation. Once a phase is certified, costs are reviewed and approved on an annual basis for future recovery in rates. Cash earnings on CWIP are recovered in rates during the certified phase of nuclear plant development.[12]

Mississippi. Legislation was passed in May 2008 to grant favorable rate regulation for the construction of a new nuclear plant. In part, the legislation gives the Mississippi Public Service Commission authority to allow recovery of pre-construction costs in rates, include CWIP in rates, and provide for early determination of prudence and cost recoverability.[13]

North Carolina. Legislation was enacted in 2007 in North Carolina supporting the recovery of financing costs during the construction of a nuclear power plant. Construction phase financing costs may be introduced into rates only through a general rate case proceeding; therefore, the timing and frequency of rate cases during the construction phase for a new nuclear plant will impact the degree to which financing costs are recovered through customer rates during the construction period.[14]

South Carolina. In May 2007, the South Carolina Legislature passed the Utility Infrastructure Investment Act, which provides for the expedited recovery of prudently incurred capital and operating costs associated with new coal-fired or nuclear base load electric generating facilities larger than 350 megawatts. The legislation also provides for approval of initial

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10 Georgia Power News Release, August 1, 2008, Georgia Power Files Diverse Energy Plan

11 Kansas SB 586, enacted May 2008.

12 Louisiana Public Service Commission, Docket No. R-29712, adopted May 2007.

13 Combined License Application, Grand Gulf Nuclear Station Unit 3, Part 1 General and Administrative Information, Section 3.2.4.

14 Combined License Application, William States Lee III Nuclear Station, Part 1 Administrative and Financial Information, Section 1.6.

prudence (of capitalized expenditures) and annual recovery of cost of capital on construction work in process (CWIP). Financing costs are reflected in rates with annual updates to the recovery mechanism to reflect increases in financing costs as the projects advance through the construction phase. These annual updates are authorized by the South Carolina Public Service Commission and do not require a general rate case proceeding.[15]

Virginia. Under Virginia Code § 56-585.1.A.6 enacted in April 2007, a utility that constructs a nuclear generation facility has the right to recover the costs of the facility through a rate adjustment clause. This rate recovery includes projected CWIP and associated financing costs. Allowable costs include planning, development and construction costs, life-cycle costs, and costs of associated infrastructure. Projected CWIP and AFUDC can be recovered prior to the date the facility begins commercial operation. As an incentive to undertake a nuclear generation facility, the statute allows an enhanced rate of return on common equity of 200 basis points above the utility's general rate of return on common equity. This enhanced rate of return on common equity is applied to CWIP and the calculation of AFUDC during the facility construction phase. It is also applied to the nuclear facility from the date of the commencement of commercial operation and continuing for a period of 12 to 25 years.[16]

In sum, there has been considerable recent legislative and regulatory activity at the U.S. state level to encourage the construction of baseload facilities through the inclusion of CWIP in rates and other measures.

3.3. CANADA

There has been recent activity regarding the inclusion of CWIP in rates in two Canadian provinces as well.

Ontario. As a general matter, CWIP has not been included in rate base in Ontario. However, in August 2007, the Ontario Energy Board ("OEB") allowed Hydro One to expense, rather than capitalize, the AFUDC carrying costs associated with the Niagara Reinforcement Project. This transmission project was granted approval by the Board in 2005 and construction commenced shortly thereafter, but has since been delayed pending a resolution of underlying land claim issues. No explicit time limit was placed on the continued recovery of these costs.[17]

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15 Combined License Application, V.C. Summer Nuclear Station, Units 2&3, Part 1: General and Administration Information, page 4. Combined License Application, William States Lee III Nuclear Station, Part 1 Administrative and Financial Information, Section 1.6.

16 Combined License Application, North Anna 2, Part 1: General and Administration Information, page 14.

17 Ontario Energy Board, EB-2006-0501, Hydro One Network, Inc., For 2007 and 2008 Electricity Transmission Revenue Requirements.

Based on the approved treatment of the Niagara Reinforcement Project, there appear to be no specific legal constraints that prevent the OEB from including CWIP in rates. Nonetheless, in the same decision, the OEB rejected including CWIP in rates for several special projects identified by Hydro One. For these projects, the OEB decided that conventional rate recovery methods were adequate, given the costs of the designated projects and the time period over which the costs would be advanced. This distinction rested on a finding that there was not sufficient evidence that these projects would lead to rate shock or increased financing costs. In considering this finding, it should be noted that these three projects totaled in aggregate only about $780 million in capital expenditures, not far above Hydro One's total capital expenditures per year.[18]

British Columbia. In British Columbia, a government directive allows the British Columbia Utilities Commission ("BCUC") to make findings that allow for the British Columbia Transmission Corporation ("BCTC") to recover in current rates expenditures for studies, design, planning, acquisition, construction and operation of proposed transmission facilities.[19] Additionally, in a recent order the BCUC approved BCTC's request to adopt AFUDC as an accounting treatment for CWIP. In that decision, it was noted that portions of the equity return on CWIP have been recovered in current BCTC rates.[20]

4. GENERAL BENEFITS OF CWIP IN RATES

Including CWIP in rate base can provide two primary benefits. The first is the avoidance of rate shock and the second is a reduction in borrowing costs. As the Louisiana Public Service Commission noted recently: "The Commission recognizes the recovery of a current cash return on CWIP may be needed to protect a utility's financial integrity, to maintain an acceptable credit rating, to prevent an undue increase in the utility's cost of capital and/or to accomplish the phasing in of the cost of a large capital project for the benefit of customers."[21]

4.1. RATE SHOCK

In a stable environment, new plant to serve existing and additional customers along with inflation in operating costs will offset the depreciation of existing assets and lead to utility rates, excluding fuel, that grow roughly at inflation over time. This relatively benign state of

18 Ibid, pages 37 and 53.

19 Special Direction No. 9 to the British Columbia Utilities Commission, B.C. Reg. 157/2005, deposited March 22, 2005.

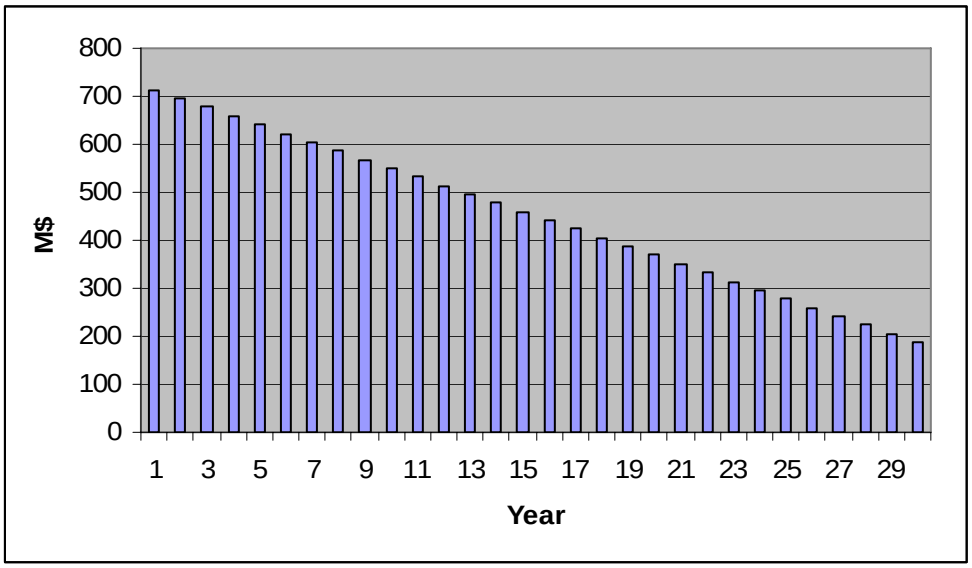
20 British Columbia Utilities Commission, Order G-64-07, June 12, 2007, Appendix A.

21 Louisiana Public Service Commission, Order No. U-30192, November 8, 2007.

affairs can be disrupted by the need for a large construction program, particularly for large baseload plants or major transmission projects with long construction periods.

Because the cost of a new plant placed into service has yet to be depreciated, the revenue requirement under standard cost-of-service ratemaking associated with the recovery of the capital expended on a new plant is said to be "front end loaded". Shown in the illustrative chart below is the annual capital revenue requirement for a new $4 billion baseload plant as it is depreciated over an assumed 30-year life.

Chart 1: Illustrative Front End Loaded Capital Revenue Requirements for $4 Billion Plant



While long-lived utility assets are expected to provide ratepayer benefits over their operating lifetimes, front end loading of cost recovery can cause rates to increase significantly when the new asset is placed into service. The impact is exacerbated when CWIP is not included in rate base during the construction phase.

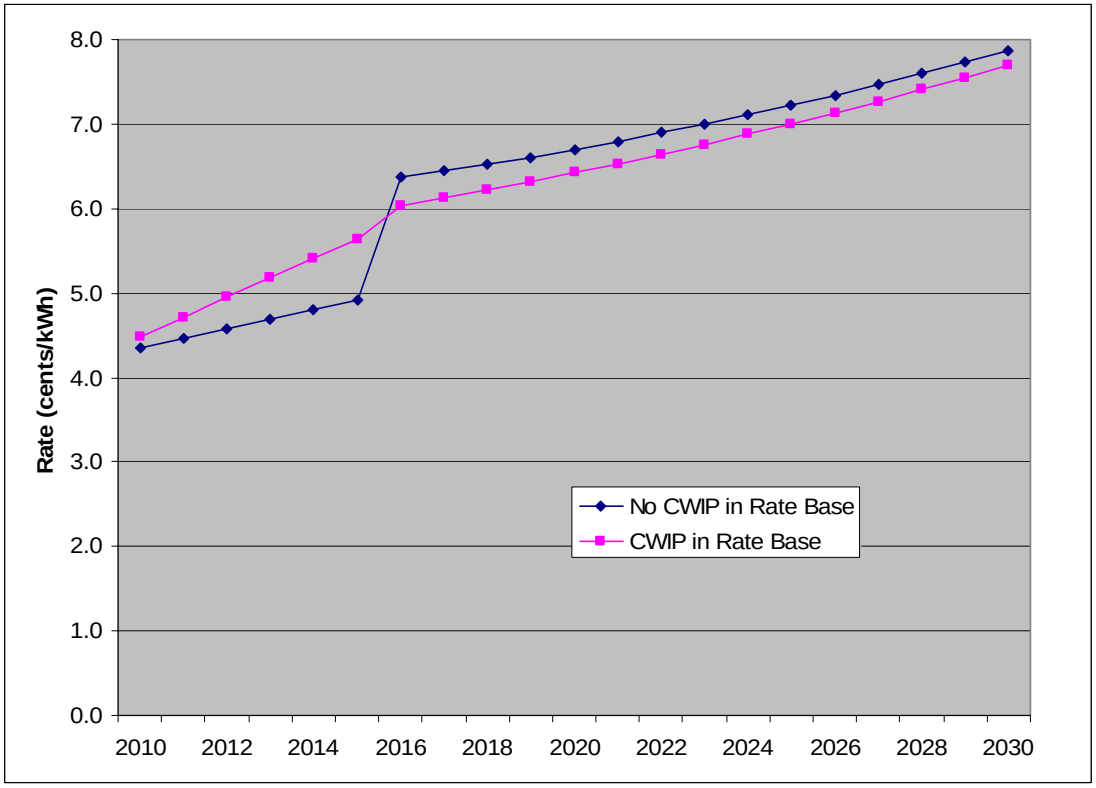
Today, construction of a new 1000 MW nuclear plant might cost $3 to $5 billion, excluding AFUDC. AFUDC could increase these costs by 30% or more (as illustrated in the example that follows). For a utility that has not constructed significant base load generating capacity for a number of years, the cost of a new plant can be a significant percentage of the remaining net book value of the utility's existing asset base. As such, rate base can increase significantly when the new plant is placed in service, resulting in the potential for rate shock.

Chart 2 provides an illustrative example of the impact of including AFUDC in rates for a large base load plant with a 6-year construction period placed in service in 2016. The plant is assumed to cost $4 billion without AFUDC. The utility's existing assets are assumed to have a net value of $10 billion in 2016 and the utility's annual operating costs are $2 billion. Rates

absent the new plant are assumed to increase at an assumed inflation rate of 2.5% per year. As illustrated, without CWIP in rate base, rates would increase by 29% in the year the plant is placed in service. In contrast, with CWIP in rate base, rates would increase by about 2% more per year during the construction period, but increase only 7% in the year the plant is placed in service. Rates continue to be lower during the remaining life of the plant.

Chart 2: Illustrative Rates per Year

New $4 Billion Plant for Utility with $10 Billion in Existing Assets



In effect, CWIP in rate base provides a smoothing, or phase-in effect on rates, and thereby mitigates the rate shock that would take place when the large new plant is placed into service. While other approaches, like levelizing the recovery of capital after the in-service date, can assist with the rate shock issue they tend to worsen the impact on borrowing costs.

4.2. BORROWING COSTS

The major credit rating agencies evaluate the ability of a utility to meet its debt obligations.[22] Generally, utilities are required to obtain ratings from these agencies to gain access to capital

22 The major rating agencies include Fitch Ratings, Moody's, and Standard and Poor's.

markets. The credit ratings are used by investors when evaluating the likelihood that the debt will be repaid. The lower the credit rating, the higher the interest rate needed by investors to assume the risk that the debt will not be repaid. The credit rating agencies use a variety of financial ratios to determine ratings, along with qualitative assessment of factors such as the regulatory environment faced by the utility.

The provision of CWIP financing costs in current rates is an important consideration for the ratings agencies, particularly for those utilities with large assets under construction. Fitch Ratings notes in a discussion of nuclear plant construction financing: "Like any other large capital program, Fitch assesses the capital requirements of a nuclear construction program relative to the available financial resources to determine the effect on credit quality. Fitch also considers whether regulatory support, non-resource financing, federal load guarantees or fixed-price construction contracts are available to reduce construction risk. *For regulated U.S. utilities, the availability of a cash return on construction work in progress (CWIP) would reduce the construction risk.*" [23]

Generally, the rating agencies are concerned with the amount of cash generated from continuing operations and the associated funds available to pay the interest on the debt. Key financial ratios include funds from operations ("FFO") interest coverage ratio and funds from operations as a percent of total debt. AFUDC is a non-cash item which is not reflected in funds from operations. These key financial ratios will decrease when utility AFUDC becomes significant, as would take place during the construction of large utility assets in the absence of the inclusion of CWIP in rates. All else equal, this decrease will lead to a decrease in the utility's credit rating. The resulting increase in interest charges will lead to higher costs for customers.

For example, the yield on corporate bonds as of August 7, 2008 for 20-year AA-rated bonds was 6.35% and for 20-year A-rated bonds was 6.81%.[24] A decrease from an AA to an A rating on $2 billion in debt, for example, would result in an increased interest cost charged to customers of nearly $10 million per year. Even for those utilities with governmental support for their financing, a significant mismatch between utility cash flow and revenues could lead to credit quality concerns. Stand-alone consideration of the utility's operation and risk can be an important control mechanism for maintaining credit quality.

Shown in Chart 3 are the FFO Interest coverages for the illustrative example company discussed above during the six-year construction period. As shown, coverages fall significantly if CWIP is not included in rate base, but only moderately if CWIP is in rate base. By the later years of the construction period, the FFO Interest coverage declines by more

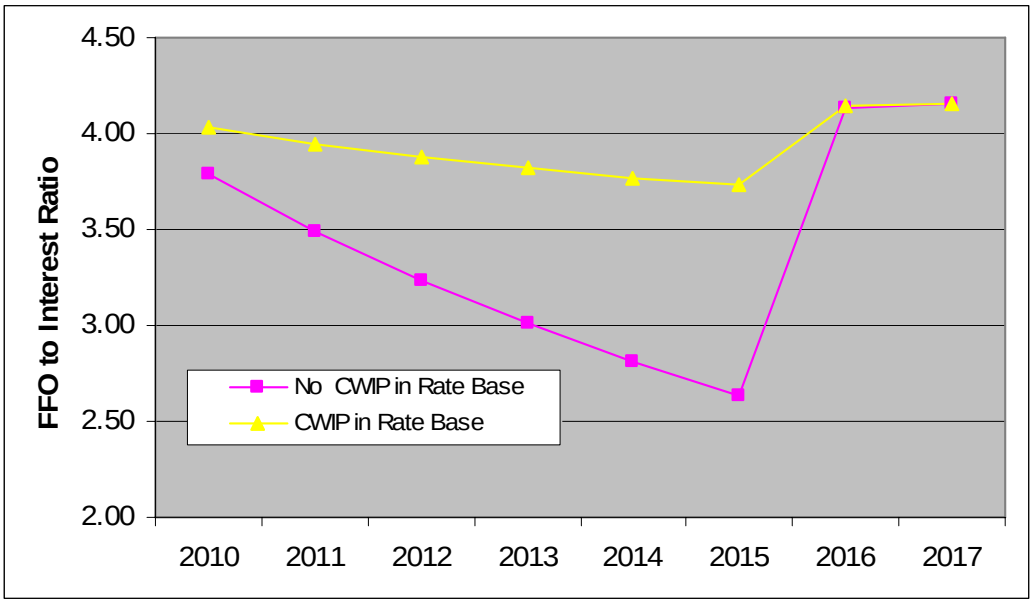
23 Fitch Ratings, U.S. Nuclear Power: Credit Implications, November 2, 2006. Emphasis added.

24 finance.yahoo.com/bonds/composite_bond_rates

than 25% if CWIP is not included in rate base, likely resulting in a credit rating decrease and a corresponding increase in the cost of debt.

Chart 3: Illustrative FFO Interest Coverages During Construction

New $4 Billion Plant for Utility with $10 Billion in Existing Assets



4.3. Additional Benefits

In addition to avoiding rate shock and decreased borrowing costs, there are other benefits of including CWIP in rate base. Earlier cash returns on assets with long construction periods provides more certainty to investors which should encourage a greater willingness to invest, all else equal. And these investments provide a benefit to ratepayers, even while under construction, in that they provide an assurance that future needs will be met. Similarly, a more favorable, i.e., less uncertain, rate treatment likely would make the cost of borrowing lower for the affected utility allowing investment in assets that may not be economic under less favorable regulatory treatment. The resulting investment also can reduce risk to customers as longer-term prices will tend to equilibrate at lower levels when low-cost supplies are under construction regardless of the short-term supply and demand balance.

4.4. Arguments Against CWIP in Rates

The main arguments against inclusion of CWIP in rates fall into two major areas. Inclusion of CWIP in rates is said to:

1. Make current ratepayers pay for an asset that will serve only future ratepayers.

2. Shift risks of plant construction to ratepayers.

We discuss each of these arguments in turn below.

4.4.1. Current vs. Future Ratepayers

Recovery of CWIP in rates is sometimes said to cause an inter-generational transfer of wealth, in that current ratepayers are paying for assets that will serve only future ratepayers. It is correct that CWIP in rates does require current ratepayers to pay a portion of the costs of an asset designed for future service. But it is also correct that current ratepayers are enjoying the benefits of assets predominately paid for (through front end loaded revenue requirements) by past ratepayers. That is, certain valuable assets that are fully or nearly fully depreciated are relied upon by current ratepayers, but were largely paid for by prior ratepayers. In short, intergenerational transfers are embodied throughout the ratemaking process and the inclusion of CWIP in rates would simply be another component to be taken into account by the regulatory agencies in setting rates.

Moreover, there are other rate impacts associated with the new assets while under construction. The utility, for example, may not enter into the same amount of longer-term contracts, or may not build as many shorter-term assets given that a baseload plant will be coming into service. That is, the new plants will affect actual utility costs and rates during the construction period with or without CWIP in rates. As noted above, the construction of the new plants, absent CWIP in rates, can also increase financing costs for all utility activities, thereby impacting current rates. As such, when the benefits of CWIP in rates are significant, there is no compelling reason that current ratepayers should not pay for some portion of the assets during construction.

4.4.2. Risks of Construction

Recovery of CWIP in rates is sometimes said to transfer risk from the utility to its customers. By waiting until the new asset is providing service, customers can ensure themselves that they are paying for a prudently-incurred useful (i.e., “used and useful”) asset prior to placing the asset in rate base. This argument perhaps has more validity if regulatory agencies are not reviewing utility investment plans prior to construction. With such reviews in place, the utility is unlikely to proceed with construction without regulatory agency guidance. This process helps mitigate the risk that the utility is planning construction of an asset that the customers may not want or is not expected to be economic.

The used and useful standard was considered further by the FERC in July 2006 at the time it issued Order 679 in which it permitted full inclusion of CWIP in rate base for qualifying grid investments. The FERC noted that “the argument that CWIP treatment violates the used and useful doctrine is not supported by Commission and court precedent. As we found in Order No. 298, there are ‘widely recognized exceptions and departures from this [used and useful]

rule, particularly when there are countervailing public interest considerations.' The Commission also emphasized the importance of economic equities when we found that: 'In light of lengthening construction cycles, relatively high inflation, and the proportional significance of capital financing costs in relation to overall project costs, this Commission – as well as many state regulatory authorities – have examined the basis for the inclusion of CWIP from rate base and have often disregarded the used and useful concept when the reliability of future service is in doubt … it must be reemphasized that the used and useful concept, if administered inflexibly and without regard to other equitable and policy considerations may fail the interests of both the electric utility industry and its ratepayers.' " [25]

If necessary, disallowances can also be used by regulatory agencies regardless of whether CWIP has been put into rates. Prudence disallowances are typically for much less than the full amount of a new baseload plant. CWIP in rates will only recover a portion of the new plant during the construction period, leaving a large portion to be placed into rate base at the time of in service. Thus, the regulatory agency will continue to have a large amount of control and flexibility in deciding the ultimate rate treatment for a new asset.

Ultimately, these arguments related to intergenerational impacts and transfer of construction risks need to be weighed against the benefits of CWIP in rates, such as lower financing costs and avoidance of rate shock.

5. CONCLUSIONS AND RECOMMENDATIONS

Including CWIP in rate base can provide two primary benefits. The first is the avoidance of rate shock and the second is avoidance of increased borrowing cost. In response to these concerns and the current need for significant utility investment, many U.S. states have passed legislation and/or put in place regulations to allow for CWIP to be placed in rate base during the construction of these assets. Given the need for significant new investment by Ontario utilities, a similar change makes sense for Ontario.

25 FERC Docket EL06-54-000, Order Granting Petition for Declaratory Order and Denying Motion to Defer Consideration, June 20, 2006.