

**PRE-FILED TESTIMONY OF
C.F. OSLER AND G.D. FORREST
IN REGARD TO MANITOBA HYDRO 2017/18 and 2018/19
GENERAL RATE APPLICATION**

Submitted to:

The Manitoba Public Utilities Board

on behalf of

Manitoba Industrial Power Users Group

Prepared by:

InterGroup Consultants Ltd.

and

Forkast Municipal and Regulatory Consulting

October 31, 2017

TABLE OF CONTENTS

1.0 Introduction..... 1-1

2.0 Hydro’s New Goal to Recover 25% Equity in 10 vs almost 20 Years 2-1

3.0 Overview of Concerns Related to New Hydro Approach 3-1

**4.0 Historical Context: Hydro Reserves, Long-term Debt and Rates Since
1970s 4-1**

5.0 PUB review of Hydro Rates from late 1980s to mid-1990s..... 5-1

6.0 Concluding observations..... 6-1

LIST OF APPENDICES

Appendix A: Detailed Review of Hydro Rate from the Late 1980s to Mid-1990s

Appendix B: Qualifications of Mr. C.F. Osler & Mr. G.D. Forrest

LIST OF FIGURES

Figure 1: Manitoba Hydro’s Equity Ratio from 1962-2034 Updated for IFF16 Update with
Interim 4-3

Figure 2: Manitoba Hydro Net Debt under NFAT Scenarios and Updated IFF Scenarios at 3.95%
and 7.9% 4-4

Figure 3: Real Average Prices of Domestic Energy Sold, 1961/62 - 2033/34 4-5

1 **1.0 INTRODUCTION**

2 This evidence has been prepared for the Manitoba Industrial Power Users Group ("MIPUG")
3 under the direction of Mr. C.F. Osler (InterGroup Consultants Ltd.) and Mr. G.D. Forrest
4 (Forkast Municipal and Regulatory Consulting). The qualifications of Mr. Osler and Mr. Forrest
5 are provided in Appendix B.

6 This evidence focuses on Manitoba Hydro's ("Hydro's") new financial goal to recover a 25%
7 equity level by 2026/27. This new goal drives Hydro's 2017/18 & 2018/19 General Rate
8 Application (the "GRA") request for rate increases at 7.9% per year – annual increases that
9 are double the 3.95% requested in Hydro's last rate application. The justification for rate
10 increases of even 3.95% was challenged by MIPUG evidence in Hydro's last rate application,
11 and is assessed in the current proceeding by other MIPUG evidence provided by Mr. Patrick
12 Bowman.

13 In the *Crown Corporations Governance and Accountability Act (Bill 20)*, the PUB's mandate is
14 set out as follows in Section 25(4):¹

15 *"In reaching a decision pursuant to this Part, The Public Utilities Board may*

16 *(a) take into consideration*

- 17 *i. the amount required to provide sufficient funds to cover operating,*
18 *maintenance and administration expenses of the corporation;*
- 19 *ii. interest and expenses on debt incurred for the purposes of the corporation*
20 *by the government;*
- 21 *iii. interest on debt incurred by the corporation;*
- 22 *iv. reserves for replacement, renewal and obsolescence of works of the*
23 *corporation;*
- 24 *v. any other reserves that are necessary for the maintenance, operation, and*
25 *replacement of works of the corporation;*
- 26 *vi. liabilities of the corporation for pension benefits and other employee benefit*
27 *programs;*
- 28 *vii. any other payments that are required to be made out of the revenue of the*
29 *corporation;*

¹ See Section 25(4) of the Crown Corporations Governance and Accountability Act.

1 *viii. any compelling policy considerations that the board considers relevant to*
2 *the matter;*

3 *ix. any other factors that the Board considers relevant to the matter; and*

4 **(b) hear submissions from any persons or groups or classes of persons or groups who,**
5 *in the opinion of the Board, have an interest in the matter."*

6 The goal of this evidence is to assist the Manitoba Public Utilities Board ("PUB") with fulfilling
7 its legislative mandate by providing historical context on which Hydro rate applications have
8 previously been reviewed when assessing the adequacy of Hydro's reserves, and by
9 highlighting some of the issues the PUB may face relating to Hydro's new financial goal to
10 recover a 25% equity level by 2026/27 and its impact on requested rate increases.

1 **2.0 HYDRO'S NEW GOAL TO RECOVER 25% EQUITY IN 10 VS ALMOST 20**
2 **YEARS**

3 Hydro's core justification for doubling its rate increase proposal in this GRA is to recover a
4 25% equity level within 10 years of the 2017/18 test year, i.e., by 2026/27. Hydro's
5 submissions prior to this GRA aimed to recover a 25% equity level over a much longer time
6 period.

7 Hydro's new financial goal's dominant role in setting much higher rate increases is highlighted
8 by Hydro's submissions to date in the current proceeding:

- 9 • Prior to the PUB's interim rate decision in this proceeding, Hydro sought 7.9%/year
10 increases for five years and 2%/year increases thereafter in order to recover a 25%
11 equity level by 2026/27.²
- 12 • After the PUB approved 3.36% as the interim rate increase for 2017/18,³ Hydro revised
13 its rate plan now to seek 7.9%/year increases for six subsequent years [2018/19-
14 2023/24], 4.54% in the seventh year, and 2%/year thereafter so that it can still
15 recover a 25% equity level by 2026/27.⁴

16 In contrast to this GRA, prior Hydro submissions assumed, or proposed, 3.95% per year rate
17 increases to achieve a 25% equity level over a much longer time period during Hydro's current
18 major investment phase.

- 19 • The NFAT filing (2013) assumed long-term increases of 3.95%/year beginning in
20 2014/15 to achieve a 75% debt level (25% equity level) in 18 years, i.e., by 2031/32.
- 21 • The PUB's resulting NFAT report⁵ noted that "Manitoba Hydro's financial forecasts are
22 premised on rates being increased sufficiently to allow the debt-to-equity ratio to
23 recover to the target level [75:25] over a 20-year time period". After noting the
24 significant effect on all ratepayers from a doubling of rates, the PUB Panel supported
25 a relaxation of Hydro's 75/25 debt-to-equity ratio to smooth out rate increases over
26 the planning period. The PUB recommendation was accepted by the Government of
27 Manitoba, as shown in the Minister's letter to hydro setting out the Manitoba

² Tab 2, page 60, Figure 2.36, Manitoba Hydro 2017/18 and 2018/19 GRA.

³ PUB Order 80/17.

⁴ Appendix 3.8 (revised), MH16 Update with Interim (published September 7, 2017), Manitoba Hydro 2017/18 and 2018/19 GRA.

⁵ PUB. 2014. Report on the Needs For and Alternatives To (NFAT): Review of Manitoba Hydro's Preferred Development Plan. June 2014, page 29 of 306.

1 Government's response to the NFAT report.⁶ Hydro's new financial goal to recover a
2 25% equity level by 2026/27 is not consistent with what the PUB reviewed or
3 recommended in its report, or with what the Minister accepted at that time.

4 • Hydro maintained the 3.95% rate increase trajectory as a baseline in its integrated
5 financial forecasts (IFF) through IFF12, IFF13, IFF14 and IFF15, with slight revisions
6 as to the projected end date of the 3.95% annual increase series and the date for
7 achievement of various debt/equity levels.

8 • The 3.95% increases have also been sought by Hydro since 2014 on a number of
9 occasions, with approvals by the PUB since 2013 ranging from 2.75% to 3.95% (and
10 with the PUB directing that portions of the revenues from these approvals be placed
11 in a Deferral Account established by PUB Order 43/13 to mitigate future rate increases
12 when the Bipole III Transmission Reliability Project comes into service in 2018/19).⁷

13 Hydro's forecast in its last GRA (MH15) recovered 25% equity in 2031/32 with 3.95% per
14 year rate increases for 12 years (2017/18-2028/29) and 2% per year thereafter,⁸ and in
15 2033/34 with 3.36%/year rate increases each year.⁹ Assuming the same rate increases as the
16 prior GRA (3.95%/year increase for 12 years, and 2%/year thereafter), Hydro's forecast in
17 the current GRA (MH16) recovers 25% equity in 19 years (2035/36).

18 In summary, Hydro's revised proposal in this GRA based on its new financial goal to recover
19 a 25% equity level in 10 years would increase rates over the 10 years (from 2017/18 to
20 2026/27) by 77%. In contrast, cumulative rate increases over the same 10 years based on
21 accepting the longer period to recover a 25% equity level would equal 47% under the rate
22 increases proposed in Hydro's last rate application and 39% under the 3.36% rate increase
23 per year approved in recent PUB decisions.

24 Hydro acknowledges that its new financial goal reflects a material change from its previous
25 financial plans filed with the PUB regarding how risks are addressed, and criticizes past Hydro
26 financial plans as follows:

⁶ Letter was reproduced as part of Exhibit MH#45 in the 2015/16 Hydro GRA, and stated: "Also consistent with the PUB's advice, we request that the Manitoba Hydro-Electric Board review its current 75:25 debt-to-equity target with the aim of moderating rates for consumers while ensuring strong financial health for the corporation including maintaining sufficient retained earnings."

⁷ Rate increases approved as at May 1, 2013 (3.5%, with 1.5% to be placed in the Deferral Account), May 1, 2014 (2.75%, with 0.75% to be placed in the Deferral Account); August 1, 2015 (3.95%, with 2.15% to be placed in the Deferral Account); and August 1, 2016 (3.36%, with all of this to be placed in the Deferral Account).

⁸ Tab 2, page 28, Manitoba Hydro 2017/18 and 2018/19 GRA.

⁹ COALITION/MH I-15, page 2 of 4 [referenced as Scenario 1, Attachment 46, pages 9 and 10, 2016/17 Supplemental Filing], Manitoba Hydro 2017/18 and 2018/19 GRA.

1 *"In Manitoba Hydro's view, a financial plan that returns the Corporation to a*
2 *25% equity level over almost 20 years is not credible as a commitment to being*
3 *a self-supporting entity."*¹⁰

4 *"Previous financial plans did not adequately address the risks facing the*
5 *Corporation or its customers in both the near term and over the longer term.*
6 *Previous financial plans did not address significant and unmitigated risk*
7 *exposure in the first 10 or more years of those plans."*¹¹

8 The issues of what was done or not done in previous financial plans of Hydro as well as the
9 extent that Hydro's financial risks today are materially greater or less than in the last GRA or
10 NFAT are issues addressed separately by other intervenor evidence in this proceeding,
11 including Mr. Bowman's evidence. At a high level; however, review of IFF forecasts as
12 provided by Hydro does not indicate any new lower minimum equity level expected to occur
13 over the next decade compared to what was provided to the PUB in the last GRA.

¹⁰ Tab 2, page 28 [lines 8-10], Manitoba Hydro 2017/18 and 2018/19 GRA.

¹¹ COALITION/MH I-15, page 1 of 4, Manitoba Hydro 2017/18 and 2018/19 GRA.

1 **3.0 OVERVIEW OF CONCERNS RELATED TO NEW HYDRO APPROACH**

2 The new Hydro financial goal and its requirement to double Hydro's annual rate increases
3 presents the PUB with a major departure from past precedent and principle related to PUB
4 approval of Hydro rate increases since at least the late 1980s, when the PUB was given quasi-
5 judicial jurisdiction over Hydro rate changes.

6 Hydro's new rate approach raises a range of obvious and material concerns related to the
7 sharp increase now proposed for near-term rates, and the extent to which this proposal on
8 its face is not consistent with each of the following:

- 9 1. **Hydro's last two rate proposals** - in its 2015 GRA, and 2013 NFAT proceeding,
10 Hydro proposed a very different approach and rate increases to deal with recovery of
11 a 25% equity level after the current major capital spending period.
- 12 2. **Regulatory pricing objectives to avoid increases that create "rate shock" or**
13 **unexpected, as well as unreasonably high rate increases** – the new proposed
14 rate increases are almost four times expected inflation, twice as high as Hydro
15 previously proposed, and 2.35 times higher than the 3.36% increase that the PUB
16 approved in the last GRA when Hydro proposed 3.95% rate increases.
- 17 3. **Regulatory pricing principles related to rate stability and inter-generational**
18 **fairness** – regulatory pricing principles direct that rate increases should not
19 unreasonably charge today's customers for assets that provide service to future
20 customers over many decades – in this regard, Hydro's proposal imposes very high
21 near-term (next 5 to 7 years) rate increases on current customers to address financing
22 issues for new large, capital-intensive and inflation-protected hydro generation and
23 transmission assets justified and installed to provide forecast benefits and services to
24 customers over at least 50 years and up to more than 100 years into the future.
- 25 4. **General policy goals to avoid material adverse impacts on customers and**
26 **the Manitoba economy** – very high and unexpected rate increases act to jar near
27 and long-term customer confidence in this province's electricity services, and can lead
28 to unintended consequences, including discouragement of new loads, and reductions
29 in current loads and subsequent revenues that frustrate Hydro's revenue objectives;
30 in addition, significantly higher than inflation rate increases will impose material
31 adverse economic impacts on the overall provincial economy which, in the current
32 Manitoba context, would be concurrent with the end of the economic stimulus related
33 to the construction of the new Hydro assets.

- 1 The above basic concerns are being addressed by other intervenor evidence¹² in the current
2 proceeding, along with related details regarding inconsistencies in Hydro's current evidence
3 as compared with its evidence in the 2015 GRA and 2013 NFAT proceedings.¹³
- 4 Hydro's new rate approach also raises serious concerns related to inconsistencies with the
5 purpose and role of this Corporation, and its experience gained in past decades involving
6 major new asset development in northern Manitoba. These concerns are elaborated on and
7 reviewed below.

¹² See the Pre-filed Testimony of P. Bowman (InterGroup Consultants Ltd. on behalf of MIPUG), October 31, 2017. In addition, MIPUG has co-sponsored the evidence of P. Colaiacovo (Morrison Park Advisors), which focuses on capital market considerations.

¹³ See Supplementary Background Paper B: Needs For and Alternatives To (NFAT) Update, prepared by P. Bowman on behalf of MIPUG, October 2017.

1 **4.0 HISTORICAL CONTEXT: HYDRO RESERVES, LONG-TERM DEBT AND**
2 **RATES SINCE 1970S**

3 Hydro is a Crown utility with customer-funded reserves that, for accounting purposes, are
4 referenced as "equity". However, Hydro's "equity" bears no relation to owner-invested funds
5 held by a privately-owned power utility.

6 Under the Manitoba Hydro Act (the "Act"), Sections 39(1), 40(1) and 40(2) respectively
7 address the price of power sold by the corporation, the establishment of reserves, and the
8 use of reserves. In summary, the Act provides the following directions:¹⁴

- 9
- 10 • Prices payable for power supplied by Hydro are to cover Hydro's full costs of supplying
11 the power, including necessary operating expenses, interest and debt service
12 charges, and provision for reserves or funds to be established pursuant to subsection
13 40(1);
 - 14 • Reserves shall be established and maintained by Hydro to help fund the operating
15 expenses of the corporation, to protect against adverse events, and to help stabilize
16 rates; and
 - 17 • The primary objectives of Hydro's reserves are to allow for the stabilization of rates,
18 to provide for the funding of sinking funds, and to help fund new or replacement
19 construction.

19 The KPMG 2014 review of Hydro's mandate under the Act highlighted the following
20 observations:¹⁵

- 21
- 22 • Retained earnings are considered to be reserves and are maintained for a number of
23 specific purposes (as noted above); these purposes do not include the earning of a
24 return on these reserves, although a return may be made as a consequence of meeting
25 other objectives.
 - 26 • With the exception of some distributions made in fiscal 2002, 2003 and 2004 as
27 specifically called for under Sections 45(5) and 43(6) of the Act, the Act does not
28 envisage the distribution of retained earnings (i.e., dividends) to the legal shareholder
(i.e., the Province).

¹⁴ Summary based on review by KPMG LLP, *Manitoba Hydro – Financial Targets Review*, May 2016, Section 2. The Manitoba Hydro Act provisions as addressed here are understood to have remained applicable to the corporation through the period of PUB regulation of Hydro rates that started in 1989.

¹⁵ *Ibid.*, sections 2.2 to 2.4.

- 1 • The equity of the corporation consists largely of retained earnings, and there is also
2 no expectation that the Province would contribute new equity funding to Hydro.
- 3 • Hydro's "statutory framework and the presentation of its results for accounting
4 purposes are consistent with its operation as a self-supporting entity...Overall,
5 Manitoba Hydro is therefore expected to operate on a 'closed loop', user-pay basis."¹⁶
- 6 • Financial targets must recognize the essential need to continue Hydro's status as a
7 self-supporting entity, and the dominant role that retained earnings play in building
8 up the financial reserves of the corporation.
- 9 • "Financial targets that are designed for investor-owned, or private-sector utilities are
10 not directly applicable to Manitoba Hydro and its unique financial objectives, which
11 focus on recovering costs from consumers over time."¹⁷

12 Hydro's "equity" reserves remained less than 10% from the late 1960s through to shortly
13 after the mid-1990s. Thereafter, as reviewed in Figure 1 below, Hydro's equity ratio
14 consistently remained above 10% (including for forecasts through to 2034), having increased
15 to eventually exceed 25% for a few years around 2010.

16 Regulatory approval was required from the PUB for Hydro rate changes after 1988. As
17 reviewed in section 5 of this evidence, the period from the late 1970s through to 1988 and
18 the start of current PUB rate regulation of Hydro rates included considerable rate turmoil. The
19 sharp increase in Hydro's equity reserves that started after the mid-1990s included a
20 significant period from 1998 to after 2002 with no PUB approved changes in Hydro's overall
21 rates to domestic customers.

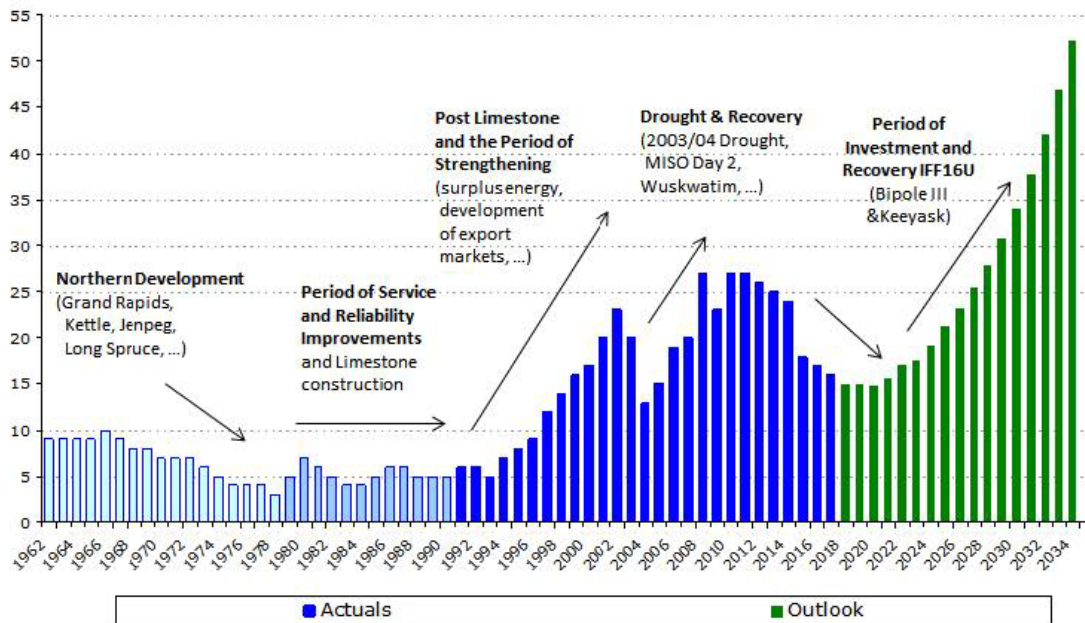
22 The growth of this consumer-funded "equity" occurred after the last major capital expansion
23 (Limestone construction with first in-service in 1990). During this period, Hydro did not
24 concurrently pursue any major debt repayment initiatives.¹⁸

¹⁶ Ibid., Section 2.4.

¹⁷ Ibid.

¹⁸ Response to MIPUG/MH 1-2(g) shows year to year changes in Hydro's total long-term debt (LTD) balance from March 31, 1980 to March 31, 2017. Over this period LTD declined in only 7 of the 38 years. From 1992 to 1997, after Limestone construction, LTD declined in three of the six years – but over the period LTD grew from \$4.6 billion at March 31, 1991 to \$5.2 billion at March 31, 1997.

1 **Figure 1: Manitoba Hydro's Equity Ratio**
 2 **from 1962-2034 Updated for IFF16 Update with Interim¹⁹**



3

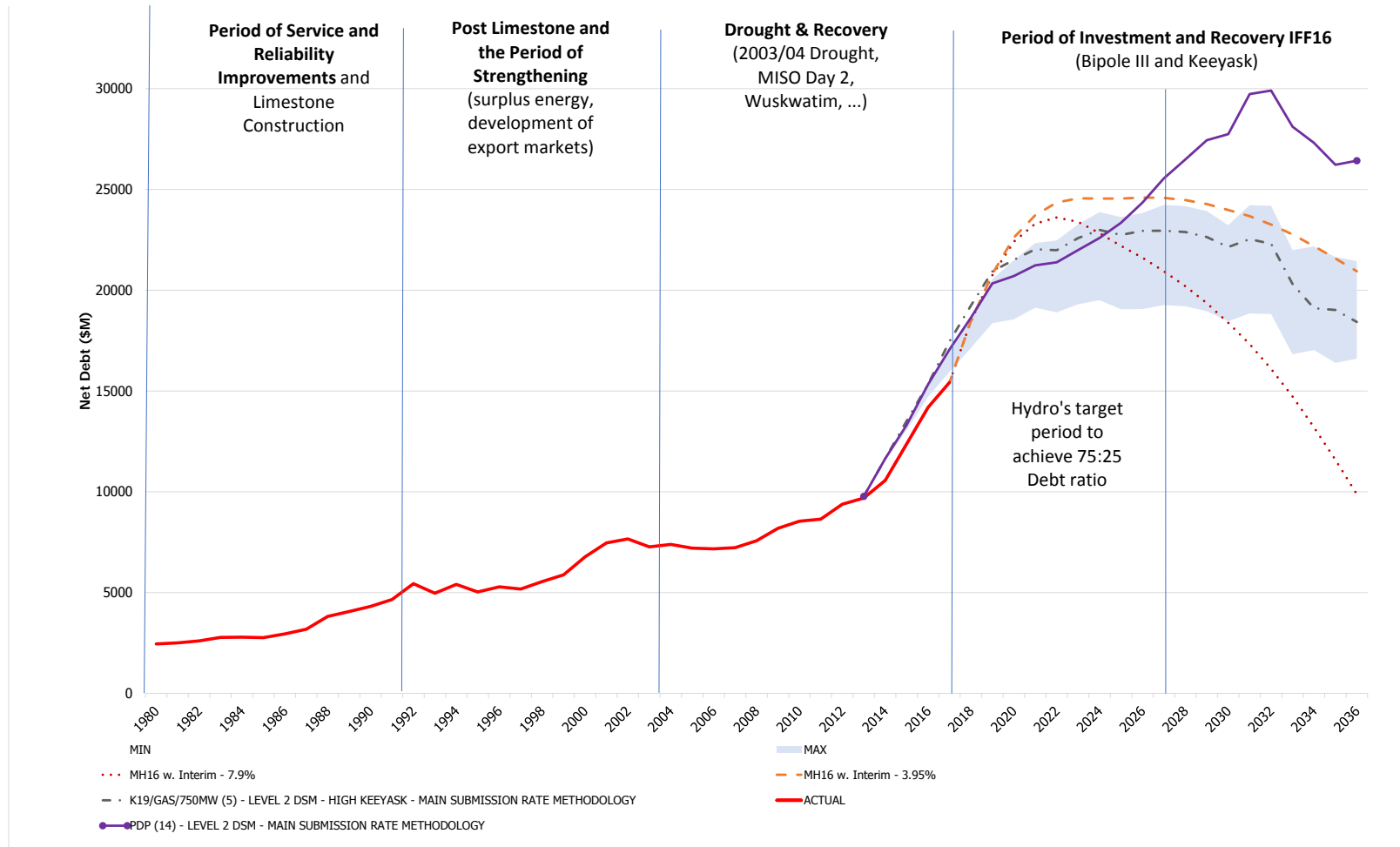
4 Figure 2 (below) reviews the levels of Hydro long-term debt (LTD) from 1980 to 2017;
 5 projections to 2034 under NFAT scenarios; and updated IFF scenarios at 3.95% and 7.9%
 6 per year rate increase proposals (each with 2%/year increases after certain dates). Figure 2
 7 also highlights that 25% "equity" was achieved briefly in the past through growth of reserves
 8 rather than through LTD reduction, and shows that Hydro's new proposals in this GRA seek
 9 high rate increases to finance a material and unprecedented LTD reduction strategy.

10 Figure 2 indicates historic periods of notable LTD increases:

- 11 • From 1980 to 1985, LTD increases by only 14% (from \$2.4 to \$2.8 billion).
- 12 • From 1986 to 1992, LTD increases by over 80% (from \$3.0 to \$5.4 billion).
- 13 • From 1993 to 1994, LTD decreased by \$0.4 billion.
- 14 • From 1994 to 2002, LTD increases by over 40% (from \$5.4 to \$7.7 billion).
- 15 • From 2003 to 2008, LTD fluctuated between \$7.2 and \$7.6 billion.
- 16 • From 2009 to 2017, LTD increases by nearly 90% (from \$8.2 to \$15.4 billion).

¹⁹ MIPUG/MH 1-2(h-1), page 9 of 14, Manitoba Hydro 2017/18 and 2018/19 GRA.

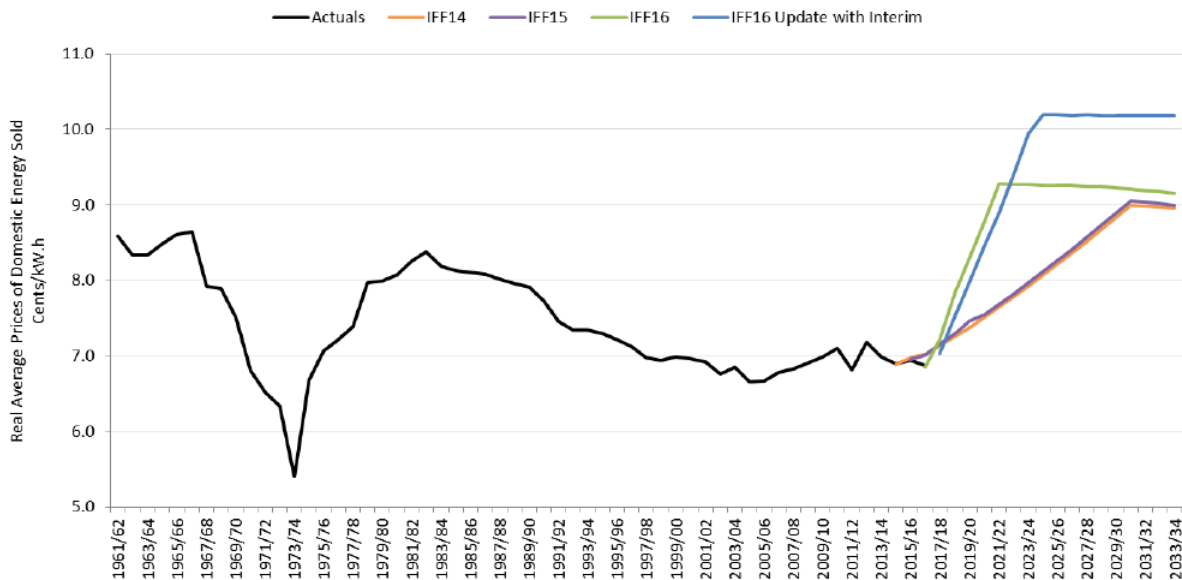
1 **Figure 2: Manitoba Hydro Net Debt under NFAT Scenarios and Updated IFF Scenarios at 3.95% and 7.9%²⁰**



²⁰ Supplementary Background Paper A: Manitoba Hydro Debt Levels, prepared by P. Bowman on behalf of MIPUG, October 2017, page A-3.

1 Figure 3 shows Hydro's domestic energy prices by year (1961/62 to 2033/34) under IFF14, IFF15,
2 and IFF16.

3 **Figure 3: Real Average Prices of Domestic Energy Sold, 1961/62 - 2033/34²¹**



4

5 As shown in Figure 3, historic improvements in reserves/equity in the 1990s involved domestic
6 customer rate increases that were less than inflation. In contrast, Hydro's recent rate increase
7 proposals would quickly increase Hydro rates to real price levels well above prices seen since the
8 early 1960s.

- 9
- 10 • Overall, except for the period from about 1975 to 1979²², Figure 3 indicates that real
11 average prices of domestic electricity have been generally declining until about 2005/06.
12 Inflation rates varied widely throughout this period, remaining high after the early 1970s
13 until the early 1990s, and then remaining relatively low through to the current time.
 - 14 • Figure 3 does not highlight the last period of material Hydro rate increases that occurred
15 from May 1983 through to April 1987, averaging above inflation and leading to the first
16 PUB review of Hydro rates since 1978 (i.e., the 1988 PUB report to the Minister on Hydro
rates as at April 1 1986, 1987 and 1988, following a public hearing held after rate increases

²¹ MIPUG/MH II-3(b), page 4 of 5, Manitoba Hydro 2017/18 and 2018/19 GRA.

²² High inflation starting in the early 1970s accounts for some of the sharp declines in Figure 3 real average prices during this period. Hydro average domestic prices in nominal terms were at 1.1 cents/kW.h from 1961/62 to 1972/73, declined to 1.0 cents per kW.h in 1973/74, and increased to 2.8 cents/kW.h by 1979/80 (rate increases of 14.9% on Feb.1/78 and 14.5% on Feb.1/79 occurred in response to low financial reserves of \$50 million at March 31/78, surplus energy conditions and cost increases for new facilities; financial reserves increased to \$141.6 million by March 31/80, well above levels from 1970 to 1978 that ranged between \$42 and 57 million). The Province instituted a Hydro rate freeze from April 1/79 to May 15/83; financial reserves declined to \$82 million by March 31/83.

1 had already been implemented for 1986 and 1987).²³ Subsequent to this set of events,
2 new legislation was introduced prior to the 1989 PUB hearing that mandated PUB review
3 and approval of all new changes to Hydro rates. Rate changes for Hydro since then have
4 required PUB review and approval.

- 5 • During the period from 1990 to about 2003 when Hydro “equity” reserve levels were
6 increasing from less than 10% to approach 25%, Hydro’s real domestic consumer prices
7 (2017\$) fell by about 10% (consumer price inflation over this 13-year period was
8 approximately 20% and the actual average electricity price increase was about 9%).

9 An important factor contributing to the growth in Hydro’s financial reserves after the mid-1990s
10 was the improvement in export prices, which also enabled Hydro to defer consideration of
11 domestic rate changes after 1997 until after 2002. The key PUB decisions and assessments on
12 these matters; however, were made in 1989-1996 period before export price improvement was
13 so clearly shown.

14 The next section of this evidence reviews the historical context during the late 1980s and early-
15 to-mid 1990s when the PUB reviewed and approved Hydro rate applications in an era when Hydro
16 equity levels were less than 10%.

²³ Following the rate freeze, Hydro rate increases were 9.5% (May 15/83), 7.9% (April 1/84), 5.0% (April 1/85), 2.8% (April 1/86), and 9.7% (April 1/87).

1 **5.0 PUB REVIEW OF HYDRO RATES FROM LATE 1980S TO MID-1990S**

2 The PUB in the late 1980s and mid 1990s approved precedent setting rate increases that were in
3 excess of Hydro's current costs in order to fund higher Hydro reserves. The context and principles
4 that guided these approvals provide guidance for assessing Hydro's current GRA proposals.

5 Appendix A reviews, in detail, the following stages relating to this historical period:

6 **1. Background: Late 1970s and most of 1980s – PUB 1988 Report to Minister –**

7 This period prior to the PUB's new mandate displayed uncertainty and turmoil for Hydro's
8 ratepayers, including major rate increases (over 30% in two years) followed by a rate
9 freeze for four years, followed by further major rate increases over several years at rates
10 averaging well above inflation. Provincial water rental rates jumped up as well for Hydro.
11 In 1984/85, Hydro's Board introduced a new reserve policy with an objective to build
12 reserves to \$180 to \$200 million to cover a two-year drought. In 1988 the PUB held a
13 public review of Hydro's rates in response to a customer application to review Hydro's
14 prices. The PUB provided a report to the Minister addressing a range of issues, including
15 the need for PUB review and approval of Hydro's rate changes in future, its recent rate
16 changes and new reserve policy, and water rental rate changes.

17 **2. PUB 1989 Hydro Rate Review** – Following new legislation in early 1989 that gave the
18 PUB jurisdiction to review and approve any changes to Hydro's rates, the PUB reviewed
19 Hydro's proposed 6.0% rate increase and reduced it to 5.0%, noting that the Board
20 considered a one-year delay in reaching the target reserve level was not unreasonable
21 and that 5.0% was more consistent with current inflation and with projected future rate
22 increase requirements. The Board also addressed other matters, including financial
23 targets.

24 **3. PUB 1990 Hydro Rate Review** – The PUB reduced Hydro's 1990 rate increase from
25 4.5% as proposed to 4.0%, responding to intervenor concerns about rate increase impacts
26 and noting that 4.0% overall would appear to provide the required revenue for Hydro to
27 reach, by its 1995 target, its new minimum target reserves of \$370 million. Hydro's new
28 short and long-term financial targets were reviewed (including the new long-term target
29 of 85:15 debt to equity ratio within 10 years of achieving the short-term target). Rate
30 stability was accepted as a priority requirement when addressing these financial targets.
31 Intervener concerns were discussed regarding the new longer-term reserve targets, as
32 well as new debt service charges by the Province and the history regarding water rental
33 rate increases by the Province since 1984.

34 **4. PUB 1991 Hydro Rate Review** – Hydro applied for a three-year rate increase package.
35 The PUB disallowed the rate increases for the second and third years, and reduced the
36 rate increase for 1991 from 4.1% to 3.1%, noting that a one-year may occur in Hydro

1 achieving its short-term reserve target and that Hydro should review its operating budgets
2 to determine whether expenditures could be reduced.

3 **5. PUB 1992 Hydro Rate Review** – The PUB reduced Hydro’s rate increase from 3.5% to
4 2.65%, recognizing intervenor views, the current lengthy recession’s impacts, updated
5 inflation estimates and other information presented during the hearing. The date to
6 achieve the minimum reserve target was now set by Hydro at 1995/96 (one year delay
7 from earlier). Issues related to phasing in of Limestone costs were discussed.

8 **6. PUB 1994 Hydro Rate Review** – Hydro applied for a two-year rate increase. The PUB
9 balanced financial requirements of Hydro with the economic circumstances of its
10 ratepayers, and reduced slightly the overall rate increase in each of the two years from
11 1.5% requested to 1.2%. The Board accepted Hydro’s minimum retained earnings target
12 (MRET) of \$370 million to be achieved now by March 31, 1997 as being a reasonable
13 short-term financial goal and noted that the intent of MRET “is to achieve a minimum
14 retained earnings level and not a minimum equity level”. The Board recognized that the
15 rate increases as approved may not be sufficient in themselves to achieve this target by
16 March 31, 1997 and that Hydro must achieve further internal efficiencies, organizational
17 improvements and cost reductions to achieve this target by that date.

18 The hearing revealed changed long-term financial outlooks for Hydro. Compared with the
19 1992 Hydro application, cumulative rate increases from April 1, 1992 to achieve the short-
20 term target had been reduced to 5.8% versus 14.2% to 14.4% (1991IFF forecasts), and
21 to achieve 85:15 debt to equity ratio target had been reduced to 5.8% versus 24.8%.
22 Hydro also saw a doubling of the Provincial debt guarantee fee effective April 1, 1993 –
23 absent this cost change, Hydro confirmed it would have been able to achieve its \$370
24 million MRTE prior to March 31, 1997 without any rate increase in the 1994 to 1997 period.

25 **7. PUB 1996 Hydro Rate Review** – Hydro applied for a two-year rate increase of 2.0%
26 each year. The Board reduced the rate increases, allowing 1.5% for 1996/97 and 1.3%
27 for 1997/98. The hearing reviewed the basic issues related to rate increases and reserve
28 growth, including new financial objectives developed by Hydro that introduced the 75:25
29 debt to equity ratio target as a goal to be achieved by no later than 2005/06 and its
30 updated MRET of \$650 million. The Board noted Hydro’s current weak financial position
31 with reserves at \$343 million as of March 31, 1996, and focused on Hydro achieving a
32 minimum debt to equity ratio of 85:15 and an annual gross interest coverage ratio in the
33 range of 1.15 to 1.20 by 2001/01 as indicated in IFF95-1. The Board encouraged Hydro
34 to reduce capital expenditures during the current period of non-expansion and not rely
35 only on increasing rates to consumers in order to improve its debt to equity ratio. The
36 hearing noted that Hydro’s exemption from the Provincial Corporations Capital Tax had
37 been rescinded in 1994, and that the required payment in 1995/96 fiscal year was
38 approximately \$25 million per year.

1 Following the PUB review 1996 Hydro rate review, there was a hiatus in overall rate change
2 applications by Hydro until after 2003. From 1997 to 2003; however, there were a number of
3 matters reviewed by the PUB and/or other events affecting Hydro's financial position, including:

- 4 • Hydro's purchase of Centra Gas Manitoba Inc. from Westcoast Energy Inc.;
- 5 • Hydro's purchase of Winnipeg Hydro from the City of Winnipeg; and
- 6 • Hydro's special export profit payment to the Province of up to \$288 million.²⁴

²⁴ PUB Order 7/03, page 24 references the direction applicable to 2002 to 2004, with an initial payment of \$150 million in 2002 to be followed by \$75 million in 2003 and \$63 million in 2004, subject in each of these last two years to the amount not to exceed 75% of net income in that year.

1 **6.0 CONCLUDING OBSERVATIONS**

2 Hydro's new financial goal to recover a 25% equity level by 2026/27 drives its GRA request for
3 7.9% per year rate increases – annual increases that are double what Hydro requested in prior
4 GRAs or forecast to be needed in its NFAT review.

5 This new goal reflects a material change from Hydro's previous financial plans filed with the PUB
6 regarding how risks are addressed, and presents the PUB with a major departure from past
7 practice and principle related to approval of Hydro rate increases since the late 1980s, when the
8 PUB was given quasi-judicial jurisdiction over Hydro rate changes. Regulatory pricing objectives
9 and principles are challenged under this new Hydro goal by "rate shock", unexpected as well as
10 unreasonably high rate increases, rate instability, inter-generational inequity, and material
11 adverse impacts on consumers and the Manitoba economy.

12 The PUB's review and approval of Hydro rates since 1989 has reflected its mandate, as well as
13 the mandate of Hydro. The PUB has recognized the dominant role that retained earnings play in
14 building up financial reserves as needed for Hydro to be a self-supporting entity with ability to
15 provide stable rates to its domestic ratepayers. Hydro's reserves have been, and are mandated
16 to be, used to fund the costs of drought, major new construction and other impacts as required
17 for the stabilization of domestic customer rates. To the extent that Hydro's reserves are adequate
18 for these objectives, rate stability is delivered and self-supporting capability continues to be
19 demonstrated.

20 Throughout this period, in review and approval of Hydro rate changes, the PUB has balanced the
21 interests of domestic ratepayers as these relate to current day rates and ratepayers versus longer-
22 term Hydro retained earnings, reserves and ratepayers.

23 The level of Hydro's "equity" reserves prior to the mid-1990s was less than 10% of total debt and
24 equity. Ratepayer contributions, based on rates as approved by the PUB, are the sole factor that
25 built up reserves after the mid-1990s to much higher levels, including a brief period when "equity"
26 levels slightly exceeded 25%. The principles and objectives referenced to support PUB rate
27 approvals that lead to this build up of retained earnings reserves focused consistently on domestic
28 ratepayer interests today and in the future.

1 Keeping rate increases at or under inflation whenever feasible has been a consistently stated
2 regulatory pricing objective of the PUB. Approving rates higher than current costs in order to
3 build up reserves has been endorsed on the understanding that the resulting reserves will be
4 used to enhance future rate stability and not returns to the shareholder. Concerns have been
5 consistently noted about the “moral hazards” that can arise if Hydro retained earnings growth
6 ends up stimulating higher Provincial charges or levies, or acts to reduce incentives for Hydro to
7 operate as efficiently and cost effectively as possible.

8 The era since the mid-1980s has highlighted the ongoing relevance of growing charges by the
9 Provincial Government. At the start of the period, when Hydro and Manitoba were first financing
10 development of Hydro’s northern generation and transmission, Hydro had low water rental rates,
11 a debt service fee at one-eighth of 1%, and no capital tax. Moving into the 1980s, this began to
12 change, starting with water rental rate escalations, followed by debt guarantee fees jumps in the
13 late 1980s and thereafter, and then by the 1994 rescinding of Hydro’s exemption from the capital
14 tax. By fiscal 2014, these three charges were costing Hydro and its ratepayers \$341 million per
15 year, with charges related to capital and debt now accounting for almost two-thirds of this total.²⁵
16 Hydro’s GRA places emphasis on the new debt required for the current surge in generation and
17 transmission asset development – but no attention is directed at the option of securing Provincial
18 approval to defer imposing these current-day high Provincial charges on these new assets in order
19 to assist in the transition over the next decade. Absent such deferral, Provincial revenues from
20 such charges on Hydro will jump once again.

21 In summary, the lessons from the era leading up to the surge in Hydro’s reserves after the mid-
22 1990s highlight the need for a patient and calm approach to deal with new developments rather
23 than resort to leaps in current day rates in order to meet some specific equity level build up. As
24 emphasized in prior Hydro submissions and PUB reviews, Hydro’s past retained earnings build up
25 has provided the strong basis needed today to move through the next stage of capital asset
26 development. Stable long-term rate changes continue to represent the optimal approach,
27 combined with regular update, review and readiness to adjust if and when needed to address a
28 clear and specific new challenge.

²⁵ KPMG LLP report (2016), op. cit., page 12. Capital taxes equal to 0.5% of paid-up capital (debt and equity) accounted for \$117 million in fiscal 2014, and the Debt Guarantee equal to 1% or outstanding applicable debt annually accounted for \$99 million in fiscal 2014.

**APPENDIX A:
DETAILED REVIEW OF HYDRO RATES
LATE 1980S TO MID-1990S**

TABLE OF CONTENTS

A.1. DETAILED REVIEW OF HYDRO RATES: LATE 1980S TO MID 1990S A-1

**A.1.1. Background: late 1970s and most of 1980s – PUB 1988 Report to
 Minister.....A-1**

A.1.2. PUB 1989 Hydro Rate ReviewA-3

A.1.3. PUB 1990 Hydro Rate ReviewA-4

A.1.4. PUB 1991 Hydro Rate ReviewA-7

A.1.5. PUB 1992 Hydro Rate ReviewA-8

A.1.6. PUB 1994 Hydro Rate ReviewA-9

A.1.7. PUB 1996 Hydro Rate ReviewA-11

1 A.1. DETAILED REVIEW OF HYDRO RATES: LATE 1980S TO MID-1990S

2 A.1.1. BACKGROUND: LATE 1970S AND MOST OF 1980S – PUB 1988 REPORT TO 3 MINISTER

4 The late 1970s, and most of the 1980s, led to the PUB's new mandate in 1989 to review and
5 approve all Hydro rate changes. This background was a period of uncertainty and turmoil for
6 Hydro ratepayers:¹

- 7 • **1978-1979/80** – At the start of this period, ratepayers experienced major rate increases
8 (31.6% cumulative increase in 1978 and 1979) related to costs and surplus generation
9 impacts from bringing into service new facilities; these rate increases and other factors
10 lead to Hydro's reserves jumping from \$50.3 million at March 31, 1988 to \$141.6 million
11 by March 31, 1980, which was well above the \$42 to \$57 million reserve range
12 experienced from 1970 to 1978.
- 13 • **1980-1983** – A significant change in Provincial policy affecting the utility and the PUB
14 was initiated in 1979 – including statutory amendments affecting the power of the PUB
15 with respect to Hydro, combined with the introduction of the Energy Rate Stabilization
16 Act ("ERSA") in April 1, 1979 in conjunction with a rate freeze. This rate freeze lasted
17 until May 1983, when the Province announced approval of an across the board rate
18 increase of 9.5%. By the end of 1983, Hydro had retained reserves at \$82 million after
19 withstanding two consecutive years when water levels had been well below normal.
- 20 • **1983/84-1988** – From May 1983 to May 1987, Hydro rates increased approximately
21 40% during a period when inflation (CPI) increased by about 18%; from 1984 to 1987,
22 Hydro's rate increases averaged approximately 6.3% per year during a period when
23 Hydro's unit cost increases averaged only 1.2%/year before water rental increases and
24 2.5%/year after water rental increases. Hydro's reserves increased to \$137.3 million by
25 March 31, 1987. During most of this period Hydro benefited from retention of ERSA (it
26 was amended April 1, 1987), but was adversely impacted by significant Provincial water
27 rental rate increases that added over \$30 million in extra charges for fiscal 1986 and
28 1987².

29 During this period, Hydro's Board introduced a new reserve policy in 1984/85 with an objective
30 to build reserves to \$180 to \$200 million in order to cover costs for a two-year serious drought.
31 No specific time target was then set to achieve this objective. This target, however, introduced
32 the concept of having rates set to build up reserves that would appear on Hydro's books as
33 "equity".

¹ Information as provided in Pre-filed testimony of C.F. Osler in February 1990, on behalf of MIPUG, in regard to Hydro's April 1, 1990 Rate Increase Application.

² Water rental rates increased 46% on April 1/86 and a further 147% on April 1/87.

1 Attention in the late 1980s came to be focused on establishing, through the PUB review and
2 approval process, principles and approaches that could provide much greater stability for Hydro's
3 domestic customers. It is worth noting that during this time period inflation and interest rates
4 were considerably higher than what has been experienced in the background to the current 2017
5 GRA.

6 Formal PUB involvement during the 1980s began when CAC/MSOS filed an application with the
7 PUB in 1986 pursuant to Section 39(4) of The Manitoba Hydro Act to review Hydro's "price". The
8 price which initiated the application was a 2.8% rate increase effective April 1, 1986.
9 Subsequently, rate increases of 9.7% and 4.5% effective April 1 1987 and 1988 were included in
10 the application for PUB review and report to the Minister. At that time, the PUB had no jurisdiction
11 to approve any Hydro rates.

12 In response to the CAC/MSOS application, the PUB in 1988 held a public hearing review of Hydro's
13 1986, 1987 and 1988 rate increases and issued a report to the Minister on March 31, 1988.

14 MIPUG, as an intervener for large industrial customers, sought rate determinations based on
15 normal regulatory principles:

16 "MIPUG is concerned that Manitoba Hydro rates are not in fact based upon normal regulatory
17 principles. In contrast, the utility appears to argue that consumers should have no real
18 concerns with respect to the overall level of Manitoba Hydro rates because these rates
19 are the lowest in North America, and because these rates are expected to increase at a
20 pace much slower than increases typically occurring in other jurisdictions."³

21 "MIPUG's intervention in the 1988 and 1989 PUB reviews of Hydro rates focused on long term
22 concerns relevant to major industrial power users, namely:

- 23 1. The need for regulatory review and approval of Hydro rates;
- 24 2. The need for stability and predictability of Hydro rates;
- 25 3. Protection for domestic customers of Hydro against risks in export or other areas;
- 26 4. Protection for domestic customers of Hydro against charges which are tantamount
27 to hidden taxation by the Province; and
- 28 5. Assurance that Hydro rate increases will reflect long term rate cost requirements
29 with provision for reserves that are appropriate in light of Hydro's past practice
30 and experience in Manitoba."⁴

³ MIPUG Final Argument. PUB Review of Manitoba Hydro Rates April 1 1986, 1987 and 1988. Part II: Issues of Concern, pg. 7.

⁴ Information as provided at page 2 in Pre-filed testimony of C.F. Osler in February 1990, on behalf of MIPUG, in regard to Hydro's April 1, 1990 Rate Increase Application. The quote excludes items related to cost-of-service, rates to each customer group, and the range of efficient rate options.

1 Increasing Provincial charges were noted by MIPUG and others as a concern in the 1988 PUB rate
2 reviews.

3 The PUB's March 1988 report to the Minister included the following summary conclusions⁵:

- 4 • Hydro's three rate increases [in 1986, 1987 and 1988] "are reasonable".
- 5 • The Board should have the power to review and approve all future rate changes, as well
6 as review Hydro's plans and forecasts related to its growth and development.
- 7 • Hydro must be a "self-supporting operation". "Reserve levels are necessary to ensure rate
8 stability and rate predictability."
- 9 • Hydro's target reserve of \$272 million is not excessive. "Given the specific risk of drought
10 and the need to protect against rate shock, the target reserve may be too little given all
11 of the risks of the Hydro operation."
- 12 • When Limestone comes on stream, costs associated with this project will likely exceed its
13 related revenues in both 1991 and 1992. "Irrespective of how the initial losses from
14 Limestone are handled for rate setting purposes, the effect on rates must be clearly
15 communicated to the ratepayers."
- 16 • "The Manitoba Hydro Board should adopt a general debt/equity ratio target and begin
17 moving towards this target." [The Board reviewed debt/equity targets at pages 34-38 of
18 its report, noting concerns about intolerable rate increases if meaningful improvements
19 are sought by 1992 and noting that with modest rate increases "significant improvements
20 in the debt/equity ratio may be achieved over a longer time period."]
- 21 • Revenues and costs related to export sales should be segregated in Hydro's accounting
22 records. The purpose of this segregation is to ensure that the domestic ratepayer is not
23 subsidizing export sales.
- 24 • The Board believes that there should only be gradual changes in water rental rates as
25 abrupt increases in water rental rates leads to rate instability.

26 **A.1.2. PUB 1989 HYDRO RATE REVIEW**

27 Following the PUB's 1988 Report, proclamation in January 1989 of Part IV of the Crown
28 Corporations Act gave jurisdiction to the PUB to review and approve any changes in Hydro rates.

29 Hydro applied in 1989 for an overall 6.0% increase in rates effective April 1, 1989.

30 The initial PUB Hydro rate application review in 1989 under its new mandate took place against
31 the above background. The previous decade had displayed major Provincial policy shifts,

⁵ Executive Summary, PUB Report to the Minister Pursuant to Section 39(11) of the Manitoba Hydro Act, March 31, 1988.

1 unexpected rate increases that were often well above inflation, material increases in Provincial
2 water rentals that shifted new revenues to the Province, and the re-start of Limestone
3 construction (in conjunction with a 1984 contract to sell 500 MW to NSP over 12 years, starting
4 in 1993) with a decision to advance Limestone in-service by two years prior to the NSP contract
5 start.

6 PUB Order No. 42/89 issued March 28, 1989 reduced the rate increase to 5.0%. In its subsequent
7 Order with reasons, the Board noted evidence that this reduction would result in target minimum
8 reserves being achieved one year later (in 1995/96) than would otherwise be the case, and stated
9 as follows:

10 "The Board considers that a one year delay in reaching the target reserve level is not
11 unreasonable and notes that a five percent increase is more consistent with current
12 inflation levels and with future rate increases assumed in Hydro's Integrated Financial
13 Forecast for 1988/89 to 1998/1999."⁶

14 PUB Order No. 99/89 (p. 27-28) reiterated the Board's 1988 recommendation that changes in
15 water rental rates should be gradual in order to avoid rate instability and that Hydro should work
16 closely with the Province on this matter.

17 On other matters related to financial targets and reserves, PUB Order No. 99/89 (p. 34)
18 recommended that:

- 19 • The Board of Hydro develop appropriate long-term financial objectives including an
20 appropriate debt-equity ratio target and plan for implementation, and that this information
21 should be included in Hydro's next rate application.
- 22 • The Board of Hydro consider the need for including the potential impact of losses related
23 to the self-insurance program in the target minimum reserves.
- 24 • Hydro justify, at future hearings, the appropriateness of major export sale agreements on
25 the basis of contribution to lower domestic rates than would otherwise have existed, and
26 the impact of capital expenditures on rates especially where decisions as to future
27 generating capacity are influenced by export sale agreements.

28 **A.1.3. PUB 1990 HYDRO RATE REVIEW**

29 In November 1989 Hydro applied for a 4.5% increase in general consumer revenue as at April 1,
30 1990. PUB Order 43/90 reduced the rate increase by 0.5% to 4.0%, stating that the Board
31 appreciates CAC/MSOS's position that a 5.5% increase is too onerous for Residential ratepayers,

⁶ PUB Order 99/89, page 8.

1 and noting that a 4.0% increase overall would appear to provide the required revenue for Hydro
2 to reach, by its 1995 target, its minimum target reserves of \$370 million.⁷

3 In September 1989, Hydro's Board had approved new short and long-term financial targets to
4 retain financial self-sufficiency and be able to meet its financial obligations without cash subsidies
5 from the Province. These new targets included the following measures (the following summary
6 includes Hydro's responses to MIPUG 16 in the 1990 rate proceeding):

- 7 • Hydro's first priority was to achieve its new short-term target; this new target modified its
8 prior 1984 reserve target to include provision for the maximum possible single self-insured
9 loss [then estimated at \$40 million in 1987 dollars], and specified that the new target is
10 to be achieved within five years (Hydro stated that IFF89-3 indicated that this could be
11 achieved in 1994/95 without jeopardizing rate stability).
- 12 • Hydro's next priority was to achieve its new long-term debt/equity target of 85:15 while
13 maintaining rate stability; this target was to be achieved within 10 years following the
14 achievement of the target minimum reserve level. [As of March 31, 1989, Hydro stated
15 that its debt: equity ratio was equal to 97.3:2.7].⁸
- 16 • Maintaining gross interest coverage within the range of 1.15 to 1.25 was noted as a
17 residual target, except immediately prior to and during periods within which the costs of
18 new facilities are being absorbed into the rate base.
- 19 • Hydro also mentioned in its policy the "overriding objective of rate stability for Manitoba
20 customers."

21 Hydro's new financial targets in 1989 were announced shortly after reporting that Hydro's
22 financial reserves had fallen to \$92 million as at March 31, 1989, following low water conditions
23 during 1988/89 that added just under \$60 million of costs.

24 Hydro's evidence in the 1990 proceeding indicated that its new targets would see customers fund
25 an increase from the forecast reserves of \$130 million in fiscal 1990 to a level of \$1,430 million
26 in fiscal 2009 (when the 85:15 debt: equity target was forecast to be achieved). Hydro's base
27 forecast in its 1990 rate application indicated that the target minimum reserves will be achieved
28 in 1994/95 if rate increases equal the projected rate of inflation; thereafter, long-term debt/equity
29 ratio targets were forecast to be achieved with rate increases two percent below inflation until
30 2004/05 (at which time rate increases one percent below inflation were projected to be required).

⁷ PUB Order 42/90, March 26, 1990, p. 16.

⁸ Hydro's equity since 1970 had, by its own reporting in the late 1980s, been within the range of two per cent to six per cent of net debt plus equity. Evidence provided during this period noted that the key element in sustaining investor confidence had been the Provincial Government's guarantee of the utility's bond issues. Evidence in the 1988 Hydro proceeding indicated that Hydro's share of Manitoba's directly guaranteed debt fell from about two-thirds in the 1970s to about one-third by the late 1980s.

1 In response to Hydro's new financial targets, MIPUG provided evidence in 1990 on factors and
2 concerns that needed to be considered by the PUB regarding the new long-term 15% equity
3 target, including⁹:

- 4 • The new long-term Hydro policy deviates significantly from past practice, and suggests a
5 basic need to justify a requirement for change.
- 6 • The new long-term policy implies that a specific generation of consumers will be required
7 to pay for higher rates than would otherwise apply in order to create a "better situation"
8 for future consumers; issues arise as to "intergeneration equity" and what is a fair and
9 reasonable allocation of costs among the customers who use the generation and
10 transmission assets over the life of these assets.
- 11 • If the increased equity is used to reduce debt without any return on the equity, future
12 costs will be reduced and the true cost of the capital employed may not be reflected in
13 rates.
- 14 • However, if the Province as owner of the utility requires a return to be earned on the
15 increased equity (with payments to be made to the Province), a separate set of concerns
16 emerge (including the fairness of using consumer-funded equity as the basis for
17 Government to earn new revenues, and the concern that higher reserves may lead to
18 higher consumer rates than would be needed under a lower debt/equity ratio [since equity
19 typically requires a higher rate of return than the prevailing level of interest rates]).
- 20 • Customers of Hydro may well have a vested interest in ensuring that their contributions
21 towards "reserves" (to be held for specified uses) are identified as "operating reserves"
22 held in trust for the customers rather than as "equity" owned by the Province.
- 23 • Concern that the advent of the next major set of capital facilities will create serious
24 financial problems for the utility and its customers unless the primary guide (over and
25 above the minimum reserve target) for setting long-term rate and financial targets is the
26 objective of securing rate stability in a manner consistent with the need to retain financial
27 self-sufficiency.

28 PUB Order 43/90 reviewed Hydro's new short-term and long-term financial targets, and provided
29 the following findings:¹⁰

- 30 • The Board accepted the short-term objectives of minimum target reserves as indicated in
31 IFF89-3 and accepted that these targets include a provision for self-insurance.
- 32 • The Board noted the longstanding debate on whether Hydro requires more equity in the
33 Corporation or whether it should continue to pay dividends to its customers through lower

⁹ Pre-filed testimony of C.F. Osler in February 1990, on behalf of MIPUG, in regard to Hydro's April 1, 1990 Rate Increase Application (pages 16-17).

¹⁰ PUB Order 43/90, March 26, 1990; pp. 20-23.

1 rates. The Board stated its view "that Hydro should strive to improve its debt equity ratio
2 which for the fiscal period ending 1990 is 97:03". On the matter of long-term targets, the
3 Board stated that it "believes long-term objectives can be more properly reviewed once
4 the short term objective is approached [target to occur in 1995]. The Board does not feel
5 compelled nor does it feel it appropriate to endorse the specific long term targets proposed
6 by Hydro in the context of the current rate application which deals with only the fiscal
7 year ending March 31, 1991."

8 In 1990, the Province announced an increase in the provincial service charge on Hydro's debt
9 effective April 1, 1990 (to one-quarter of one percent, from one-eighth of one percent). MIPUG
10 and others noted new concerns about higher Provincial charges acting to inhibit Hydro's ability to
11 secure its target reserves. The Board in Order 43/90 (page 25) recommended that Hydro and the
12 Province negotiate the guarantee fee "to ensure that the fee is commensurate with the associated
13 risk for which the fee is intended."

14 PUB Order 43/90 (at pages 25-28) reviewed the history of water rental rate increases since 1980,
15 noting that the rate per horsepower year was \$1.25 in April 1980 and \$9.90 in September 1989,
16 and recommended that future increases in water rental rates as set by the Province "should not
17 exceed the rate of inflation in any given year."

18 **A.1.4. PUB 1991 HYDRO RATE REVIEW**

19 Hydro's 1991 rate application sought approvals for rate increases in April 1991 (4.1% after
20 removing increase for isolated diesel generation), 1992 (4.5%) and 1993 (4.0%), with the stated
21 objective of reaching its minimum reserve target of \$370 million by 1994/95.

22 PUB Order 29/91 in March 1991 disallowed Hydro's application for rate increases in 1992 and
23 1993, stating that Hydro "...has not presented evidence which substantiates its position that
24 approval of rates for three years will provide considerable financial savings and benefits. The cost
25 that might be saved is, for the present, far outweighed by the public interest in periodic
26 reviews."¹¹

27 PUB Order 29/91 concurred with the positions of CAC/MSOS and MIPUG "that in these economic
28 times, rate relief could be granted for 1991/92" and reduced Hydro's proposed increase for 1990
29 by 1.0 % to 3.1%.¹² The Board noted that the \$6.1 million reduction in Hydro's proposed revenue
30 requirement may delay by one year Hydro's achievement of its 1994/95 minimum reserve target,
31 and stated that "the Board expects that the Corporation will review its operating budgets to
32 determine whether expenditures could be reduced to offset the \$6.1 million reduction."¹³

¹¹ PUB Order 29/99, March 1991, Executive Summary (p.4).

¹² Ibid.; also pages 24-25.

¹³ PUB Order 29/99, March 1991, Executive Summary (p.5).

1 PUB Order 43/90 had accepted Hydro's short-term objective of minimum target reserves indicated
2 in IFF89-3 – however, MIPUG and others in the 1990 PUB hearing challenged the view that the
3 PUB had also endorsed reaching this target by 1994/95. MIPUG noted that a one-year delay, with
4 lower rate increases than Hydro had applied for, was appropriate given the then current evidence
5 (i.e., annual average rate increases of three per cent per year would enable Hydro to achieve its
6 short term financial reserve target by 1995/96, and its long-term debt/equity target of 15% equity
7 by 2002/03).¹⁴

- 8 • Hydro's loss projected in 1992/93 of \$32.2 million, which Hydro referenced as a basis for
9 higher rate increases being needed, was associated mainly with Limestone construction
10 being accelerated for exports (impact of \$101 million in 1992/93).
- 11 • The evidence, however, confirmed the underlying strength of Hydro's financial position
12 for the 1990s, and MIPUG referenced this underlying financial strength in support of
13 adopting the one-year delay and lower annual rate increases.

14 **A.1.5. PUB 1992 HYDRO RATE REVIEW**

15 Hydro applied for a 3.5% general rate increase effective April 1, 1992, with the intention of
16 reaching its short-term objective of minimum reserves of \$370 million by 1995/96, a one-year
17 delay from Hydro's original short-term objective. Further annual increases of 4.5% were projected
18 in each of 1993/94 and 1994/95 and 1.0% each year thereafter, with the debt:equity target ratio
19 of 85:15 projected to be met by 2005.

20 PUB Order 25/92 reduced the average increase in general consumers' rates from 3.5% to 2.65%,
21 recognizing viewpoints expressed by CAC/MSOS and MIPUG, the current lengthy recession's
22 impacts on consumers' capacity to absorb rate increases, updated inflation estimates in the range
23 of 2.1 to 3.5%, Hydro operating savings from added vacant positions, and indications of potential
24 favourable variance as compared to Hydro projections for 1991/92.¹⁵

25 MIPUG's final argument as quoted in Order 25/92 (p.11) noted the following:

- 26 • Hydro had not provided convincing evidence as to why the minimum reserve target cannot
27 be slipped for one or two more years.
- 28 • Hydro had successfully survived severe drought conditions in the late 80s at the same
29 time that it was facing rate shock impacts associated with Limestone.
- 30 • Starting in 1993/94, Hydro is projected to begin to achieve earnings greater than that
31 ever achieved in the Corporation's history.

¹⁴ MIPUG Final Argument (March 1, 1991) re April 1 1991 Rate Increase Application (pages 15-18, which includes quotes from evidence by Mr. C.F. Osler as well as from Hydro witnesses.

¹⁵ PUB Order 25/92, March 24, 1992, p. 7.

- 1 • Based on current projections, MIPUG demonstrated to the Board that the amount of \$500
2 million (not \$370 million) would be required to withstand the financial effects of two years
3 of drought equal to the worst on record and the maximum Hydro is liable to incur under
4 its self-insurance program. However, MIPUG agreed with Hydro that for the purposes of
5 setting a dollar amount for the short-term financial target, the sum of \$370 million should
6 be used at this time.

7 The Board in Order 25/92 reviewed Hydro's short-term financial objectives, stating (p.12) that
8 "...achievement of these targets must be reassessed each year in light of current economic
9 conditions" and that achievement of the \$370 million target by 1995/96 "is less critical given the
10 current economic environment."

11 The Board in Order 25/92 reviewed (pp.13-15) issues related to phasing in costs of Limestone.
12 Hydro estimated that the charges to the operating statement as a result of Limestone will be
13 \$72.6 million in 1992/93, which contribute to the forecasted loss of \$17.3 million. Hydro stated
14 that it had accepted the loss in 1992/93 in lieu of charging the excess cost to consumers in one
15 year, and therefore accomplished phase-in through rate smoothing. The Board stated that
16 "predictable rate increases are a desirable objective and that, in this respect, rate smoothing is
17 desirable". The Board did not accept that the rate discontinuity in this instance was of such
18 significance that a formal regulatory approved phase-in plan or a variation on the traditional
19 method of accounting for a new plant coming into service was appropriate.

20 **A.1.6. PUB 1994 HYDRO RATE REVIEW**

21 Hydro applied for a two-year rate increase in general consumer revenue of approximately 1.5%
22 effective April 1, 1994 and approximately 1.5% effective April 1, 1995, with a primary objective
23 to achieve its short-term financial target of \$370 million by March 31, 1997. Hydro noted that its
24 present calculations of the minimum retained earnings target was in the range of \$410 to \$460
25 million for the two years under review; however, Hydro considered it appropriate to set the target
26 at a fixed dollar amount of \$370 million to show progress in the movement towards the target.
27 Hydro accepted the slippage in the date for achieving this target in recognition of the financial
28 difficulties being experienced by its ratepayers. No rate increase was implemented in 1993.

29 The 1994 Hydro application reflected a changed long-term financial outlook of Hydro, including
30 deferral of the Conawapa Station and cancellation of the Ontario Hydro 1000 MW sale, reduced
31 load (sales) forecasts due to lower projected long-term economic growth, economic assumptions
32 changes including escalation (inflation) rate and interest rate assumptions, and new firm export
33 agreements. Hydro's then current planning document (IFF93-3) did not include any assumed rate
34 increases after the 1995/96 fiscal year, and forecast retained earnings of \$705.5 million by
35 March 31, 2003 resulting in the current long-term financial objective of an 85:15 debt to equity
36 ratio being achieved in that year. In final argument, Hydro conceded that there was general
37 agreement that interest and escalation (inflation) rates had decreased since IFF93-3 was prepared

1 in October 1993 with its assumed escalation rates at 2.5% (1994/95) to 3.0% (after 1995/96)
2 and forecast long-term debt interest rate of 9.0%.

3 Hydro noted that it had an agreement with the Province to freeze water rental rates from
4 September 1, 1989 to March 31, 1997 in return for Hydro assuming the Province's responsibility
5 of costs for certain mitigation payments and of the North Central Transmission Program. The
6 Board in Order 62/94 (p. 16) noted that intergenerational issues are raised by the fact that current
7 ratepayers will benefit from the freezing of water rental rates while future ratepayers will have to
8 bear the amortization and carrying costs of the capital payments that were assumed.

9 Hydro noted that the Province's guarantee fee on Hydro debt was increased from 0.25% to 0.50%
10 effective April 1, 1993.

11 MIPUG's evidence in the 1994 proceeding reviewed the latest financial projections, the basis for
12 accepting a lower rate increase (given lower forecast inflation, improved Hydro projections, and
13 continued consumer adverse economic conditions), and the latest changes in Provincial charges
14 to Hydro. This evidence highlighted forecast changes in the 1994 application compared with the
15 1992 application, including¹⁶:

- 16 • Greatly reduced rate increase assumptions over the test years and the planning period:
 - 17 ○ The cumulative general rate increase now required from April 1, 1992 to achieve
 - 18 the \$370 million short-term financial target has been reduced to 5.8% versus
 - 19 14.2% (IFF91-4) or 14.4% (IFF91-5).
 - 20 ○ The cumulative general rate increase now required from April 1, 1992 to achieve
 - 21 Hydro's long-term debt/equity target ratio has been reduced to 5.8% versus
 - 22 24.8% (IFF91-4)
- 23 • Significant improvements in Hydro's overall financial status and projections.
- 24 • Absent the 1993 increase in the Provincial guarantee, Hydro had confirmed that it would
- 25 have been able to achieve its \$370 million minimum reserve target prior to March 31,
- 26 1997 without any rate increases in the 1994 to 1997 period.¹⁷

27 The Crown Corporations Council report of February 1993, which was reviewed in this proceeding,
28 stated that Hydro ranks as one of the financially weakest electrical utilities in Canada with a high
29 debt to equity ratio and low financial reserves. Hydro management's response in its May 1992
30 report to the Board of Manitoba Hydro noted that the debt to equity ratio and reserve level is
31 only one measure of the financial strength of a business enterprise - and referenced a range of
32 other factors that should be considered before coming to a conclusion as to the relative financial

¹⁶ Pre-filed testimony of C.F. Osler in February 1994, on behalf of MIPUG, in regard to Hydro's April 1, 1994 and April 1, 1995 Rate Increase Application (pages 3-5 to 3-6).

¹⁷ Ibid., page 4-12. Referenced response to MIPUG/MH(I)-24.a. in that proceeding.

1 strength or weakness of an electrical utility in Canada, stating that based on these other factors,
2 Hydro may be considered to rank as one of the financially strongest electrical utilities in Canada.¹⁸

3 In PUB Order 62/94, the Board continued to balance the financial requirements of Hydro with the
4 economic circumstances of its ratepayers, and determined that the overall requested rate increase
5 could be slightly reduced in each of the two years from 1.5% requested to approximately 1.2%.

6 The Board accepted the Hydro minimum retained earnings target ("MRET") of \$370 million to be
7 achieved by March 31, 1997 as being a reasonable short-term financial goal for Hydro that (absent
8 any significant negative variance from forecasts) should not slip further. The Board recognized
9 that the rate increases as approved may not be sufficient in themselves to achieve this short-
10 term financial target by March 31, 1997 and that Hydro must achieve further internal efficiencies,
11 organizational improvements and cost reductions to achieve this target by that date.¹⁹ The Board
12 also provided its view as follows regarding the purpose and intent of Hydro's minimum reserves
13 or MRET:²⁰

14 *"...the Board believes that the purpose of the MRET [minimum retained earnings target] to*
15 *have a fund that could be drawn down in times of adverse conditions and thus help to*
16 *ensure rate stability. The intent of MRET, regardless of what it was called in the past, is*
17 *to achieve a minimum retained earnings level and not a minimum equity level."*

18 **A.1.7. PUB 1996 HYDRO RATE REVIEW**

19 Hydro applied for a two-year rate increase in general consumer revenue of 2.0% effective
20 April 1, 1996 and 2.0% effective April 1, 1997. These increases were stated to be consistent with
21 Hydro's policy of requesting overall rate increases that are at or below the rate of inflation. In
22 this application, Hydro presented its newly developed financial targets of 75:25 debt to equity
23 ratio and a 1.25 gross interest coverage ratio, noting that its debt to equity ratio and gross interest
24 coverage as at March 31, 1995 were 92:08 and 1.13 respectively.

25 The application noted that, effective the 1994 Provincial Budget, Hydro's exemption had been
26 rescinded from the Provincial Corporations Capital Tax. Effective the 1995/96 fiscal year, the
27 required payment was approximately \$25 million per year.

28 The basic issues relating to rate increases and reserve growth were revisited again in the PUB's
29 1996 review of Hydro's rates. Highlights from the Board's review include the following:²¹

¹⁸ Ibid. page A-4 which referenced the Crown Corporations Council report and quoted the May 1993 Hydro management report. The factors noted by Hydro management included "asset values, system age and reliability, future cost/revenue streams, rate structures, susceptibility to economic downturns, productivity of workforce, DSM potential, fuel dependencies, environmental issues, export opportunities, etc."

¹⁹ PUB Order 62/94, April 8, 1994, p. 1. Also pages 8-9, 27-28.

²⁰ Ibid. page 9.

²¹ PUB Order 51/96, April 15, 1996, Section 9, pages 12-17 on Financial Objectives.

- 1 • Hydro stated that applying the earlier short term financial objectives to the then current
2 environment would require a retained earnings balance of something in excess of \$650
3 million (vs \$370 million identified in the 1989 financial minimum reserve target to be
4 achieved by March 31, 1995).
- 5 • Hydro announced in the 1994 public hearing that it was reviewing its long-term financial
6 objectives. Deloitte & Touche ("Deloittes") were commissioned by Hydro, and provided a
7 report in May 1995; Hydro also commissioned RBC Dominion Securities Inc. ("RBC") who
8 provided a report in April 1995. The authors of the Deloittes and RBC reports appeared
9 at the PUB hearing as Hydro's witnesses.
- 10 • Hydro's Board approved new financial objectives in September 1995 that included:
- 11 ○ To achieve and maintain a minimum debt to equity ratio target of 75:25 by no
12 later than 2005/2006.
- 13 ○ To achieve and maintain an annual gross interest coverage ratio in the range of
14 1.20 to 1.35 as soon as possible.
- 15 ○ To fund all capital construction requirements from internal sources, except during
16 periods when major new generation and/or major transmission facilities are being
17 added to the system.
- 18 • Intervenors (CAC/MSOS and MIPUG) provided witnesses who advised the Board against
19 the desirability of changing Hydro's long-term debt to equity target ratio from 85:15 to
20 75:25.
- 21 ○ MIPUG opposed the Board approving rate increases for the purpose of increasing
22 the equity of Hydro's shareholder beyond 15%, and noted that the evidence has
23 not demonstrated any clear net benefit to ratepayers that would justify more than
24 doubling the average rate increases required over the next decade in order to
25 finance the extra equity needed to achieve a debt to equity ratio of 75:25 versus
26 85:15.
- 27 ○ CAC/MSOS argued that the debt ratio of 85 to 90 percent provides Hydro with
28 sufficient cushion to respond to any situation that may arise without threatening
29 its financial integrity or causing rate shock.
- 30 • The Board in its findings noted the weak financial position of Hydro relative to other
31 Canadian and American electrical utilities, the increasing risks and uncertainties facing
32 Hydro due to changing market conditions, and the fact that Hydro's projected retained
33 earnings as of March 31, 1996 was \$343.1 million or only 42% below its current minimum
34 retained earnings target ("MRET") of \$650 million.

- 1 • The Board accepted “as directionally correct” Hydro’s financial objective of achieving a
2 minimum debt to equity target of 85:15 and an annual gross interest coverage ratio in
3 the range of 1.15 to 1.20 by 2001/02, as indicated by IFF95-1. On the other new Hydro
4 target, the Board stated that it “will evaluate the reasonableness of Hydro achieving and
5 maintaining” these targets by the dates suggested by Hydro “... once Hydro achieves a
6 minimum debt to equity ratio of 85:15 and an annual gross interest coverage ratio in the
7 range of 1.15 to 1.20.”
- 8 • The Board urged Hydro to adopt specific annual retained earnings targets based on
9 IFF95-1, to improve its financial position through various controls and other measures,
10 and to stringently limit its capital expenditures where safety and reliability constraints
11 allow and apply itself to reducing its long-term debt with urgency.

12 The Board reviewed Hydro’s capital spending, noted concerns at the forecast levels, encouraged
13 Hydro to reduce capital expenditures during the current period of non-expansion, and stated as
14 follows:²²

15 “If Hydro is to improve its debt to equity ratio, then this is to be accomplished by controlling
16 internal expenditures such as capital projects, and not solely by increasing rates to the
17 consumers.”

18 The Board reduced the rate increase, allowing overall increases of 1.5% for 1996/97 and 1.3%
19 for 1997/98.

²² Ibid., page 37.

APPENDIX B:
QUALIFICATIONS OF MR. C.F. OSLER & G.D. FORREST



CAMERON F. OSLER
CHAIR/ PRINCIPAL/ SENIOR CONSULTANT

**AREAS OF EXPERIENCE:**

- Cost of Service and Rates - Expert Analysis and Testimony at Hearings
- Strategic Planning and Multi-disciplinary Project Team Management - Resource, Regional and Urban Development Projects
- Socio-economic and Environmental Assessment and Related Public Consultation – Hydroelectric, Mining, Forestry and Other Major Projects
- Compensation and Monitoring Related to Resource Project Impacts
- Resource Rent, Royalty and Tax Policy - Related Expert Evidence
- Other Strategic Planning and Assessment

EDUCATION:

- M.A. (Economics), Simon Fraser University, 1968
- University of Toronto Law School, 1964-1965
- B.A. (Philosophy), University of Manitoba, 1964

PROFESSIONAL EXPERIENCE:

InterGroup Consultants Ltd.
1974 – Present

Winnipeg, Manitoba
Chair/Principal/Senior Consultant

Cost of Service and Rates – Expert Analysis and Testimony at Hearings

For the Yukon Energy Corporation (1989-Present) – Expert analysis and testimony for applications before the Yukon Utilities Board on planning major capital projects (1992, 2006) and on electricity costing and rates related to rate applications by Yukon Energy Corporation (1989, 1991, 1993, 1996, 1997, 1998, 2005, 2008-09, 2012-13, and YEC-YECL 2009 Phase II Application).

For Newfoundland Industrial Customers (2016-Present) – Senior advisor re: investigation and hearing into supply issues and power outages on the Island, Phase II addressing future reliability issues prior to and after completion of Muskrat Falls and related new HVDC transmission connections.

For Newfoundland Industrial Customers (2001 and 2003) – Expert testimony before the Board of Commissioners of Public Utilities of Newfoundland and Labrador on electricity costing and rates related to general rate applications by Newfoundland Hydro.

For the Manitoba Industrial Power Users Group (1987-1999) – Expert testimony before the Manitoba Public Utilities Board in Manitoba Hydro electricity rate hearings, including rate applications in 1987/88, 1989, 1990, 1991, 1992, 1994, 1995, and 1998, and the Manitoba Hydro Major Capital Projects hearing in 1990. Represented MIPUG at hearings before the Board in 1999 to approve the purchase of Centra Gas by Manitoba Hydro.

For the Bruce Municipal Telephone System in the early 1990's – Expert economic evidence to the Ontario Telephone Service Commission related to the cost of equity capital.

For Government of Yukon, expert testimony before the National Energy Board in 1985 – Expert testimony on costs and rates pertaining to the Northern Canada Power Commission.

For IPSCO during the 1980's – Expert testimony before Saskatchewan Utilities Regulatory Commission hearing on the first and second rate applications by Saskatchewan Power Commission.



CAMERON F. OSLER
CHAIR/ PRINCIPAL/ SENIOR CONSULTANT

For Stelco, INCO and the Motor Vehicle Manufacturers' Association of Canada, in the 1977-1979 Ontario Energy Board hearings HR5 – Examining Ontario Hydro's electricity costing and pricing principles; provided consulting advice and expert testimony on the issues and options pertaining to that hearing.

For a consortium (The Consumers' Gas Company, Union Gas, Northern and Central Gas and the Ontario Ministry of Energy), a 1974 report on natural gas requirements throughout Canada - Provided expert testimony before the National Energy Board on this report.

Strategic Planning & Multi-disciplinary Project Team Management – Resource, Regional and Urban Development Projects

For Gwich'in Council International (2016-Present) – Senior advisor on study by Gwich'in Tribal Council funded by INAC, with participation of GNWT and others, on fossil fuel use and costs (and options to reduce this use) for power generation, heating and transportation in Inuvik region communities. Prior to this study, senior advisor to Gwich'in Council International on study to document true cost of fossil fuel generation in selected off grid communities in N.W.T, Nunavut and Yukon, and to define Power Purchase Agreement and ownership options as part of a plan whereby the Indigenous people of the North in off grid communities can take action to secure alternative energy sources to reduce current reliance on fossil fuels.

For Natural Resources Canada (NRCan) (2017) – Project Principal on study to summarize current challenges and opportunities associated with fuelling off-road mine haul trucks in Canada with natural gas.

For Government of Northwest Territories (2015-2016) – InterGroup Principal in North Slave Resiliency Study (with Manitoba Hydro International) to assess this system's resiliency to drought and to examine a range of infrastructure and rate-related options to improve this resiliency.

For the Province of New Brunswick and New Brunswick Power (2016-Present) – Senior advisor on Assessment of Socio-Economic Benefits of Expressions of Interest submitted under the Locally Owned Renewable Energy that is Small Scale (LORESS) Program to obtain 80 MW of new renewable generation capacity from Aboriginal Businesses and Local Entities.

For Yukon Energy Corporation (2016) - Project sponsor and senior advisor on Resource Options Evaluation of potential power generation options (fossil thermal [including LNG], non-fossil thermal, storage battery, wind, solar, geothermal, and various hydro generation options) and transmission options to meet long-term grid load forecasts (2016-2035), against environmental, social and economic attributes, in association with EDI Environmental Dynamics, Ecofor Consulting and Campbells North Consulting.

For Yukon Energy (2016) – Financial evaluation of geothermal resource options (working with KGS Group).

For Tolko Industries, Hudbay Minerals and Manitoba Hydro (2015-2016) – InterGroup Principal for concept study assessing natural gas fuel alternatives (LNG and CNG) for northern Manitoba.

For Saik'uz First Nation (2014-2015) – Provide financial and economic consulting services related to the ongoing discussions between the Saik'uz First Nation and Innergex regarding the Nulki Hills Wind Project, including professional assistance and advice regarding the negotiation of a term sheet, and the review and negotiation of any purchase power agreement that Innergex would negotiate with BC Hydro for the sale and purchase of the power from the Nulki Hills Wind Project.



CAMERON F. OSLER
CHAIR/ PRINCIPAL/ SENIOR CONSULTANT

For Yukon and Alaska governments (2014-2015) – Participated in the management team responsible for planning study for Yukon and Alaska to provide Viability Analysis of a South-east Alaska and Yukon Economic Development Corridor, including viability assessment of transmission connection development options between Skagway and Whitehorse and related potential hydro developments in South-east Alaska.

For Casino Mining Corporation and Selwyn-Chihong Mining Ltd. (2014-2016) – Provide advice and assistance regarding the assessment and negotiation of agreements with potential liquefied natural gas (LNG) suppliers in British Columbia to these two separate proposed mine developments in Yukon. For Selwyn-Chihong Mining Ltd., provided initial assessments of LNG supply chain options.

For Yukon Energy Corporation (2005-2014) – Project director for various strategic planning activities, including: preparation of Yukon Energy's 2006 20-Year Resource Plan Submission to the Yukon Utilities Board (provided expert testimony before the YUB) that lead to the Carmacks-Stewart Transmission Project and other developments. Senior advisor to 2007-2008 update team assessing near-term hydro generation enhancement options for potential in-service by 2012 (lead to selection of Mayo B Project, Gladstone, Atlin and Marsh Lake projects); overall strategic planning for development of the Carmacks Stewart Transmission Project and the Mayo B Hydro Enhancement Project; preparation of Yukon Energy's 2011 20-Year Resource Plan: 2011-2030 that reviewed a wide range of new resource options, including near-term liquefied natural gas development and long-term legacy hydro development planning; participation in Yukon Energy's Part 3 Application and review by the Yukon Utilities Board for the Whitehorse Diesel-Natural Gas Conversion Project.

For the City of Winnipeg and Neeginan Development Corporation (1998) – Project director responsible for preparation of the Development Plan for the Thunderbird House project on Main Street.

For Spirit of Manitoba Inc. and Manitoba Entertainment Complex Inc. (1994-1995) – Responsible for management of all aspects of a project to develop a new downtown entertainment complex and to retain the Winnipeg Jets Hockey Club in Winnipeg; managed the multi-disciplinary team carrying out negotiations, siting, design, costs, feasibility planning, environmental assessments, and other work required to secure approvals under tight deadlines specifically for the new arena component of the project.

For The Forks Renewal Corporation (a corporation owned by Canada, Manitoba and Winnipeg) (1987-1993) – Development Coordinator responsible for planning and directing initial development and financial activities, including negotiation of land exchange agreements, preparation of a Phase I Concept and Financial Plan, site planning and Stage One projects, roads and services; ongoing financial and strategic planning counsel.

For the East Yard Task Force (comprised of the governments of Canada, Manitoba and Winnipeg) (1985-1986) – General advisor and manager for all consultant work (planning and architectural, engineering, financial and legal) related to the redevelopment of a major rail yard area in downtown Winnipeg.

For Government of Yukon (Department of Economic Development, Mines & Small Business) (1985-1987) – Managed multi-disciplinary team carrying out financial, economic, legal and strategic planning work relating to the devolution and transfer to Yukon of the Northern Canada Power Commission assets and operations in Yukon; participation in all related negotiations.



CAMERON F. OSLER
CHAIR/ PRINCIPAL/ SENIOR CONSULTANT

For North Portage Development Corporation (1984-1987) – Economics and financial counsel during the initial development phase; coordinator for work relating to corporate financial plans, selection of major developers (retail, housing and office projects), and negotiation of long-term agreements (land lease, development and other related agreements) with each of the selected developers.

For Canadian Methanol Canadien (1980s) – Participation in an executive capacity in a partnership venture involving Inter-City Gas Corporation and The M100 Group to develop methanol vehicle fuel [management of multidisciplinary project team involving engineers, planners, financial, legal, and other professionals to demonstrate and develop hybrid (natural gas and wood feedstock) methanol production facilities, as well as different market uses for methanol (including use in flexible fuel passenger vehicles)].

For the Government of Canada (late 1970s) – Project director of a major multi-disciplinary study to examine the feasibility of producing liquid fuels (including methanol) from biomass feedstock resources throughout Canada; this study included examination of liquid fuel production options involving the joint use of either electricity or natural gas along with biomass feedstock. The multi-disciplinary consulting team included firms with chemical engineering and forestry expertise.

Socio-Economic and Environmental Assessment & Related Public Consultation – Hydro-electric, Mining, Forestry and Other Major Projects

For Yukon Energy (2016-Present) – Project Sponsor and senior advisor on Aishihik Hydro Relicensing Yukon Environmental and Socio-economic Assessment Act Project Proposal (project team with Morrison Hershfield); Yukon Energy working with Champagne and Asihihik First Nations).

For Yukon Government (2015-2016) (Alaska Highway) – Project Principal regarding development of an economic profile for the Alaska Highway.

For Yukon Energy Corporation (2015-2016) – Project Principal regarding Stewart Keno Transmission Project activities related to preparation of YEC Project Proposal Submission to the Yukon Environmental and Socio-economic Assessment Board Executive Committee (project team with Morrison Hershfield).

For Yukon Energy Corporation (2013-14) – Project Principal regarding support for Yukon Energy's Project Proposal Submission to the Yukon Environmental and Socio-economic Assessment Board Executive Committee, and the subsequent Part 3 Application and review by the Yukon Utilities Board, for the Whitehorse Diesel-Natural Gas Conversion Project; provision of expert testimony in the related Yukon Utilities Board hearing.

For Manitoba Hydro (1999-2014) – Study Leader responsible for socio-economic assessment and planning work in a multi-disciplinary Consultant Management Team retained to assist Manitoba Hydro in the conduct of the environmental assessment programs associated with future planning for three potential hydroelectric generating stations in northern Manitoba (Wuskwatim, Keeyask and Conawapa), including site selection and environmental assessments for the associated transmission facilities. Provided expert testimony before the Manitoba Clean Environment Commission on the Wuskwatim Generation and Transmission Projects EISs submitted by Manitoba Hydro and Nisichawayasihk Cree Nation. The Wuskwatim Generation and Transmission Projects have been constructed (the Wuskwatim Generation Project was developed by the Wuskwatim Power



CAMERON F. OSLER
CHAIR/ PRINCIPAL/ SENIOR CONSULTANT

Limited Partnership of Nisichawayasihk Cree Nation and Manitoba Hydro). The Keeyask Project is currently under construction. Planning for the Conawapa Project is currently suspended.

For Yukon Energy Corporation (2008-2012) – Project Principal regarding 10+ MW Mayo B Hydro Enhancement Project activities related to preparation of YEC Project Proposal Submission to the Yukon Environmental and Socio-economic Assessment Board Executive Committee and the YEC Application to the Yukon Water Board, and related planning activities leading to construction of this project, including negotiation of Project Agreement with First Nation of Na-cho Nyak Dun, process to select and finalize Alliance construction contractor (Kiewit), preparation of Public Utilities Act Part 3 Application for Mayo B and provision of expert testimony on this Application to the Yukon Utilities Board, and participation in ongoing oversight of project implementation activities (the project came into service before the end of 2011).

For Manitoba Hydro (2011-2012) – Senior advisor regarding environmental assessment approach, including significance and cumulative effects assessment, for the EIS filing of the proposed Bipole III Transmission Project. Provided expert testimony on this project before the Clean Environment Commission.

For Yukon Energy Corporation (2005-2008) – Project Principal regarding 138 kV Carmacks-Stewart Transmission Project activities related to preparation of YEC Project Proposal Submission to the Yukon Environmental and Socio-economic Assessment Board Executive Committee, negotiation of purchase power agreement with mine customer to be served by this project and Project Agreement with three Northern Tutchone First Nations, provision of expert testimony on this project to the Yukon Utilities Board, and participation in ongoing oversight of project implementation activities (Stage 1 of this project came into service in late 2008, Stage 2 came into service in mid-2011).

For Manitoba Floodway Authority (2003-2005) – Senior advisor regarding environmental assessment and licensing activities of the proposed Red River Floodway Expansion Project. Provided expert testimony before the Manitoba Clean Environment Commission on EIA study approach, including cumulative effects assessment, regarding the Project EIS submitted by the Manitoba Floodway Authority.

For Yukon Energy Corporation (1992-2002) – Advisory reviews of environmental impact assessment work for re-licensing of the Aishihik hydro-generation facility and related expert testimony before the Yukon Territorial Water Board.

For uranium mining companies in northern Saskatchewan (1990s) – Project director for consultants regarding socio-economic impact assessment, economic impact and cost-benefit assessments, and public consultation design and implementation for the Rabbit Lake expansions (Cameco Corporation, 1991-1993), the McArthur River developments (Cameco Corporation, 1993-1996), the Cigar Lake developments (Cigar Lake Mining Corporation, 1993-1996), and the Rabbit Lake extension (Cameco Corporation, 1999-); provided related evidence and expert witness testimony for the Rabbit Lake federal environmental review panel hearing and the McArthur River developments federal-provincial environmental review panel hearings. Provided advisory review for InterGroup’s similar socio-economic and economic impact assessments, and public consultation work for COGEMA related to Cluff Lake mine projects during this period.



CAMERON F. OSLER
CHAIR/ PRINCIPAL/ SENIOR CONSULTANT

For Cameco, Cigar Lake Mining Corporation and COGEMA (1993-1994) – Facilitated an agreement in principle for an impact management agreement involving seven Athabaska communities (this was one element of the socio-economic/public consultation EIS work related to the McArthur River and CLMC projects).

For Repap Manitoba, Inc. (1989-1991) – Project management of the socio-economic impact assessment, and design and implementation of an extensive public consultation program, for the proposed Phase 1 Manitoba expansion.

For aggregate producers in Ontario (1980s and early 1990s) – Socio-economic impact and resource policy evaluations relating to proposed aggregate developments in southern Ontario (Puslinch, Milton and Niagara Escarpment Planning Area); provision of resource economics expert testimony before the Ontario Municipal Board on behalf of TCG Materials Limited and on behalf of Armbro Aggregate.

For the City of Winnipeg (1990s) – Socio-economic impact assessment for the new Charleswood and Main/Norwood bridge developments (two separate assignments; provided advisory review for other InterGroup principals who directed this work, as well as assistance in coordination of hearing testimony for the regulatory review of the Charleswood bridge project).

For the Moosonee Development Area Board (early 1990s) – Socio-economic counsel in an intervention relating to potential impacts of Ontario Hydro's proposed hydro generation development of the Moose River Basin.

For Manitoba Hydro (late 1980s and 1990s) – Senior advisory review as required by other InterGroup principals carrying out the following assignments: socio-economic impact assessment and public consultation program for the Conawapa hydro generating station EIS (1989-1993); socio-economic impact assessment and public consultation program for the Split Lake transmission line project (joint study with the First Nation, early 1990's); socio-economic impact assessment and public consultation program for the siting and the EIS related to the Winnipeg-Brandon transmission line and Neepawa substation projects (1995-1997); study to review environmental externality and compensation cost modeling for hydro-generation and related transmission line projects (1996-1997). Deputy Project Director for initial environmental assessments study for third Bipole Transmission Lines (1986-1987).

For Manitoba Hydro (early-to-mid 1980s) – Various investigations with respect to the environmental and socio-economic impacts related to planning of new power generation projects in northern Manitoba, including deputy project director for the Burntwood River Environmental Overview Study (1980-1984), and review of InterGroup's work (carried out by senior staff) to prepare the socio-economic assessment and conduct public consultation for the Limestone hydro-electric generating station EIS.

For Alcan (early 1980s) – Managed investigations with respect to the socio-economic impacts of a proposed aluminium smelter in Manitoba.

For Key Lake Mining Corporation (early 1980s) – Provided expert testimony before the Commission of Enquiry on socio-economic impacts associated with the uranium project at Key Lake.



CAMERON F. OSLER
CHAIR/ PRINCIPAL/ SENIOR CONSULTANT

For Amok Ltd. (1977) – In the 1977 Saskatchewan hearings on uranium developments, provided expert testimony before the Bayda Commission of Enquiry on socio-economic impacts associated with the Amok mining project at Cluff Lake.

Compensation & Monitoring Related to Resource Project Impacts

For Tsay Keh Dene First Nation (2001-2009) – Expert socio-economic and resource economics assistance with respect to settlement negotiations concluded with BC Hydro and the Province of British Columbia relating to impacts on the Tsay Keh Dene First Nation from the Williston Reservoir developments in the 1970s (AIP reached in 2006); related advice regarding the Peace Water Use (WUP) process and contracting arrangements for Tsay Keh WUP reservoir-related contracts with BC Hydro.

For Kwadacha First Nation (2001-2008) – Expert socio-economic and resource economics assistance with respect to settlement negotiations concluded with BC Hydro and the Province of British Columbia relating to impacts on Kwadacha First Nation from the Williston Reservoir developments in the 1970s (AIP reached in 2006; Final Agreement reached in 2008).

For Manitoba Hydro in the 1990's – Expert socio-economic and resource economics assistance with respect to claims by the community of South Indian Lake (early 1990's) and by Northern Flood Agreement communities, including the Cross Lake First Nation (1999-Present), related to post-project development impacts from hydroelectric power development.

For uranium mining companies (1999) – Project director for the preparation of a draft work plan for a community vitality monitoring program for northern communities in Saskatchewan affected by uranium mining development; the work plan requirement arose out of federal-provincial environmental impact panel hearings on the McArthur River and Cigar Lake mining projects; the work plan was prepared for a working committee with representatives from the three uranium mining companies (Cameco Corporation, COGEMA, and Cigar Lake Mining Corporation), the Saskatchewan Northern Mines Monitoring Secretariat, and the northern Saskatchewan Health Districts.

For BC Hydro (early 1990's) – Evaluation of a trust fund proposed to compensate five Lillooet Nation Bands for damages from hydroelectric generation and transmission activities.

For the Beaufort Sea Steering Committee (early 1990's) – Review of wildlife compensation program options in the event of an oil spill in the Beaufort Sea.

For Manitoba Hydro (1989-1990) – Project management of an independent post-project evaluation of the Grand Rapids Project impacts on Aboriginal communities, including direction of the socio-economic component of the evaluation.

Resource Rent, Royalty and Tax Policy – Related Expert Evidence

For Grand River Enterprises (GRE) Six Nations Ltd. (2013-2016) – Analysis of economic impacts of GRE manufacture on a First Nation reserve of unmarked tobacco products and sale of such products on other First Nation reserves in Ontario, and the impacts of Ontario Tobacco Quota regulation.

For Regional Municipality of Ottawa Carleton (RMOC) in the mid-1990's – Expert resource and regulatory economist evidence before the Ontario Municipal Board on By-Law 234/92, which imposed compensation payments on private landfill operators in the Region.



CAMERON F. OSLER
CHAIR/ PRINCIPAL/ SENIOR CONSULTANT

For a group of pipeline companies in Ontario (1989-1992) – Assistance with coordination of expert evidence in an arbitration, and provision of expert evidence on methodology to determine annual rent for pipeline use of a transmission corridor owned by Ontario Hydro.

For Sun Oil in the 1970's – Counsel on preparation of a brief to the Government of Canada on the proposed Federal Land Regulations for Oil and Gas Lands.

For the Canadian Potash Producers' Association in the 1970's and early 1980's – Expert assistance with taxation discussions with Saskatchewan authorities, analysis of the proposed government takeover of the potash industry, and liaison with legal counsel.

For the Uranerz-Inexco joint venture in the 1970's – Participation in discussions between the Saskatchewan Government and the uranium industry concerning uranium taxation revisions; provided economic counsel for these discussions.

For the Mining Association of British Columbia in the 1970's – Expert testimony before the Commission of Enquiry into property taxation in that province.

For the Mining Association of Canada in the 1970's – Preparation of analytical models for comparison of different mineral taxation structures.

For Canadian Industrial Oil and Gas Ltd. in the 1970's – Analysis of the public policy aspects of Saskatchewan Bill 42 relating to taxation (advice to legal counsel related to a court case).

Other Strategic Planning and Assessment

For the Yukon Energy Corporation and the Yukon Development Corporation (1987-Ongoing) – Financial and strategic planning counsel on major issues, including rate policy planning (see also Utility Regulation), major capital planning issues (see also Socio-Economic and Environmental Assessment, and Strategic Planning), management agreement arrangements, negotiations in the 1990s between YEC and various owners of the Faro mine, negotiation in 2006-2007 of Power Purchase Agreement (PPA) with Minto Explorations Ltd. and ongoing activities to amend the Minto PPA and to negotiate PPAs with other mines (including Alexco Resource Corp.).

For Manitoba Hydro (1999-early 2000s) – Assistance on various matters, including policy reviews related to debris management programs and planning related to US market consultations.

For the Northern Manitoba Economic Development Commission (1991-1992) – Participation in the preparation of two reports, contributing to the Commission's Sustainable Economic Development Plan for Northern Manitoba for the 1990s.

For Regional Municipality of Ottawa Carleton (RMOC) during the 1990's – Economic assessments of options to extend the life of the Trail Road Landfill site.

For Metropolitan Toronto (late 1980's) – Economic analysis of the best available technology for the utilization of the landfill gas resources at the Keele Valley Landfill site.

For a western energy company (early 1990's) – Preparation of a Cost-Benefit Analysis of a 160 MW co-generation project, assessment of the implications of the project for Manitoba Hydro, and participation in the discussions between the company and Manitoba Hydro.



CAMERON F. OSLER
CHAIR/ PRINCIPAL/ SENIOR CONSULTANT

For Western Economic Diversification (late 1980's) – Assessment of Winnipeg tri-government development corporation cash flow scenarios.

For the Government of Manitoba during the late 1980's and early 1990's – Advice and assistance in the preparation of proposal calls for the redevelopment of a historically significant site in Winnipeg, as well as participation in the developer selection and negotiation process.

For the Canadian Electrical Association in the late 1970's – Management of interdisciplinary team investigations with respect to the impacts of proposed federal atmospheric emission control guidelines on Canadian electrical generating industry thermal power stations.

RESEARCH PAPERS:

"The Process of Urbanization in Canada, 1600-1961." Simon Fraser University (M.A.) Thesis. 1968.

"Technological Change and the Economics of Agricultural Development." Simon Fraser University (M.A.) Thesis. 1968.

"Economic Analysis of Short-Term Alternatives Regarding Southern Indian Lake in Manitoba" (joint work with Dr. A.M. Lansdown, P.Eng., 1969).

"A New National Development Policy for Canada: The Relevance of Western Canada." Prepared for the Liberal Conference on Western Objectives. 1973.

"Canada's Gains and Losses from Oil Export Taxes" (joint work with Dr. R.W. Fenton, 1973).

"Resource Management Factors Influencing Mineral Development in North Central Canada." Paper presented to the annual western meeting of the Canadian Institute of Mining and Metallurgy, Winnipeg, October 7, 1974.

"Energy, Provincial Rights and Canadian Unity." 1973.

"An Evaluation of 'An Energy Policy for Canada'" (joint work with Dr. R.W. Fenton, 1973).

"Resource Management Factors Influencing Manitoba Mining." Natural Resources Institute, University of Manitoba. 1974.

"Liquid Fuels from Renewable Resources in Canada: Systems Economic Studies." Paper presented to the Institute of Gas Technology Symposium on Energy from Biomass and Wastes, Washington, DC. August 1978.

"Canadian Scenario for Methanol Fuel." Paper presented to the Alcohol Fuels Technology Third International Symposium, California, January 1979.

"Socio-Economic Impacts from Potential Canadian Methanol Fuel Development." Paper presented to the IV International Symposium on Alcohol Fuels Technology, Brazil. October 1980.

"Canadian Methanol Development Using Natural Gas and Wood Feedstocks." Paper presented to the First IEA Conference on New Energy Conservation Technologies and their Commercialization, Berlin. April 1981.

"Methanol as an Alternative Automotive Fuel: CMC's Approach and Experience." Paper presented to the West Coast International Meeting of the Society of Automotive Engineering, Vancouver, BC. August 1983.



CAMERON F. OSLER
CHAIR/ PRINCIPAL/ SENIOR CONSULTANT

"Status of CMC Fuel Methanol Production and Market Development Programs." Paper presented to the VI International Symposium on Alcohol Fuels Technology, Ottawa. May 21-25, 1984.

"Diesel & Thermal Electricity Generation Options." Background Paper for Yukon Energy Corporation Energy Planning Charrette, Whitehorse, March 6-9, 2011. Related presentations at the Energy Charrette: "Loads and Role of Diesel" and "Thermal Generation Options".

"LNG - Transition Fuel Option for Yukon." Paper presented at Yukon Energy LNG Workshop, Whitehorse, January 18, 2012.

Forkast

Municipal and Regulatory Consulting

**39 Tracy Crescent
Winnipeg, MB
R2M 4H5**

Gerry Forrest

G. D. (Gerry) Forrest is a professional public administrator who has been involved in the Canadian Federal, Provincial and Municipal Public policy and Energy Regulatory arena for nearly four decades, the last 17 years in the energy regulatory sector. Gerry's career path includes roles as Deputy Minister of Municipal Affairs, Urban Affairs and Rural Development and former Chair and CEO of the Public Utilities Board of Manitoba. In addition, he has been a past chair/president and member of many intergovernmental, pensions, federal, provincial and regulatory associations.

As a professional administrator in both positions as Deputy Minister and Chair of the Public Utilities Board, Gerry was responsible for the leadership and direction of all financial and people resources required to meet specific goals and public interest policies. Those include the physical geographic planning strategies to use assets and infrastructure efficiently and effectively, to organize and deliver economic growth strategies, financial prudence and independence, and quality service standards for end users.

In his capacity of Deputy Minister of Municipal Affairs, Gerry's department recommended legislation to create a special Deputy Minister /senior officer Forum which met frequently to discuss issues related to interdepartmental liaison and collaboration. This committee reports directly to a cabinet committee and makes recommendations for increased efficiency and effectiveness with particular respect to program implementation that impacted other departments and ministries. While unique at the time, the Forum continues to be very successful today and has facilitated improved relationships between departments within government.

During his assignment to Urban Affairs and Rural Development, Gerry also acted as the Chairman of the Interdepartmental Planning Board, providing advice to the government on all land and water related issues. In Rural Development, he was responsible for the Manitoba Water Services Board, which offered a number of community based support programs to Manitobans with potable water and sewer infrastructure support for Manitoba Agra-related industries.

For a 13-year period (1991 – 2004), Gerry was Chairman and CEO of the Public Utilities Board of Manitoba, which was responsible for the regulation of the natural gas, propane, electricity, basic car insurance, and water and sewer services. Gerry was responsible for all management and supervision of the Board members as well as administrative, technical and legal services. As Chair of the Public Utilities Board, Gerry and his team additionally examined the Utility strategic, operational, service, financial and capital

plans to ensure an appropriate balance between the financial integrity of the Utility and the costs for the end user.

Gerry's leadership style, that of a collaborative and participative approach has resulted in the development of a unique set of skills that enables him to successfully develop, mediate and/or negotiate mutually beneficial solutions for a broad mix of stakeholder interests ranging from local consumer groups to large businesses, to governments to regulatory bodies. In addition, he is a specialist in the provision of policy and strategic advice to governments and the private sector with further expertise in regulatory affairs.

In 2008/09, Gerry participated on the Electricity Review Panel established by the Ministerial Energy Coordinating Committee to review electricity regulation, rates and subsidy programs in the Northwest Territories. The Panel travelled to eight different communities across the Northwest Territories holding public meetings and speaking to elected officials, utility senior managers, business people and residents. The Panel produced two reports, a consultation summary report titled "A Discussion with Northerners About Electricity" that summarized public interests and concerns heard by the Panel and "Creating a Brighter Future," which reviewed and made recommendations to the territorial government on electricity regulation, rates and subsidy programs.

Gerry is Past Chair of the Canadian Association of Member of Public Utilities (Camput) (Chair 1997-1999), past Chair, Municipal Employees Benefits Board (1977-1993), past Chairman, Intergovernmental Committee on Urban and Regional Research, Toronto, Canada (1977-1992), Chairman and President of Leaf Rapids Town Properties Ltd (Crown Corporation) (1977-1992), Board member and Chair, the Manitoba ARC Authority (1985-1991), Chairman, Provincial Interdepartmental Planning Board (1977-1992), Co-Chair, Provincial Decentralization Task Force (1988-1991) and Executive Committee Member of the Organizational Committee of the World Forum on Energy Regulation held in Montreal, Canada in May 2000.

Gerry holds a Diploma in public administration from the University of Manitoba, a Diploma in Municipal Administration, a Queens Certificate for Public Executives, and a Certificate from the Banff School of Management. Gerry has become a nationally and internationally recognized expert in the field of public administration and public utility regulation and has served as a university Guest Lecturer and conference/workshop speaker across Canada and the United States. In 2003 through USAID and the World Bank, Gerry was invited to make a presentation on the regulation and organization of Public Utilities to the senior administrators from a number of third world countries including Nepal, Bhutan, India, Bangladesh and Sri Lanka.

Finally, Gerry is very proud of his leadership as a founding member of the Manitoba Institute of Management International Management Associates Program through which he personally provided program assistance and policy advice for education, administration and technical support to the Countries of Anguilla, Saint Vincent and the Grenadines. He also holds an Honorary Life Membership in both the Manitoba Municipal Administrators Association and the Public Utility Tribunals of Canada. Gerry maintains his membership in the Institute of Public Administration, Canada.

Gerry retired in 2004 and now operates as a management consultant to government, municipalities and the private sector.

Since 2004, Gerry has been actively involved in energy policy and utility rate matters throughout North America, continuing to provide strategic advice to regulators, government departments, private industry and other stakeholders. He has prepared and participated in cost of service studies and operational reviews for utilities and as well large user clients.