F2015 to F2016 Revenue Requirements Rate Application

Appendix H



Regulatory Accounts Report

Fiscal F2013 to F2024

February 28, 2014

Table of Contents

1	Exec	utive Su	mmary	1
2	Regu	ulatory A	ccounts at BC Hydro	7
	2.1	History		7
	2.2	Descrip	otion of Regulatory Accounts	9
3	Reco	overy of	Regulatory Account Balances	11
	3.1		11	
		3.1.1	Variance Accounts	12
		3.1.2	Benefit Matching Accounts	17
		3.1.3	Non-cash Provisions	
		3.1.4	Rate Smoothing Accounts	
		3.1.5	IFRS Transition Accounts	19
	3.2	Summa	ary of Regulatory Account Recovery Mechanisms	21
4	Appli	ication o	f Interest to Regulatory Accounts	23
5	Fore	cast of F	Regulatory Account Balances	27
6			nalysis	
7	Cond	clusion		

List of Figures

Figure 1	BC Hydro – Actual and Forecast Regulatory Account Balances	
	(\$ million)	28

List of Tables

Table 1	Deferral Account Rate Rider	15
Table 2	DARR Percentages Applied to Deferral Accounts	16
Table 3	Rationale for Regulatory Account Recovery	21
Table 4	Recovery Mechanisms for Regulatory Accounts	22
Table 5	Application of Interest to Regulatory Accounts	26
Table 6	Regulatory Account Balances – Actual F2005 to F2013 and	
	Forecast F2014 to F2024 (\$ million)	29
Table 7	BC Hydro's Five Major Regulatory Accounts F2013 to F2024	30
Table 8	Cost Sensitivities	33

Regulatory Accounts Report

Page i

List of Appendices

Appendix A	Discussion of Issues Raised by Interveners/BCUC in RRA, the B.C. Government Review Panel and the Auditor General of B.C.
Appendix B	Detailed Description of Existing Regulatory Accounts

Page ii

BChydro 🗘

1 1 Executive Summary

This report describes BC Hydro's regulatory accounts, its plan to reduce the total 2 balance and number of accounts, and its principles regarding potential new accounts 3 and the application of interest to the accounts. It is provided in the context of the 4 Province's 10-Year plan for BC Hydro (the 10-Year Plan) announced on 5 November 26, 2013, and Directions No. 6 and 7, issued on March 6, 2014 to the 6 British Columbia Utilities Commission (BCUC). 7 BC Hydro uses various regulatory accounts, in compliance with BCUC orders, in 8 order to: 9 1. Better match costs and benefits for different generations of customers 10 2. Smooth out the rate impact of a large non-recurring cost or to smooth out rate 11 12 increases Defer to a future period the differences between forecast and actual costs or 13 revenues 14 BC Hydro is aware of concerns about the growth in the balances of its regulatory 15 accounts, the length of time that will be required to recover the significant balances 16 in the accounts, and potential impacts on intergenerational equity. This report 17 addresses these concerns and sets out how the balances in BC Hydro's regulatory 18 accounts will be recovered in a manner that reflects the nature of each regulatory 19 account. 20 This report looks out to the end of F2024, at which time BC Hydro's regulatory 21 accounts are forecast to total approximately \$4.06 billion, a reduction of just over 22 \$1 billion from the forecast maximum of \$5.1 billion in F2018 and F2019. The 23 number of regulatory accounts stands at 27 at the beginning of F2014, and based on 24 the forecast amortization periods, 13 regulatory accounts will have been fully 25 amortized by F2024. It should be noted that several of the regulatory accounts are 26

1 designed to capture costs on an ongoing basis and therefore may not be drawn down to zero within a 10-year period. Of the \$4.4 billion balance at the beginning of 2 F2014, BC Hydro is already collecting in its rates 19 of the 27 regulatory accounts 3 representing account balances of \$3.5 billion, or 80 per cent of the total balance. As 4 well, by the end of F2024 just over 84 per cent of the outstanding regulatory account 5 balances (approximately \$3.4 billion) consist of five regulatory accounts that either 6 match costs with associated benefits (Demand Side Management (DSM), Site C and 7 Smart Metering & Infrastructure) or that relate to the transition to International 8 Financial Reporting Standards (IFRS, – IFRS Property, Plant & Equipment and IFRS) 9 Pension) and 14 per cent (approximately \$550 million) will consist of two non-cash 10 provision accounts that are not recovered in rates until such time as an actual cash 11 expenditure is made against the provision. 12

There are two caveats that should be considered with regard to the balances shown 13 in this report, relating primarily to the fact that the balances are forecasts and actual 14 balances will be different and impacted by sensitivities that are further described in 15 section 6. First, the forecast of regulatory account balances shown in Table 6 16 indicates that the cost of energy variance accounts will have been fully paid down at 17 the end of F2023. However, due to the nature of these regulatory accounts, which is 18 described more fully in section 3.1.1 of the report, BC Hydro expects that there will 19 likely be balances in these accounts in each of the years of the forecast. These 20 accounts capture the variances between forecast and actual energy costs in each 21 year, which can be positive or negative. Due to the nature and number of variables 22 that determine actual energy costs, it is not possible to accurately forecast energy 23 costs in any given year. 24

A second caveat is that the balance in the Non-Current Pension Cost regulatory
 account is based on a calculation of the unrecognized actuarial gains and losses at
 the end of F2014. The annual actuarial experience is subject to large positive and
 negative fluctuations as actuarial experience is very sensitive to changes in market

1 discount rates. For example, a 1 per cent increase/decrease in the market discount rate for valuing the pension liability will give rise to an actuarial gain/loss on the 2 pension liability of approximately \$300 million. Therefore, BC Hydro expects that the 3 balances in this account will also vary from those currently forecast. 4 Regulatory accounts are not uncommon in the utility industry, and BC Hydro is not 5 alone in their use. Regulatory accounts are often used to reflect timing differences 6 between when a utility spends money to provide a service or acquire an asset, and 7 when that expenditure is recovered from ratepayers. The benefit of a particular 8 service or asset may accrue to ratepayers over a long period of time, and regulatory 9 accounts can serve to match the benefit with the cost, thereby supporting 10 intergenerational equity for current and future ratepayers. In other words, 11 BC Hydro's current customers are not required to pay for the full cost of an asset or 12 service that will provide benefits to customers over periods of 10, 20 or 30 years. A 13 good example is DSM costs. BC Hydro is spending money in current years to 14 reduce the amount of electricity that customers would otherwise use, resulting in 15 lower future energy costs and delayed or reduced infrastructure costs. The benefit of 16 such reduced costs through DSM impacts future customers and the cost of the DSM 17 programs is properly matched to the benefits enjoyed by those future customers by 18 deferring and amortizing those costs over 15 years, which is the average term of 19 DSM program benefits. 20

In some cases, regulatory accounts may also be used to transfer uncontrollable risks 21 and benefits to customers, in particular the differences between forecast and actual 22 costs due to changes in items such as water inflow levels, interest rates, and market 23 prices of energy, which cannot be accurately forecast. Expenditures deferred for this 24 reason are generally recovered over a shorter time period than those associated 25 with longer term benefits. This shorter recovery also supports intergenerational 26 equity, in that the benefits associated with the deferred cost are generally much 27 more immediate - for example, the cost of the energy which is used by current rather 28

than future customers. In this case the deferred costs should be recovered from
 ratepayers over a relatively short period.

A further, potentially overriding concern with the recovery of regulatory accounts is 3 the rate increases that may be required in any particular year due to their recovery. 4 Mitigation of rate increases may result in longer recovery periods than would be the 5 case if rate mitigation was not an issue. In addition, concerns about rate impacts 6 may also lead to the establishment of a regulatory account for the sole purpose of 7 smoothing the rate impact of a large one-time expenditure. The period of time over 8 which a one-time expenditure is recovered takes into consideration the amount of 9 the expenditure, its nature and other rate increase pressures that may exist at the 10 time. 11

As a Crown Corporation, BC Hydro has different priorities and risk considerations 12 than would be found with many investor-owned utilities (**IOUs**). In particular, while 13 there is a focus on providing service and value to its customers, there is also a goal 14 of keeping rates as low as practical; immediate cost recovery or share price are not 15 the paramount concerns to BC Hydro that they would be to an IOU. BC Hydro 16 therefore believes that an appropriate balance needs to be struck between keeping 17 rates low and recovering the regulatory account balances over a period of time that 18 accords with the nature of the expense being deferred, as discussed further in 19 section <u>3</u> of the report. 20

BC Hydro is also backed by the financial support of the Government of British
Columbia, which provides BC Hydro with the benefit of low borrowing costs and
avoids the need for it to access the financial markets directly for its financing needs.
This support allows BC Hydro to finance the balances in its regulatory accounts
almost entirely with debt, which an IOU would find difficult to sustain, as such large
balances could impair the ability of an IOU to access debt financing at low interest
rates.

1 BC Hydro's regulatory accounts are subject to review and approval, both externally and within BC Hydro. In most cases, BC Hydro has sought BCUC approval for 2 establishing regulatory accounts and the BCUC has approved BC Hydro's requests 3 for a deferral after analysis and enquiry into the need and use of the regulatory 4 account. In some cases, the BCUC has been directed by Government to allow costs 5 to be recorded in a regulatory account, as discussed further in section 2.1. The 6 BCUC itself has also directed that certain regulatory accounts be set up, as was the 7 case with the DSM regulatory account, which is forecast to have the largest balance 8 of all of BC Hydro's regulatory accounts by F2024 (forecast to be approximately 9 \$1.4 billion at the end of F2024). Interveners have also explicitly agreed to the 10 creation of regulatory accounts in some cases. BC Hydro also provides details of its 11 regulatory account balances in its public quarterly and annual financial statements, 12 which can be found on its website. 13

BC Hydro's benefit-matching regulatory accounts are capital-like, in that they capture costs that are similar to capital assets, as they will provide long term benefits to BC Hydro's current and future customers. Also similar to capital assets, the amounts deferred in these accounts are subject to management oversight and governance processes. For major expenditures such as Site C, DSM and SMI, business cases have been developed, reviewed and approved by BC Hydro's senior management and board.

The annual budget planning process also ensures that expenditures are prioritized 21 and reviewed before being spent and placed into regulatory accounts. BC Hydro's 22 planning and budgeting framework includes both top-down and bottom-up elements. 23 The top-down element, which is strategic in nature, includes a review of BC Hydro's 24 strategic objectives and performance measures. The bottom-up elements, which are 25 operational in nature, involve reviews by the business groups of their needs, the 26 identification of projects and initiatives and resourcing of work plans. Trade-offs, 27 including cost reductions and productivity improvements to offset cost pressures, are 28

1 made to stay within the overall business groups operating cost target set by the

2 top-down approach. BC Hydro's senior management reviews the operating plans for

- consistency and alignment with BC Hydro's priorities and strategic objectives from
- an overall consolidated view.

5 With respect to the capital-like accounts, there is a matching of costs incurred with

- ⁶ the long-term benefits that are being delivered to future generations of customers.
- 7 Shortening the amortization periods of these accounts to reduce the balances

8 sooner would be counter to one of BC Hydro's goals of achieving intergenerational

9 equity and the matching of costs and benefits.

For these reasons, and as discussed further in this report, BC Hydro believes that the account balances remaining at the end of F2024 are acceptable and do not cause BC Hydro undue concern in terms of intergenerational equity nor in terms of its financial health.

However, if there was a concern about the overall level of BC Hydro's regulatory
 account balances, deviations from this approach could be considered, though it
 would be contrary to BC Hydro's principles guiding the recovery of the regulatory
 account balances.

Three points are worth noting with respect to the regulatory account recovery 18 periods that BC Hydro is proposing in this report. In the report, accounts currently 19 subject to the Deferral Account Rate Rider (DARR) will continue to be recovered at 20 amounts determined through the existing mechanism, as discussed in section 3.1.1. 21 Although, in accordance with Directions No. 6 and 7, and as further discussed in 22 section 3.1.1, the DARR itself will remain at 5 per cent in each year, regardless of 23 the balances of the three energy deferral accounts. In addition, BC Hydro proposes 24 that the recovery mechanisms are to be applied consistently over the life of the 25 regulatory account. As well, there is an alignment between costs and benefit 26 recognition to achieve intergenerational equity. 27

1 BC Hydro still expects to seek approval of new regulatory accounts over the period of this report, if warranted by one or more of the following three guiding criteria 2 (discussed further in section 2.2): a) to better match costs and benefits for future 3 generations of customers; b) to smooth out the rate impacts of large non-recurring 4 costs or to smooth out rate increases; or c) to defer to a future period differences 5 between forecast and actual costs or revenues. However, BC Hydro only plans to 6 apply for new regulatory accounts in exceptional cases or for un-forecasted or 7 uncontrollable material expenditures that would have a significant impact on 8 BC Hydro's net income if not recovered from customers. BC Hydro considers that 9 cumulative expenditures that would have a net income impact of \$10 million or more 10 in a year would be material. 11 The report begins by setting out a brief history of regulatory account use at 12 BC Hydro and then describes BC Hydro's main regulatory accounts and their 13

particular reasons for being in place. This is followed by a discussion of the rationale 14 for the recovery plan for each regulatory account. The application of interest to the 15 regulatory accounts and a forecast of regulatory account balances is then provided, 16 followed by a discussion on the sensitivity of the regulatory account balances to 17 changes in key earnings variables. Finally, in Appendix A, BC Hydro discusses the 18 issues and concerns regarding the regulatory accounts that have been raised by the 19 BCUC and interveners, the Auditor General of B.C., and by the Government Review 20 Panel and in Appendix B, BC Hydro provides a detailed explanation of each 21 regulatory account. 22

23 2 Regulatory Accounts at BC Hydro

24 2.1 History

BC Hydro must apply to the BCUC in order to establish regulatory accounts, and
 must also seek approval for the timeline and mechanism to recover the balances in

the accounts from ratepayers. BC Hydro can also be directed by the BCUC to
 establish regulatory accounts.

BC Hydro has used various forms of regulatory accounts since the 1980s. In 1982,
the BCUC directed BC Hydro to create a Rate Stabilization Account to capture
revenue from export sales of surplus energy less associated expenses. In 1990, the
BCUC rescinded the export sales rate stabilization account and replaced it with a
new rate stabilization account to mitigate the impact of volatile earnings. Transfers
were made to this new account during high income years to reduce the need for rate
increases in lower income years.

During the period F1995 to F2003 BC Hydro was under a rate freeze; however,
 during this time BC Hydro was directed to establish, or requested the approval of,
 several regulatory accounts.

- In 1995, the BCUC directed all regulated gas, electric and steam heat utilities in
 British Columbia to defer and amortize into rates, costs associated with DSM
 activities that achieve energy savings. The DSM activities and associated costs
 generate energy savings to customers over a period of time longer than the year of
 expenditure, so the deferral and amortization of these costs aligns the recognition of
 costs with the period that customers receive benefits.
- ¹⁹ In 2002 BC Hydro applied for and received approval for a regulatory account to
- 20 capture foreign exchange gains and losses due to the translation of foreign currency
- denominated long-term monetary items. Foreign exchange gains and losses are
- subject to external market forces over which BC Hydro has no control.
- In 2004, subsequent to an inquiry into BC Hydro's heritage generation assets,
- 24 Heritage Special Direction No. HC2 was issued by the Province. It required the
- ²⁵ BCUC to direct the establishment of the Heritage Deferral Account and the Trade
- ²⁶ Income Deferral Account. The former captures the variances between BC Hydro's

actual and forecast cost of supply from heritage assets, and the latter captures

variances between the actual and forecast net income of Powerex.

- ³ The BCUC directed the establishment of the Heritage Deferral Account and the
- ⁴ Trade Income Deferral Account in its final order regarding BC Hydro's F05/F06 RRA.
- 5 By the same order, the BCUC directed the establishment of the Non-Heritage
- 6 Deferral Account to capture and defer variances between the forecast and actual
- ⁷ energy costs that are not associated with the heritage assets.

BC Hydro must apply to the BCUC in order to establish regulatory accounts, and
must also seek approval for the timeline and mechanism to recover the balances in
the accounts from ratepayers. Since F2005 BC Hydro has sought and received
approval from the BCUC for a number of regulatory accounts.

2.2 Description of Regulatory Accounts

Regulatory accounts can either be regulatory assets (amounts potentially to be
 recovered from BC Hydro ratepayers) or regulatory liabilities (amounts potentially to
 be refunded to BC Hydro ratepayers).

As BC Hydro has previously stated to the BCUC¹, the purpose of a regulatory
 account is to defer, for potential future recovery or refund, costs or revenues that
 would otherwise be recorded in the current accounting period. BC Hydro continues
 to believe that there are three situations where a regulatory account may be
 warranted:

- To better match costs and benefits for different generations of customers
- To smooth out the rate impact of a large non-recurring cost or to smooth out rate increases

¹ BC Hydro Amended F12-F14 RRA – section 7.1.2.

To defer to future periods, differences between forecast and actual costs or
 revenues

With respect to the deferral of differences between forecast and actual costs,
BC Hydro remains of the view that it should assume financial responsibility for
controllable risks and create regulatory accounts for uncontrollable risks. However,
to address concerns around the proliferation of regulatory accounts, BC Hydro also
believes that with regard to the establishment of new regulatory accounts, there
should be an objective measure used as a hurdle.

BC Hydro will only propose that a new regulatory account be established for 9 amounts that are material and un-forecast or uncontrollable, and that should be 10 collected from ratepayers. BC Hydro proposes that an un-forecast expenditure with 11 a net income impact of greater than \$10 million would be considered material and be 12 deferred for future recovery upon approval by the BCUC. BC Hydro also expects 13 that there may also be circumstances in which a regulatory account may be required 14 to address a required accounting treatment of costs and to ensure proper recovery 15 of those costs in rates, in which case the net impact test would not apply. 16

In its F2005/F2006 Revenue Requirements Application (F05/F06 RRA), BC Hydro
 set out the criteria that were to be used to assess whether a risk was controllable or
 uncontrollable as follows:

- 20 1. BC Hydro's ability to directly or indirectly influence the cost category
- 21 2. The volatility of the cost category
- 22 3. The predictability of the cost category
- 23 4. The materiality of the cost category to the revenue requirement
- $_{24}$ 5. The frequency of major exceptions within the cost category²

² BC Hydro F05/F06 RRA Final Argument, page 7.

1 6. The BCUC, in its Decision concerning the F05/F06 RRA, accepted these

criteria but also concluded that risk/reward considerations were a relevant
 criterion

4 **3**

Recovery of Regulatory Account Balances

5 3.1 Categorization of Regulatory Accounts

⁶ For the purpose of establishing appropriate recovery mechanisms, BC Hydro

7 categorizes its regulatory accounts into the following categories, which also align

- with the three purposes for which BC Hydro uses regulatory accounts, as previously
 stated:
- Variance Accounts (defer to a future period the differences between forecast
 and actual costs):
- 12 (a) Cost of Energy Variance Accounts
- 13 (b) Other Cash Variance Accounts
- 14 (c) Non-Cash Variance Accounts
- 15 2. Benefit Matching Accounts (matching of costs to benefits for future generations)
- Rate Smoothing Accounts (smooth out rate impact of large non-recurring costs
 or rate increases)
- IFRS Transition Accounts (both smooth out the impacts of transition to IFRS
 and match benefits to future generations)
- In addition, BC Hydro also has three regulatory accounts that are Non-Cash
- 21 Provisions and which are required under Canadian Generally Accepted Accounting
- Principles (**CGAAP**) in order to create a regulatory asset to match an accounting
- 23 liability.

The amortization period for the recovery of individual regulatory accounts is first dependent on which of the above categories the account falls into (with the exception of the Non-Cash Provision accounts, which are drawn down as expenses are actually incurred) as different recovery mechanisms have been developed for each category which consider the characteristics of that category, as further described below.

Three points are worth noting regarding the recovery of regulatory accounts over the 7 ten-year period of this report. First, accounts currently subject to the DARR will 8 continue to be recovered through that mechanism, as modified by Directions No. 6 9 and 7 and as discussed further in section 3.1.1. BC Hydro believes that the DARR 10 remains an appropriate recovery mechanism that minimizes the risk of not achieving 11 intergenerational equity. Second, BC Hydro proposes that the recovery mechanisms 12 are applied consistently over the life of the regulatory account. Finally, there is an 13 alignment of costs and benefit recognition to address intergenerational equity 14 concerns. This latter point is reflected in the contrasting shorter and longer recovery 15 periods for different regulatory accounts based on the nature of the costs in the 16 accounts. BC Hydro notes that these objectives may, from time to time need to be 17 balanced with the objective of keeping rates low, which may give rise to rate 18 mitigation or smoothing mechanisms or regulatory accounts, as discussed in the 19 Executive Summary of this report. 20

The recovery mechanisms for each category of regulatory account is next discussed in further detail, with a summary of the rationale for each account, in <u>Table 3</u> and a summary of the amortization periods for each account in <u>Table 4</u>.

24 **3.1.1 Variance Accounts**

Variance accounts capture the difference between forecast costs and revenues, on
 which rates are set in BC Hydro's revenue requirements applications, and the actual
 costs and revenues that are incurred or received by BC Hydro. Not all forecast costs

1 will be subject to variance account treatment. For those costs that BC Hydro has control over, it generally accepts the financial risk of the difference between the 2 forecasted and actual costs. However, for those costs that BC Hydro does not have 3 control over, it can be difficult to accurately forecast them and therefore regulatory 4 accounts are often set up to capture the difference between the forecast and actual 5 costs and recover or refund the variance, through the rates charged to ratepayers. 6 This effectively transfers the forecast cost risk of these uncontrollable costs to 7 customers. BC Hydro considers that it is appropriate that these costs be paid by 8 ratepayers, as the costs are being incurred in the provision of service to its 9

10 ratepayers.

With regard to forecast revenue variances, it can also be difficult for BC Hydro to 11 forecast exactly when some revenues will be received. The current example of this 12 situation is the Real Property Sales Regulatory Account which will be set up in 13 F2015. The 10-Year Plan sets rates in F2015 and F2016 on the forecast assumption 14 that BC Hydro will earn \$10 million per year in real estate sales. In actual fact, real 15 estate sales may be greater or lesser than that amount in each of F2015 and F2016 16 and the Real Property Sales Regulatory Account will capture the difference between 17 the forecast and actual sales. 18

19 Cost of Energy Variance Accounts:

The cost of energy variance accounts are made up of the Heritage Deferral Account, the Non-Heritage Deferral Account and the Trade Income Deferral Account. The Heritage Deferral Account and Trade Income Deferral Account were created pursuant to Heritage Special Direction No. HC2 and BC Hydro included in the F05/F06 RRA a request to also set up the Non-Heritage Deferral Account to capture variances between the forecast and actual energy costs that are not associated with heritage assets.

1 The purpose of the cost of energy variance accounts (the three of which are also referred to as the "Deferral Accounts") is to defer the difference between forecast 2 and actual costs of energy and trade income, for recovery in a future period. For 3 example, the Deferral Accounts are used to smooth net income when energy costs 4 are unexpectedly higher or lower than forecast. This may happen due to variations in 5 reservoir water levels (due to more or less precipitation and snow melt in any given 6 year), resulting in the requirement for BC Hydro to change its mix of energy 7 resources to meet load demand. While rates are set assuming average water inflow 8 levels, the lower cost Hydro generation levels can fluctuate by +/- 5,000 GWh 9 between low and high water years, resulting in the need to sell surplus power or 10 purchase energy from the market. As water inflow levels are uncontrollable it is 11 appropriate that the risk of this cost should be borne by BC Hydro's customers and 12 recovered in rates. 13 BC Hydro recovers the balances in the cost of energy Deferral Accounts using the 14

DARR. In the F09/F10 RRA Decision, the BCUC approved BC Hydro's proposal that the level of the DARR, to be effective on April 1 of a given year, be based on the net balance in the Deferral Accounts as of September 30 of the previous year in accordance with <u>Table 1</u> (this methodology is referred to as the **DARR Table Mechanism**). 1

Table 1 De	ferral Account Rate F	Rider
Net Forecast Bal	ance at March 31	% Rate Rider
>\$ million	<=\$ million	Following April 1st
< -500	-500	(5.0)
-500	-450	(4.5)
-450	-400	(4.0)
-400	-350	(3.5)
-350	-300	(3.0)
-300	-250	(2.5)
-250	-200	(2.0)
-200	-150	(1.5)
-150	-100	(1.0)
-100	-50	(0.5)
-50	0	0.0
0	50	0.0
50	100	0.5
100	150	1.0
150	200	1.5
200	250	2.0
250	300	2.5
300	350	3.0
350	400	3.5
400	450	4.0
450	500	4.5
500	> 500	5.0

The BCUC also determined in the F09/F10 RRA Decision that if BC Hydro considers 2

- a deviation from the DARR Table Mechanism is warranted due to special 3
- circumstances then BC Hydro should seek BCUC approval of such deviation. In the 4
- Amended F12-14 RRA Decision Order No. G-77-12A, the BCUC determined that the 5
- DARR was to be set at 5 per cent for F2013 and F2014. In addition, on 6
- March 6, 2014 the Province issued Directives No. 6 and 7 which require that the 7
- DARR be maintained at 5 per cent and the amount collected in excess of what 8
- would otherwise be collected under the DARR Table Mechanism be used to offset 9
- general rate increases. The DARR percentages that are expected to be applied to 10

the Deferral Accounts over the next 10 years are shown in <u>Table 2</u>. <u>Table 2</u> indicates

2 that the DARR percentages applied to Deferral Accounts will be nil for F2024,

however, as noted in the Executive Summary, BC Hydro expects that due to the

4 nature of these cost of energy Deferral Accounts, there will likely be balances in

5 these accounts in each of the forecast years. The amounts shown in <u>Table 2</u> are

6 based on the forecast of balances shown in <u>Table 6</u>

7 8 Table 2

DARR Percentages Applied to Deferral Accounts

	F15 (%)	F16 (%)	F17 (%)	F18 (%)	F19 (%)	F20 (%)	F21 (%)	F22 (%)	F23 (%)	F24 (%)
DARR	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Amount applied to Deferral Accounts	5.0	5.0	4.5	3.5	1.5	1.0	0.5	0.5	0.5	0
Amount applied to general revenues	0	0	0.5	1.5	3.5	4.0	4.5	4.5	4.5	5.0

9 Also, in Appendix H of the Amended F12-F14 RRA, BC Hydro provided an analysis

and simulation of the DARR mechanism. The analysis looked at the probability of

11 the cost of energy Deferral Account balances becoming zero at some point due to

12 the revenues from the DARR and the fluctuations, positive and negative, in

¹³ multi-year variations in water inflows. The analysis concluded that by using the

DARR table mechanism there was an 80 per cent probability that the total balance in

the deferral accounts would reach zero in the next 10 years, and almost a

16 100 per cent probability that the total balance in the deferral accounts would reach

17 zero in the next 20 years.

18 Other Cash Variance Accounts:

¹⁹ Other Cash Variance Accounts capture the difference between forecast and actual

- 20 costs for other non-energy related costs that BC Hydro considers to be
- ²¹ uncontrollable, and for which it should not carry the risk. Examples of such accounts

are the Storm Restoration and the Total Finance Charges regulatory accounts.

2 Balances in these accounts are generally recovered in the next test period, as they

3 represent costs that do not provide long-lasting benefits to future generations of

⁴ ratepayers and that therefore should be recovered from current ratepayers.

5 Non-Cash Variance Accounts:

The purpose of these accounts is to capture the differences between forecast and 6 actual uncontrollable costs, which are non-cash in nature, for recovery from or 7 refund to ratepayers in a future period. There are two regulatory accounts in this 8 category: 1) the Foreign Exchange Gain/Losses and 2) Non-Current Pension Cost 9 regulatory accounts. The recovery period for these accounts should match the 10 underlying attribute. For example, the non-current pension cost account is amortized 11 over the average remaining service life of employees and the foreign exchange 12 gain/loss account is amortized on a straight-line pool basis over the weighted 13 average life of the related debt. 14

15 **3.1.2 Benefit Matching Accounts**

The purpose of these accounts is to better match current costs to future benefits, so 16 that each generation of customers pays its fair share of the costs. Benefit matching 17 accounts include those regulatory accounts with some of the most significant 18 balances. The largest balances are forecast for the DSM, SMI and Site C regulatory 19 accounts, all of which are related to long-lasting assets that should not be paid 20 entirely by current customers, but whose cost should be spread out for recovery 21 from future customers to ensure intergenerational equity. Even though CGAAP 22 accounting rules (that now include IFRS)³ may not permit the capitalizing of these 23 costs, BC Hydro believes that capturing these amounts in a regulatory account 24 provides for cost matching and a degree of rate smoothing for large expenditures 25

³ Government Organization Accounting Standards Regulation 257/2010 requires BC Hydro to adopt IFRS, subject to United Stated Financial Accounting Standards Board Accounting Standards Codification 980 (ASC 980), effective April 1, 2012 (F2013). ASC 980 provides for the use of regulatory accounting where directed by a rate-regulated utility's rate regulator.

1 that have a lasting benefit. For example, the Site C Regulatory Account was established to provide a better matching of the up-front investigation costs with the 2 future benefits from this project. If the Site C investigation costs were expensed as 3 required under IFRS, it would cause an unfair rate impact on current customers, 4 considering the long development period before the Site C dam will be completed 5 and placed into service and the fact that customers over many decades after the 6 completion of the project will be receiving the benefits that incurring these costs 7 today will have allowed. 8

9 3.1.3 Non-cash Provisions

Non-cash provisions are regulatory accounts set up in response to loss provision 10 liabilities required under CGAAP. As such, these provisions are not recovered in 11 rates until such time as actual cash expenditures are made against the provision. 12 These regulatory accounts will remain until the requirement for the provision is no 13 longer required under CGAAP. The regulatory assets preserve BC Hydro's right to 14 collect in rates, subject to BCUC approval, any actual amounts paid in respect of 15 these provisions. The three non-cash provision regulatory accounts that BC Hydro 16 currently has are the First Nations Provisions, Environmental Provisions and Arrow 17 Water Provision regulatory accounts. These accounts are forecast to still have 18 significant balances at the end of F2024 totalling \$427 million in the First Nations 19 Provisions regulatory account (after accounting for actual costs and accretion over 20 the 10-year period)⁴ and \$131 million in the Environmental Provisions regulatory 21 account (drawdowns of this account extend out to F2045). 22

23 3.1.4 Rate Smoothing Accounts

Rate Smoothing accounts serve to mitigate the rate impact of either large one-time
 expenditures or overall general rate increases that may otherwise be required to
 recover BC Hydro's approved revenue requirements. During the period of the

⁴ The balance in the First Nations Provision Regulatory account also reflects the fact that some of the First Nations Settlement Agreements include payments in perpetuity.

F12-F14 ARRA, BC Hydro had two rate smoothing accounts 1) the Waneta rate
 smoothing account; and 2) the F12-F14 rate smoothing account. Both of these
 accounts will have expired by the end of F2015.

The Province, as part of the 10-Year Plan, by way of Directive No. 7 to the BCUC requires BC Hydro to establish a rate smoothing regulatory account in F2015 in order to smooth the impacts of the rate increases that would otherwise be applicable in order to mitigate rate shock in any particular year. BC Hydro is forecasting that the balance in the F2015 rate smoothing regulatory account will be nil at the end of F2024.

10 3.1.5 IFRS Transition Accounts

Finally, IFRS Transition regulatory accounts have been put in place to smooth the 11 impact of the transfer to IFRS accounting rules, which came into effect at the start of 12 F2013. The move to IFRS does not create new costs nor increase financial risks; 13 rather the move to IFRS changes the timing of the recognition of revenues and costs 14 into income. The two IFRS Transition Accounts are the IFRS Pension and the IFRS 15 Property Plant & Equipment (**PP&E**) regulatory accounts. The IFRS Pension 16 regulatory account is required due to the different treatment under IFRS of 17 unamortized experience gains and losses on BC Hydro's pension and other 18 post-employment benefit plans. IFRS requires recognition of these amounts on the 19 balance sheet, which was not required under the previous accounting rules. The 20 IFRS PP&E regulatory account will phase in overhead costs of capital projects that 21 can no longer be capitalized under IFRS. These costs were previously recorded on 22 the balance sheet as property, plant and equipment, and will be amortized on the 23 same schedule as the assets they are associated with. 24

The IFRS Transition regulatory accounts have been set up under the criteria of rate smoothing and benefit matching of asset costs with their useful lives. If BC Hydro were to have recognized the impact of the transition to IFRS in its rates at the time of

1 the transition, the rate impact for customers would have been significant followed by a drop in rates the following year. The IFRS Transition regulatory accounts also act 2 to recover the transition costs of pension and capital assets over the same period of 3 time as if the IFRS rules had not come into being, and therefore have very long 4 recovery periods of 20 years for the IFRS Pension regulatory account and 40 years 5 for the IFRS PP&E regulatory account. The IFRS Transition regulatory accounts are 6 forecast to have significant balances remaining at the end of F2024; the IFRS 7 Pension regulatory account balance is forecast to be \$306 million, while the IFRS 8 PP&E regulatory account balance is forecast to be \$976 million. 9 Table 3 provides a summary of the rationale for determining appropriate recovery 10 mechanisms for BC Hydro's regulatory accounts, based on the foregoing discussion 11

regarding the nature of the accounts, and BC Hydro's objectives in recovering the

13 account balances.

BChydro

	Rationale for Regulatory Account Recovery						
Type of Regulatory Account	Rationale for Recovery Mechanism						
Variance Accounts:							
Cost of Energy Variance Accounts	The DARR mechanism minimizes intergenerational inequity by being responsive to the changing net balance in the cost of energy variance accounts, while maintaining rate stability for customers to the extent practicable.						
Other Cash Variance Accounts	To minimize intergenerational inequity, cash variance accounts should be recovered in the subsequent test period.						
Non-Cash Variance Accounts	Non-cash variances should be recovered over the remaining period of the associated asset or liability (e.g. remaining service life of employees or remaining term of debt issues).						
Benefit Matching Accounts	To achieve intergenerational equity, the recovery period should match the future benefit period of the expenditure.						
Non-Cash Provisions	Since non-cash provisions are not recovered in rates, no recovery mechanism is required. The provision is drawn down when actual expenditures are charged to the deferral account.						
Rate Smoothing Accounts	To balance the concerns of rate shock and intergenerational equity, the balances in rate smoothing accounts should be recovered over a period not exceeding 10 years.						
IFRS Transition Accounts	To smooth in the impact of the transition to IFRS, the balances in these accounts should be recovered on the same basis as they would have been recovered in the absence of IFRS.						

3 3.2 Summary of Regulatory Account Recovery Mechanisms

- ⁴ <u>Table 4</u> provides a summary of the recovery mechanisms for each of BC Hydro's
- 5 regulatory accounts.

Regulatory Accounts Report

F2015 to F2016 Revenue Requirements Rate Application

BChydro 🖸

1 2

Table 4	Recovery Mechanisms for Regulatory
	Accounts

	Recovery Mechanism
Cost of Energy Variance Accounts	,,,
Heritage Deferral Account	DARR
Non-Heritage Deferral Account	DARR
Trade Income Deferral Account	DARR
Other Cash Variance Accounts	
Storm Restoration	Next Test Period
Amortization of Capital Additions	Next Test Period
Total Finance Charges	Next Test Period
Rock Bay Remediation Costs	Next Test Period
Arrow Water Divestiture Costs	Next Test Period
Asbestos Remediation Costs	Next Test Period
Home Purchase Option Plan	Next Test Period
Real Property Sales (new)	Next Test Period
Non-Cash Variance Accounts	
Foreign Exchange Losses (Gains)	Straight-line Pool Method
Non-Current Pension Cost	Average Remaining Service Life
Benefit Matching Accounts	
Demand-Side Management	15 Years
First Nations Costs	10 Years (see Note 1, below)
Site C	To Be Determined
Future Removal & Site Restoration	As Dismantling Costs Are Incurred
Pre-1996 Contributions	45 Years (to F2040)
Capital Project Investigation (closed)	10 Years (to F2021)
Smart Metering & Infrastructure	15 Years (starting in F2015)
Non-Cash Provisions	
First Nations Provisions	N/A
Environmental Provisions	N/A
Arrow Water Provision	N/A
Rate Smoothing Accounts	
F2010 ROE Adjustment (closed)	6 Years (to F2015)
Waneta (closed)	5 Years (to F2015)
F12-F14 Rate Smoothing (closed)	3 Years (to F2014)
Rate Smoothing (new)	10 years
IFRS Transition Accounts	
IFRS PP&E	40 Years (to F2061)
IFRS Pension	20 Years (to F2032)

Note 1: BC Hydro proposes for the First Nations Costs regulatory account that the F2014 closing balance
 related to settlement payments and negotiation costs will be amortized over 10 years beginning in
 F2015. Future lump sum settlement payments are to be amortized over 10 years and annual
 negotiation costs and settlement payments will be expensed in the year of expenditure.

Regulatory Accounts Report

F2015 to F2016 Revenue Requirements Rate Application

BChydro

As shown in <u>Table 4</u> above, BC Hydro will be adding two new regulatory accounts
 as part of the 10-Year Plan related to the following:

Real Property Sales – Due to the uncertainty in the timing of transactions,
 variances related to actual gain on sales compared to the gains included in the
 forecast used to set rates would be captured in this new account

Rate Smoothing - As part of the Province's rate plan a Rate Smoothing
 regulatory account is needed to mitigate rate increases in the short-term

4 Application of Interest to Regulatory Accounts

The same principle of matching costs with benefits results in some regulatory 9 accounts also attracting interest, as the carrying costs of maintaining the account 10 balances may have a real cost in any particular period that needs to be recovered in 11 rates. For cash variance regulatory accounts that come about through a direct cash 12 outlay from BC Hydro, the related interest costs are generally included as part of the 13 regulatory accounts. BC Hydro incurs financing charges to carry amounts that were 14 paid in cash but not recovered in rates in the same test period. This category of 15 account is recovered over a short period of time. For some accounts, the interest 16 cost may be immediately expensed from the regulatory account to rates, rather than 17 being carried over and amortized for recovery in future rates. 18

Variance regulatory accounts such as energy deferral accounts also attract interest
 because BC Hydro does not forecast variances in the accounts. When borrowing
 costs are incurred to fund these unplanned expenditures, they are deferred to keep
 ratepayers and the shareholder cost-neutral in the test period. For the remaining
 regulatory accounts, interest is generally applied when there is a working capital
 effect on BC Hydro.

Generally, benefit-matching accounts such as Site C also attract interest because of
 their similarities to PP&E under construction and Interest During Construction (**IDC**).

1 BC Hydro incurs financing charges as a result of not immediately recovering the costs of construction of large assets. It is therefore fair that these costs be recovered 2 from future ratepayers, rather than be recovered from current ratepayers, so that 3 there is intergenerational equity between current and future ratepayers who will be 4 enjoying the benefits of the earlier expenditures. 5 Interest applied to regulatory accounts does not have the effect of increasing or 6 decreasing BC Hydro's allowed net income, as the capitalized interest merely offsets 7 the unbudgeted incremental interest costs. BC Hydro uses the weighted average 8 cost of debt of the current period as the interest rate for regulatory accounts and 9 IDC. The current interest rate is 4.73 per cent, and is applied on a monthly basis to 10 the regulatory accounts. 11 Based on the forgoing criteria, BC Hydro applies interest to all regulatory accounts, 12 with the exception of the following accounts: 13 (a) Non-cash regulatory accounts (such as provisions) 14 (b) Rate-smoothing regulatory accounts (since the annual transfers to a 15 rate-smoothing regulatory account already reflect the impact of the account on 16 finance charges) 17 (c) The Total Finance Charges Regulatory Account (since interest costs are part of 18 total finance charges) 19 Regulatory accounts that capture timing differences (such as pre-1996) (d) 20 Contributions) 21 BC Hydro has three accounts that should attract interest based on the above criteria, 22 but which have not been subject to interest historically: 23 (a) The Future Removal and Site Restoration Regulatory Account (FRSR 24 **Regulatory Account**) 25

(b) The Capital Project Investigation Costs Regulatory Account (CPI Regulatory
 Account)

3 (c) The First Nations Costs Regulatory Account (FNC Regulatory Account)

- The FRSR Regulatory Account is expected to be depleted by F2016 and the CPI
 Regulatory Account was closed in F2011 with the balance being amortized over
 10 years beginning in F2012. Therefore, BC Hydro is not proposing any change to
- 7 these accounts.
- 8 In addition, interest is not charged to the DSM regulatory account, as DSM
- 9 expenditures generally go into service in the year of expenditure, and BC Hydro

does not defer interest on capital projects after they enter service, similar to the

- 11 treatment for PP&E.
- However, in accordance with the above criteria for the charging of interest and as
- directed by Directive No. 6, BC Hydro will begin to apply interest to the
- 14 FNC Regulatory Account commencing in F2015. The interest forecast to be charged
- to the FNC Regulatory Account will be added to the forecast annual amortization for
- the account.
- Table 5 below summarizes the application of interest to BC Hydro's regulatory
 accounts.

BChydro

Table 5 Application of Interest to Regulatory Accounts

	•	
	Interest Applied	Rationale
Cost of Energy Variance Accounts		
Heritage Deferral Account	Yes	
Non-Heritage Deferral Account	Yes	
Trade Income Deferral Account	Yes	
Other Cash Variance Accounts		
Storm Restoration	Yes	
Amortization of Capital Additions	Yes	
Total Finance Charges	No	Finance Charges
Rock Bay Remediation Costs	Yes	
Arrow Water Divestiture Costs	Yes	
Asbestos Remediation Costs	Yes	
Home Purchase Option Plan	Yes	
Real Property Sales (new)	Yes	
Non-Cash Variance Accounts		
Foreign Exchange Losses (Gains)	No	Non-Cash
Non-Current Pension Cost	No	Non-Cash
Benefit Matching Accounts		
Demand-Side Management	No	Similar to PP&E
First Nations Costs	Yes	Starting in F2015
Site C	Yes	_
Future Removal & Site Restoration	No	Exception
Pre-1996 Contributions	No	Timing Difference
Capital Project Investigation (closed)	No	Exception
Smart Metering & Infrastructure	Yes	
Non-Cash Provisions First Nations Provisions	No	Non-Cash
Environmental Provisions	No	Non-Cash
Arrow Water Provision	No	Non-Cash
Rate Smoothing Accounts		
F2010 ROE Adjustment (closed)	No	Rate Smoothing
Waneta (closed)	No	Rate Smoothing
F12-F14 Rate Smoothing (closed)	No	Rate Smoothing
IFRS Transition Accounts		
IFRS PP&E	No	Rate Smoothing
IFRS Pension	No	Non-Cash

Regulatory Accounts Report

1 2

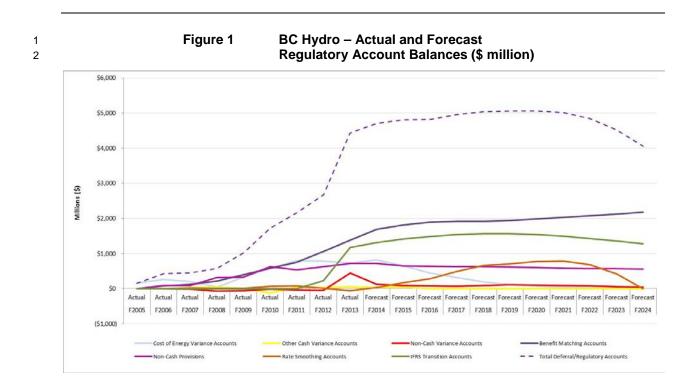
5 Forecast of Regulatory Account Balances

At the beginning of F2014, BC Hydro's regulatory accounts had a combined net 2 balance of \$4.4 billion.⁵ The overall net balance will continue to increase by 3 \$700 million billion to a forecasted maximum net balance in F2018 and F2019 of 4 \$5.1 billion. As noted earlier in the Executive Summary, of the \$4.4 billion balance at 5 the beginning of F2014, BC Hydro is already collecting in its rates 19 of the 27 6 regulatory accounts representing account balances of \$3.5 billion, or 80 per cent of 7 the total balance. 8 The following Figure 1 illustrates the actual and forecast regulatory account 9 balances over the 20-year period from F2005 to F2024. As the amounts shown for 10 F2014 forward are forecasts, actual results in future years will be different than those 11 discussed in this report. Figure 1 illustrates that there has been significant growth in 12 the total regulatory account balances, the largest increase occurring in F2013, when 13 the two IFRS Transition regulatory accounts and the Non-Current Pension Cost 14 regulatory account added almost \$1.4 billion, as a result of the transition to IFRS 15 accounting. As noted earlier, the move to IFRS does not create new costs nor 16 increase financial risks, it merely changes the timing of the recognition of revenues 17

18 and costs into income.

⁵ Forecast amounts will be updated in F15-F16 RRA.

BChydro



Regulatory Accounts Report

F2015 to F2016 Revenue Requirements Rate Application

Table 6	Regulatory Account Balances – Actual F2005 to F2013 and Forecast F2014 to
	F2024 (\$ million)

		F2005	F2006	F2007	F2008	F2009	F2010	F2011	F2012	F2013	F2014	F2015	F2016	F2017	F2018	F2019	F2020	F2021	F2022	F2023	F2024
	(\$ million)	Actual	Forecast	Forecast	Forecast	Forecas															
	Cost of Energy Variance Accounts	6420	6244	6470	670	6220	6225	6240	6244	670	Ć C F	654	625	670	<i>.</i>	626	645	<i>640</i>	<i></i>		
1		\$138	\$241	\$178	\$78	\$329	\$325	\$248	\$244	\$70	\$65	\$51	\$35	\$70	\$41	\$26	\$15	\$10	\$4	-	-
2		131	205	209	52	74	119	362	367	468	386	303	209	129	75	47	27	18	7	-	-
3		(115)		(202)	(103)	(80)	122	188	175	190	370	290	200	124	71	45	26	17	7	-	-
4		N/A	25	13	22	10	19	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Total	154	257	198	49	333	585	798	786	728	822	644	445	323	187	117	69	45	18	-	-
	Other Cash Variance Accounts					(0)	(-)	(4)		(2)	(2)										_
5		N/A	N/A	33	43	(2)	(5)	(1)	1	(3)	(3)		-	-	-	-	-	-	-	-	-
6	Amortization on Capital Additions	N/A	N/A	N/A	N/A	(3)	(6)	(10)	(2)	(6)	(18)	(9)		-	-	-	-	-	-	-	-
7	Total Finance Charges	N/A	N/A	N/A	N/A	1	(104)	(4)	6	1	(51)	(26)		-	-	-	-	-	-	-	-
8		N/A	N/A	N/A	N/A	N/A	N/A	2	4	29	52	49	-	-	-	-	-	-	-	-	-
9	Arrow Water Divestiture Costs	N/A	N/A	N/A	N/A	N/A	N/A	8	8	8	9	4	-	-	-	-	-	-	-	-	-
10	Asbestos Remediation	N/A	-	8	19	10	-	-	-	-	-	-	-	-	-						
11	Total Taxes (closed)	N/A	N/A	N/A	N/A	(2)	(7)	(13)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
12	GM Shrum 3 (closed)	N/A	N/A	N/A	N/A	42	41	43	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
13	Net Employment Costs (closed)	N/A	N/A	N/A	N/A	(29)	(62)	-	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
14	Home Option Purchase Plan	N/A	N/A	N/A	N/A	1	11	18	20	21	22	11	-	-	-	-	-	-	-	-	-
15	Real Property Sales	N/A	-	-	-	-	-	-	-	-	-	-	-								
	Total	-	-	33	43	8	(131)	43	37	58	30	38	-	-	-	-	-	-	-	-	-
	Non-Cash Variance Accounts																				
16	Foreign Exchange Losses (Gains)	(2)	2	(16)	(66)	(57)	(101)	(107)	(103)	(100)	(96)	(94)	(94)	(91)	(50)	(10)	(8)	(6)	(4)	(3)	
17	Non-Current Pension Cost	N/A	N/A	N/A	N/A	N/A	86	72	55	544	219	186	171	155	140	124	109	93	78	62	47
	Total	(2)	2	(16)	(66)	(57)	(15)	(35)	(49)	444	123	92	77	64	90	115	100	87	74	59	44
	Benefit Matching Accounts																				
18		207	269	282	309	362	443	506	638	732	821	898	946	982	1,012	1,065	1,126	1,197	1,266	1,327	1,389
19	First Nations Costs	29	33	36	41	62	91	99	153	168	175	174	155	137	118	98	79	59	39	20	0
20	Site C	N/A	N/A	4	9	35	59	103	181	258	362	377	394	412	434	459	486	515	545	576	610
21	Future Removal & Site Restoration	(238)	(227)	(211)	(192)	(172)	(159)	(140)	(120)	(88)	(66)	(41)	(10)	-	-	-	-	-	-	-	-
22	Pre-1996 Contributions	N/A	N/A	14	27	38	49	59	67	75	81	87	92	95	96	91	86	81	76	71	65
23	Smart Metering & Infrastructure	N/A	N/A	N/A	N/A	9	19	34	92	192	282	287	286	264	242	220	198	176	154	132	110
24	Capital Project Investigation (closed)	N/A	N/A	N/A	12	32	43	49	44	40	35	30	25	20	15	10	6	1	-	-	-
25	Procurement Enhancement (closed)	N/A	N/A	N/A	7	29	40	38	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Total	(2)	75	125	213	396	585	747	1,055	1,377	1,689	1,812	1,887	1,911	1,917	1,944	1,980	2,029	2,079	2,126	2,175
	Non-Cash Provisions																				
26	First Nations Provisions	N/A	88	90	319	326	308	300	391	386	416	401	405	407	413	418	420	413	418	422	427
27	Arrow Water Provision	N/A	N/A	N/A	N/A	N/A	N/A	3	4	3	3	3	3	4	4	3	2	1	0	-	-
28	Environmental Provisions	N/A	N/A	N/A	N/A	N/A	321	229	230	331	295	239	231	220	208	195	181	166	151	141	131
	Total	0	88	90	319	326	629	533	625	720	714	644	640	631	625	616	602	581	569	564	557
																			1		
	Rate Smoothing Accounts																				
29	F07/F08 Depreciation Study (closed)	N/A	N/A	19	14	10	5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
30	Waneta (closed)	N/A	N/A	N/A	N/A	N/A	N/A	30	40	25	15	-	-	-	-	-	-	-	-	-	-
31	F2010 ROE Adjustment (closed)	N/A	N/A	N/A	N/A	N/A	56	45	34	23	11	-	-	-	-	-	-	-	-	-	-
32	F12-F14 Rate Smoothing (closed)	N/A	(70)	(111)	-	-	-	-	-	-	-	-	-	-	-						
33	Rate Smoothing	N/A	-	166	287	491	663	703	775	785	686	425	-								
	Total	-	-	19	14	10	61	75	4	(63)	26	166	287	491	663	703	775	785	686	425	· ·
										-		_							_		_
	IFRS Transition Accounts																				
34	IFRS Pension	N/A	-	723	688	650	612	574	535	497	459	421	382	344	306						
35	IFRS PP&E	N/A	222	447	617	758	873	962	1,025	1,064	1,079	1,071	1,039	1,007	976						
	Total	-	-	-	-	-	-	-	222	1,170	1,306	1,408	1,485	1,535	1,561	1,561	1,538	1,491	1,421	1,352	1,282
										_											
_																					_

As shown in <u>Table 7</u>, by the end of F2024 almost 84 per cent of the total balance in the regulatory accounts will be in five accounts, three that are benefit matching and two that relate to the transition to IFRS. In addition, \$557 million of the balance is comprised of non-cash provision accounts, which are not recovered in rates until such time as an actual cash expenditure is made against the provision.

6 7

Table 7BC Hydro's Five Major Regulatory
Accounts F2013 to F2024

Regulatory Accounts	- Year-End balances	F2013	F2014	F2024
(\$ million)		Actual	Forecast	Forecast
Demand-Side Management		732	821	1,389
Site C		258	362	610
Smart Metering & Infrastructure		192	282	110
IFRS Property, Plant & Equipment		447	617	976
IFRS Pension		723	688	306
Subtotal		2,352	2,770	3,390
Cost of Energy Variance Accounts		728	822	(0)
Non-Cash Provisions		720	714	557
Other Regulatory Accounts		634	404	110
Total		4,434	4,710	4,058
Subtotal as Per Cent of Total		53%	59%	84%

- 8 Further detail on each of the three benefit-matching and two IFRS Transition
- 9 regulatory accounts is provided below.
- 10 **DSM**
- 11 This regulatory account captures expenditures made on DSM activities related to
- achieving customer energy savings. The 2002 and 2007 BC Energy Plans
- established DSM savings targets for BC Hydro, which were subsequently updated in
- the Clean Energy Act. The current targets are to reduce the expected increase in
- demand for electricity by the year 2020 by at least 66 per cent. The level of DSM
- 16 expenditures has been set to achieve the targets set in the Clean Energy Act. As
- noted in section <u>2.1</u>, in 1995 the BCUC directed that electric utilities in British
- 18 Columbia were to defer and amortize into rates costs associated with DSM activities

BChydro

1 that achieve energy savings. BC Hydro's historical and future DSM costs are

2 amortized over 15 years in accordance with the ARRA Decision, BCUC

³ Order No. G-77-12A. The DSM forecasted amounts in <u>Table 6</u> and <u>Table 7</u>, above,

are based on the amounts in the 2013 Integrated Resource Plan and expenditure

⁵ levels may vary from the current forecast depending on targets established in the

⁶ future. As a result, the DSM regulatory account balance could be greater or less in

7 10 years than is currently forecast.

8 Site C

This regulatory account captures the pre-capitalization Site C project expenditures. These costs are not eligible for capitalization under previous CGAAP nor IFRS as the Site C project has not completed the feasibility assessment phase and BC Hydro has not made the decision to proceed with the project. BC Hydro will apply to the BCUC to recover the costs through rates at a future time and over an appropriate time frame, when the asset is completed and benefits to the ratepayers from the investment are being realized. The expected in-service date for the project is F2024.

16 Smart Metering & Infrastructure

As directed by Government Direction No. 4 issued on September 25, 2013, this

regulatory account will commence amortization in F2015, when the SMI program is

¹⁹ fully implemented and in operation across BC Hydro's system. BC Hydro is

20 proposing in this report that the SMI account be amortized over a 15-year period,

²¹ based on the weighted average life of SMI assets.

22 IFRS Property, Plant & Equipment (**PP&E**)

This regulatory account enables the deferral of overhead costs that can no longer be capitalized under IFRS as they are not directly attributable to the construction of an asset. In the Amended F12-F14 RRA, BC Hydro proposed that overhead costs that can no longer be capitalized should not be immediately absorbed in rates as it would result in a significant rate impact, but rather should be deferred and transitioned into

operating expenditures over 10 years. In order to transition the overhead costs that 1 can no longer be capitalized under IFRS into rates over a 10-year period, BC Hydro 2 will reduce the amount of ineligible overhead costs that it would otherwise charge to 3 this deferral account by 10 per cent per year, and instead charge the corresponding 4 amount to operating costs. For example, BC Hydro charged 100 per cent of 5 ineligible overhead costs to the PP&E regulatory account in F2012, and starting in 6 F2013 will reduce the percentage of ineligible overhead costs that will be charged to 7 the deferral account by 10 per cent each year. The amounts not charged to the 8 deferral account will be included in current year operating costs. 9

BC Hydro is amortizing the additions to the regulatory account over 40 years, based
 on the composite life of BC Hydro's assets and to match the overhead costs with the
 benefits of the underlying assets.

13 IFRS Pension

Under previous CGAAP, BC Hydro recognized actuarial gains and losses related to
 pension costs in net income over the remaining service period of employees.

¹⁶ On the transition to IFRS, BC Hydro had to recognize all unamortized experience

- 17 gains and losses on the pension and other post-employment benefit plans not
- 18 previously recognized in its financial statements. To maintain its ability to recover
- this amount from customers, BC Hydro placed the amount that would otherwise be
- charged to its retained earnings on the transition to IFRS, into the IFRS Pension
- ²¹ regulatory account.
- BC Hydro is amortizing the amount in the IFRS Pension account over 20 years. This
- level of amortization results in approximately the same total revenue requirement
- ²⁴ under IFRS as under previous CGAAP.

6 Sensitivity Analysis

As was mentioned in the Executive Summary, one of the caveats to be considered 2 with regard to the regulatory account balances shown in this report is that they are 3 forecast amounts as of the end of F2014 and subject to change. The actual 4 balances will be subject to sensitivities. The following table shows the effect on 5 BC Hydro's costs of changes in some key variables. Each of the changes in costs 6 shown will have an impact on regulatory account balances. For example, changes in 7 hydro generation will impact actual energy costs and result in additions or reductions 8 to the energy deferral accounts. Electricity trade margins will have a direct impact on 9 forecasted balances in the trade income deferral account. One of the most dramatic 10 impacts is due to market discount rates and their impact on BC Hydro's non-current 11 pension costs regulatory account. A 1 per cent change in the market discount rate 12 will result in a difference of approximately \$300 million in the non-current pension 13 cost regulatory account balance. 14

1	5

Factor	Change	Approximate change in costs before regulatory account transfers (\$ million)
Hydro Generation (GWh) ⁶	+/- 1%	+/- 15
Electricity trade margins	+/- 10%	+/- 20
Interest rates	+/- 1%	+/- 50
Exchange rates (CAN\$ relative to US\$)	+/- \$0.01	+/- 5
Weather	+/- 1 degree C	+/- 20
	(in average temperature)	(colder weather decreases costs)
Market discount rate applicable to pension obligations	+/- 1%	+/- 300

Table 8 Cost Sensitivities

⁶ Hydro generation levels can fluctuate by as much as +/- 5,000 GWh from average based on higher or lower water inflow levels. Average hydro generation levels are approximately 45,000 GWh/year.

7 Conclusion

In this report, BC Hydro has described and summarized its regulatory accounts,
 discussed the differing regulatory account categories and the recovery mechanisms
 that apply to each category, and set out the individual recovery period for each
 regulatory account.

The report shows that at the end of F2024, BC Hydro forecasts that it will have total 6 regulatory account balances of \$4.06 billion, which is slightly less than the actual 7 balance at the beginning of F2014 of \$4.4 billion. However, this is a reduction of just 8 over \$1 billion from the forecast maximum amount of \$5.1 billion in F2019. In 9 addition, over the 10-year period thirteen of the existing regulatory accounts will 10 have their balances reduced to zero. Not included in those thirteen accounts are the 11 three energy deferral accounts, which will be expected to have balances in them at 12 the end of F2024, even though the forecast of the reductions of the current balances 13 through the DARR mechanism show the balances being eliminated in F2023. As 14 well, at the end of F2024 almost 84 per cent of the outstanding regulatory account 15 balances (approximately \$3.4 billion) will be in five regulatory accounts that either 16 match costs with associated benefits (DSM, Site C and SMI), or that relate to the 17 transition to IFRS (IFRS PP&E and IFRS Pension) and 14 per cent will be comprised 18 of non-cash provision accounts that are not recovered in rates until such time as an 19 actual cash expenditure is made against the provision. In addition, of the \$4.4 billion 20 balance at the beginning of F2014, BC Hydro is already collecting in its rates 19 of 21 the 27 regulatory accounts representing account balances of \$3.5 billion, or 22 80 per cent of the total balance. 23

Finally, it should be noted that the forecast of regulatory account balances is subject to revisions as a result of changing spending priorities and changes in Government energy policy that may come about over the next 10 years. In addition, as the balances are forecasts, actual balances will be different and are subject to sensitivities to various factors, some which are described in section <u>6</u>.

BChydro 🛈

Although large, BC Hydro views the balances in its regulatory accounts as 1 acceptable and a reflection of BC Hydro's goals and objectives of ensuring 2 intergenerational equity and maintaining low rates for its customers. Regulatory 3 accounts are not uncommon in the utility industry; however, BC Hydro is aware of 4 the concerns about the growth in the balances of its regulatory accounts and their 5 potential effects on intergenerational equity. As a Crown Corporation, BC Hydro has 6 differing priorities and risk considerations than many IOUs. One of BC Hydro's 7 primary goals is to keep rates as low as practical, in addition to providing reliable 8 service and value. The goal of low rates is assisted by a matching of the costs of 9 major programs and projects such as DSM and SMI with the long-lasting benefits 10 that each deliver to future generations of ratepayers. BC Hydro believes that the use 11 of regulatory accounts is necessary to ensure that there is proper intergenerational 12 equity between its current and future customers. This growth has occurred, for the 13 most part, with approvals from the BCUC and full disclosure by BC Hydro. 14

In terms of financial risk, BC Hydro is backed by the full support of the Government
of British Columbia, which provides BC Hydro with the benefit of low borrowing costs
and avoids the need for it to directly access the financial markets for financing
needs. This support allows BC Hydro to carry balances in its regulatory accounts
that an IOU may find difficult to sustain, as large balances could impair the ability of
an IOU to access financing at low interest rates.

Looking at each regulatory account in isolation, there is a clear purpose for its 21 existence and a clear matching of costs incurred either to be recovered from 22 ratepayers over the short term for those costs that do not have a lasting benefit or 23 over a longer term for those costs with long-term benefits that are being delivered to 24 future generations of customers. Changing the amortization periods of these 25 accounts to reduce the balances sooner would violate BC Hydro's principled 26 approach of addressing intergenerational equity concerns and the proper matching 27 of costs and benefits. However, BC Hydro also recognizes that there are concerns 28

- about the growth in the balances of its regulatory accounts and the length of time
- ² that will be required to recover those balances.
- ³ In summary, BC Hydro acknowledges the concerns that have been raised by
- 4 interveners and stakeholders and does not dismiss them out of hand. However,
- 5 BC Hydro believes that the number and balances contained in its regulatory
- 6 accounts, and the recovery periods as set out in this report are not unreasonable
- 7 and are a reflection of BC Hydro's goals and objectives of ensuring intergenerational
- 8 equity and maintaining low rates for its customers.

Regulatory Accounts Report

Appendix A

Discussion of Issues Raised by Interveners/BCUC in RRA, the B.C. Government Review Panel and the Auditor General of B.C.



Table of Contents

1	Use of DARR Table Mechanism	1
2	Issues Raised by the Auditor General of B.C.	6
3	BC Government Review Recommendations	8

List of Tables

Table A-1 Trade Income Deferral Account Analysis 5
--

1 Use of DARR Table Mechanism

2 Background

In the F09/F10 RRA Decision, the BCUC approved BC Hydro's proposal to 3 implement the DARR Table Mechanism. At that time, it was expected that the net 4 balance in the Deferral Accounts would not exceed the range of plus or minus 5 \$500 million, and that the net balance in the Deferral Accounts would be both 6 positive and negative over a reasonable period of time. However, there has never 7 been a net credit balance in the Deferral Accounts, and the net debit balance has 8 grown to be well in excess of \$500 million. The reasons for the growth in the net 9 debit balance include: 10

- 11 1. Losses on energy hedges in F2009
- 12 2. Trade Income that was lower in F2010 than the forecast established by the
- BCUC in the F09/F10 RRA Decision, and that was lower in F2011 than the
 forecast established in the F11 RRA NSA
- The debiting to the Trade Income Deferral Account in F2014 of the California
 Settlement amount of \$214 million
- Transfers to the Non-Heritage Deferral Account in F2011 through F2014 of
 forecast increases in the cost of energy
- 5. Constraining the DARR below the level of the DARR that would result from
 application of the DARR Table Mechanism in F2011 and F2012
- 21 BCUC and Intervener Concerns with Current DARR Table Mechanism
- 22 Through information requests and intervener evidence, the BCUC and interveners
- have raised various concerns with the current DARR Table Mechanism, including:

1. The view that since variations from normal water inflows will be symmetric over 1 time the Deferral Accounts should be self-clearing, or at a minimum should be 2 cleared over a long period of time. In provision 9(i) of the F11 RRA NSA, 3 BC Hydro committed to analyze a DARR based on a five-year amortization of the 4 Trade Income Deferral Account and a ten-year amortization of the Heritage and 5 Non-Heritage Deferral Accounts (the "Alternate DARR Mechanism"). BC Hydro 6 responded to this commitment in Amended Appendix H of the Amended 7 F12-F14 RRA. The analysis demonstrated that even though variations in water 8 inflows might be symmetric over time, the additions to Deferral Accounts are not 9 symmetric over time. Furthermore, under the Alternate DARR Mechanism, the 10 net balance in the Deferral Account reaches plus or minus \$1 billion, and there is 11 almost a 50 per cent probability that the total balance in the Deferral Accounts 12 would not reach zero even once during the next 20 years. Conversely, the 13 current DARR Table Mechanism would maintain the net balance in the Deferral 14 Accounts in the range of plus or minus \$500 million and there is almost a 15 100 per cent probability that the total balance in the Deferral Accounts would 16 reach zero at least once within the next 20 years. 17 2. Given the current net balance in the Deferral Accounts, it was suggested that the 18

DARR table be expanded beyond the current range of plus or minus
 \$500 million. As discussed above, the net balance in the Deferral Accounts
 should return to the range anticipated in the design of the current DARR
 Table Mechanism.

3. It was noted that the DARR applies to a customer's total bill (which includes distribution costs for customers served at distribution voltage) even though the
 Deferral Accounts relate only to generation costs. This has the effect of under-recovering costs from Transmission customers and over-recovering costs from smaller customers. Furthermore, the DARR applies to all components of a customer's bill, potentially distorting marginal cost-based energy price signals.

1 While these concerns are valid, if the net balance in the Deferral Accounts returns to lower levels, and if the net balance is both positive and negative over a 2 reasonable period of time, then these concerns would be mitigated to a large 3 degree. 4 It was also suggested that a quarterly adjustment to the DARR might be 5 appropriate, as is commonly done with cost of energy type riders in other 6 jurisdictions. However, since water inflows and Powerex net income can vary 7 widely from month to month, setting the DARR more frequently than annually 8 could result in unstable customer bills. 9 Variations on the current DARR Table Mechanism, including the Revenue 10 Stabilization Mechanism used by Pacific Northern Gas Ltd. and incorporating the 11 deferral account recovery in base rates, were explored in information requests, 12 but none offered any material improvement over the current DARR 13 Table Mechanism 14

6. It was suggested that the interest on the net balance in the Deferral Accounts be
 expensed in the current period rather than deferred. However, the annual interest
 on the net balance in the Deferral Accounts is not material, and furthermore all
 differences between forecast and actual finance charges are subject to deferral
 through the Total Finance Charges Regulatory Account.

7. It has been pointed out that due to load growth and rate increases the average
recovery period for the net balance in the Deferral Accounts will shorten over
time. This is mathematically correct, and may need to be addressed in future.
However, given the large debit balances that have been experienced, and
recognizing that the net balance in the Deferral Accounts was expected to be
both positive and negative over time, it is recommended that the current DARR
Table Mechanism be retained until the balance clears at least once.

3

4

5

6

7

- 8. In its decision on the Amended F12-14 RRA, the BCUC directed BC Hydro to
- ² include in its next RRA, as per Order No. G-77-12A, section 4:
 - an analysis of, and a proposal for, a formulaic method for clearing the net balance in the Deferral Accounts that considers the forecast changes to the balance and does not contain a maximum/minimum limit in a range which has already been surpassed;
- e. an analysis as to whether the Trade Income Deferral
 Account should be treated as one of the Deferral Accounts.
 BC Hydro must also show what the rate relief would be in
 the absence of the TIDA being treated as one of the
 Deferral Accounts.
- ¹³ The response to Directive 4 (a) is discussed in item 2, above. With respect to
- item 4 (e), BC Hydro notes that Direction No. 7, issued on March 6, 2014 continues
- to treat the Trade Income Deferral Account as one of the Deferral Accounts that is
- 16 subject to the DARR Table Mechanism.
- However, for illustrative purposes, BC Hydro has undertaken the analysis and the
- ¹⁸ impact of the suggested treatment of the Trade Income Deferral Account is shown in
- 19 <u>Table A-1</u> Trade Income Deferral Account Analysis below which provides the rate
- ²⁰ impact analysis of removing the Trade Income Deferral Account from the DARR
- 21 mechanism and amortizing the Trade Income Deferral Account balance to rates over
- ²² five years. The analysis indicates that removing the TIDA from the DARR
- mechanism results in a rate increase of 0.9 per cent in F0215 and then rate
- decreases or no rate impacts for the remainder of the years to F2024.

1

I able A-1											
				Deferral	/ Regulato	ory Account	Int Balance				
\$ millions	F2015	F2016	F2017	F2018	F2019	F2020	F2021	F2022	F2023	F2024	
Change in Account Balances:											
Heritage Deferral Account	(1)	(0)	0	(0)	(0)	(1)	(0)	(0)	(0)	(0)	
Non-Heritage Deferral Account	(48)	(20)	3	(9)	(16)	(31)	(0)	(0)	(0)	(0)	
Trade Income Deferral Account	15	25	24	7	(14)	(9)	-	-	-	-	
Total	(35)	4	27	(2)	(31)	(40)	(0)	(0)	(0)	(0)	
Change in Rate Increase:											
Annual	0.9%	-0.1%	-0.1%	-0.1%	0.0%	-0.5%	0.0%	0.0%	0.0%	0.0%	
Cumulative	0.9%	0.9%	0.8%	0.7%	0.7%	0.1%	0.0%	0.0%	0.0%	0.0%	
Rate Rider change	0.0%	-1.5%	-1.0%	0.0%	0.0%	0.1%	-0.6%	0.0%	0.0%	0.0%	
	Change in Account Balances: Heritage Deferral Account Non-Heritage Deferral Account Trade Income Deferral Account Total Change in Rate Increase: Annual Cumulative	\$ millions F2015 Change in Account Balances:	\$ millions F2015 F2016 Change in Account Balances:	\$ millions F2015 F2016 F2017 \$ millions F2015 F2016 F2017 Change in Account Balances:	\$ millions F2015 F2016 F2017 F2018 Change in Account Balances: -	F2015 F2016 F2017 F2018 F2019 Change in Account Balances: -	F2015 F2016 F2017 F2018 F2019 F2020 Change in Account Balances: Image: Comparison of the state of the st	F2015 F2016 F2017 F2018 F2019 F2020 F2021 Change in Account Balances: -	F2015 F2016 F2017 F2018 F2019 F2020 F2021 F2022 Change in Account Balances: -	F2015 F2016 F2017 F2018 F2019 F2020 F2021 F2022 F2023 Change in Account Balances: -	

 Table A-1
 Trade Income Deferral Account Analysis

2 With respect to item 4 (e), BC Hydro agrees with Direction No. 7 that the Trade

³ Income Deferral Account should continue to be treated as one of the Deferral

4 Accounts that are subject to recovery through the DARR Table Mechanism, for the

5 following reasons:

The balance in the Trade Income Deferral Account could be in a credit position 6 while the overall balance in the Deferral Accounts is in a debit position. For 7 example, as shown in Table 1 of Appendix H of the Amended F12-F14 RRA, in 8 five of the seven years from F2005 to F2011 the Trade Income Deferral 9 Account had a credit balance whereas there was an overall debit balance in the 10 Deferral Accounts in every year. Had the Trade Income Deferral Account been 11 treated separately, there would have been a refund of a portion of the Trade 12 Income Deferral Account balance in those five years, thereby increasing the 13 Deferral Account balances to be recovered through the DARR. Since balances 14 in the individual Deferral Accounts may offset, it would be appropriate to 15 continue to manage the overall balance in the Deferral Accounts on a net basis. 16 Since there is overlap between the drivers of the balances in the Heritage 17 Deferral Account, the Non-Heritage Deferral Account and the Trade Income 18

¹⁹ Deferral Account, including uncertainty in both water inflows and the cost of

1 market energy, it would be appropriate to continue to manage the overall balance in the Deferral Accounts using a single recovery mechanism 2 The Trade Income Deferral Account exists because of the volatility of Trade 3 Income. If recovery and/or refund amounts for the Trade Income Deferral 4 Account were fixed for a particular test period as part of an approved revenue 5 requirement, there would be no opportunity to vary these amounts in response 6 to changing circumstances (such as a change in the balance in the Trade 7 Income Deferral Account from a debit to a credit, or vice versa). Fixing the 8 recovery and/or refund amounts for the test period as part of the approved 9 revenue requirement could therefore increase the actual balance in the Trade 10 Income Deferral Account at the end of the test period. 11

2 Issues Raised by the Auditor General of B.C.

The Auditor General of B.C. raised a number of concerns regarding BC Hydro's use
 of regulatory accounts in the Report: *BC Hydro: The Effects of Rate Regulated Accounting*, including the following issues:

- The growth in BC Hydro's regulatory accounts to date and the forecast 17 continued growth in the future
- Lack of a plan to recover the net deferred costs in its regulatory accounts
- Preference that BC Hydro fully adopt IFRS reporting, and ending the use of
 rate-regulated accounting, to ensure financial transparency
- As discussed in section 5, the growth in BC Hydro's regulatory accounts over the
- next ten years is primarily in benefit matching accounts, including DSM and Site C
- ²³ which will provide benefits to ratepayers in the future, and in regulatory accounts
- related to the transition to IFRS, including the IFRS PP&E and IFRS Pension
- accounts. The balance in all other regulatory accounts is forecast to decrease by

almost \$1.3 billion over the ten years to the end of F2024, primarily due to

² recoveries from the DARR mechanism (refer to Table 6).

- 3 BC Hydro believes that its recovery plan for the regulatory accounts will result in the
- 4 recovery of existing regulatory account balances over a reasonable time frame. In
- ⁵ addition, as discussed in section 2.2 of the report, BC Hydro will be limiting requests
- 6 for new regulatory accounts that are material and unforecasted or uncontrollable and

7 that should be collected from ratepayers, with material defined as have a net income

⁸ impact greater than \$10 million.

The Auditor General also raised several issues with respect to the operation of the
 regulatory accounts themselves, including:

- The use of regulatory accounts for expenditures that would otherwise be
 expensed impacts the presentation of BC Hydro's financial results, and could
 mislead users of the financial reports as to BC Hydro's performance.
- BC Hydro Response: BC Hydro publishes audited financial reports in
 compliance with prescribed accounting regulations (reflecting current CGAAP
 with modified IFRS standards), in addition to reporting using regulatory
 accounting, for regulatory proceedings. BC Hydro therefore does not agree that
 the comprehensive disclosures in its financial statements are misleading to
 users.
- The inclusion of notional interest on regulatory account balances in its financial statements, which would give rise to an increase in the regulatory account balances and a longer time frame for the recovery of the account balance. In addition, the Auditor stated that this notional interest has the effect of increasing net income, and also influences calculations on return on equity, and dividend payments to government.

BC Hydro Response: BC Hydro agrees that inclusion of interest on certain
 regulatory accounts will result in an increase in the balance to be recovered
 from ratepayers at a later date. However, as discussed in section 4 of the
 report, interest applied to regulatory accounts does not increase or decrease
 BC Hydro's allowed net income, as the interest added to the regulatory account
 offsets the unbudgeted incremental interest costs.

- The Auditor General also raised questions about BC Hydro's relatively long, or
 in some cases the undetermined, time period for recovery of several of the
 regulatory account balances, and whether this gives rise to intergenerational
 equity issues, whereby future ratepayers pay for the benefits received by earlier
 generations of ratepayers.
- BC Hydro Response: BC Hydro shares concerns about anything that would
 give rise to intergenerational inequity. However, BC Hydro believes that
 generational equity can be enhanced through the appropriate use and recovery
 of regulatory accounts. The greatest forecast growth in the regulatory accounts
 and the largest regulatory account balances are for those accounts in which the
 matching of costs and benefits for different generations is the basis of the
 deferral and amortization of costs.
- 19 **3**

BC Government Review Recommendations

- 20 Recommendation No. 53 directed BC Hydro to:
- "Work with the province to perform a more in-depth review of the
 growth of regulatory accounts and determine a more sustainable
 approach to utilizing them over the long term."
- BC Hydro has worked with the Province in the development of this Regulatory
 Accounts Report, which the Province has accepted as responsive to the above
- recommendation.



Regulatory Accounts Report

Appendix B

Detailed Description of Existing Regulatory Accounts

Table of Contents

1	Introd	duction	1
2	Cost	of Energy Variance Accounts	4
	2.1	Heritage Deferral Account	5
	2.2	Non-Heritage Deferral Account	
	2.3	Trade Income Deferral Account (TIDA)	9
3	Othe	r Cash Variance Accounts	10
	3.1	Storm Restoration Costs	10
	3.2	Amortization of Capital Additions	10
	3.3	Total Finance Charges	11
	3.4	Rock Bay Remediation Costs	11
	3.5	Arrow Water Systems Divestiture Costs	12
	3.6	Asbestos Remediation Costs	13
	3.7	Home Purchase Option Program	13
4	Non-	Cash Variance Accounts	14
	4.1	Foreign Exchange Gains and Losses	14
	4.2	Non-Current Pension Costs	
5	Bene	fit Matching Accounts	16
	5.1	Demand Side Management	16
	5.2	First Nations Negotiation and Settlement Costs	16
	5.3	Site C	17
	5.4	Future Removal and Site Restoration	17
	5.5	Pre-1996 Contributions in Aid of Construction	18
	5.6	Capital Project Investigation (CPI) Costs (Closed)	18
	5.7	Smart Metering and Infrastructure Program	
6	Non-	Cash Provisions	20
	6.1	First Nations Provisions	20
	6.2	Environmental Provisions	21
	6.3	Arrow Water Systems Provision	23
7	Rate	Smoothing Accounts	23
	7.1	F2010 ROE Adjustment (Closed)	23
	7.2	Waneta Rate Impact Smoothing (Closed)	24
8	IFRS	Transition Accounts	25
	8.1	IFRS Property, Plant and Equipment	25
	8.2	IFRS Pension and Other Post-Employment Benefits	26

List of Tables

Table B-1	Historical Regulatory Account Balances	. 2
Table B-2	Recovery Mechanism, Applicability of Interest and BCUC Order	
	Numbers	. 3
Table B-3	Waneta Rate Impact Smoothing	24

Regulatory Accounts Report

F2015 to F2016 Revenue Requirements Rate Application

1 Introduction

This appendix provides a detailed description of BC Hydro's regulatory accounts.

<u>Table B-1</u> below provides a summary of the actual balances in each of BC Hydro's regulatory accounts for the period F2007 to F2013.

<u>Table B-2</u> summarizes the currently approved recovery mechanism and applicability of interest for each of BC Hydro's regulatory accounts, and provides the BCUC Orders establishing or amending each account.¹

The remaining sections in this appendix describe each of BC Hydro's regulatory accounts that were active at the beginning of F2014, in the order presented in <u>Table B-2.</u>

¹ Three of the regulatory accounts on Table 1 which are closed and have had zero balances for the last three years are not included on Table 2: the BCTC Deferral Account, the Net Employment Costs Regulatory Account and the F07/F08 RRA Depreciation Study Regulatory Account.

Table B-1

Historical Regulatory Account Balances

	d of Year Balance million)	F2007	F2008	F2009	F2010	F2011	F2012	F2013
6	st of Energy Variance Accounts							
	Heritage Deferral Account	178.1	78.0	328.9	324.9	247.7	243.8	69
	Non-Heritage Deferral Account	208.8	51.6	74.4	119.5	362.1	367.0	467
	Trade Income Deferral Account	(202.2)	(102.6)	(79.9)	121.7	187.5	174.7	190
	BCTC Deferral Account (closed)	(202.2)	21.5	(79.9) 9.7	18.6	0.0	0.0	0
	Total	198.1	48.5	333.2	584.7	797.3	785.6	727
Oth	her Cash Variance Accounts							
	Storm Restoration Costs	32.9	43.2	(2.0)	(4.8)	(1.4)	0.6	(2
	GM Shrum 3 (closed)	0.0	0.0	42.4	41.5	43.2	0.0	Ċ
	Net Employment Costs (closed)	0.0	0.0	(29.1)	(61.6)	0.0	0.0	(
	Total Taxes (closed)	0.0	0.0	(1.7)	(7.4)	(13.4)	(0.0)	(0
	Amortization of Capital Additions	0.0	0.0	(2.8)	(5.7)	(9.5)	(1.7)	(!
	Total Finance Charges	0.0	0.0	0.6	(104.1)	(4.0)	5.5	1
	Rock Bay Remediation Costs	0.0	0.0	0.0	0.0	2.1	3.8	28
	Arrow Water Divestiture Costs	0.0	0.0	0.0	0.0	7.7	8.1	8
	Asbestos Remediation Costs	0.0	0.0	0.0	0.0	0.0	0.0	8
	Home Purchase Option Plan	0.0	0.0	0.7	11.0	18.4	20.1	21
	Total	32.9	43.2	8.2	(131.2)	43.1	36.4	59
No	n-Cash Variance Accounts							
	Foreign Exchange Losses (Gains)	(15.8)	(66.0)	(57.0)	(100.8)	(106.7)	(103.1)	(100
	Non-Current Pension Costs	0.0	0.0	0.0	85.6	71.5	54.6	543
	Total	(15.8)	(66.0)	(57.0)	(15.2)	(35.2)	(48.6)	443
Ве	nefit Matching Accounts							
	Demand Side Management	282.1	309.3	362.4	442.9	506.4	638.0	732
	First Nations Costs	36.3	40.9	62.4	91.2	98.6	152.6	167
	Site C	3.7	8.7	34.7	59.4	103.3	181.1	258
	Future Removal & Site Restoration	(210.9)	(192.2)	(172.2)	(159.4)	(140.3)	(120.4)	(87
	Pre-1996 Contributions	14.0	26.7	38.3	49.0	58.7	67.3	74
	Procurement Enhancement (closed)	0.0	7.3	29.2	40.3	38.0	0.0	(
	Capital Project Investigation (closed)	0.0	12.2	32.0	42.8	49.0	44.3	39
	Smart Metering & Infrastructure	0.0	0.0	8.9	18.5	34.0	91.9	19 ⁻
	Total	125.2	212.9	395.6	584.7	747.8	1,054.9	1,377
No	n-Cash Provisions							
	First Nations Provisions	89.9	319.4	326.2	308.1	300.2	390.7	385
	Environmental Provisions	0.0	0.0	0.0	320.5	229.0	230.2	330
	Arrow Water Systems Provision	0.0	0.0	0.0	0.0	3.3	3.6	3
	Total	89.9	319.4	326.2	628.6	532.5	624.5	720
	te Smoothing Accounts							
	F07/F08 RRA Depn Study (closed)	19.2	14.4	9.6	4.8	0.0	0.0	(
	F2010 ROE Adjustment (closed)	0.0	0.0	0.0	56.4	45.1	33.8	22
	Waneta Rate Smoothing (closed)	0.0	0.0	0.0	0.0	30.0	40.0	25
	F12-F14 Rate Smoothing (closed)	0.0	0.0	0.0	0.0	0.0	(69.7)	(110
	Total	19.2	14.4	9.6	61.2	75.1	4.1	(63
	RS Transition Accounts							
	IFRS PP&E	0.0	0.0	0.0	0.0	0.0	221.8	446
	IFRS Pension & OPEB	0.0	0.0	0.0	0.0	0.0	0.0	723
	Total	0.0	0.0	0.0	0.0	0.0	221.8	1,169
Tot	tal	449.5	572.4	1,015.8	1,712.8	2,160.6	2,678.8	4,43

Regulatory Accounts Report

Page 2

Table B-2

Recovery Mechanism, Applicability of Interest and BCUC Order Numbers

Regulatory Accounts	Recovery Mechanism	Interest	BCUC Order No.
Cost of Energy Variance Accounts			
Heritage Deferral Account	DARR	Yes	G-96-04, G-143-06
Non-Heritage Deferral Account	DARR	Yes	G-96-04, G-143-06
Trade Income Deferral Account	DARR	Yes	G-96-04, G-143-06
Other Cash Variance Accounts			
Storm Restoration	Next Test Period	Yes	G-16-09
Amortization of Capital Additions	Next Test Period	Yes	G-16-09, G-180-10, G-77-12A
Total Finance Charges	Next Test Period	No	G-16-09, G-180-10, G-77-12A
Rock Bay Remediation Costs	Next Test Period	Yes	G-75-11, G-55-12, G-57-13
Arrow Water Divestiture Costs	Next Test Period	Yes	G-90-11
Asbestos Remediation Costs	Next Test Period	Yes	G-7-13
Home Purchase Option Plan	Next Test Period	Yes	G-55-09, G-180-10, G-77-12A
Non-Cash Variance Accounts			
Foreign Exchange Losses (Gains)	Straight-line Pool Method	No	G-47-02
Non-Current Pension Cost	Average Remaining Service Life	No	G-16-09, G-180-10, G-77-12A
Benefit Matching Accounts			
Demand-Side Management	15 Years	No	G-55-95, G-91-09
First Nations Costs	10 Years	Yes	G-53-02, G-11-08
Site C	To Be Determined	Yes	G-143-06, G-16-09, G-180-10, G-77-12A
Future Removal & Site Restoration	As Dismantling Costs Are Incurred	No	G-96-04
Pre-1996 Contributions	45 Years (to F2040)	No	G143-06
Capital Project Investigation (closed)	10 Years (to F2021)	No	G-16-09, G-180-10, G-77-12A
Smart Metering & Infrastructure	15 Years (starting in F2016)	Yes	G-55-09, G67-10, G115-11, G-77-12A
Non-Cash Provisions			
First Nations Provisions	N/A	No	G-56-06, G-11-08
Environmental Provisions	N/A	No	G-88-10, G-7-13
Arrow Water Provision	N/A	No	G-90-11
Rate Smoothing Accounts			
F2010 ROE Adjustment (closed)	6 Years (to F2015)	No	G-16-09
Waneta (closed)	5 Years (to F2015)	No	G-180-10
F12-F14 Rate Smoothing (closed)	3 Years (to F2014)	No	G-77-12A
IFRS Transition Accounts			
IFRS PP&E	40 Years (to F2061)	No	G-77-12A
IFRS Pension	20 Years (to F2032)	No	G-77-12A

Note 1: Interest to be charged on the First Nations Costs Regulatory Account effective F2015.

Regulatory Accounts Report

F2015 to F2016 Revenue Requirements Rate Application

2 Cost of Energy Variance Accounts

In 2004, subsequent to an inquiry into BC Hydro's heritage generation assets, Heritage Special Direction No. HC2 was issued by the Province. It required the BCUC to direct the establishment of the Heritage Deferral Account and the Trade Income Deferral Account. The former captures the variances between BC Hydro's actual and forecast cost of supply from heritage assets, and the latter captures variances between the actual and forecast net income of Powerex.

The BCUC directed the establishment of the Heritage Deferral Account and the Trade Income Deferral Account in its final order regarding BC Hydro's F05/F06 RRA. By the same order, the BCUC directed the establishment of the Non-Heritage Deferral Account to capture and defer variances between the forecast and actual energy costs that are not associated with the heritage assets.

The purpose of the cost of energy variance accounts (also referred to as the Deferral Accounts) is to defer the difference between forecast and actual costs of energy and trade income, for recovery in a future period. The cost of energy variance accounts are used to smooth BC Hydro's net income as energy costs are always higher or lower than forecast. This happens, for example, due to variations in reservoir water levels (as a result of more or less precipitation and snow melt in any given year), resulting in the requirement for BC Hydro to change its mix of energy resources to meet load demand. While rates are set assuming average water inflow levels, the lower-cost hydro generation levels can fluctuate by +/- 5,000 GWh between low and high water years, resulting in the need to sell surplus power or purchase energy from the market. As water inflow levels are uncontrollable, it is appropriate that the risk of this cost should be borne by BC Hydro's customers and recovered in rates.

BC Hydro recovers the balances in the cost of energy variance accounts using the Deferral Account Rate Rider (**DARR**) and section 3.1.1 of the Regulatory Accounts Report describes how the DARR is used to pay down those accounts.

Each of the Deferral Accounts is described in greater detail below.

2.1 Heritage Deferral Account

The Heritage Deferral Account (**HDA**) captures variances between the forecast and actual cost for the following components of the Heritage Payment Obligation:

- (a) Cost of energy. This item is expanded in greater detail below to provide clarification on the methodology used to determine variances:
 - (i) The total Heritage Energy volume (including Skagit/Seattle City Light commitments) is limited to 49,000 GWh per year. If the Heritage Energy volume including all market electricity purchases exceeds the Heritage Energy limit, the excess is transferred to Non-Heritage Energy in order to reduce the Heritage Energy volume to the Heritage Energy limit.
 - (ii) Cost of energy variances resulting from changes to compensation and mitigation costs, water rental remissions, or Skagit energy transportation contracts are eligible for deferral. These are price variances as they do not vary with volume.
 - (iii) All load curtailment costs are included as part of the Heritage Payment Obligation
 - (iv) Gains/losses on energy derivatives and financial instruments used to minimize energy costs are included as part of total energy costs
- (b) Variable costs related to thermal generation
- (c) Significant unplanned major maintenance costs greater than \$1 million related to single event equipment or infrastructure failure or caused by weather related events
- (d) Significant unplanned major capital expenditures having an incremental annual impact on BC Hydro's income statement greater than \$1 million related to

single event equipment or infrastructure failure or caused by weather related events

- (e) Amortization of unplanned deferred capital costs pursuant to BCUC Order No. G-53-02.
- (f) All net revenues from surplus hydro electricity sales
- (g) Skagit Valley Treaty revenues and ancillary services revenue

Notable changes in the balance in the HDA include the following:

- The balance increased from \$78 million in F2008 to \$329 million in F2009 due to purchases of high cost energy to offset lower than forecast hydro-generation due to low water inflows.
- The balance decreased from \$244 million in F2012 to \$70 million in F2013 primarily due to released water from BC Hydro's portion of the Non-Treaty Storage Agreement, higher surplus sales and rate rider recoveries.

2.2 Non-Heritage Deferral Account

The Non-Heritage Deferral Account (**NHDA**) captures variances between forecast and actual net energy costs in excess of the Heritage Energy limit of 49,000 GWh.

Specifically, the NHDA captures variances between the forecast and the actual cost for the following components of the Non-Heritage Cost of Energy:

- (a) Cost of energy all non-Heritage energy costs. This item is expanded in greater detail below to provide clarification on the methodology used to determine variances:
 - Any variances relating to fixed price gas transportation contracts flow through the NHDA as they do not vary with volume

- (ii) Future Trade: when Powerex purchases energy for future trade the cost of the purchase from the external party and the sale to BC Hydro of this energy is recorded in Powerex and is included as part of Trade Income. The BC Hydro side of the entry is shown as part of domestic energy costs (on consolidation, the Powerex revenue from BC Hydro and the BC Hydro energy costs from Powerex are eliminated). The difference between forecast and actual on the BC Hydro side relating to energy for future trade flows through the NHDA. The Powerex side of the transaction, which is part of Trade Income, flows through the Trade Income Deferral Account. Similar treatment is made when the energy is returned to Powerex.
- (iii) Future Trade: when Powerex purchases energy for future trade, the Heritage Payment Obligation (HPO) is charged with a notional water rental charge for the use of this energy. The other side of this entry is shown as part of Non-Heritage energy. These entries are eliminated on consolidation. The difference between the forecast and actual notional water rentals that is part of the HPO flows through the HDA. The opposite variance relating to the Non-Heritage side of the notional water rental transaction flows through the NHDA.
- (iv) Gains/losses on energy derivatives and financial instruments used to minimize energy costs are included as part of total energy costs.
- (b) Significant unplanned major maintenance costs greater than \$1 million related to single event equipment or infrastructure failure.
- (c) Significant unplanned major capital expenditures having an incremental annual impact on BC Hydro's income statement greater than \$1 million related to single event equipment or infrastructure failure or caused by weather related events
- (d) Founding Partner Benefits and any CIS Credits under the ABS Contract

(e) Impact of load variance

In 2010, the Province issued the *Clean Energy Act* which consolidated BCTC and BC Hydro effective July 5, 2010. As part of the consolidation process, the BCUC issued Order No. G-16-11 dated February 10, 2011 which approved the transfer of BC Hydro's portion of the regulatory account balances on the books of BCTC and the remaining balance in BC Hydro's BCTC Deferral Account to the NHDA, and subsequent termination of the BCTC Deferral Account. At the time of the BC Hydro and BCTC integration, BCTC had the following 11 deferral accounts:

- 1. Revenue Deferral Account
- 2. Cost of Market Deferral Account
- 3. Emergency Maintenance Deferral Account
- 4. Regulatory Expenditure Deferral Account
- 5. International Financial Reporting Standards Deferral Account
- 6. Section 5 Transmission Inquiry Deferral Account
- 7. Polychlorinated Biphenyls Mitigation Deferral Account
- 8. Aboriginal Relations Deferral Account
- 9. F2011 BCTC Capital Portfolio Sustaining Cost Deferral Account
- 10. F2011 External Communications Regulatory Account
- 11. F2011 Labour Contracts Regulatory Account

BCUC Order No. G-16-11 also allowed for BC Hydro, on a go forward basis after the integration of BCTC and BC Hydro, to capture variances associated with the difference between forecast and actual transmission services revenues in the NHDA, as previously captured in the former BCTC Deferral Account. This order also allowed BC Hydro to capture transmission asset expenditures for significant

unplanned major maintenance costs greater than \$1 million related to a single event equipment or infrastructure failure in the NHDA.

Notable changes in the balance in the NHDA include the following:

- The balance decreased from \$209 million in F2007 to \$52 million in F2008 primarily due to lower market electricity purchases and higher transactions with Powerex
- The balance increased from \$119 million in F2010 to \$362 million in F2011 primarily due to an adjustment of \$233 million in accordance with the terms of the F11 RRA NSA
- The balance increased from \$367 million in F2012 to \$468 million in F2013 primarily due to a \$62 million IFRS conversion adjustment (approved by BCUC Order No. G-77-12A and confirmed by letter from the BCUC dated April 10, 2013) and the deferral of an increase in the cost of energy of \$103 million as set out in the F12-F14 RRA Decision

2.3 Trade Income Deferral Account (TIDA)

This deferral account was created pursuant to Heritage Special Direction No. HC2 which directed the BCUC to approve, if requested by BC Hydro, a deferral account to record variances between actual and forecast Trade Income.

Trade Income is defined as the net income of Powerex, as included in BC Hydro's consolidated financial statements, adjusted for rate-setting purposes to be no less than zero.

Prior to May 22, 2012, Trade Income was defined as the net income of Powerex adjusted for rate-setting purposes to be no less than zero and no greater than \$200 million.

BChydro 🛈

On March 6, 2014, the Government issued Directive No. 7 which allows for the inclusion in the Trade Income Deferral account of any F2014 trading net loss from Powerex.

3 Other Cash Variance Accounts

3.1 Storm Restoration Costs

In the F09/F10 RRA Decision, the BCUC approved the ongoing deferral of the difference between actual storm-related restoration costs and the forecast storm-related costs included in each revenue requirements application. The forecast storm-related costs included in a revenue requirements application are average of the actual storm-related restoration costs for the five most recent "normal weather" years available at the time of that application.

Notable changes in the balance in this regulatory account include the following:

- The balance increased from zero in F2006 to \$33 million in F2007 due to restoration costs incurred as a result of major winter storms during the October 2006 to January 2007 period
- The balance increased from \$33 in F2007 to \$43 million in F2008 due to approved incremental operating expenditures to improve BC Hydro's response to future storms
- The balance decreased from a \$43 million debit in F2008 to a \$2 million credit in F2009 due to the transfer of the F2008 closing balance to the NHDA

3.2 Amortization of Capital Additions

Due to uncertainty in the forecast timing of capital additions, in the F09/F10 RRA Decision the BCUC directed BC Hydro to defer in a regulatory account any differences between forecast and actual amortization of capital additions. The F11 RRA NSA and the F12-F14 RRA Decision extended this regulatory account to the end of F2014.Government Directive No. 6 extends this regulatory account to F2015 and future years. At the end of F2014, the account is forecasted to have a credit balance of \$18 million.

3.3 Total Finance Charges

As a result of economic uncertainty and the potential volatility of interest rates, in the F09/F10 RRA Decision the BCUC directed BC Hydro to establish a regulatory account to defer any differences between forecast and actual finance charges for F2009 and F2010. The F11 RRA NSA and the F12-F14 RRA Decision extended this regulatory account to the end of F2014. Government Directive No. 6 extends this regulatory account to F2015 and future years.

Notable changes in the balance in this regulatory account include the following:

- The balance changed from a debit of \$1 million at the end of F2009 to a credit of \$104 million at the end of F2010. Due to global economic weakness, the Bank of Canada cut interest rates to unprecedented levels in 2009. As a result, BC Hydro's actual weighted average cost of debt in F2009 was 4.47 per cent compared to BC Hydro forecast of 6.04 per cent.
- The balance in the account changed from a credit of \$104 million at the end of F2010 to a credit of \$4 million at the end of F2011 primarily because the credit balance in the account at the end F2010 was refunded to customers in F2011
- BC Hydro is forecasting a credit at the end of F2014 of \$51 million.

3.4 Rock Bay Remediation Costs

In F2011 and following years, BC Hydro will incur expenditures to remediate properties at the Rock Bay area on Vancouver Island. Remediation costs are difficult to forecast and vary considerably from year to year. Since F2011 remediation costs were not included in the F11 RRA NSA, BC Hydro applied to the BCUC for approval

BChydro 🛈

of a regulatory account to defer for future recovery the actual costs incurred in F2011 in relation to remediation activities at Rock Bay.

By Order No. G-75-11, the BCUC approved the establishment of the Rock Bay Remediation Regulatory Account to defer F2011 actual remediation expenditures. By Order Nos. G-55-12 and G-57-13, the regulatory account was extended to defer actual remediation costs incurred in F2012 and F2013 respectively.

The balance in the Rock Bay Remediation Regulatory Account increased from \$4 million in F2012 to \$29 million in F2013 primarily due to the settlement of legal action with Transport Canada and the balance at the end of F2014 is forecast to be \$52 million as significant remediation expenses have been incurred in F2014. Government Directive No. 6 requires that BC Hydro fully amortize the account balances over F2015 and F2016.

3.5 Arrow Water Systems Divestiture Costs

In the mid-1960s, BC Hydro relocated residents affected by the creation of the Hugh L. Keenleyside Dam and Arrow Lakes Reservoir to the newly constructed towns of Edgewood, Fauquier and Burton, and also to West Robson, all now part of the Regional District of Central Kootenay. BC Hydro built the drinking water systems in Burton, Fauquier and Edgewood when the towns were constructed, and upgraded and assumed control of the West Robson drinking water system to compensate for impacts related to construction of the Keenleyside Dam.

On January 4, 2011, BC Hydro divested the assets of the Arrow water systems to the Regional District of Central Kootenay at a nominal price. Costs related to the divestiture, including the write-down of assets, were not included in the F11 RRA NSA. Therefore, BC Hydro applied to the BCUC for approval to establish a regulatory account to defer for later recovery the costs associated with the divestiture of the Arrow water systems.

By Order No. G-90-11, the BCUC approved the establishment of the Arrow Water Systems Divestiture Costs Regulatory Account and the Arrow Water Systems Provision Regulatory Account. The Arrow Water Systems Divestiture Costs Regulatory Account has a forecasted balance of \$9 million at the end of F2014 will be fully amortized at the end of F2016.

3.6 Asbestos Remediation Costs

In F2013 and following years, BC Hydro will incur expenditures related to asbestos remediation at its facilities.

BC Hydro applied to the BCUC for approval of a regulatory account to defer the actual costs incurred for asbestos remediation that were not included in the Amended F12-F14 RRA.

In Order No. G-7-13, the BCUC approved the establishment of the Asbestos Remediation Regulatory Account for unplanned costs in F2013 and F2014 related to asbestos remediation of BC Hydro's facilities. The account is forecasted to have a balance of \$9 million at the end of F2014. Government Directive No. 6 continues this account for F2015 and future years, as BC Hydro expects to be incurring asbestos remediation expenditures for the foreseeable future.

3.7 Home Purchase Option Program

BC Hydro, through BCTC, undertook to upgrade the existing transmission lines that run through Ladner, Tsawwassen and Galiano, Parker and Salt Spring Islands, and which serve Vancouver Island.

By letter dated December 17, 2008 the Minister of Energy, Mines and Petroleum Resources directed BC Hydro to carry out a Home Purchase Option Program (**HPOP**) in relation to affected owners of residential properties in the Tsawwassen area.

By OIC No. 205 dated March 12, 2009, the Lieutenant Governor in Council made Direction No. 1 to the BCUC to allow BC Hydro to establish a regulatory account for the purpose of recovering from its ratepayers, in a subsequent period, the net HPOP costs incurred by BC Hydro.

In Order No. G-55-09 the BCUC approved the establishment of a regulatory account to defer the net costs of the HPOP in F2009 and F2010, plus interest. The F11 RRA NSA and the F12-F14 RRA Decision extended this regulatory account to the end of F2014 at which time it is forecasted to have a balance of \$22 million. This account will be fully amortized by F2016.

4 Non-Cash Variance Accounts

4.1 Foreign Exchange Gains and Losses

Foreign Exchange gains and losses are subject to external market forces over which BC Hydro has no control.

In Order No. G-47-02 the BCUC approved the deferral and amortization of foreign exchange gains and losses on the translation of foreign denominated long-term monetary items, using the straight-line pool method, for the fiscal year beginning April 1, 2002 and future periods.

The balance in this regulatory account changed from a debit of \$2 million in F2006 to a credit of \$107 million in F2011 primarily due to significant foreign exchange translation gains on un-hedged US debt as a result of the strengthening of the Canadian dollar relative to the US dollar. During this period, the Canadian dollar gained nearly 16 per cent in value relative to the US dollar. BC Hydro is forecasting a credit balance of \$96 million at the end of F2014.

4.2 Non-Current Pension Costs

Prior to International Financial Reporting Standards (**IFRS**) being adopted, experience gains and losses related to both pension and other post- employment benefits plans were not recognized immediately on BC Hydro's balance sheet. Rather, they were amortized over the expected average remaining service life of the employee group as part of non-current pension costs. Experience gains and losses include the difference between the estimated return on the plan assets and the actual amounts earned, the impact of the change in the market discount rate on the benefit obligations, and other impacts on the future benefits to be paid.

In the F09/F10 RRA Decision, the BCUC approved the establishment of a regulatory account to defer the difference between forecast and actual non-current pension costs in F2010 due to the economic crisis that occurred in 2008 and the resulting large negative impact on these costs. The F11 RRA NSA provided that this regulatory account be extended for F2011 and that the closing F2011 balance in the regulatory account be amortized over a five-year period beginning in F2012.

In the F12-F14 RRA Decision, the Non-Current Pension Costs Regulatory Account was continued for the F2012 to F2014 period because of the continuing uncertainty and potential volatility of the capital markets. In addition, the Non-Current Pension Costs Regulatory Account was expanded to include:

- 1. the difference between forecast and actual non-current other post-employment benefit costs, beginning in F2013
- 2. the actual amount of experience gains or losses related to BC Hydro's pension and other post-employment benefit plans, beginning in F2012

The balance in this regulatory account changed from a debit of \$55 million in F2012 to a debit of \$544 million in F2013 primarily due to (i) a \$322 million experience loss in F2012 and (ii) an addition of \$184 million for F2013 due to an experience loss in

BChydro 🛈

F2013 and the difference between forecast and actual F2013 non-current pension costs related to other post-employment benefits. At the end of F2014, this account is forecast to have a balance of \$219 million.

5 Benefit Matching Accounts

5.1 Demand Side Management

Under previous CGAAP and IFRS, demand side management (**DSM**) expenditures do not qualify for capitalization.

In 1995, the BCUC directed all regulated gas, electric and steam heat utilities in British Columbia to defer and amortize into rates, costs associated with DSM activities that achieve energy savings. The DSM activities and associated costs generate energy savings to customers over a period of time longer than the year of expenditure, so the deferral and amortization of these costs aligns the recognition of costs with the period that customers receive benefits.

The costs in the DSM Regulatory Account reflect expenditures made on DSM activities, and include the direct and indirect expenditures related to achieving energy savings. Prior to F2013, these costs were amortized over a ten-year period, in accordance with BCUC Order Nos. G-55-95 and G-91-09. In the F12-F14 RRA Decision, the amortization period for historical and future DSM costs was increased from 10 years to 15 years. At the end of F2014, this account is forecast to have a balance of \$821 million.

5.2 First Nations Negotiation and Settlement Costs

In Order No. G-53-02, the BCUC approved the capitalization of actual negotiation and settlement costs related to First Nations settlements and the amortization of actual negotiation costs and approved settlement costs over a ten-year period. In accordance with BCUC Order No. G-11-08, BC Hydro must submit an application to

BChydro 🛈

the BCUC for a determination that settlement costs may be recovered in rates. Beginning in F2015, the F2014 balance in the First Nations Negotiation and Settlement Costs regulatory account will be amortized over 10 years and also beginning in F2015, annual negotiation and settlement payments will be expensed in the year incurred. At the end of F2014 the balance in this account is forecast to have a balance of \$175 million.

5.3 Site C

In Order No. G-143-06, the BCUC approved the creation of a regulatory account in respect of Site C expenditures incurred in F2007 and F2008. The F09/F10 RRA Decision, the F11 RRA NSA and the F12-F14 RRA Decision extended the Site C Regulatory Account to the end of F2014 and Government Directive No. 6 further extended the account to the end of F2016.

This regulatory account captures the pre-capitalization Site C project expenditures. These costs are not eligible for capitalization under previous CGAAP nor IFRS as the Site C project has not completed the feasibility assessment phase and BC Hydro has not made the decision to proceed with the project. BC Hydro will apply to the BCUC to recover the costs through rates at a future time and over an appropriate time frame, when the asset is completed and benefits to the ratepayers from the investment are being realized. At the end of F2014 the account is forecasted to have a balance of \$362 million.

5.4 Future Removal and Site Restoration

Prior to 1995, future dismantling costs were accrued in amortization expense and recovered in rates. In F2005, the accounting rules changed with the introduction of asset retirement obligations, and future dismantling costs are no longer accrued in amortization expense.

In the F05/F06 RRA Decision, the BCUC directed BC Hydro to establish a Future Removal and Site Restoration (**FRSR**) regulatory liability equal to the future dismantling costs that had been previously recovered in rates, and to charge future dismantling costs for assets for which an asset retirement obligation has not been recorded against this regulatory account.

This regulatory account is drawn down as actual expenditures on dismantling costs are incurred. This account is forecast to have a credit balance at the end of F2014 in the amount of \$66 million.

5.5 Pre-1996 Contributions in Aid of Construction

In F2006 BC Hydro engaged Gannett Fleming to complete a depreciation study, which was filed as part of the F07/08 RRA. Gannett Fleming recommended that the amortization period for assets referred to as "Profile ID 99403 Distribution Pre-1996 Contributions in Aid" be increased from the then-approved period of 25 years to 45 years. Section 7(iv) of the F07/F08 RRA NSA provided that the amortization period for these assets would be retained at 25 years. In its financial records BC Hydro changed the amortization period for these assets from 25 to 45 years, and implemented the F07/F08 NSA commitment by creating a regulatory account to capture the difference in the revenue requirement impacts of a 45-year amortization period and a 25-year amortization period.

This regulatory account has a 45-year life and will be fully amortized at the end of F2040. This account is forecast to have a balance at the end of F2014 of \$81 million.

5.6 Capital Project Investigation (CPI) Costs (Closed)

Under previous CGAAP and IFRS, capital project investigation costs are to be treated as operating costs. In the F09/10 RRA, BC Hydro proposed the establishment of a regulatory account to defer capital project investigation costs and recover these costs over the useful life of the related assets. In the F09/F10 RRA

Decision, the BCUC approved the establishment of a regulatory account for CPI costs for F2009 and F2010. The F11 RRA NSA provided that additions to the CPI Regulatory Account would be discontinued at the end of F2011, and that the closing F2011 balance would be amortized beginning in F2012.

In the F12-F14 RRA, BC Hydro proposed that the balance in the CPI Regulatory Account be amortized over a ten-year period beginning in F2012. The F12-F14 RRA Decision approved the amortization of the F2011 closing balance in this regulatory account over 10 years commencing in F2012.

This regulatory account is closed and will be fully amortized by the end of F2023. At the end of F2014 the balance is forecast to be \$35 million.

5.7 Smart Metering and Infrastructure Program

The Smart Metering and Infrastructure Regulatory Account is used to capture costs associated with the SMI Program.

In BCUC Order Nos. G-55-09 and G-67-10, the BCUC approved the establishment of a regulatory account to defer the operating costs incurred by BC Hydro with respect to the SMI Program in F2009 and F2010 respectively. By Order No. G-115-11, the BCUC authorized BC Hydro to include its actual F2011 SMI Program operating costs up to \$5.8 million in the SMI Regulatory Account. BC Hydro's actual F2011 SMI Program operating costs were \$5.1 million.

In accordance with CGAAP, BC Hydro began amortizing existing revenue meter assets at an accelerated rate once the SMI Program received BC Hydro Board approval on September 16, 2010. In Order No. G-115-11, the BCUC authorized BC Hydro to accelerate the rate of depreciation on its existing meters and to include the increased amortization incurred in F2011 in the SMI Regulatory Account.

In the F12-F14 RRA Decision, BC Hydro was authorized to defer all net SMI costs over the F2012 to F2014 period to allow for a better matching of the timing of the

costs and benefits of the SMI Program. Specifically, BC Hydro was authorized to defer actual net operating costs, amortization of capital assets, finance charges and return on equity related to the SMI Program from F2012 to F2014. Government Directive No. 6 extends the deferral of these costs, including the costs of the meter choices program, to the end of F2016. BC Hydro will seek approval to recover these costs in F2017.

6 Non-Cash Provisions

6.1 First Nations Provisions

BC Hydro is required under CGAAP to record a loss provision to recognize any claims related to past grievances made against it by First Nations when certain conditions are met in respect of anticipated settlements.

In Order No. G-56-06, the BCUC approved the establishment of a regulatory account in the amount of a loss provision BC Hydro recorded as required under CGAAP in respect of two First Nations claims. In Order No. G-11-08, the BCUC amended the First Nations Provision regulatory asset to allow the balance of the regulatory account to reflect loss provisions as required under CGAAP related to any First Nations claim, and to allow the periodic adjustment of the balance of the regulatory account to reflect adjustments to the loss provisions required under CGAAP.

The recording of the loss provision liability and the corresponding First Nations Provision regulatory asset preserves BC Hydro's ability to seek recovery of actual settlement costs in rates in a future period.

BC Hydro reached settlements with the Kwadacha and Tsay Keh Dene First Nations which both included a lump sum payment in F2010 and ongoing annual payments starting in F2010. BC Hydro also reached a settlement with the St'at'imc First Nation which included a lump sum payment in F2012 and ongoing annual payments.

Settlement payments are transferred to the First Nations Negotiation and Settlement Costs Regulatory Account.

A loss provision liability can change due to the underlying circumstances of the loss exposure. BC Hydro from time to time re-evaluates the loss provision liability to determine whether the amount continues to be reasonable or whether further adjustment is required.

A loss provision liability can also change due to accretion expense. Under IFRS, loss provisions are measured on a present value basis and accretion expense reflects the adjustments required with the passage of time so that the balance of the loss provision liability will be equal to the amount needed to settle the liability provision. The forecast balance in this account at the end of F2014 is \$416 million.

6.2 Environmental Provisions

BC Hydro is required under CGAAP to record a loss provision to recognize environmental liabilities related to new PCB Regulations and the remediation of environmental contamination at Rock Bay.

The new PCB regulations require the removal of equipment contaminated with PCB contamination concentrations of at least 50 mg/kg but less than 500 mg/kg. If the PCB concentration is 50 mg/kg or less, the regulation requires appropriate disposal when the asset is removed from service.

The Environmental Provisions Regulatory Account preserves BC Hydro's ability to seek recovery of actual environmental costs in rates in a future period.

By Order No. G-88-10 the BCUC approved the establishment of the Environmental Provisions Regulatory Account in the amount of the loss provision liability recognized by BC Hydro in respect of compliance with the PCB Regulations and the remediation of environmental contamination at Rock Bay, and to periodically adjust

BChydro 🛈

the amounts in the regulatory account to match the changes required under CGAAP in the loss provision liability.

In Order No. G-7-13, the BCUC approved BC Hydro's application to include in the Environmental Provision Regulatory Account provisions required under CGAPP related to the remediation of asbestos at its facilities. The need for the provision of asbestos remediation is a result of the requirement that BC Hydro immediately identify and remediate asbestos in compliance with recent WorkSafe BC orders concerning the management of asbestos at its facilities.

Actual costs associated with compliance with PCB Regulations are expensed as incurred. Actual costs associated with remediation activities at Rock Bay are deferred and included in the Rock Bay Environmental Costs Regulatory Account. Actual costs associated with asbestos remediation activities at BC Hydro facilities are deferred and included in the Asbestos Remediation Regulatory Account.

Notable changes in the balance in the Environmental Provisions Regulatory Account include:

- The decrease in the balance from \$321 million in F2010 to \$229 million in F2011 was primarily due to a reduction in the environmental provision for PCB remediation based on a review of BC Hydro's PCB remediation requirements
- The increase in the balance from \$230 million in F2012 to \$331 million in F2013 was primarily due to a new asbestos provision of \$43 million and \$61 million related to re-measurement of the discount rate used for the PCB provision

The forecasted balance in this account at the end of F2014 is \$295 million.

6.3 Arrow Water Systems Provision

As described in section 3.7, by Order No. G-90-11 the BCUC approved the establishment of the Arrow Water Systems Divestiture Costs Regulatory Account and the Arrow Water Systems Provision Regulatory Account.

BC Hydro is required under IFRS to record a loss provision liability in regards to the divestiture of the Arrow Water System. The recording of the loss provision liability and the corresponding Arrow Water Systems Provision regulatory asset preserves BC Hydro's ability to seek recovery of actual costs in rates in a future period.

In F2011, the actual provision included in the Arrow Water Systems Provision Regulatory Account was \$3.3 million representing the present value of water rates and parcel tax levies that BC Hydro has agreed to pay until eligible Arrow Water Systems customer property is transferred or there is a change in use. An additional \$0.5 million was added to the regulatory account in F2012 for contingency payments. As payments are made, this account is drawn down and amounts are recovered in rates, subject to approval by the BCUC. This account is forecasted to have a balance at the end of F2014 of \$3 million.

7 Rate Smoothing Accounts

7.1 F2010 ROE Adjustment (Closed)

On February 17, 2009, the B.C. Government issued OIC No. 074 amending sections 4 and 7 of HC2, effective February 17, 2009. The effect of OIC No. 074 was twofold:

 First it required the BCUC to increase BC Hydro's revenue requirements for F2010, F2011 and F2012 in order to afford BC Hydro the opportunity to earn its previously determined pre-income tax annual return on equity plus an additional 1.63 per cent (the ROE adder)

BChydro 🛈

 Secondly, the BCUC was required to allow BC Hydro to establish a regulatory account to defer for recovery in a later fiscal year or years the difference between the F2010 revenue required pre-February 17, 2009 and the F2010 revenue required after the issuance of OIC No. 074

In the F09/F10 RRA Decision the BCUC approved the establishment of the F2010 ROE Adjustment Regulatory Account to defer the impact on BC Hydro's F2010 revenue requirement of the incremental rate of return on deemed equity as prescribed by HSD#2 as amended by OIC No. 074.

The F11 RRA NSA provided that the closing F2010 balance in this regulatory account be amortized over five years beginning in F2011. The regulatory account will be fully amortized by the end of F2015.

7.2 Waneta Rate Impact Smoothing (Closed)

The F11 RRA NSA provided that the initial rate impact of the large one-time \$850 million capital addition related to the Waneta Transaction would be smoothed as set out in the following table:

(\$ million)	Deferral/ (Recovery)
F2011	30.0
F2012	10.0
F2013	(15.0)
F2014	(10.0)
F2015	(15.0)
Total	0.0

Table B-3 Waneta Rate Impact Smoothing

This regulatory account is closed and will be fully amortized by the end of F2015.

8 IFRS Transition Accounts

8.1 IFRS Property, Plant and Equipment

The IFRS Property, Plant and Equipment (**IFRS PP&E**) Regulatory Account enables the deferral of overhead costs that can no longer be capitalized under IFRS as they are not directly attributable to the construction of an asset.

Prior to IFRS, costs related to indirect overheads such as IT system maintenance and operating costs, HR support costs, finance support costs, building operations costs, training costs and system planning costs could be capitalized as property, plant and equipment. Under IFRS, these costs can no longer be capitalized.

In the Amended F12-F14 RRA, BC Hydro proposed that overhead costs that can no longer be capitalized not be immediately absorbed in rates as it would result in a significant rate impact, but rather be deferred and transitioned into operating expenditures over ten years. In order to transition the overhead costs that can no longer be capitalized under IFRS into rates over a ten-year period, BC Hydro proposed to charge 100 per cent of ineligible overhead costs to the IFRS PP&E Regulatory Account in F2012, and starting in F2013 reduce the percentage of ineligible overhead costs that would be charged to the regulatory account by 10 per cent each year.

BC Hydro also proposed to amortize the additions to the regulatory account over 40 years based on the composite life of BC Hydro's assets, in order to match the overhead costs with the benefits of the underlying assets.

In the Amended F12-F14 RRA, BC Hydro proposed an addition to the IFRS PP&E Regulatory Account for F2012 of \$178 million, plus \$8 million for related IDC.

In the F12-F14 RRA Decision, the IFRS PP&E Regulatory Account was approved as proposed by BC Hydro.

Subsequent to the F12-F14 RRA Decision, BC Hydro completed a capital cost allocation study which identified a further \$37 million of ineligible capital overheads in F2012, above the amount of \$178 million included in the Amended F12-F14 RRA. For F2012, BC Hydro recorded \$222 million in the IFRS PP&E Regulatory Account, consisting of the \$178 million included in the Amended F12-F14 RRA, the additional \$37 million identified in the capital cost allocation study, and \$7 million of related IDC. By letter dated April 10, 2013, the BCUC approved this \$222 million addition to the IFRS PP&E Regulatory Account for F2012.

On May 3, 2013, BC Hydro wrote to the BCUC seeking approval to include in the IFRS PP&E Regulatory Account the reduction to retained earnings on transition to IFRS related to the accounting for mass asset retirements and asset componentization, in the amounts of \$26 million and \$7 million respectively. The increase in the balance of the IFRS PP&E Regulatory Account from \$222 million in F2012 to \$447 million in F2013 is comprised of these amounts of \$26 million and \$7 million, plus F2013 ineligible overheads of \$197 million, less amortization of \$5 million.

The IFRS PP&E Regulatory Account will be fully amortized by F2061.

8.2 IFRS Pension and Other Post-Employment Benefits

Prior to the adoption of IFRS, experience gains and losses on the pension and other post-employment benefit plans were amortized over the average remaining service life of the employee group, but were not recognized on BC Hydro's balance sheet.

On transition to IFRS, BC Hydro was required to recognize on its balance sheet all unamortized experience gains and losses on the pension and other post-employment benefit plans not previously recognized in its financial statements. To maintain BC Hydro's ability to recover this amount from customers, BC Hydro proposed the establishment of the IFRS Pension Regulatory Account with an

opening liability balance in F2013 equal to the actual unamortized experience gains and losses on the pension and other post-employment benefit plans that BC Hydro had to recognize in its financial statements at the time of conversion to IFRS.

BC Hydro also proposed to amortize the balance in the IFRS Pension Regulatory Account over a period of twenty years, which results in approximately the same revenue requirement impact as would have resulted under previous CGAAP.

The amount of the unamortized experience gains and losses recognized on transition to IFRS was \$762 million.

The establishment of the IFRS Pension Regulatory Account was approved in the F12-F14 RRA Decision. The balance in the IFRS Pension Regulatory Account will be fully amortized by F2032.

Regulatory Accounts Report

F2015 to F2016 Revenue Requirements Rate Application