## Janet Fraser

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March 7, 2014
Ms. Erica Hamilton
Commission Secretary
British Columbia Utilities Commission
Sixth Floor - 900 Howe Street
Vancouver, BC V6Z 2N3
Dear Ms. Hamilton:

## RE: British Columbia Utilities Commission (BCUC)

British Columbia Hydro and Power Authority (BC Hydro)
F2015 to F2016 Revenue Requirements Rate Application (F15-F16 RRRA)
F2014 to F2016 Expenditures on Demand-Side Measures (DSM)
Retail Access
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BC Hydro writes to apply for a final order confirming its rates in F2014, F2015 and F2016 further to the Province's November 26, 2013 announcement in regard to BC Hydro (BC Hydro Plan) ${ }^{1}$ and subsequent changes to the regulatory framework regarding BC Hydro's revenue requirements and rates. Related corollary relief is also sought with respect to BC Hydro's regulatory accounts, among other matters. The specific order sought regarding BC Hydro's F2014, F2015 and F2016 rates is set out in Appendix A (Draft Order A).

BC Hydro is also applying for a final order cancelling BC Hydro's retail access program and accepting BC Hydro's withdrawal of any obligation to provide unbundled transmission services pursuant to BC Hydro's Open Access Transmission Tariff (OATT) to retail customers in British Columbia. The specific order sought regarding retail access is set out in Appendix B (Draft Order B).

## 1. Background

## Introduction

BC Hydro's current F2014 rates have been set as final by BCUC Order No. G-77-12A, subject to acceptance by the BCUC of BC Hydro's F2014 DSM expenditures, and they will expire on March 31, 2014. In the normal course BC Hydro would have filed a full revenue requirements

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application (RRA), seeking average rate increases for F2015 (at least), and acceptance of DSM expenditures, on the basis of evidence regarding BC Hydro's cost structure and DSM plans.

The announcement by the Province of the BC Hydro Plan on November 26, 2013 and the subsequent issuance of various enactments regarding BC Hydro's revenue requirements and rates have resulted in quite a different application than would normally be the case. In particular, under the revised regulatory framework the BCUC must issue final orders to set BC Hydro's rates for F2015 and F2016 within 20 days of this application being filed, being March 27, 2014. This is a challenging deadline to meet in light of the complexity of BC Hydro's cost structure and the revised regulatory framework. Accordingly, this application is mostly given over to explaining what orders are required by reference to the new enactments and BC Hydro's F2015 and F2016 revenue requirements model (F15-F16 RR Model) attached as Appendix C. However, because the revised regulatory framework will have on-going effect aside from the settlement of F2015 and F2016 rates, some discussion is also given over to explaining the revised framework.

The revised regulatory framework regarding BC Hydro's revenue requirement rates has been effected through the following:

1. B.C. Reg. 29/2014 enacts new Direction No. 6 to the BCUC, which compels certain F2015 and F2016 revenue requirement and rate orders by March 27, 2014. Upon those required orders being issued, Direction No. 6 will no longer have any legal effect.
2. B.C. Reg. 28/2014 enacts new Direction No. 7 to the BCUC, which continues the essential elements of the Heritage Contract framework formerly enshrined in Heritage Special Direction No. HC2 (HSD\#2) and establishes new on-going elements, some of which have effect in regard to F2014, F2015 and F2016. The same Regulation effects the repeal of HSD\#2.
3. Order in Council No. 095/2014 enacts an amendment to Heritage Special Directive No. HC1 (HSD\#1) to BC Hydro, which has the effect of reducing BC Hydro's annual dividend to the Province after 2017 until it reaches zero and keeping it at zero until BC Hydro's debt-equity ratio reaches 60:40

These enactments are attached as Appendices D, E and F, respectively.
As noted, Appendix A is Draft Order A regarding BC Hydro's F2014, F2015 and F2016 rates and is central to this application. Draft Order A sets out all the orders required from the BCUC by March 27, 2014 in consequence of Direction Nos. 6 and 7, with the exception of orders relating to retail access, which is addressed by Draft Order B in Appendix B. For convenience, each element of Draft Order A and Draft Order B is, where applicable, cross-referenced to the applicable provision in one or other of those enactments.

The F15-F16 RR Model attached as Appendix C shows, in a format substantially consistent with previous BC Hydro RRAs, each element of BC Hydro's cost structure in F2015 and F2016 consistent with Draft Order A and Direction Nos. 6 and 7.

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The balance of this "Background" section provides further information on the new enactments and regulatory framework.

The subsequent section entitled "Explanation of Requested BCUC Orders" provides a provision-by-provision explanation of Draft Orders A and B, cross-referencing where applicable to the appropriate enactment or schedule in the F15-F16 RR Model.

Section $\underline{3}$ summarizes BC Hydro's F2015 and F2016 revenue requirements, and section 4 addresses previous BCUC directives and BC Hydro's commitments regarding BC Hydro's revenue requirement applications.

## Direction No. 6 to the BCUC

Direction No. 6 is a direction to the BCUC pursuant to section 3 of the Utilities Commission Act, RSBC 1996, c. 473, as amended (the Act). Direction No. 6 came into force on March 6, 2014. It has the force of law and compels the BCUC to issue final orders set out in the direction, and as applied for by BC Hydro in this application, within 20 days of the filing of this application with the BCUC. Direction No. 6 concerns F2014, F2015 and F2016 only and, once the BCUC has issued the order requested in this application, will no longer have any legal effect.

Among other things, Direction No. 6 requires the BCUC to issue orders addressing the following:

- The DSM expenditure schedule for F2014, F2015 and F2016 (attached as Appendix A to Direction No. 6 and Schedule A to Draft Order A) is to be accepted by the BCUC
- The BCUC must confirm BC Hydro's rates for F2014 as final and no longer subject to refund
- The BCUC must set BC Hydro's Electric Tariff rates for F2015 and F2016 in accordance with Appendix B to Direction No. 6, and BC Hydro's OATT rates for F2015 and F2016 in accordance with Appendix $C$ to that direction (Schedules $B$ and $C$ respectively, to Draft Order A). The F2015 rates are 9 per cent higher, on average than the F2014 rates, and the F2016 rates are 6 per cent higher on average than F2015 rates. All the rates in Appendices $B$ and C of Direction No. 6 are consistent with the applicable rate increase ( 9 per cent or 6 per cent) and, with one exception, were calculated in accordance with previous BCUC-ordered pricing principles. The exception is the Transmission Service Rate (TSR) stepped rate (RS1823). Contrary to the pricing principle established in BCUC Order No. G-79-05, approval of the rates set out in Appendix B to Direction No. 6 (Schedule B to Draft Order A) will effectively result in the 9 per cent and 6 per cent rate increases being applied equally to the Tier 1 and Tier 2 energy rates (and to the Demand Charges, as is normally the case) of the TSR rate.
- Specific amounts to be amortized from BC Hydro's regulatory accounts in each of F2015 and F2016 are prescribed for a majority of BC Hydro's regulatory accounts

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- BC Hydro's F2014 rate of Return on Equity (ROE) effectively remains at 11.84 per cent, rather than being reduced as it would otherwise have been to reflect the BCUC's Stage 1 Generic Cost of Capital decision (Order No. G-75-13)


## Direction No. 7 to the BCUC

Direction No. 7 is also a direction to the BCUC pursuant to section 3 of the Act. Direction No. 7 also came into force on March 6, 2014 and has the force of law. Direction No. 7 primarily concerns the F2017 and future fiscal periods, although some of its provisions also have an impact in regard to F2014, F2015 and F2016 and therefore is relevant to the order being requested in this application. In addition, Direction No. 7 re-enacts the content of HSD\#2, including the Heritage Contract. Accordingly, the Heritage Contract framework continues, although somewhat amended as described herein.

Notable elements of Direction No. 7 are as follows:

- As described in the BC Hydro Plan, rate caps will be in place for F2017, F2018 and F2019 at 4 per cent, 3.5 per cent and 3 per cent respectively. Any BCUC approved revenue requirements that would (absent the rate caps) result in rates greater than the capped amounts will be placed into the Rate Smoothing Regulatory Account that the BCUC is required to establish under Direction No. 7. By implication, BC Hydro will be filing a revenue requirements application in regard to F2017 and future fiscal years about two years from now (i.e., fourth quarter of F2016).
- BC Hydro's rate of ROE will continue at 11.84 per cent for F2015, F2016 and F2017. For F2018 and subsequent years, BC Hydro's ROE (i.e., expressed in dollars) will effectively be increased by the amount of any increase in the British Columbia Consumer Price Index for the applicable year, independent of the rate of ROE and deemed equity (even as BC Hydro's rate base continues to grow at a rate faster than inflation).
- The "floor" of $\$ 0.00$ in the definition of Trade Income is removed for F2014. As a result, Powerex's anticipated net loss for F2014 will be placed into the Trade Income Deferral Account (TIDA). For F2015 and future years, the floor will be reinstated, and Powerex net losses will not be allowed into the TIDA.
- With regard to BC Hydro's regulatory accounts:
o As part of the BC Hydro Plan, the Province announced the permanent closure of the Burrard Thermal generating station other than those assets required for transmission support services. Costs incurred by BC Hydro in F2014 and later years to decommission the plant are to be deferred to the Non-Heritage Deferral Account (NHDA).
o Two new regulatory accounts are to be approved effective in F2015:

1) the Rate Smoothing Regulatory Account, which will function in a fashion similar to the F2012-F2014 Rate Smoothing Account, namely to allow for the deferral

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and more gradual recovery of one or more large, non-recurring revenue requirement increases, with the objective of smoothing rate increases so that there is less volatility from year to year
2) the Real Property Sales Regulatory Account, to defer the variances between forecast and actual net gains from real property sales

- The Deferral Account Rate Rider (DARR) will be set at 5 per cent for F2015 and future years, unless BC Hydro applies to have it changed. The revenue received from the DARR is to be apportioned between general revenue and the balances of the Heritage Deferral Account (HDA), the NHDA and the TIDA depending on the net balance of the three accounts. The allocation methodology uses the DARR allocation table initially approved by the BCUC in its decision on BC Hydro's F09/F10 RRA (DARR Allocation Table) and further confirmed through BCUC Order No. G-77-12A ${ }^{2}$. The DARR revenue in excess of what would otherwise be collected under the DARR Allocation Table will be accounted for as general revenue and thereby used to offset general rate increases. In accordance with this mechanism, all of the DARR revenue in F2015 and F2016 is forecasted to be allocated to paying down the balance of the deferral accounts.
- With regard to BC Hydro's Retail Access Program, by March 23, 2014, the BCUC must cancel the program. In addition and also by March 23, 2014, the BCUC must accept BC Hydro's withdrawal of any obligation it may have to offer unbundled transmission services directly or indirectly to retail customers under the OATT, or to those who would supply such customers. In anticipation of further development work on retail access issues, ${ }^{3}$ BC Hydro hereby withdraws any such obligations. Since March 23, 2014 is a Sunday, Direction No. 7 effectively requires the BCUC to issue these orders by end of day Friday, March 21, 2014.


## 2. Explanation of Requested BCUC Orders

As noted, the requested orders are attached at Appendix $A$ and Appendix $B$.

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## Order to be Issued within 20 Days (Draft Order A)

Section 3 of Direction No. 6 requires that the BCUC issue its final orders with regard to BC Hydro's F2014, F2015 and F2016 revenue requirements rates within 20 days of the date on which BC Hydro files its application. As BC Hydro filed its application on March 7, 2014, the BCUC is therefore required to issue its final order no later than March 27, 2014

## DSM Expenditure Schedule and F2014 Rates

Paragraph 1 of Draft Order A relates to section 3(a) of Direction No. 6, which requires that the BCUC accept BC Hydro's DSM Expenditure Schedule for F2014, F2015 and F2016 attached as Appendix A to Direction No. 6 and as Schedule A to Draft Order A. A description of BC Hydro's F2014 to F2016 DSM initiatives, as well as the energy and capacity savings the DSM initiatives are expected to achieve, is set out in Appendix G to this application. Line 49/schedule 5 of the F15-F16 RR Model shows the DSM costs for F2014, F2015 and F2016.

Paragraph 2 of Draft Order A responds to section 3(b) of Direction No. 6, which requires the BCUC to confirm BC Hydro's F2014 rates as final and no longer subject to refund.
BCUC Order No. G-77-12A set BC Hydro's F2014 rates as final subject to the BCUC's acceptance of BC Hydro's F2014 DSM expenditure schedule under section 44.2 of the Act. In consequence of the acceptance and by virtue of section 3(b) of Direction No. 6, the BCUC must order that BC Hydro's F2014 rates (including the OATT rates) are final and no longer subject to refund.

## F2015 and F2016 BC Hydro Electric Tariff Rates

Paragraphs 3 and 4 of Draft Order A respond to section 3(c) of Direction No. 6 which requires the BCUC to approve the Electric Tariff rates as set out in Appendix B to Direction No. 6. The rates shown in Appendix B of Direction No. 6 and Schedule B to Draft Order A are the result of BC Hydro applying a 9 per cent average rate increase to the F2014 approved final rates to yield the new F2015 rates and a 6 per cent average rate increase to the F2015 rates to yield the F2016 rates, subject in all cases to BCUC-approved pricing principles except as noted previously.

Three other rate schedules are also affected as a consequence of the equal application of the 9 per cent and 6 per cent increases to the Tier 1 and Tier 2 energy prices of the TSR stepped rate.

1. Rate Schedule 1825 - Transmission Service - Time-of-Use (RS 1825) has differing pricing for Winter and Spring high load hour and low load hour periods that is derived from the Tier 2 price for RS 1823. Therefore, the pricing for F2015 and F2016 for RS 1825 will vary from what it otherwise would be as a result of the TSR stepped rate pricing. BC Hydro notes, however, that there are currently no transmission service customers using RS 1825.

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2. Rate Schedule 1880 - Transmission Service - Standby and Maintenance Supply (RS 1880) is a rate available to transmission services customers who have their own generation and is used when all or part of a customer's generating plant has been curtailed. The energy charge for RS 1880 is the same as the Tier 2 price under RS 1823 and, therefore, will also vary from what it otherwise would be as a result of the TSR stepped rate pricing. In particular, the energy charge for RS 1880 will increase from 7.36 cents/kWh to 8.022 cents/kWh for F2015 and to 8.503 cents/kWh for F2016 (amounting to 9 per cent and 6 per cent rate increases respectively).
3. Finally, the rate charged under Tariff Supplement No. 76 - Shore Power is tied directly to the pricing of RS 1880, as it is calculated as the RS 1880 rate multiplied by a distribution loss factor, resulting in Shore Power rates of 8.298 cents/kWh and 8.795 cents/kWh in F2015 and F2016, respectively. Again, this varies from what it otherwise would be as a result of the TSR stepped rate pricing.

## F2015 and F2016 OATT Rates

Paragraphs 5 and 6 of Draft Order A approve the OATT rates in accordance with section 3(d) of Direction No. 6. Section 3(d) of Direction No. 6 requires the BCUC to approve the OATT rates for F2015 and F2016 as shown in Appendix C to Direction No. 6.

## Deferral Account Rate Rider (DARR)

Paragraph 7 of Draft Order A sets the DARR at 5 per cent, further to sections 10(1) and (2) of Direction No. 7.

Line 21/schedule 1 of the F15-F16 RR Model attached as Appendix C shows forecast DARR revenue in F2015 and F2016.

## F2015 Rate Schedules

Paragraph 8 of Draft Order A requires BC Hydro to file updated OATT and Electric Tariff sheets to reflect the new rates approved for F2015 by March 31, 2014 (BC Hydro's proposed date).

## Return on Deemed Equity

Paragraph 9 of Draft Order A responds to section 4(d)(i) of Direction No. 7 which requires the BCUC to ensure BC Hydro's rates are set so as to allow BC Hydro to earn a rate of ROE of 11.84 per cent on its deemed equity in both F2015 and F2016.

Line 46/schedule 9 of the F15-F16 RR Model shows the rate of return on equity, and line 47/schedule 9 shows the return on equity.

## New Regulatory Accounts

Paragraph 10 of Draft Order A approves the establishment of a new regulatory account called the Rate Smoothing Regulatory Account, as required by section 7(h)(i) of Direction No. 7. By

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this application, BC Hydro seeks BCUC approval to establish the Rate Smoothing Regulatory Account to defer, for recovery in future years, those portions of BC Hydro's revenue requirement for each fiscal year, beginning in F2015, that are not (or were not) recovered in rates in that particular fiscal year. As its name suggests, the Rate Smoothing Regulatory Account allows rate increases to be spread out over the course of a period of years. The BC Hydro Plan contemplates that the Rate Smoothing Regulatory Account will be cleared over 10 years.

Line 173/schedule 2.2 of the F15-F16 RR Model attached in Appendix C shows the amounts to be deferred to the Rate Smoothing Regulatory Account in F2015 and F2016.

Similarly, paragraph 11 of Draft Order A approves the establishment of a new regulatory account called the Real Property Sales Regulatory Account, as required by section 7(h)(ii) of Direction No. 7. In this application, BC Hydro seeks the BCUC's approval to establish the Real Property Sales Regulatory Account to allow BC Hydro to defer the variances between BC Hydro's forecast and actual net gains from sales of its real property each fiscal year.

For each of F2015 and F2016, BC Hydro is forecasting net gains from the sale of real property of $\$ 10$ million as shown in line 82/schedule 5 of the F15-F16 RR Model.

## Existing Regulatory Accounts

- Paragraph 12 of Draft Order A complies with section 3 (h) of Direction No. 6 by allowing BC Hydro to defer its F2015 and F2016 operating costs associated with the development of the Site C project to the existing Site C Regulatory Account. The Site C operating costs are not forecast for F2015 and F2016 in the F15-F16 RR Model.
- Paragraph 13 of Draft Order A complies with section 3(I)(ii) of Direction No. 6. It orders BC Hydro to defer to the SMI Regulatory Account BC Hydro's net operating costs incurred in F2015 and F2016 arising from the smart metering and infrastructure program and net operating costs arising from the meter choices program (approved by BCUC Order No. G-166-13). The forecast net operating costs are found on Line $56 /$ schedule 5 of the F15-F16 RR Model which shows forecast deferrals of $\$ 28.4$ million in F2015 and $\$ 21.5$ million in F2016. The definition of "smart metering and infrastructure program" in section 1 of Direction No. 6 includes both BC Hydro's smart meter program and its smart grid program (which it is required to pursue under section 17(4) of the Clean Energy Act).

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- Paragraph 14 of Draft Order A concerns BC Hydro's F2014 ROE, as required by section 3(v) of Direction No. 6. This order effects an 11.84 per cent ROE for F2014 by reversing the credit to the NHDA arising from paragraph 1(xxvii) of BCUC Order No. G-77-12A which was issued in compliance with section 3(I) of Direction No. 3 to the BCUC. ${ }^{4}$
- Paragraph 15 of Draft Order A requires BC Hydro to continue to defer to the NHDA the difference between actual and forecast domestic customer load, as required by section 7(c)(i) of Direction No. 7. As BC Hydro does not forecast variances for variance regulatory accounts, no load variances have been forecasted for inclusion in the NHDA in F2015 and F2016.
- Paragraph 16 of Draft Order A requires BC Hydro to defer to the NHDA the "Burrard Costs" further to section 7(c)(ii) of Direction No. 7. Burrard Costs are defined as BC Hydro's costs, beginning in F2014, arising from the decommissioning of the parts of the Burrard Thermal Generating Station not required for transmission support. These include not only the costs associated with decommissioning parts of the generating station itself but also, without limitation: the costs associated with retaining employees at the Burrard Generating Station until the electricity generating units are no longer in operation; damages or contractual penalties that may arise as a result of the decommissioning; and the net increase in amortization expense in F2015 and F2016 that will result from a future BCUC order required under section 15 of Direction No. 7. ${ }^{5}$ Burrard Costs will likely be incurred and included in the NHDA, but these are not yet known and therefore not forecast at this time.
- Paragraph 17 of Draft Order A addresses the requirement set out in section 7(d)(i) of Direction No. 7, by ordering BC Hydro to defer to the DSM Regulatory Account the costs arising from the development, implementation and administration of demand-side measures. Both Draft Order A and Direction No. 7 expressly address costs arising from BC Hydro's

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"specified demand-side measures", which are also to be deferred to the DSM Regulatory Account. These are defined in Direction No. 7 by reference to the Demand-Side Measures Regulation under the Act and include BC Hydro's community engagement, education and technology innovation programs.
Appendix G to this application describes BC Hydro's expenditures on demand-side measures as well as BC Hydro's accounting practices with respect to those expenditures. Section 7(d)(ii) of Direction No. 7 requires the BCUC to allow BC Hydro to amortize DSM costs in the DSM Regulatory Account over a 15-year period, which is consistent with BC Hydro's previous practices and BCUC Order No. G-77-12A.
Line 49/schedule 5 of the F15-F16 RR Model shows the forecast deferrals to the DSM Regulatory Account.

- Paragraph 18 of Draft Order A responds to section 7(e) of Direction No. 7 by requiring BC Hydro to continue to defer to the Rock Bay Remediation Regulatory Account the costs made subject to that account by BCUC Order No. G-75-11, including F2014 costs. As a result of the BCUC order required by section 7(e) of Direction No. 7, it will no longer be necessary for BC Hydro to file an annual application with the BCUC requesting the inclusion in the Rock Bay Regulatory Account of the Rock Bay costs for any particular fiscal year.

Line 134/schedule 2.2 of the F15-F16 RR Model sets out the forecast amounts to be deferred to the Rock Bay Remediation Regulatory Account in F2015 and F2016.

- Paragraphs 19 and 20 of Draft Order A comply with sections 7(f) and (g) of Direction No. 7 respectively. They require BC Hydro to continue to record the variances between forecast and actual asbestos remediation costs and forecast and actual non-current pension costs to the regulatory accounts established for those purposes. As BC Hydro does not forecast variances for variance deferral accounts, no variances have been forecasted for inclusion in these accounts in F2015 and F2016.
- Paragraphs 21 and 22 of Draft Order A address the requirements set out in sections 7(i)(i) and (ii) of Direction No. 7. They require both the First Nations Costs Regulatory Account and the Real Property Sales Regulatory Account to accrue interest in each fiscal year at BC Hydro's weighted average cost of debt ${ }^{6}$.
Line 12/schedule 2.2 of the F15-F16 RR Model shows the forecast interest accrued on the First Nations Costs Regulatory Account
- Paragraph 23 of Draft Order A directs how revenue from the DARR is to be allocated, with express reference to section 10(3) of Direction No. 7. The provision requires that revenue from the DARR be apportioned between the three deferral accounts (the HDA, NHDA and TIDA) and general revenue. DARR revenue will be applied to the three deferral accounts based on the table in Section 14 of Direction No. 7. The table is substantively identical to the DARR Allocation Table that has been used to set the DARR in previous fiscal years.

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Equation 1 in section 10(3) of Direction No. 7 calculates the amount of DARR revenue that will be apportioned to general revenue, with the balance being used to draw down the three deferral accounts proportionally in accordance with paragraph 10(3)(iii).
Lines 5, 12, 20/schedule 2.1 of the F15-F16 RR Model show the forecast amounts that will be allocated to the HDA, the NHDA and the TIDA in F2015 and F2016, respectively. There are no amounts that will be apportioned to general revenue in F2015 and F2016.

## F2015 and F2016 Regulatory Account Baseline Forecasts

Paragraph 24 of Draft Order A fulfills the requirements in sections 3(e) and (f) of Direction No. 6. It expressly approves certain baseline forecasts for the regulatory accounts that record variances between forecast and actual costs or expenditures. To allow easy reference to the F15-F16 RR Model, the table in Draft Order A is reproduced below with cross-references to the applicable schedule.

Table 1 Regulatory Baseline Amounts

| Forecast <br> (Applicable Account) | F15-F16 RR Model Reference | F2015 <br> (\$ million) | F2016 <br> (\$ million) |
| :---: | :---: | :---: | :---: |
| Heritage Payment Obligation (HDA) | Line 75 (schedule 4.0) | 353.2 | 399.2 |
| Non-Heritage Cost of Energy Subject to Deferral (NHDA) | Line 88 (schedule 4.0) | 1,074.3 | 1,032.2 |
| Total Rate Revenue (NHDA) | Line 22 (schedule 1.0) | 4,168.3 | 4,459.7 |
| Trade Income (TIDA) | Line 17 (schedule 1.0) | 110.0 | 110.0 |
| Non-Current Pension Costs | Line 61 (schedule 8.0) | 2.9 | 0.1 |
| Storm Restoration Costs | N/A ${ }^{7}$ | 3.9 | 3.9 |
| Total Finance Charges | Lines 71 - Line 60 - Line 61 (schedule 8.0) | 602.6 | 725.2 |
| Amortization of Capital Additions | Line 73 - Line 72 (schedule 13.0) | 34.7 | 106.7 |
| Real Property Sales | Line 82 (schedule 5.0) | 10.0 | 10.0 |
| Asbestos Remediation Costs | Line 166 (schedule 2.2) | 1.8 | 0.9 |

## Specific Amortization Orders

Paragraphs 25 through 37 of Draft Order A direct the amortization of specific amounts from BC Hydro's regulatory accounts, in compliance with Direction No. 6. Table 2 below shows the amounts required to be amortized from each regulatory account in F2015 and F2016, with reference to the applicable paragraph of Draft Order A, the corresponding section of

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Direction No. 6, and the corresponding entry in the F15-F16 RR Model. The amortization amounts have been determined consistently with the Regulatory Accounts Report at Appendix H .

Table 2 Regulatory Account Amortization Amounts

| Regulatory Account | Draft Order A <br> Paragraph <br> Reference | Direction No. 6 <br> Section <br> Reference | F15-F16 RR Model <br> Reference | F2015 | F2016 |
| :--- | :---: | :---: | :--- | :---: | :---: |
| First Nations Costs | 25 | $3(\mathrm{~g})$ | Line 28 (schedule 5.0) | (\$ million) | (\$ million) |
| Storm Restoration | 26 | $3(\mathrm{i})$ | Line 30 (schedule 5.0) | 1.4 | 43.3 |
| Capital Additions | 27 | $3(\mathrm{j})$ | Line 57 (schedule 7.0) | 9.8 | 1.4 |
| Total Finance <br> Charges | 28 | $3(\mathrm{k})$ | Line 69 (schedule 8.0) | 25.5 | 9.4 |
| SMI | 29 | $3(\mathrm{l})(\mathrm{i})$ | Line 35 (schedule 5.0) | 30.5 | 31.3 |
| Home Purchase <br> Option Plan | 30 | $3(\mathrm{~m})$ | Line 36 (schedule 5.0) | 11.8 | 11.3 |
| Non-current Pension <br> Costs | 31 | $3(\mathrm{n})$ | Line 37 (schedule 5.0) | 32.6 | 15.5 |
| Rock Bay | 32 | $3(\mathrm{o})$ | Line 99 (schedule 5.0) | 51.5 | 50.5 |
| IFRS PP\&E | 33 | $3(\mathrm{p})(\mathrm{i})$ | Line 38 (schedule 5.0) | 15.9 | 19.8 |
| IFRS Pension | 34 | $3(\mathrm{q})$ | Line 39 (schedule 5.0) | 38.2 | 38.2 |
| Arrow Water <br> Divestiture Costs | 35 | $3(\mathrm{r})$ | Line 100 (schedule 5.0) | 4.7 | 4.5 |
| Arrow Water Provision | 36 | $3(\mathrm{~s})$ | Line 101 (schedule 5.0) | 0.3 | 0.3 |
| Asbestos Remediation | 37 | $3(\mathrm{t})$ | Sum of Lines 95 through 98 <br> (schedule 5.0) | 12.1 | 10.7 |

## Specific Deferral Orders

Paragraph 38 of Draft Order A requires BC Hydro to defer to the IFRS PP\&E Regulatory Account $\$ 156.8$ million in F2015 and $\$ 134.4$ million in F2016. These amounts can be found in line 58/schedule 5 of the F15-F16 RR Model. Paragraph 38 of Draft Order A implements the requirement set out in section 3(p)(ii) of Direction No. 6.

Paragraph 39 of Draft Order A requires BC Hydro to defer to the Rate Smoothing Regulatory Account $\$ 166.2$ million in F2015 and $\$ 121.2$ million in F2016. These amounts can be found in line 103/schedule 5 of the F15-F16 RR Model. Paragraph 39 implements the requirement set out in section 3(u) of Direction No. 6.

# BChydro $\boldsymbol{H}$ 

March 7, 2014
Ms. Erica Hamilton
Commission Secretary
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## Order to be Issued by March 23, 2014 (Draft Order B)

Unlike the orders set out in Draft Order A, which must be issued within 20 days of BC Hydro filing this application, the orders in Draft Order B must be issued on or before March 23, 2014. As March 23, 2014 falls on a Sunday, in effect the orders in Draft Order B are required no later than end of day on March 21, 2014. Draft Order B responds to the requirements in section 14(1)(a) and (b) of Direction No. 7 regarding retail access. Paragraph 1 approves BC Hydro's withdrawal of any obligation to offer unbundled transmission services pursuant to BC Hydro's OATT to retail customers in British Columbia and to those who supply such customers, as effected above. Paragraph 2 cancels the Retail Access Program as defined in BCUC Order No. G-39-12.

## 3. F2015 and F2016 Revenue Requirements

Table 3 summarizes the components of BC Hydro's revenue requirements for F2015 and F2016 and shows the revenue shortfalls that would result from existing rates.

Table 3 Revenue Requirements Summary

|  | F15-F16 RR Model Schedule 1 Reference (Appendix C) | F2015 <br> (\$ million) | $\begin{gathered} \text { F2016 } \\ \text { (\$ million) } \end{gathered}$ |
| :---: | :---: | :---: | :---: |
| Cost of Energy | Line 1 | 1,384.5 | 1,391.7 |
| Operating Costs | Line 2 | 1,170.8 | 1,146.6 |
| Taxes | Line 3 | 213.8 | 224.1 |
| Amortization | Line 4 | 698.7 | 758.0 |
| Finance Charges | Line 5 | 725.0 | 838.3 |
| Return on Equity | Line 6 | 581.5 | 651.9 |
| Non-Tariff and Other Utility Revenue | Line 7 + Line 20 | (137.5) | (143.1) |
| Inter-segment Revenue | Line 8 | (52.6) | (53.5) |
| Net Deferral/Regulatory Accounts | Line 12 + Line 16 | (93.4) | (16.2) |
| Subsidiary Net Income | Line 19 | (114.2) | (115.1) |
| DARR Revenue | Line 11 | (208.4) | (223.0) |
| Total Revenue Requirement | Line 22 | 4,168.2 | 4,459.7 |
| Rate Revenue at Current Rates | Line 26 | 3,824.2 | 3,860.0 |
| Revenue Shortfall | Line 27 | 344.0 | 599.7 |
| Rate Increase (\%) | Line 28 | 9.0 | 6.0 |

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## 4. BC Hydro Commitments and Previous BCUC Directives

BC Hydro's F12-F14 Amended Revenue Requirements Application was resolved through the enactment of Direction No. 3 on May 22, 2012 and the subsequent issuance of BCUC Order No. G-77-12A. In its filing of May 23, 2012 to the BCUC in response to Direction No. 3, BC Hydro made several commitments with regard to information that would be provided no later than the filing of its next RRA. In addition, BCUC Order No. G-77-12A also contained directions to which BC Hydro was to respond in its next application. In this section, BC Hydro discusses these commitments and BCUC directives, as well as applicable revenue requirement directives from previous proceedings.

## BC Hydro Commitments

## Regulatory Accounts Report

One of BC Hydro's May 2012 commitments was to provide a more detailed regulatory accounts plan. Attached as Appendix H is BC Hydro's Regulatory Accounts Report dated February 28, 2014. The report describes BC Hydro's regulatory accounts, its plan to reduce the total balance and number of accounts and its principles regarding potential new accounts and the application of interest to the accounts. Direction Nos. 6 and 7 and this application are entirely consistent with the report.

## 10-Year Capital Plan

BC Hydro also committed in May 2012 to filing a long-term capital plan no later than its next RRA. Direction Nos. 6 and 7, however, have precluded the full evidentiary hearing of a revenue requirements application until the filing of its next RRA in 2016. BC Hydro reiterates its commitment to file a long-term capital plan with that application at that time. In addition, BC Hydro will continue to keep stakeholders apprised of its capital plans through the annual capital project information included in its Annual Financial Report to the BCUC that is filed by the end of July in each year.

## Long-term Workforce Plan

BC Hydro also committed in May 2012 to filing a long-term workforce plan no later than its next RRA. As with the 10-Year Capital Plan, BC Hydro remains committed to providing this plan with the filing of its next RRA in 2016.

## Previous BCUC Directives

## BCUC Order No. G-77-12A

BCUC Order No. G-77-12A contained several directions to be addressed by BC Hydro in its next revenue requirements application.

1) Directive 4 (a): BC Hydro is directed to include in its next RRA an analysis of, and proposal for, a formulaic method for clearing the net balance in the Deferral Accounts that considers

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the forecast changes to the balance and does not contain a maximum/minimum limit in a range which has already been surpassed.

## BC Hydro Response

Direction No. 7 requires BC Hydro to maintain the DARR at 5 per cent and to allocate the revenue received between the deferral accounts and general revenue based upon a formula contained in Direction No. 7. Therefore, BC Hydro considers that directive 4(a) has been superseded by Direction No. 7. BC Hydro also notes that directive 4 (a) is addressed in section 1 of Appendix A of its Regulatory Accounts Report (Appendix H) which describes the use of the DARR Allocation Table.
2) Directive 4 (b): BC Hydro is directed to include in its next RRA its accounting practices and policies concerning DSM expenditures.

## BC Hydro Response

Direction No. 7 defines precisely the costs that are subject to the DSM Regulatory Account as well as the amortization period. Therefore, BC Hydro considers that directive 4(b) has been superseded by Direction No. 7. Nevertheless, Appendix G to this application responds to directive 4(b) by providing a discussion of BC Hydro's accounting practices and policies concerning DSM expenditures (section 1.4 of Appendix G).
3) Directive 4(c): BC Hydro is directed to include in its next RRA a range of reasonable amortization periods, and the associated amortization amounts, to be applied to the following regulatory accounts: First Nations Costs, Home Purchase Option Plan (HPOP) and Rock Bay Remediation Costs.

## BC Hydro Response

Direction No. 6 requires specific amortization in F2015 and F2016 from these three accounts as noted above. BC Hydro also discusses the amortization periods of these three accounts in section 3 of its Regulatory Accounts Report (Appendix H), as follows:
a) $\$ 43.5$ million and $\$ 43.3$ million are to be amortized in F2015 and F2016, respectively, from the First Nations Costs Regulatory account (section 3(g) of Direction No. 6), consistent with the 10-year amortization period with respect to lump sum settlement costs, as described in Table 4, note 1 of the Regulatory Accounts Report
b) The Home Purchase Option Plan Regulatory Account is to be fully amortized over two years in the amounts of \$11.8 million and $\$ 11.3$ million in F2015 and F2016 respectively (section 3(m) of Direction No. 6)
c) $\$ 51.5$ million and $\$ 50.5$ million are to be amortized in F2015 and F2016, respectively, from the Rock Bay Remediation Regulatory Account (section 3(o) of Direction No. 6), consistent with the 2-year amortization period of Rock Bay costs described in Table 4 of the Regulatory Accounts Report
4) Directive 4(d): BC Hydro is directed to include in its next RRA the appropriate amortization period of its SMI Program assets in light of evidence regarding their anticipated useful lives.

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## BC Hydro Response

As discussed in section 3 and Table 4 of its Regulatory Accounts Report (Appendix H), BC Hydro believes that the appropriate amortization period for its deferred SMI Program costs is 15 years. Direction No. 6 requires that amortization expense of $\$ 30.5$ million and $\$ 31.3$ million in F2015 and F2016 respectively be allowed, consistent with this position.
5) Directive 4 (e): BC Hydro is directed to include in its next RRA an analysis as to whether the TIDA 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.

## BC Hydro Response

Section 10(3) of Direction No. 7 sets the DARR and prescribes the allocation of revenues collected through the DARR. Direction No. 7 effectively maintains the TIDA as one of the deferral accounts. In addition, Table A-1 in Appendix A to the Regulatory Accounts Report, (Appendix H) provides the rate impact analysis of removing the TIDA as a deferral account and no longer amortizing it using the DARR Allocation Table and instead amortizing the account over five years. In section 1 of Appendix A of the Regulatory Accounts Report, BC Hydro also discusses the reasons why the TIDA should remain as a Deferral Account.

## BCUC Order No. G-7-13

BCUC Order No. G-7-13 was issued in response to BC Hydro's application for approval of the Asbestos Remediation Costs Regulatory Account.

Directive 5 of that order requires BC Hydro to file for the recovery of the asbestos remediation costs as part of its next RRA. Section 3(t) of Direction No. 6 requires that $\$ 12.1$ million and $\$ 10.7$ million be amortized in F2015 and F2016, respectively.

Directive 6 of BCUC Order No. G-7-13 directed that for F2015 and future years, BC Hydro is to apply to the BCUC for approval to record in the Asbestos Remediation Regulatory Account any variance from the amount of asbestos remediation costs included in revenue requirements for the respective test year and the actual asbestos remediation costs incurred, plus interest at BC Hydro's weighted average cost of debt for its current fiscal year. Section 7(f) of Direction No. 7 requires the BCUC to allow the variance between actual and forecast costs to be deferred to the Asbestos Remediation Regulatory Account.

## BCUC Order No. G-57-13

BCUC Order No. G-57-13 was issued in response to BC Hydro's application for approval to record its F2013 Rock Bay remediation costs in the Rock Bay Remediation Regulatory Account. In summary, the order directs that:

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Ms. Erica Hamilton
Commission Secretary
British Columbia Utilities Commission
F2015 to F2016 Revenue Requirements Rate Application (F15-F16 RRRA)
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- BC Hydro is to apply for recovery in rates of the costs in the account related to the Transport Canada litigation and settlement, including a proposed amortization period for cost recovery, as part of BC Hydro's next RRA; and
- BC Hydro is to include the following information as part of its RRA:
o BC Hydro's best estimate of when it expects to apply for recovery in rates of the Account
o BC Hydro's best estimate of the expected final balance of the account once all Rock Bay remediation costs have been incurred and all remediation activities have been completed
o The status of Rock Bay remediation activities
BC Hydro Response
As noted above, amortization from the Rock Bay Remediation Regulatory Account is to be allowed in the amounts of $\$ 51.5$ million and $\$ 50.5$ million in F 2015 and F 2016 respectively (section 3(o) of Direction No. 6). BC Hydro notes that section 7(e) of Direction No. 7 requires that BC Hydro continue to record in the Rock Bay Remediation Regulatory Account the costs that it incurs for remediation of Rock Bay. BC Hydro will propose an amortization schedule for any remaining balance in its next RRA. Appendix I briefly describes the status of the Rock Bay remediation activities.


## BCUC Order No. G-16-09

BCUC Order No. G-16-09 was issued in connection with BC Hydro's F09/F10 RRA. Several directives contained in the order are still applicable to F2015 and F2016.

1) Directive No. 57: Uniform System of Accounts (USoA). BC Hydro was directed to file USoA financial information in its revenue requirement applications after January 1, 2011.
BC Hydro Response
BC Hydro has been providing financial information in a USoA format as part of its Annual Report to the BCUC, beginning with the F2012 Annual Report, and will continue to do so for F2015 and F2016.
2) Directive No. 51: Capital expenditures. The BCUC recommended that BC Hydro include in its next RRA the implications arising from planned capital expenditures, set out for each capital item.

## BC Hydro Response

BC Hydro has filed schedules I and J in its recent RRAs in compliance with this Directive. BC Hydro will be filing schedules I and J with its F2014 Annual Report to the BCUC due by the end of July 2014.

# BChydio : 

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Commission Secretary
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## BCUC Order No. G-143-06

BCUC Order No. G-143-06 was issued in connection with BC Hydro's F07/F08 RRA. Directives No. 19 to 21 concerned BC Hydro's capital plan and required that BC Hydro file bi-annually its capital plan identifying all capital expenditures for the current and following fiscal period, as well as total expenditure and in-service date forecasts for project already underway in those periods.

## BC Hydro Response

BC Hydro has filed the capital plan information as schedules I and $J$ in its recent RRAs. As noted above, BC Hydro will be filing schedules I and J with its F2014 Annual Report to the BCUC due by the end of July 2014.

## 5. Conclusion

$B C$ Hydro respectfully submits that the draft orders in Appendices $A$ and $B$ comply with the revised regulatory framework governing BC Hydro and meet the specific legal requirements established in Direction Nos. 6 and 7, as explained in this application. Accordingly, BC Hydro requests that the BCUC issue:

1. a final order that is substantially consistent with Draft Order A within 20 days of the date on which this application is filed (i.e., by March 27, 2014)
2. a final order that is substantially consistent with Draft Order B on or before March 23, 2014 (since March 23, 2014 is a Sunday, this order must be issued by end of day on March 21, 2014)
For further information, please contact Fred James at 604-623-4317 or by email at bchydroregulatorygroup@bchydro.com.

Yours sincerely,


Janet Fraser
Chief Regulatory Officer
fi/af
Enclosure (1)
Copy to: BCUC Project No. 3698622 (F12-F14 RRA) Registered Intervener Distribution List.

# F2015 to F2016 Revenue Requirements Rate Application 

## Appendix A

## Draft Order A

Appendix A

British Columbia
Utilities Commission

Order
Number G-


IN THE MATTER OF
the Utilities Commission Act, R.S.B.C. 1996, Chapter 473
and

Application by British Columbia Hydro and Power Authority (BC Hydro)
Regarding its Rates for F2014, F2015 and F2016,
Expenditures on Demand Side Measures in F2014, F2015 and F2016 and Retail Access

## BEFORE:



## ORDER

## WHEREAS:

A. On November 26, 2013, the Province of British Columbia announced a 10-year plan regarding BC Hydro's rates and revenue requirements including, among other things, average rate increases of $9 \%$ and $6 \%$ in F2015 and F2016, respectively;
B. On March 6, 2014 B.C. Reg. 29/2014 enacted Direction No. 6 to the British Columbia Utilities Commission (Direction No. 6);
C. On March 6, 2014 B.C Reg. 28 /2014 enacted Direction No. 7 to the British Columbia Utilities Commission (Direction No. 7), and repealed Heritage Special No. HC2 to the British Columbia Utilities Commission (HSD\#2);
D. On March 6, 2014 Order in Council No. 0952014 effected certain amendments to Heritage Special Directive No. HC1to the British Columbia Hydro and Power Authority (HSD\#1);
E. On March 7, 2014 BC Hydro filed an application pursuant to the Utilities Commission Act (the Act), and Direction Nos. 6 and 7, seeking Commission orders that, among other things, would confirm as final and no longer subject to refund BC Hydro's 2014 rates; set its F2015 and F2016 Electric Tariff rates; and set its F2015 and F2016 Open Access Transmission Tariff (OATT) rates (the F15-F16 RRRA);
F. The F2015 and F2016 rates for which approval is sought are prescribed by Direction No. 6, and effect average rate increases of $9 \%$ and $6 \%$ per year, respectively.

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NOW THEREFORE the Commission orders as follows:

1. BC Hydro's F2014, F2015 and F2016 schedule of expenditures on demand-side measures is accepted as shown in Schedule A. [NTD: D6, 3(a)]
2. BC Hydro's F2014 rates, as set by BCUC Order No. G-77-12A, are confirmed as final and no longer subject to refund. [NTD: D6, 3(b)]
3. BC Hydro's F2015 Electric Tariff rates are set as shown in Schedule B, effective April 1, 2014 on a final, non-refundable basis. [NTD: D6, 3(c)]
4. BC Hydro's F2016 Electric Tariff rates are set as shown in Schedule B, effective April 1, 2015 on a final, non-refundable basis. [NTD: D6, 3(c)]
5. BC Hydro's F2015 OATT rates are set as shown in Schedule C, effective April 1, 2014 on a final, non-refundable basis. [NTD: D6, 3(d)]
6. BC Hydro's F2016 OATT rates are set as shown in Schedule C, effective April 1, 2015 on a final, non-refundable basis. [NTD: D6, 3(d)]
7. The Deferral Account Rate Rider is set at $5 \%$ on a final, non-refundable basis. [NTD: D7, 10(1)]
8. By March 31, 2014 BC Hydro must file rate schedules with the Commission reflecting the F2015 OATT rate and Electric Tariff rate orders above.

## Return on Deemed Equity

9. BC Hydro's allowed rate of return on deemed equity is set at $11.84 \%$ for each of F2015 and F2016. [NTD: D7, 4(d)(i)]

## New Regulatory Accounts

10. The Rate Smoothing Regulatory Account is approved as applied for. [NTD: D7, 7(h)(i)]
11. The Real Property Sales Regulatory Account is approved as applied for. [NTD: D7, 7(h)(ii)]

## Existing Regulatory Accounts

12. BC Hydro is to defer to the Site C Regulatory Account its F2015 and F2016 operating costs incurred in regard to the development of the Site C project. [NTD: D6, 3(h)]

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13. BC Hydro is to defer to the SMI Regulatory Account its F2015 and F2016 net operating costs arising from the smart metering and infrastructure program and the net operating costs arising from BCUC Order No. G-166-13. [NTD: D6, 3(I)(ii)]
14. BC Hydro is to defer to the Non-Heritage Deferral Account the amount that is determined by subtracting the amount in subparagraph (ii) from the amount in subparagraph (i):
(i) the forecast return on deemed equity in F2014 calculated on the basis of an annual rate of return on deemed equity in that year of $11.84 \%$, and
(ii) the forecast return on deemed equity in F2014 calculated on the basis of an annual rate of return on deemed equity in that year that is greater than or less than $11.84 \%$ as a result of the Commission's order arising from the generic cost of capital proceeding initiated by Commission Order No. G-20-12. [NTD: D6, 3(v)]
15. BC Hydro is to continue to defer to the Non-Heritage Deferral Account the variances between the actual and forecast cost of energy arising from differences between forecast and actual customer load.
[NTD: D7, 7(c)(i)]
16. BC Hydro is to defer to the Non-Heritage Deferral Account its Burrard Costs. [NTD: D7, 7(c)(ii)]
17. BC Hydro is to defer to the DSM Regulatory Account its costs arising from the development, implementation and administration of demand-side measures, including costs arising from specified demand-side measures and public awareness programs. [NTD: D7, 7(d)(i)]
18. BC Hydro is to continue to defer to the Rock Bay Remediation Regulatory Account its Rock Bay costs. [NTD: D7, 7(e)]
19. BC Hydro is to continue to defer to the Asbestos Remediation Regulatory Account the variances between its actual and forecast asbestos remediation costs. [NTD: D7, 7(f)]
20. BC Hydro is to continue to defer to the Non-Current Pension Costs Regulatory Account the variances between its actual and forecast non-current pension costs. [NTD: D7, 7(g)]
21. The First Nations Costs Regulatory Account shall accrue interest in a fiscal year at BC Hydro's weighted average cost of debt in that year. [NTD: D7, 7(i)(i)],
22. The Real Property Sales Regulatory Account shall accrue interest in a fiscal year at BC Hydro's weighted average cost of debt in that year. [NTD: D7, 7(i)(ii)]
23. Forecast revenue from the Deferral Account Rate Rider is to be accounted for by BC Hydro in accordance with paragraph 10(3) of Direction No. 7. [NTD: D7, 10(3)]

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## F2015 and F2016 Regulatory Account Baseline Forecasts

24. The following forecasts of costs and revenues are approved for the purposes of the applicable regulatory accounts: [NTD: D6, 3(e) and 3(f)]

| Forecast (Regulatory Account) | F2015 <br> (\$ million) | F2016 <br> (\$ million) |
| :--- | :---: | :---: |
| Heritage Payment Obligation (HDA) | 353.2 | 399.2 |
| Non-Heritage cost of Energy Subject to Deferral (NHDA) | $1,074.3$ | $1,032.2$ |
| Total Rate Revenue (NHDA) | $4,168.3$ | $4,459.7$ |
| Trade Income (TIDA) | 110.0 | 110.0 |
| Non-Current Pension Costs | 2.9 | 0.1 |
| Storm Restoration Costs | 3.9 | 3.9 |
| Total Finance Charges | 602.6 | 725.2 |
| Amortization of Capital Additions | 34.7 | 106.7 |
| Real Property Gain/Loss | 10.0 | 10.0 |
| Asbestos Remediation Costs | 1.8 | 0.9 |

## Specific Amortization Orders

25. BC Hydro shall amortize from the First Nations Costs Regulatory Account the amounts of $\$ 43.5$ million and \$43.3 million in F2015 and F2016 respectively. [NTD: D6, 3(g)]
26. BC Hydro shall amortize from the Storm Restoration Regulatory Account the amounts of $\$ 1.4$ million in each of F2O15 and F2016. [NTD: D6, 3(i)]
27. BC Hydro shall amortize from the Capital Additions Regulatory Account the amounts of $\$ 9.8$ million and $\$ 9.4$ million in each of F2015 and F2016 respectively. [NTD: D6, 3(j)]
28. BC Hydro shall amortize from the Total Finance Charges Regulatory Account the amount of $\$ 25.5$ million in each of F2015 and F2016. [NTD: D6, 3(k)]
29. BC Hydro shall amortize from the SMI Regulatory Account the amounts of $\$ 30.5$ million and $\$ 31.3$ million in F2015 and F2016 respectively. [NTD: D6, 3(I)(i)]
30. BC Hydro shall amortize from the Home Purchase Option Plan Regulatory Account the amounts of $\$ 11.8$ million and $\$ 11.3$ million in F2015 and F2016 respectively. [NTD: D6, 3(m)]
31. BC Hydro shall amortize from the Non-Current Pension Costs Regulatory Account he amounts of $\$ 32.6$ million and $\$ 15.5$ million in F2015 and F2016 respectively. [NTD: D6, 3(n)]

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32. BC Hydro shall amortize from the Rock Bay Remediation Regulatory Account the amounts of $\$ 51.5$ million and $\$ 50.5$ million in F2015 and F2016 respectively. [NTD: D6, 3(o)]
33. BC Hydro shall amortize from the IFRS PP\&E Regulatory Account the amounts of $\$ 15.9$ million and $\$ 19.8$ million in F2015 and F2016 respectively. [NTD: D6, 3(p)(i)]
34. BC Hydro shall amortize from the IFRS Pension Regulatory Account the amount of $\$ 38.2$ million in each of F2015 and F2016. [NTD: D6, 3(q)]
35. BC Hydro shall amortize from the Arrow Water Divestiture Costs Regulatory Account the amounts of $\$ 4.7$ million and $\$ 4.5$ million in F2015 and F2016 respectively. [NTD: D6, 3(r)]
36. BC Hydro shall amortize from the Arrow Water Provision Regulatory Account the amount of $\$ 0.3$ million in each of F2015 and F2016. [NTD: D6, 3(s)]
37. BC Hydro shall amortize from the Asbestos Remediation Regulatory Account the amounts of $\$ 12.1$ million and $\$ 10.7$ million in F2015 and F2016 respectively. [NTD: D6, 3(t)]

## Specific Deferral Orders

38. BC Hydro is to defer to the IFRS PP\&E Regulatory Account $\$ 156.8$ million and $\$ 134.4$ million in F2015 and F2016 respectively. [NTD: D6, 3(p)(ii)]
39. BC Hydro is to defer to the Rate Smoothing Regulatory Account $\$ 166.2$ million and $\$ 121.2$ million in F2015 and F2016 respectively. [NTD: D6, 3(u)]

DATED at the City of Vancouver, in the Province of British Columbia, this day of , 2014.

## BY ORDER

## Schedules:

Schedule A - DSM Expenditure Schedule from Direction No. 6
Schedule B - Electric Tariff Rates from Direction No 6
Schedule C - OATT Rates from Direction No. 6


> Application by British Columbia Hydro and Power Authority (BC Hydro)
> Regarding its Rates for F2014, F2015 and F2016,
> Expenditures on Demand Side Measures in F2014, F2015 and F2016 and Retail Access

|  | APPENDIX A |  |  |
| :--- | ---: | ---: | ---: |
|  | F2014 - F2016 DSM Expenditure Schedule |  |  |
| S MILLION | F2014 | F2015 | F2016 |
| Codes and Standards | 2.4 | 4.0 | 4.2 |
| Rate Structures | 6.5 | 2.0 | 1.7 |
| Programs |  |  |  |
| Residential | 30.4 | 17.7 | 18.9 |
| Commercial | 66.4 | 39.5 | 40.0 |
| $\quad$ Industrial | 101.9 | 64.3 | 42.9 |
| Total Programs | 198.7 | 121.5 | 101.8 |
| Supporting Initiatives | 28.7 | 20.6 | 20.3 |
| Total Energy Efficiency Portfolio | 236.3 | 148.0 | 128.0 |
| Capacity Focused DSM | 0.0 | 2.4 | 3.1 |
| Total | 236.3 | 150.5 | 131.1 |



SCHEDULE B to Order G-xx-xx

Page 1 of 5

Application by British Columbia Hydro and Power Authority (BC Hydro) Regarding its Rates for F2014, F2015 and F2016, Expenditures on Demand Side Measures in F2014, F2015 and F2016 and Retail Access

ELECTRIC TARIFF RATES - F2015 and F2016

| Rate Class | Rate Schedule | Rate | F2015 | F2016 |
| :---: | :---: | :---: | :---: | :---: |
| Residential | 1101/1121 | Basic Charge(\$/day) | 0.1664 | 0.1764 |
|  |  | Step 1 energy rate (\$/kWh) | 0.0752 | 0.0797 |
|  |  | Step 2 energy rate (\$/kWh) | 0.1127 | 0.1195 |
| Residential | 1105 (closed) | Energy rate (\$/kWh) | 0.0492 | 0.0522 |
|  |  | Energy rate during period of interruption (\$/kWh) | 0.2865 | 0.3037 |
| Residential Zone II | 1107/1127 | Basic Charge (\$/day) | 0.1775 | 0.1882 |
|  |  | Step 1 energy rate (\$/kWh) | 0.0901 | 0.0955 |
|  |  | Step 2 energy rate (\$/kWh) | 0.1548 | 0.1641 |
| Residential | 1148 (closed) | Basic Charge(\$/day) | 0.1775 | 0.1882 |
|  |  | Energy rate (\$/kWh) | 0.0901 | 0.0955 |
| Residential | 1151/1161 | Basic Charge (\$/day) | 0.1775 | 0.1882 |
|  |  | Energy rate (\$/kWh) | 0.0901 | 0.0955 |
| Exempt General Service | $\begin{array}{r} \hline 1200 / 1201 / \\ 1210 / 1211 \end{array}$ | Basic Charge(\$/day) | 0.2129 | 0.2257 |
|  |  | Demand rate - Step 1 (\$/kW) | 0 | 0 |
|  |  | Demand rate - Step 2 (\$/kW) | 5.19 | 5.50 |
|  |  | Demand rate - Step 3 (\$/kW) | 9.95 | 10.55 |
|  |  | Energy Rate - Tier 1 (\$/kWh) | 0.1012 | 0.1073 |
|  |  | Energy Rate - Tier 2 (\$/kWh) | 0.0486 | 0.0515 |


| Rate Class | Rate Schedule | Rate | F2015 | F2016 |
| :---: | :---: | :---: | :---: | :---: |
| General Service | $\begin{array}{r} \hline 1205 / 1206 / \\ 1207 \end{array}$ | Energy rate - Tier 1 (\$/kWh) | 0.0492 | 0.0522 |
|  |  | Energy rate - Tier 2 (\$/kWh) | 0.0323 | 0.0342 |
|  |  | Energy rate during period of interruption (\$/kWh) | $0.2865$ | 0.3037 |
| Small General Service Zone II | 1234 | Basic Charge (\$/day) | 0.2129 | 0.2257 |
|  |  | Energy rate - Tier 1 (\$/kWh) | 0.1012 | 0.1073 |
|  |  | Energy rate - Tier 2 (\$/kWh) | 0.1686 | 0.1787 |
| Distribution Service | 1253 | Monthly Minimum energy charge (\$/month) | 39.03 | 41.37 |
| Distribution Service | 1268 | Energy charge (\$/kWh) | 0.00157 | 0.00166 |
| Power Service | 1278 (Closed) | \$/kVA | 2.526 | 2.678 |
|  |  | Energy charge (\$/kWh) | 0.06604 | 0.07 |
|  |  | Monthly minimum greater of \$/kVA or (\$) | $\begin{array}{r} 4.93 \\ 9868.64 \end{array}$ | $\begin{array}{r} 5.23 \\ 10460.76 \end{array}$ |
| Large General Service Zone II | $\begin{array}{r} 1255 / 1256 / \\ 1265 / 1266 \end{array}$ | Basic Charge (\$/day) | 0.2129 | 0.2257 |
|  |  | Energy charge - Tier 1 (\$/kWh) | 0.1012 | 0.1073 |
|  |  | Energy charge - Tier 2 (\$/kWh) | 0.1686 | 0.1787 |
| Net Metering Service | 1289 | Energy rate (\$/kWh) | 0.0999 | 0.0999 |
| Small General Service | $\begin{array}{r} 1300 / 1301 / \\ 1310 / 1311 \end{array}$ | Basic Charge (\$/day) | 0.2129 | 0.2257 |
|  |  | Energy Charge (\$/kWh) | 0.1012 | 0.1073 |
| Irrigation | 1401/1402 | Irrigation season energy rate (\$/kWh) | 0.0487 | 0.0516 |
|  |  | Non-irrigation season energy charge - Tier 1 (\$/kWh) | 0.0487 | 0.0516 |
|  | , | Non-irrigation season energy rate - Tier 2 (\$/kWh) | 0.3864 | 0.4096 |
|  |  | Minimum charge irrigation season (\$/kW) | 4.87 | 5.16 |
|  |  | Non-irrigation season if consumption >500 kWh (\$ per kW) | 38.98 | 41.32 |
| Medium General Service | $\begin{array}{r} 1500 / 1501 / \\ 1510 / 1511 \end{array}$ | Basic Charge (\$/day) | 0.2129 | 0.2257 |
|  |  | Demand rate - Step 1 (\$/kW) | 0.00 | 0.00 |
|  |  | Demand rate - Step $2(\$ / \mathrm{kW})$ | 5.19 | 5.50 |
|  |  | Demand rate - Step 3 (\$/kW) | 9.95 | 10.55 |
|  |  | Part 1 Energy Rate - Tier 1 (\$/kWh) | 0.0934 | 0.0989 |


| Rate Class | Rate Schedule | Rate | F2015 | F2016 |
| :---: | :---: | :---: | :---: | :---: |
|  |  | Part 1 Energy Rate - Tier 2 (\$/kWh) | 0.0651 | 0.0690 |
|  |  | Part 2 Energy Rate (\$/kWh) | 0.0971 | 0.0990 |
|  |  | Minimum Energy Rate (\$/kWh) | 0.0311 | 0.0330 |
| Large General Service | $\begin{array}{r} \hline 1600 / 1601 / \\ 1610 / 1611 \end{array}$ | Basic Charge (\$/day) | 0.2129 | 0.2257 |
|  |  | Demand rate - Step 1 (\$/kW) | 0.00 | 0.00 |
|  |  | Demand rate - Step 2 (\$/kW) | 5.19 | 5.50 |
|  |  | Demand rate - Step 3 (\$/kW) | 9.95 | 10.55 |
|  |  | Part 1 Energy Rate Tier 1 (\$/kWh) | 0.1010 | 0.1066 |
|  |  | Part 1 Energy Rate- Tier 2 (\$/kWh) | 0.0486 | 0.0513 |
|  |  | Part 2 Energy Rate (\$/kWh) | 0.0971 | 0.0990 |
|  |  | Minimum Energy Charge (\$/kWh) | 0.0311 | 0.0330 |
| Large General Service (150 kW and over) for Distribution Utilities | $\begin{array}{r} 2600 / 2601 / \\ 2610 / 2611 \end{array}$ | Basic Charge (\$/day) | 0.2129 | 0.2257 |
|  |  | Demand rate - Step 1 (\$/kW) | 0.00 | 0.00 |
|  |  | Demand rate - Step 2 (\$/kW) | 5.19 | 5.50 |
|  |  | Demand rate - Step 3 (\$/kW) | 9.95 | 10.55 |
|  |  | Part 2 Energy Rate \$/kWh (RS1600) | 0.0971 | 0.0990 |
|  |  | Embedded Cost Rate \$/kWh | 0.0501 | 0.0531 |
|  |  | Discount (\$/kWh) | -0.0037 | -0.0039 |
| Street Lighting | 1701 | 100 SV fixture rate (\$/month) | 15.61 | 16.55 |
|  |  | 150 SV fixture rate (\$/ month) | 18.61 | 19.73 |
|  |  | 200 SV fixture rate (\$ month) | 21.49 | 22.78 |
|  |  | 175 MV fixture rate (\$/ month) | 17.15 | 18.18 |
|  |  | 250 MV fixture rate (\$/ month) | 19.76 | 20.95 |
|  |  | 400 MV fixture rate (\$/ month) | 25.48 | 27.01 |
| Street Lighting | 1702 | Each Unmetered Fixture (\$/watt per month) | 0.03 | 0.0318 |
|  |  | Each Metered Fixture (\$/kWh) | 0.0901 | 0.0955 |
| Street Lighting | 1703 | Energy rate (\$/watt per month) | 0.03 | 0.0318 |
|  |  | Contact rate (\$/contact per month) | 0.9057 | 0.96 |
| Street Lighting | 1704 | Energy rate (\$/kWh) | 0.0901 | 0.0955 |


| Rate Class | Rate Schedule | Rate | F2015 | F2016 |
| :---: | :---: | :---: | :---: | :---: |
| Street Lighting | 1755 (closed) | 1. Pole owned by Customer |  |  |
|  |  | 175 MV or 100SV fixture charge (\$ per month) | 14.63 | 15.51 |
|  |  | 400 MV or 150SV fixture charge (\$ per month) | $25.22$ | 26.73 |
|  |  | 2. Pole on public property |  |  |
|  |  | 175 MV or 100SV fixture charge (\$ per month) | 15.54 | 16.47 |
|  |  | 400 MV or 150SV fixture charge (\$ per month) | 26.13 | 27.70 |
|  |  | 3. Pole paid by BC Hydro |  |  |
|  |  | 175 MV or 100SV fixture charge (\$ per month) | 19.13 | 20.28 |
|  |  | 400 MV or 150SV fixture charge (\$ per month) | 30.11 | 31.92 |
| Transmission Service | 1823 | Demand rate (\$/kVA) | 6.925 | 7.341 |
|  |  | Energy rate A (\$/kWh) | 0.04059 | 0.04303 |
|  |  | Energy rate B - Tier 1 ( $\$ / \mathrm{kWh}$ ) | 0.03619 | 0.03836 |
|  |  | Energy rate B - Tier 2 (\$/kWh) | 0.08022 | 0.08503 |
|  |  | Minimum demand (\$/kVA) | 6.925 | 7.341 |
| Transmission Service | 1825 | Demand rate (\$/kVA) | 6.925 | 7.341 |
|  |  | Winter HLH energy rate (below 90\%) (\$/kWh) | 0.03619 | 0.03836 |
|  |  | Winter HLH energy rate (above 90\%) (\$/kWh) | 0.08952 | 0.09489 |
|  |  | Winter LLH energy rate (below 90\%) (\$/kWh) | 0.03619 | 0.03836 |
|  |  | Winter LLH energy rate (above 90\%) (\$/kWh) | 0.08113 | 0.08600 |
|  |  | Spring energy rate (below 90\%) (\$/kWh) | 0.03619 | 0.03836 |
|  |  | Spring energy rate (above 90\%) (\$/kWh) | 0.07226 | 0.07660 |
|  |  | Remaining energy rate (below 90\%) (\$/kWh) | 0.03619 | 0.03836 |
|  |  | Remaining energy rate (above 90\%) (\$/kWh) | 0.07923 | 0.08398 |
| Transmission Service | 1827 | Demand rate (\$/kVA) | 6.925 | 7.341 |
|  |  | Energy rate (\$/kWh) | 0.04059 | 0.04303 |
|  |  | Minimum demand (\$/kVA) | 6.925 | 7.341 |


| Rate Class | Rate Schedule | Rate | F2015 | F2016 |
| :--- | :---: | :--- | :---: | :---: |
| Transmission <br> Service | 1852 | Excess demand rate (\$/kVA) | 6.925 | 7.341 |
| Transmission <br> Service | 1853 | Minimum Monthly Charge (\$/month) | 39.03 | 41.37 |
| Transmission <br> Service | 1880 | Administrative Charge per Period of Use (\$) | 150.00 | 150.00 |
|  | 3808 | Demand Charge $(\$ / \mathrm{kW})$ | 0.08022 | 0.08503 |
| Transmission <br> Service <br> FortisBC |  |  | 6.925 | 7.341 |
|  |  | Energy charge $(\$ / \mathrm{kWh})$ | 4.059 | 4.303 |



SCHEDULE C
to Order G-xx-xx
Page 1 of 1

Application by British Columbia Hydro and Power Authority (BC Hydro)
Regarding its Rates for F2014, F2015 and F2016, Expenditures on Demand Side Measures in F2014, F2015 and F2016 and Retail Access

BC HYDRO OATT RATES - F2015 and F2016

| Service | Rate Schedule in <br> Authority's Open <br> Access Transmission <br> Tariff | F2015 Rate | F2016 Rate |
| :--- | :---: | :---: | :---: |
| Network Integration <br> Transmission Service | 00 | $\$ 52.1$ million/month | $\$ 62.1$ million/month |
| Long-Term Firm Point to <br> Point Transmission Service | 01 | $\$ 53,698 / \mathrm{MW} / \mathrm{Year}$ | $\$ 64,968 / \mathrm{MW} / \mathrm{Year}$ |
| Monthly Short-term Firm <br> and Non-Firm Point to <br> Point Transmission Service | 01 | $\$ 4,474.87 / \mathrm{MW} / \mathrm{month}$ | $\$ 5,413.99 / \mathrm{MW} / \mathrm{month}$ |
| Weekly Short-term Firm <br> and Non-Firm Point to <br> Point Transmission Service | 01 | $\$ 1,032.66 / \mathrm{MW} / \mathrm{week}$ | $1,249.38 / \mathrm{MW} / \mathrm{week}$ |
| Daily Short-term Firm and <br> Non-Firm Point to Point <br> Transmission Service | 01 | $\$ 147.12 / \mathrm{MW} / \mathrm{day}$ | $\$ 177.99 / \mathrm{MW} / \mathrm{day}$ |
| Hourly Short-term Firm <br> and Non-Firm Point to <br> Point Transmission Service | 01 | $\$ 6.13 / \mathrm{MW} / \mathrm{hour}$ | $\$ 7.42 / \mathrm{MW} / \mathrm{hour}$ |
| Scheduling, System <br> Control, and Dispatch <br> Service Fee | 03 | $\$ 0.102 / \mathrm{MWh}$ | $\$ 0.099 / \mathrm{MWh}$ |

# F2015 to F2016 Revenue Requirements Rate Application 

## Appendix B

## Draft Order B

Appendix B

British Columbia

Utilities Commission

Order
Number G


TELEPHONE: (604) 6604700 BC TOLL FREE: 18006631385 FACSIMILE: (604) 6601102

IN THE MATTER OF<br>the Utilities Commission Act, R.S.B.C. 1996, Chapter 473

and
Application by British Columbia Hydro and Power Authority (BC Hydro)
Regarding its Rates for F2014, F2015 and F2016,
Expenditures on Demand Side Measures in F2014, F2015 and F2016 and Retail Access

## BEFORE:



## WHEREAS:

A. On November 26, 2013, the Province of British Columbia announced a 10 -year plan regarding BC Hydro's rates and revenue requirements including, among other things, average rate increases of $9 \%$ and $6 \%$ in F2015 and F2016, respectively;
B. On March 6, 2014 B.C. Reg. 29/2014 enacted Direction No. 6 to the British Columbia Utilities Commission (Direction No. 6);
C. On March 6, 2014 B.C. Reg. 28/2014 enacted Direction No. 7 to the British Columbia Utilities Commission (Direction No. 7), and repealed Heritage Special No. HC2 to the British Columbia Utilities Commission (HSD\#2);
D. On March 6, 2014 Order in Council No. 095/2014 effected certain amendments to Heritage Special Directive No. HC1to the British Columbia Hydro and Power Authority (HSD\#1);
E. On March 7, 2014 BC Hydro filed an application pursuant to the Utilities Commission Act (the Act), and Direction Nos. 6 and 7, seeking Commission orders that, among other things, would confirm as final and no longer subject to refund BC Hydro's 2014 rates; set its F2015 and F2016 Electric Tariff rates; and set its F2015 and F2016 Open Access Transmission Tariff (OATT) rates (the F15-F16 RRRA);
F. The F15-F16 RRRA also seeks Commission orders, by March 23, 2014, that would cancel BC Hydro's Retail Access Program and accept BC Hydro's withdrawal of any obligation to offer unbundled transmission services pursuant to the OATT to retail customers in British Columbia and the withdrawal of such services to those who supply such customers.

| British Columbia |
| :---: |
| UTILITIES COMMISSION |
| ORDER |
| NUMBER |

NOW THEREFORE the Commission orders as follows:

## Retail Access

1. The withdrawal by $B C$ Hydro of any obligation to offer unbundled transmission services pursuant to BC Hydro's OATT to retail customers in British Columbia, and the withdrawal of such services to those who supply such customers, is accepted. [NTD: D7, 14(1)(a)]
2. BC Hydro's Retail Access Program, as defined in BCUC Order No. G-39-12, is cancelled. [NTD: D7, 14(1)(b)]

DATED at the City of Vancouver, in the Province of British Columbia, this day of , 2014.

BY ORDER

F2015 to F2016 Revenue Requirements Rate Application

## Appendix C

F2015 and F2016 Revenue Requirements Model
BC Hydro
F15-F16 RRA
Revenue Requirements Model
Version: 2014-02-26

Version: 2014-02-26
Schedule Page
1.0 Revenue Requirements SummaryDeferral and Other Regulatory Accounts
Deferral Accounts ..... 3
Other Regulatory Accounts ..... 5
Total Current Costs
Total Company ..... 11
Corporate Groups ..... 13
Generation ..... 16
Customer Care ..... 17
Transmission ..... 18
Distribution ..... 21
Cost of Energy ..... 22
Operating Costs
Total Company ..... 25
Corporate Groups ..... 29
Generation ..... 30
Customer Care ..... 31
Transmission \& Distribution ..... 32
6.0 Taxes ..... 33
7.0 Depreciation and Amortization ..... 34
8.0 Finance Charges ..... 36
9.0
Return on Equity ..... 3910.011.0
12.012.112.212.312.412.513.0
Rate Base ..... 41
Contributions ..... 42
Assets
Total Company ..... 44
Corporate Groups ..... 45
Generation ..... 46
Customer Care ..... 47
Transmission ..... 48
Distribution ..... 49
Capital Expenditures and Additions ..... 50
Domestic Energy Sales and Revenue ..... 52
Non-Tariff Revenue ..... 53

|  | $=$ | $\begin{aligned} & \stackrel{\rightharpoonup}{\mathbf{N}} \\ & \stackrel{\sim}{\mathrm{N}} \end{aligned}$ | $\begin{aligned} & \dot{0} \\ & \stackrel{6}{\sigma} \\ & \stackrel{-}{\top} \end{aligned}$ | $\underset{\underset{N}{\sim}}{\dot{\sim}}$ | $\begin{aligned} & 0 \\ & \infty \\ & \end{aligned}$ | $\begin{aligned} & \infty \\ & \infty \\ & \infty \\ & \infty \end{aligned}$ | $\begin{aligned} & 0 \\ & \frac{0}{5} \end{aligned}$ | $\begin{aligned} & \odot \\ & \stackrel{+}{\oplus} \\ & \stackrel{y}{\oplus} \end{aligned}$ | $\begin{aligned} & \text { గn } \\ & \end{aligned}$ | - |
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| F2013 |  |  |
| :---: | :---: | ---: |
| RRA | Actual | Diff |
| 4 |  | $6=5-4$ |
| $1,348.3$ | $1,057.3$ | $(291.0)$ |
|  |  |  |
| $1,348.1$ | $1,307.8$ | $(40.3)$ |
|  |  |  |
| 193.1 | 194.1 | 1.0 |
|  |  |  |
| 663.5 | 635.0 | $(28.6)$ |
|  |  |  |
| 649.3 | 576.3 | $(73.0)$ |
|  |  |  |
| 520.2 | 509.3 | $(10.9)$ |
|  |  |  |
| $(110.6)$ | $(119.1)$ | $(8.5)$ |
|  |  |  |
| $(39.5)$ | $(63.1)$ | $(23.6)$ |
|  |  |  |
| $(103.2)$ | 6.9 | 110.1 |
| $(37.4)$ | $(36.3)$ | 1.1 |
| 188.5 | 179.7 | $(8.8)$ |
| 47.9 | 150.3 | 102.4 |






| $3.91 \%$ | $3.91 \%$ |
| :--- | :--- |
|  |  |
| $5.00 \%$ | $5.00 \%$ |
| $7.07 \%$ | $7.06 \%$ |





○웅



| BC Hydro F15-F16 RRA |  |
| :---: | :---: |
| Revenue Requirements Summary (\$ million) |  |
| Line | Column |
| 1 | Cost of Energy |
| 2 | Operating Costs |
| 3 | Taxes |
| 4 | Amortization |
| 5 | Finance Charges |
| 6 | Return on Equity |
| 7 | Non-Tariff Revenue |
| 8 | Inter-Segment Revenue |
|  | Deferral Accounts |
| 9 | Deferral Account Additions |
| 10 | Interest on Deferral Accounts |
| 11 | Deferral Account Recoveries |
| 12 | Total |
| Other Regulatory Accounts |  |
| 13 | Regulatory Account Additions |
| 14 | Interest on Regulatory Accounts |
| 15 | Regulatory Account Recoveries |
| 16 | Total |
| Subsidiary Net Income |  |
| 17 | Powerex Net Income |
| 18 | Powertech Net Income |
| 19 | Total |
| 20 | Less Other Utilities Revenue |
| 21 | Less Deferral Rider |
| 22 | Total Rate Revenue Requirement |
|  | Rate Revenue at Current Rates |
| 23 | Total Domestic Revenue |
| 24 | Less Other Utilities |
| 25 | Less Deferral Rider |
| 26 | Revenue Subject to Rate Increase |
| 27 | Revenue Shortfall |
| 28 | Rate Increases (May 1 for F2012) |
| 29 | Deferral Account Rate Rider |
| 30 | Net Bill Impact |


$4.60 \% \quad 4.57 \% \quad-0.02 \%$




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Trade Income Deferral Account
Beginning of Year
Adjustment to Opening Balance
Additions
Interest
Recovery
End of Year
BCTC Deferral Account
Beginning of Year
Beginning of Year
Additions
Interest
Interest
Transfer to NHDA
End of Year
End of Year Balances
Heritage
Non-Heritage
Trade Income
Trade Income
BCTC
Summary
Deferral Account Additions
Interest on Deferral Accounts
Deferral Account Recoveries
Deferral Account Recoveries
Transter of GM Shrum Adjustment to Opening Balance

Non-Heritage Deferral Account
Beginning of Year
Adjustment to Opening Balance Additions
Interest
Transfer of Storm Restoration Transfer from BCTCDA


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$\stackrel{+}{+}$
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$\stackrel{\circ}{+}$
$4.62 \% \quad 4.34 \%$

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| :---: | :---: | :---: |
|  | 으나나 | NM |


| F2014 |  |  |
| :---: | :---: | :---: |
| RRA | Forecast | Diff |
| 7 | 8 | $9=8-7$ |
|  |  |  |
| 373.7 | 384.2 | 10.5 |
| $1,053.6$ | $1,074.3$ | 20.7 |
| 113.0 | $(103.9)$ | $(216.9)$ |


| F2013 |  |  |
| :---: | :---: | :---: |
| RRA | Actual | Diff |
| 4 | 5 | $6=5-4$ |
|  |  |  |
| 404.5 | 280.8 | $(123.7)$ |
| 852.3 | 954.3 | 102.0 |
| 113.0 | 98.2 | $(14.8)$ |


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| :---: | :---: | :---: |
| 6.12 | L．LLL | $6.8\rangle L$ |
| （ $6 \cdot 18$ ） | 8．9LE | L＇80t |
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Reference


## F07/F08 RRA Depreciation Study Beginning of Year Additions Recovery <br> Site $\mathbf{C}$ $\quad$ Beginning of Year <br> Additions <br> Recovery <br> ลโ $โ ๙$

5.0 L50
Line 18
5.0 L 28

Additions - Operating
Transfer to Negotiation Costs Transfer to
End of Year

5.0 L 84
8.0 L 76
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Adjustment to Opening Balance
Additions
End of Year

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## First Nations Costs Beginning of Year







Reference
Other Regulatory Accounts
（\＄million）





 39
40
41
42


GM Shrum 3
Beginning of Year
Additions－Deferred Operating
Additions－COE
Interest
Insurance Proceeds
Transfer to HDA
End of Year


 End of Yea Line


Reference


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s
Amortization of Capital Additions
Beginning of Year
Additions - Bad Debt
Interest
Recovery
End of Year

Net Employment Costs Beginning of Year
Additions
Interest
Recovery
End of Year
Total Taxes
Beginning of Year
Additions
Interest
Recovery
End of Year Total Taxes



## $\begin{array}{ll}\circ & 1 \\ 0 & 0 \\ 0 & 0 \\ i & 1\end{array}$



 Total Finance Charges
$\quad$ Beginning of Year
Adjustment to Opening Balance
Additions
Interest
Recovery
End of Year





Smart Metering \& Infrastructure
Beginning of Year Beginning of Year
Adjustment to Opening Balance Adjustment to Opening Balance
Additions - Deferred Operating
Additions - Amortization Additions - Deferred Operating
Additions - Amortization
Legacy Meter Contributions
Additions - Finance Charges
Additions - ROE Additions - Non tariff revenues Interest

Recovery
End of Year
Home Purchase Option Plan




Additions - Deferred Operating
Additions - Interest




Reference


5.0 L90-93


Line 129
5.0 L99


Beginning of Year
Adjustment to Opening Balance
OCI Deferral OCIDere
Interest
Recovery - Operating
Recovery - Finance Charges

Waneta
Waneta
Beginn
Recovery

Rock Bay Remediation
Beginning of Year
Beginning of Year
Transfer from Environmental
Additions
Interest
End of Year
IFRS PP\&E
Beginning of Year
Adjustment to Opening Balance
Additions - Deferred Operating
Additions - IDC Additions - IDC
Interest
Recovery
End of Yea
IFRS Pension
Beginning of Year
Adjustment to Openion
Adjustment to Opening Balance
Additions
Recovery
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Reference

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BC Hydro
F15－F16 RRA
Other Regulatory Accounts
（\＄million）
N／A
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## Line 130 <br> 5．0 L95－98

N／A
5．0 L103
rrow Water Divestiture Costs
Beginning of Year
F12－F14 Rate Smoothing
$\stackrel{\oplus}{\leftrightharpoons}$
151
152
153
154
Arrow Water Provision
Beginning of Year Beginning of Year
Additions
Additions－Accretion
Recovery
End of Year

Beginning of Year
Bdditions
Recovery
End of Year
Real Property Sales
Beginning of Year
Beginning of Year
Additions
Additions
Interest
End of Year



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## End of Year Balances

 Demand-Side ManagementFirst Nations Costs First Nations Costs
First Nations Provisio First Nations Provisions Site C

Future Removal
Foreign Exchange Pre-1996 Contributions Storm Restoration Procurement Enhancement
Capital Project Investigation GM Shrum 3 F2010 ROE Adjustment Net Employment Costs Total Taxes Amortization of Capital Additions
Total Finance Charges Total Finance Charges
Smart Metering \& Infrastructure Smart Metering \& Infrastructure
Home Option Purchase Plan Non-Current Pension Cost Waneta

Environmental Provisions
Rock Bay Remediation Rock Bay Remediation
IFRS PP\&E IFRS Pension

F12-F14 Rate Smoothing Arrow Water Divestiture Costs Arrow Water Provision
Asbestos Remediation Asbestos Remediation
Rate Smoothing Real Property Sales

Line 47
Line 67
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Cost of Energy

Amortization
Total Current
Total Current
Deferral Account Additions
Deferral Account Addions
Deferral Account Recoveries Regulatory Account Additions
Regulatory Account Recoveries Total Gross
Return on Equity
Total Current
Regulatory Account Additions
Regulatory Account Recoveries
Total Gross
Non-Tariff Revenue
Total Current
Regulatory Account Additions
Regulatory Account Recoveries







BC Hydro
F15－F16 RRA
Reconciliation of Current and Gross Views
（\＄million）
Column Inter－Segment Revenue
Powerex－Corporate Allocation Powerex－Corporate Allocation
Mark to Market Losses（Gains） Mark to Market Losses（Gains）
Other Powerex PTP Charges
BC Hydro PTP Charges Regulatory Account Transfers Deferral Accounts
Other Regulatory Accounts Tota

Powerex Net Income Powerex Net Income
Total Current
TIDA Additions
TIDA Recoveries
Total Gross

Powertech Net Income
Other Utilities Revenue
Deferral Rider Revenue
Total Rate Revenue Requirement


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## Inter－Segment Revenue

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Current Costs by Business Group Generation
Transmission
Transmission
Distribution
Customer
Customer Care Subsididary Net Income Other Utilities Revenue Other Utilities Revenue
Total Rate Revenue Requirement

Corporate Group
$\bigcirc$

Finance Charges
Return on Equity
Non－Tariff Revenue
Inter－Segment Revenue
Subsididary Net Income
Other Utilities Revenue
Other Utilities Revenue
Deferral Rider Revenue
Total Rate Revenue Requirement

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Corporate Allocation:
$\begin{array}{ll} & \text { Building Operations } \\ 22 & \text { Generation } \\ 23 & \text { Transmission } \\ 24 & \text { Distribution } \\ 25 & \text { Customer Care } \\ 26 & \text { Total } \\ & \\ & \text { ABS Costs } \\ 27 & \text { Generation } \\ 28 & \text { Transmission } \\ 29 & \text { Distribution } \\ 30 & \text { Customer Care } \\ 31 & \text { Total }\end{array}$


Cost of Energy
 Taxes Current Finance Charges Return on Equity Corporate Allocation Non-Tariff Revenue Internal Allocations First Nations Comm Dev Fund Customer Care \& Power Smart Energy Planning \& Procure
IPP Capital Lease Op Costs Technology - Depreciation Technology
Total

Inter-Segment Revenue
Powerex-Corporate Allocation
Mark to Market Losses (Gains)
Other


Total $\therefore \stackrel{\circ}{\sim} \stackrel{\sim}{\sim}$






Reference

Total Curre
(\$ million)


|  | Customer Care Support and <br> Billing System Amortization |  |
| :--- | :---: | :---: |
| 37 | Generation |  |
| 38 | Transmission |  |
| 39 | Distribution |  |
| 40 | Customer Care |  |
| 41 | Total |  |
|  |  |  |
| 42 | Non-Current Pension Costs |  |
| 42 | Generation |  |
| 43 | Transmission |  |
| 44 | Distribution |  |
| 45 | Customer Care |  |
| 46 | Total |  |
|  |  |  |
| 47 | Fleet |  |
| 47 | Generation |  |
| 48 | Transmission |  |
| 49 | Distribution |  |
| 50 | Customer Care |  |
| 51 | Total |  |
| $\quad$ Total Direct Assigments |  |  |
| 52 | Generation |  |
| 53 | Transmission |  |
| 54 | Distribution |  |
| 55 | Customer Care |  |
| 56 | Total |  |
|  |  |  |
| 57 | Allocators for Balance - \% |  |
| 58 | Generation |  |
| 59 | Transmission |  |
| 60 | Distribution |  |
| 61 | Customer Care |  |
|  | Total |  |
| 62 | Allocation of Balance |  |
| 63 | Generation |  |
| 64 | Transmission |  |
| 65 | Distribution |  |
| 66 | Customer Care |  |
|  | Total |  |
|  |  |  |



Reference
BC Hydro
F15-F16 RRA



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| Line | Column |
| :---: | :--- |
| 1 | Cost of Energy |
| 2 | Current Operating Costs |
| 3 | Taxes |
| 4 | Current Amortization |
|  |  |
| 5 | Current Finance Charges |
| 6 | Return on Equity |
| 7 | Corporate Allocation |
| 8 | Non－Tariff Revenue |
|  |  |
| 9 | Internal Allocations |
| 9 | GRTA Alloctation |
| 10 | Generation Real Time Dispatch |
| 11 | Generation Ancillary Services |
| 12 | Aboriginal Relations |
| 13 | Energy Planning \＆Econ Dev |
| 14 | Technology－Depreciation |
| 15 | Technology |
| 16 | Total |
| 17 | Total |



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| Total Current Costs－Customer Care （\＄million） |  |
| :---: | :---: |
| Line | Column |
| 1 | Cost of Energy |
| 2 | Current Operating Costs |
| 3 | Taxes |
| 4 | Current Amortization |
| 5 | Current Finance Charges |
| 6 | Return on Equity |
| 7 | Corporate Allocation |
| 8 | Non－Tariff Revenue |
|  | Internal Allocations |
| 9 | Safety，Health \＆Environment |
| 10 | Aboriginal Relations |
| 11 | Power Smart \＆Customer Care |
| 12 | Energy Planning \＆Procuremt |
| 13 | IPP Capital Lease Op Costs |
| 14 | Energy Planning \＆Econ Dev |
| 15 | Total |
| 16 | Total |

Schedule 3.4
Page 18

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Current Operating Costs
Taxes


Return on Equity Corporate Allocation Non-Tariff Revenue


SDA Allocation
Generation Real Time Dispatch Generation Real Time Dispatch
Distribution Real Time Dispatch PTP Allocation to Distribution
First Nations Comm Dev Fund First Nations Comm Dev Fund
Aboriginal Relations Generation Ancillary Services
Inter-Segment Revenue Powerex PTP Charges
BC Hydro PTP Charges

Total Current Costs
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BC Hydro
F15-F16 RR
chedule 3.4
Page 19








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12,300
53,504

$4,458.65$
$1,028.92$
146.59
6.11




12,250
51,205
$4,267.12$
984.72
140.29
5.85
3.4
24,250
0.140



## Total Current <br> Total Current Costs - Transmission (\$ million)


NITS Charge to BC Hydro Total Current Costs Internal Ancillary Services
Internal Scheduling \& Dispatch
Total Total
NITS
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Long-Term PTP Rate
Internal Ancillary Services
External Ancillary Services
External Ancillary Servis
External Scheduling \& Dispatch $\stackrel{\overline{0}}{\circ}$
Maximum Supply (MW)
Long-Term Firm PTP Rate (\$/MW/year) Maximum Price for Short-Term Firm and
Non-Firm (per MW of Reserved Capacity)
Monthly (\$/MW/month)
Weekly (\$/MW/week)
Daily (\$/MW/day)
Hourly ( $\$ / \mathrm{MW} /$ hour $)$
Scheduling Fee
$\quad$ Scheduling, Control \& Dispatch Lines $35+36$
Scheduling Fee (\$/MWh) Line $44 / 45$




\$ million)

| Line | Coumn | Reference |
| :---: | :---: | :---: |
|  | Short-Term PTP Volumes (GWh) |  |
| 56 | Internal |  |
| 57 | External Total |  |
| 58 |  |  |
|  | Short-Term PTP Revenue |  |
| 59 | Internal |  |
| 60 | External |  |
| 61 | Total |  |
|  | Short-Term PTP Average Price (\$/MWh) |  |
| 62 | Internal | Line 59 / 56 |
| 63 | External | Line $60 / 57$ |
| 64 | Total | Line $61 / 58$ |
| Total PTP Revenue |  |  |
| 65 | Internal | Line $50+59$ |
| 66 | External | Line $51+60$ |
| 67 | Total |  |
| Total External OATT Revenue |  |  |
| 68 | Total External PTP | Line 66 |
| 69 | External Ancillary Services | Line 34 |
| 70 | External Scheduling \& Dispatch | Line 36 |
| 71 | Total |  |



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Total Current Costs－Distribution
（\＄million）

| 1 | Cost of Energy |
| :---: | :--- |
| 2 | Current Operating Costs |
| 3 | Taxes |
| 4 | Current Amortization |
| 5 | Current Finance Charges |
| 6 | Return on Equity |
| 7 | Corporate Allocation |
| 8 | Non－Tariff Revenue |
|  | Internal Allocations |
| 9 | SDA Allocation |
| 10 | Distribution Real Time Dis |
| 11 | PTP Allocation to Distribution |
| 12 | Total |
| 13 | Total |



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Cost of Energy
(\$ million) $\stackrel{\unrhd}{\leftrightarrows}$
Cost of Energy (\$ million)
Heritage Energy
Hydroelectric (water rentals) Market Purchases to Non-Heritage Market Purchases to Non-Heritage Domestic Transmission
Non-Treaty Storage Agreement Other
Total
Non-Heritage Energy
Line 3
Sources of Supply (GWh)
Heritage Energy
Hydroelectric (water rentals)
Net Purchases (Sales) from Powerex
Market Electricity Purchases
Market Purchases to Non-Heritage
Market Purchases to Non-Heritage
Natural Gas for Thermal Generation
Surplus Sales
Exchange Net
Total
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 | $(5,427)$ | $(5,135)$ | 292 |
| ---: | ---: | ---: |
| 54,356 | 51,837 | $(2,519)$ |





Reference


## Unit Costs (\$/MWh)

|  | Unit Costs (\$/MWh) |
| :--- | :--- |
| 37 | Hydroelectric (water rentals) |
| 38 | Waneta (water rentals) |
| 39 | IPPs and Long-Term Commitments |
| 40 | Market Electricity Purchases |
| 41 | Surplus Sales |
| 42 | Natural Gas for Thermal Generation |
| 43 | Non-Integrated Area |
| 44 | Total Weighted Cost |


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NHDA Additions Deferred GMS 3 COE GMS 3 Insurance Proceeds Water License Variances Deferred Operating HDA
Deferred Operating NHDA Deferred Waneta Costs

HDA Recoveries
BCTCDA Recoveries
$\stackrel{0}{0}$

Total Current COE by Function Generation
Transmission

Transmission Customer Care $\stackrel{\text { 픙 }}{\circ}$
Total







BC Hydro
F15-F16 RRA
Cost of Energy
(\$ million)

Non-Heritage COE Subject to NHDA
$\stackrel{\oplus}{\leftrightharpoons}$

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Line 101-102

IPP Capital Leases
Gross Assets in Service
Opening Balance
Opening Balance
Adjustment to Opening Balance
Capital Additions
Retirements \& Tr
Closing Balance
Accumulated Amortization
Opening Balance
Opening Balance
Adjustment to Opening Balance
Amortization
Retirements \& Transfers
Closing Balance
Amortization
Retirements \& Transfers
Closing Balance

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IPP Capital Leases
Adjustment to Opening Balance
Capital Additions
Retirements \& Transfers
Closing Balance

Accumulated Amortization
Opening Balance
Adjustment to Opening Balance
Amortization
Retirements \& Transfers
Closing Balance


PP Summary Less COE Impact of New Leases
Existing Capital Leases Existing Capital Lease
Operating Costs

Taxes
Amortiz
 New IPP Capital Lea

Operating Costs
Taxes
Taxes
Finance Charges
Total

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Column


Operating Costs by Resource
Labour (excl Non-Current PEB)
Services - ABSU
Services - BCTC
Services - Other
Materials
Buildings \& Equipment
Capitalized Overhead
External Recoveries
Severance Costs
Non-Current PEB - Pension
Non-Current PEB - Other
F09/F10 RRA Adjustments
F11 RRA NSA Adjustment
F12-F14 RRA Adjustment
Total Before Regulatory Accounts egulatory Account Recoveries
DSM - F11 RRA NSA Adjustment
First Nation Costs
Site C
Storm Restoration
PEI - F11 RRA NSA Adjustment
Procurement Enhancement
Capital Project Investigation
Net Employment Costs
Smart Metering \& Infrastructure
Home Purchase Offer Plan
Non-Current Pension Cost
IFRS PP\&E
IFRS Pension
Total

Deferral Account Recoveries
Water License Variances





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Operating Costs and Provisions - Total Company
(\$ million)
Reference
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|  | Current IFRS Impact |
| :--- | :---: |
| 42 | New IPP Capital Leases |
| 43 | Other Operating Costs |
| 44 | Total |
| 45 | Total Current Operating |
|  |  |
|  | Deferral Account Additions |
| 46 | Transfers to HDA |
| 47 | Transfers to NHDA |
| 48 | Total |
|  |  |
| 49 | Regulatory Account Additions |
| 49 | Demand-Side Management |
| 50 | First Nations Costs |
| 51 | Site C |
| 52 | Storm Restoration |
| 53 | Procurement Enhancement |
| 54 | Capital Project Investigation |
| 55 | GM Shrum 3 |
| 56 | Smart Metering \& Infrastructure |
| 57 | Home Purchase Offer Plan |
| 58 | IFRS Capitalized Overhead |
| 59 | Outsourcing Implementation |
| 60 | Bad Debt (Meziadin Lake) |
| 61 | Total |
| 62 | Total Gross Operating |
|  |  |




[^7]BC Hydro
F15-F16 RRA

Deferred Provisions First Nations Provisions
Environmental Provisions
Arrow Water Divestiture Co
Arrow Water Provision
Total
Total Gross Provisions
Recovery of Deferred Provisions
PCB Remediation

Generation
Transmission
Total Current Provisions



Current Provisions by Business Group Generation
Transmission



Total Current Operating \& Provisions
$\stackrel{\circ}{3}$



Generation
Transmission $\qquad$ Customer Care
Corporate Groups
Corporate Groups (excl PEB)
Severance Costs
Non-Current PEB - Pension
Non-Current PEB - Other
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Column

[^8]Operating Costs by Resource
Services - ABSU
Services - BCTC Services - Other
Materials
Buildings \& Equipment Capitalized Overhead External Recoveries
Total Total

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Page 30





BC Hydro
F15-F16 RRA
Operating Costs - Generation
(\$ million)
Reference


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Page 31 -


## Operating Costs by KBU

Power Smart \& Customer Care
Energy Planning \& Procurement
$\stackrel{\oplus}{\leftrightharpoons}$

|  | Operating Costs by Resource <br> 10 |
| :--- | :--- |
| Labour |  |
| 11 | Services - ABSU |
| 12 | Services - BCTC |
| 13 | Services - Other |
| 14 | Materials |
| 15 | Buildings \& Equipment |
| 16 | Capitalized Overhead |
| 17 | External Recoveries |
| 18 | Total |






 Column Distribution Operations Operating Costs by KBU Transmission \& Construction Services
Operational Support Services Operational Support Services
Transmission Owner
Field Operations \& Safety Field Operations \& Safety
Grid Operations Asset Investment Management Project \& Program Delivery Engineering and Design
Aboriginal Relations
Smart Metering \& Infrastructure Business Support
Total


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Reference
BC Hydro
F15-F16 RRA
Taxes
(\$ million)
Column
Transmission
 Distribution
Grants in Lieu
School Taxes
Total

New Capital Leases Under IFRS
Total
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Grants in Lieu
School Taxes
Total Before Regulatory Accounts
Grants in Lieu
Grants in Lieu
School Taxes
IPP Capital Leases
Total
Regulatory Account Recoveries
Generation
Transmission
Distribution
Corporate Groups
Total Current Taxes
Total Gross Taxes
เट əu!
$\begin{array}{ll} & \text { Total Current Taxes by Business Group } \\ 30 & \text { Generation } \\ 31 & \text { Transmission } \\ 32 & \text { Distribution } \\ 33 & \text { Customer Care } \\ 34 & \text { Corporate Groups } \\ 35 & \text { Total }\end{array}$

F2015 to F2016 Revenue Requirements

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| BC Hydro F15-F16 RRA |  |
| :---: | :---: |
| Depreciation and Amortization (\$ million) |  |
| Line | Column |
| Amortization of Capital Assets |  |
| 1 | Generation |
| 2 | Transmission |
| 3 | Distribution |
| 4 | Customer Care |
| 5 | Corporate Groups |
| 6 | Total |
|  | Amortization of Contributions |
| 7 | Generation |
| 8 | Transmission |
| 9 | Distribution |
| 10 | Total |
| Dismantling Costs |  |
| 11 | Generation |
| 12 | Transmission |
| 13 | Distribution |
| 14 | Customer Care |
| 15 | Corporate Groups |
| 16 | Total |
| Capital Asset Write-Offs |  |
| 17 | Generation |
| 18 | Transmission |
| 19 | Distribution |
| 20 | Customer Care |
| 21 | Corporate Groups |
| 22 | Total |
| IPP Capital Leases |  |
| 23 | Existing IPP Capital Leases |
| 24 | New Capital Leases Under IFRS |
| 25 | Total |
| 26 | Other Net IFRS Impact |
|  | Regulatory Account Additions |
| 27 | F07/F08 RRA Depn Study |
| 28 | Deferred SMI Amortization |
| 29 | Deferred Environmental Liability |
| 30 | Total |
| 31 | Total Gross Amortization |

Schedule 7.0
Page 35














Depreciation and Amortization
( $\$$ million)
Reference
Regulatory Account Recoveries
Other Regulatory Account Additions
Deferred PEI Amortization
Deferred SMI Amortization
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DSM Amortization
Generation - $90 \%$
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2.2 L5+6
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Transmission-10\%
Total
Depn Study Amortization
Transmission
Distribution
Corporat
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FRSR Amortization
Generation
Transmission
Transmission

Corporate Groups Adjustmen

Pre-1996 CIAC Amortization
Capital Additions Regulatory Account
Generation
Generation
Transmission
Distribution
Transmission
Distribution
Customer Care
Corporate Groups Corporate Groups
Total

Total Recoveries
Total Current Amortization
Current Amortization by Business Group
Generation

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Generation
Transmission
Distribution
Customer Care
Corporate Groups
Total Generation
Transmission
Distribution
Customer Care
Corporate Groups
Total Generation
Transmission
Distribution
Customer Care
Corporate Groups
Total

BC Hydro
F15-F16 RRA
Finance Charges
(\$ million)


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Page 37







## 







| Line | Column | Reference |
| :---: | :---: | :---: |
|  |  |  |
|  | Short-Term Debt |  |
| 35 | Beginning of Year |  |
| 36 | Increase in Cash Requirement | Line 14 |
| 37 | Change in Long-Term Debt | Line 20-29 |
| 38 | End of Year |  |
| 39 | Mid-Year Balance |  |
| 40 | Interest Rate |  |
| 41 | Debt Costs - Interest |  |
| 42 | Debt Costs - Other |  |
| 43 | Total Short-Term Debt Costs |  |
|  | Interest Capitalized |  |
| 44 | Unfinished Construction | 13.0 L51 |
| 45 | Less Not Subject to IDC |  |
| 46 | Unfinished Subject to IDC |  |
| 47 | Interest Rate | Line 104 |
| 48 | Interest Capitalized |  |
|  | Total Before Regulatory Accounts |  |
| 49 | Sinking Fund Income | Line 17 |
| 50 | Long-Term Debt Costs | Line 34 |
| 51 | Short-Term Debt Costs | Line 43 |
| 52 | Interest Capitalized | Line 48 |
| 53 | Swaps |  |
| 54 | Other (Income) / Loss |  |
| 55 | Deferred SMI Finance Charges |  |
| 56 | Deferred HPOP Finance Charges |  |
| 57 | Existing IPP Capital Leases |  |
| 58 | New Capital Leases Under IFRS |  |
| 59 | IFRS Reduced IDC Capitalized |  |
| 60 | Accretion - ARO |  |
| 61 | Non-Current PEB |  |
| 62 | F2013 Correction |  |
| 63 | Total |  |
|  | Interest on Regulatory Accounts |  |
| 64 | Interest on Deferral Accounts | 2.1 L34 |
| 65 | Interest on Other Reg Accounts | 2.2 L 213 |
| 66 | Total |  |
|  | Regulatory Account Recoveries |  |
| 67 | Amort. of FX Gains/Losses |  |
| 68 | Non-Current Pension |  |
| 69 | Total Finance Charges |  |
| 70 | Total |  |
| 71 | Total Current Finance Chrgs | L 63+66+70 |


Reference
$\stackrel{\stackrel{\circ}{\circ}}{\stackrel{\circ}{\leftrightharpoons}}$
Lines 63＋79
 Net SMI Impact
Deferred HPOP Finance Chges IFRS Reduced IDC Capitalized Accretion－First Nations
Accretion－Environmenta Accretion－Arrow Water Total
Total Gross Finance Charges
Portion of Rate Base
Generation
Transmission
Transmission
Distribution Customer Care
Corporate Groups 등
Allocation of Current Finance Charges
Generation
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Net Debt
et Debt
Sinking Funds
Temporary Investments Temporary Investments
Long－Term Debt Long－Term Debt
Short－Term Debt IDC Adjustments
IDC Adjustments
End of Year
Mid－Year Balance
Weighted Average Cost of Debt Total Gross Finance Charges
IDC Adjustments IDC Adjustments
Total Weighted Average Cost of Debt



Line 52

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Dividend to Province

Accum Other Comp Income
OCI Deferred (Pension) Total Shareholder's Equity
 Adjustment to Opening Balance
Gross Return on Equity
Dividend to Province Distribution to Province
Retained Earnings - End of Year Retained Earnings - End of Year
Accum Other Comp Income older's Equity
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Page 39

Column Reference

F2010 ROE Regulatory Account Transfers




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Additions
Recoveries
56 Current Return on Equity
Portion of Rate Base
Generation
Transmission
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Allocation of ROE
Generation
Generation
Transmission
Distribution
Customer Care
Corporate Groups Corporate Groups
Total
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Rate Base
(\$ million)
Generation
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Transmission
Net Assets in Service Net Contributions Net Contributions Mid-Year
Distribution
$\quad$ Net Assets in Service
Net Assets in Service
Net Contributions
Total
Mid-Year
Customer Care
Net Assets in Service
Net Contributions
Net Contributions
Total
Corporate Groups
Net Assets in Service
Net Contributions
Total
Mid-Year
Total

$\begin{array}{ll} & \text { Portion of Rate Base } \\ 28 & \text { Generation } \\ 29 & \text { Transmission } \\ 30 & \text { Distribution } \\ 31 & \text { Customer Care } \\ 32 & \text { Corporate Groups } \\ 33 & \text { Total }\end{array}$






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BC Hydro
F15-F16 RRA
Contributions
(\$ million)
Reference

| Line | Column |
| :---: | :---: |
|  | Contributions - Columbia River Treaty |
| 1 | Gross Contns - Beginning of Year |
| 2 | Adjustment to Opening Balance |
| 3 | Retirements |
| 4 | Gross Contns - End of Year |
| 5 | Accum Amort - Beginning of Year |
| 6 | Adjustment to Opening Balance |
| 7 | Amortization |
| 8 | Retirements |
| 9 | Accum Amort - End of Year |
| 10 | Net Contribution - End of Year |
|  | Contributions in Aid - Generation |
| 11 | Gross Contns - Beginning of Year |
| 12 | Adjustment to Opening Balance |
| 13 | Additions |
| 14 | Retirements \& Transfers |
| 15 | Gross Contns - End of Year |
| 16 | Accum Amort - Beginning of Year |
| 17 | Adjustment to Opening Balance |
| 18 | Amortization |
| 19 | Retirements \& Transfers |
| 20 | Accum Amort - End of Year |
| 21 | Net Contributions - End of Year |
|  | Contributions in Aid - Transmission |
| 22 | Gross Contns - Beginning of Year |
| 23 | Adjustment to Opening Balance |
| 24 | Additions |
| 25 | Retirements \& Transfers |
| 26 | Gross Contns - End of Year |
| 27 | Accum Amort - Beginning of Year |
| 28 | Adjustment to Opening Balance |
| 29 | Amortization |
| 30 | Retirements \& Transfers |
| 31 | Accum Amort - End of Year |
| 32 | Net Contributions - End of Year |


BC Hydro
F15－F16 RRA
Contributions
（ $\$$ million）
Accum Amort－Beginning of Year Adjustment to Opening Balance Amortization SMI Legacy Meters
Retirements \＆Transfe
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Contributions in Aid－Distribution
$\stackrel{\circ}{\square}$
Contributions in Aid－Distribution
Gross Contns－Beginning of Year Adjustment to Opening Balance
Additions Additions
SMI Legacy

Retirements \＆Transfers
Gross Contns－End of Yea
Column


Contributions in Aid－Total
Gross Contns－Beginning of Year
Adjustment to Opening Balance
Additions
SMI Legacy Meters
Retirements \＆Transfers
Gross Contns－End of Year

Accum Amort－Beginning of Year Accum Amort－Beginning of Year
Adjustment to Opening Balance Amortization Amortization of Pre－96 CIAC Amortization of Pre－96 CIAC
SMI Legacy Meters Retirements \＆Transfers
Accum Amort－End of Ye Net Contributions－End of Year Accum Amort－End of Year
леә人 ґо риヨ－suo！̣nqułuoう łəN Accum Amort－End of Year

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BC Hydro
F15-F16 RRA
Assets - Total (Excluding DSM and IPP Capital Leases)
(\$ million)
Reference
Column
Gross Assets in Service
Opening Balance
Adjustment to Opening Balance
Capital Additions
Retirements \& Transfers
Closing Balance
Accumulated Amortization
Opening Balance
Adjustment to Opening Balance
Amort on March 2014 Assets
Amortization on Additions
Amort on CRT Contribution
SMI New Assets
SMI Legacy Meters
Capital Asset Write-Offs
Depn Study Adjustment
Retirements \& Transfers
Closing Balance
Net Assets in Service (Year-End)
Assets - To

| Assets - Total (Excluding DSM and IPP Capital Leases) (\$ million) |  |  |
| :---: | :---: | :---: |
|  |  | Reference |
| Line | Column |  |
|  | Gross Assets in Service |  |
| 1 | Opening Balance |  |
| 2 | Adjustment to Opening Balance |  |
| 3 | Capital Additions |  |
| 4 | Retirements \& Transfers |  |
| 5 | Closing Balance |  |
|  | Accumulated Amortization |  |
| 6 | Opening Balance |  |
| 7 | Adjustment to Opening Balance |  |
| 8 | Amort on March 2014 Assets |  |
| 9 | Amortization on Additions |  |
| 10 | Amort on CRT Contribution |  |
| 11 | SMI New Assets |  |
| 12 | SMI Legacy Meters |  |
| 13 | Capital Asset Write-Offs |  |
| 14 | Depn Study Adjustment |  |
| 15 | Retirements \& Transfers |  |
| 16 | Closing Balance |  |
| 17 | Net Assets in Service (Year-End) |  |




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 Capital Additions Retirements \&
Closing Balance

Adjustment to Opening Balance
Amort on March 2014 Assets
Amortization on Additions
Capital Asset Write-Offs
Depn Study Adjustment
Depn Study Adjustment
Retirements \& Transfers
Closing Balance



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Schedule 12.2
Page 46







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## Gross Assets in Service


Net Assets in Service (Year-End)


 Capital Additions
Retirements \& Tr $\qquad$ Retirements \& Transfers Closing Balance



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\end{aligned}
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## Gross Assets in Service


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| F15-F16 RRA |  |
| :--- | :---: |
| Assets - Transmission |  |
| (\$ million) |  |
|  |  |
| Line |  |
|  |  |
| $\quad$ Gross Assets in Service |  |
| 1 |  |$\quad$ Opening Balance $\quad$ Column


BC Hydro
F15-F16 RRA
Assets - Distribution
(\$ million)



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| Line |  |
| :---: | :---: |
|  |  |
|  | Gross Assets in Service |
| 1 | Opening Balance |
| 2 | Adjustment to Opening Balance |
| 3 | Capital Additions |
| 4 | Retirements \& Transfers |
| 5 | Closing Balance |
|  |  |
|  | Accumulated Amortization |
| 6 | Opening Balance |
| 7 | Adjustment to Opening Balance |
| 8 | Amort on March 2014 Assets |
| 9 | Amortization on Additions |
| 10 | SMI New Assets |
| 11 | SMl Legacy Meters |
| 12 | Capital Asset Write-Offs |
| 13 | Depn Study Adjustment |
| 14 | Retirements \& Transfers |
| 15 | Closing Balance |
| 16 | Net Assets in Service (Year-End) |



BC Hydro
F15-F16 RRA

## Capital Expenditures and Additions (\$ million)

Capital Expenditures HPOP Properties for Resale
Demand Side Management
Total

$$
\begin{aligned}
& \text { Transmission } \\
& \text { Transmission Lines }
\end{aligned}
$$

Transmission Lines
Transmission Substations SDA Substations Subtotal
Distribution T \& Telecom
Information Technology Telecommunications
Subtotal
Subtotal
Vehicles
Properties and Other Capital
Smart Metering \& Infrastructure Smart Metering \& infrastructure
HPOP Properties for Resale
(2)

Total Capital Additions
Hydroelectric Generation
Thermal Generation - Diesel Thermal Generation - Diesel Transmission Lines
Substations Substations
Transmission Substations
SDA Substations Distribution
Information Technology Information Technology
Generation

Transmission
Distribution
Customer Care Corporate Groups
Vehicles

Vehicles Telecom, Properties and Other
Generation
Distribution
Customer Care
Smart Metering \& Infrastructure





## Domestic Energy Sales and Revenue

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Residential
Light Industrial and Commercial Large Industrial
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verage Revenues (\$/MWh)
Residential
Light Industrial and Commercial
Large Industrial
Irrigation
Street Lighting
New Westminster \& Tongass
Fortis
Seattle City Light
Total (Excluding Misc Rev) Peak Demand (MW) Fortis
Seattle
Total


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Miscellaneous Revenue
(\$ million)

| Line |  | Reference |
| :---: | :---: | :---: |
|  |  |  |
| $\begin{array}{c}\text { Generation } \\ \text { Interconnected Operations Services }\end{array}$ |  |  |
| 1 | FX Loss - Cost of Energy |  |$)$

Distribution
Secondary Use Revenue \& Other
Amortization of Contributions $\quad 11.0 \mathrm{~L} 41+44-37$
$\begin{array}{lr}\text { Amortization of Contributions } & 11.0 \mathrm{~L} 36+43\end{array}$ Total
Customer Care
ustomer Care
Meter/Trans Re
Factor Surchar
Meter/Trans Rents \& Power
Factor Surcharges
Terasen Meter Reading
Terasen Meter Reading
SMI Impact
Diversion Net Recoveries
FX Loss - Cost of Energy
Other Operating Recoveries
Other Operating Recoveries
Other
Total

Total Gross Non-Tariff Revenue
Regulatory Account Additions
Legacy Meter Contributions
SMI Impact


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Total Current Non-Tariff Revenue

F2015 to F2016 Revenue Requirements Rate Application

## Appendix D

Direction No. 6

## PROVINCE OF BRITISH COLUMBIA

## ORDER OF THE LIEUTENANT GOVERNOR IN COUNCIL

Order in Council No. 096
, Approved and Ordered March 05, 2014


On the recommendation of the undersigned, the Lieutenant Governor, by and with the advice and consent of the Executive Council, orders that the attached Direction No. 6 to the British Columbia Utilities Commission is made.

## DEPOSITED

March 6, 2014
B.C. REG. 29/2014


Minister of Energy and Mines and
Presiding Member of the Executive Council Minister Responsible for Core Review
(This part is for admundrative purposes only and is not part of the Order)
Authority under which Order is made:
Act and section: Utilities Commission Act, R.S.B.C. 1996, c. 473, s. 3
Other: OTC 1123/2003; OIC 1125/2003
February 18,2014

# DIRECTION NO. 6 TO THE BRITISH COLUMBIA UTILITIES COMMISSION 

## Contents

1 Definitions
2 Application
3 Orders
APPENDIX A
Aprenidx 3
Appendix C

## Definitions

1 In this direction:
"Act" means the Utilities Commission Act;
"amortization of capital additions" means the portion of the authority's annual amortization expense that is subject to the amortization of capital additions regulatory account;
"amortization of capital additions regulatory account" means the regulatory account established under commission order G-16-09 and the direction in section 5.5 .7 of the reasons that accompany that order;
"arrow water divestiture costs regulatory accomt" means the regulatory accoint estabished under paragraph 1 of commission order G-90-11;
"arrow water provision regulatory aecount" means the regalatory aecount established under paragraph 2 of commission order G-90-11;
"asbestos remediation costs" has the same meaning as in Direction No. 7 to the British Cokambia Utilities Commission;
"asbestos remediation regulatory account" has the same meaning as in Direction No. 7 to the Bitish Columbia Utilities Commission;
"deemed equity" has the same meaning as in Direction No. 7 to the British Columbia Utilities Commission;
"electric tariff rates" means the rates in the schedules to the authority's electric tariff;
"F2014" has the same meaning as in Direction No. 7 to the British Columbia Utilities Commission;
"F2015" has the same meaning as in Direction No. 7 to the British Columbia Utilities Commission;
"F2016" has the same meaning as in Direction No. 7 to the British Columbia Utilities Commission;
"first nations costs regulatory account" means the regulatory account established under commission order G-53-02;
"heritage payment obligation" has the same meaning as in Direction No. 7 to the British Columbia Utilities Commission;
"home purchase optien plan regulatory account" means the regulatory account established under commission order G-55-09;
"IFRS pension regulatory account" means the regulatory account established under paragraph 1 (xxii) of commission order G-77-12A;
"TFRS PP\&E regulatory account" means the regulatory account established under paragraph 1 ( $x x i$ ) of commission order G-77-12A;
"non-ewrent pension costs" has the same meaning as in Direction No. 7 to the British Columbia Utilities Commission;
"non-carrent pension costs regulatory account" has the same meaning as in Direction No. 7 to the British Columbia Utilities Commission;
"non-heritage cost of energy subject to deferral" means the portion of the authority's annual cost of energy that is subject to the non-heritage deferral account;
"non-heritage deferral account" has the same meaning as in Direction No. 7 to the British Columbia Utilities Commission;
"OATT rates" means the rates in schedules 00,01 and 03 to the authority's open access transmission tariff;
"rate smoothing regulatory account" has the same meaning as in Direction No. 7 to the British Columbia Utilities Commission;
"real property gain/hoss" means the net gain or net loss in a fiscal year incurred by the authority from the sale of its real property;
"related equipment" means the related equipment described in section 3 (b) of the Smart Meters and Smart Grid Regulation;
"Rock Bay costs" has the same meaning as in Direction No. 7 to the British Columbia Utilities Commission;
"Rock Bay remediation regulatory account" has the same meaning as in Direction No. 7 to the British Colambia Utilities Commission;
"Site C regulatory account" means the regalatory account established under commission order G-143-06 and section 25 of Appendix $A$ attached to that order;
"smart meter" has the same meaning as in section 17 of the Clean Energy Act;
"smart metering and infrastructure program" means the authority's program to install and operate smart meters and related equipment and the program referred to in section 17 (4) of the Clean Energy Act;
"SMI regulatory account" has the same meaning as in Direction No. 7 to the British Columbia Uailities Commission;
"storm restoration costs" means the costs that are subject to the storm restoration regulatory account;
"storm restoration regulatory account" means the regulatory account established under commission order G-16-09 and the direction in section 5.5 .4 of the reasons that accompany that order;
"total finance charges" means the portion of the authority's annual finance charges that is subject to the total finance charges regulatory accomnt;
"total finauce charges regulatory account" means the regulatory account established under commission order G-16-09 and the direction in section 5.5.2 of the reasons that accompany that order;
"total rate revenue" means the portion of the authority's annual revenues that is subject to the non-heritage deferral account;
"trade income" has the same meaning as in Direction No. 7 to the British Columbia Utilities Commission.

## Application

2 This direction is issued to the commission under section 3 of the Act.

## Orders

3 Within 20 days of the date on which the authority files an application with the commission to request final orders in regard to the authority's F2014, F2015 and F2016 rates, the commission must issue final orders as follows:
(a) the commission must accept the schedule of expenditures in regard to demand-side measures for F2014, F2015 and F2016 as set out in Appendix A to this direction;
(b) the commission must confirm the authority's rates for F2014, set by commission order G-77-12A, as final and no longer subject to refund;
(c) the commission must set the electric tadiff rates for F2015 and F2016 as set out in Appendix B to this direction;
(d) the commission must set the OATT rates for F2015 and F2016 as set out in Appendix C to this direction;
(e) the commission must approve the following forecasts and planned expenditures for F 2015 :
(i) heritage payment obligation: $\$ 353.2$ million;
(ii) non-heritage cost of energy subject to deferral: $\$ 1074.3$ million;
(iii) total rate revenue: $\$ 4168.3$ million;
(iv) trade income: $\$ 110.0$ million;
(v) non-current pension costs: $\$ 2.9$ million;
(vi) storm restoration costs: $\$ 3.9$ million;
(vii) total finance charges: $\$ 602.6$ million;
(viii) amortization of capital additions: $\$ 34.7$ million;
(ix) real property gain/loss; $\$ 10.0$ million;
( x ) asbestos remediation costs: $\$ 1.8$ million;
(f) the commission must approve the following forecasts and planned expenditures for $\mathrm{F2016}$ :
(i) heritage payment obligation: $\$ 399.2$ million;
(ii) non-heritage cost of energy subject to deferral: $\$ 1032.2$ million;
(iii) total rate revenue: $\$ 459.7$ million;
(iv) trade income: $\$ 110.0$ million;
(v) non-current pension costs: $\$ 0.1$ million;
(vi) storm restoration costs: $\$ 3.9$ million;
(vii) total finance charges: $\$ 725.2$ million;
(viai) amortization of capital additions: $\$ 106.7$ million;
(ix) real property gain/loss: $\$ 10.0$ million;
(x) asbestos remediation costs: $\$ 0.9$ million;
(g) the commission must order, in regard to the first nations costs regulatory account, that the authority amortize from that account $\$ 43.5$ million and $\$ 43.3$ million in F2015 and F2016, respectively;
(h) the commission must order, in regard to the Site C regulatory account, that the authority defer to that accomnt operating cosis it incurs in regard to the Site C project in F2015 and F2016;
(i) the commission must order, in regard to the storm restoration regulatory account, that the authority amortize from that account $\$ 1.4$ million in each of F2015 and F2016;
(J) the commission must order, in regard to the amortization of capital additions regulatory account, that the authority amortize from that account $\$ 9.8$ million and $\$ 9.4$ million in F2015 and F2016, respectively;
(k) the commission must order, in regard to the total finance charges regulatory account, that the authority amortize from that account $\$ 25.5$ million in each of F2015 and F2016;
(1) the commussion must order, in regard to the SMI regalatory account, that
(i) the authority amortize from that account $\$ 30.5$ million and $\$ 31.3$ million in F 2015 and F 2016 , respectively, and
(ii) the authority defer to that account net operating costs incurred in F2015 and F2016 arising from the smatt metering and infrastructure program and net operating costs arising from commission order G-166-13;
(m) the commission must order, in regard to the home purchase option plan regulatory acconnt, that the authority amortize from that account $\$ 11.8$ million and $\$ 1.3$ million in F2015 and F2016, respectively;
( $n$ ) the commission must onder; in regard to the non-current pension costs regulatory account, that the authority amortize from that account $\$ 32.6$ million and $\$ 15.5$ million in $F 2015$ and F2016, respectively;
(o) the commission mast order, in regard to the Rock Bay remediation regulatory account, that the authority amortize from that account $\$ 51.5$ million and $\$ 50.5$ million in F2015 and F2016, respectively;
(p) the commission must order, in regard to the IFRS PP\&E regulatory account, that
(i) the authority amortize from that account $\$ 15.9$ million and $\$ 19.8$ million in F 2015 and F 2016 , respectively, and
(ii) the authority defer to that account $\$ 156.8$ million and $\$ 134.4$ milion in F2015 and F2016, respectively;
(9) the commission must order, in regard to the IFRS pension regulatory account, that the authority amortize from that account $\$ 38.2$ million in each of F2015 and F2016;
(r) the commission must order, in regard to the arrow water divestiture costs regulatory account, that the authority amortize from that account $\$ 4.7$ million and $\$ 4.5$ million in F 2015 and F 2016 , respectively;
(s) the commission mast order, in regard to the arrow water provision regulatory account, that the authority amortize from that account $\$ 0.3$ million in each of F 2015 and F 2016 ;
(t) the commission must order, in regard to the asbestos remediation regulatory account, that the authority amortize from that account $\$ 12.1$ million and $\$ 10.7$ million in F2015 and F2016, respectively;
(u) the commission must ordex, in regard to the rate smoothing regulatory account, that the authority defer to that account $\$ 166.2$ million and $\$ 121.2$ million in F2015 and F2016, respectively;
(v) the commission must, despite section 5 of Direction No. 3 to the British Columbia Utilities Commission, direct the authority to defer to the non-heritage deferral account the amount that is determined by subtracting the amount in subparagraph (ii) from the amount in subparagraph (i)
(i) the forecast return on deemed equity in F2014 calculated on the basis of an annual rate of return on deemed equity in that year of $11.84 \%$, and
(ii) the forecast return on deemed equity in F 2014 calculated on the basis of an annual rate of return on deemed equity in that year that is greater than or less than $11.84 \%$ as a result of the commission's order arising from the generic cost of capital proceeding initiated by commission order G-20-12.

|  | APPENDIX A <br>  <br>  <br>  <br> F2014- F2016 DSM Expenditure Schedule |  |  |  |
| :--- | :---: | ---: | ---: | ---: |
| S MILLLON | F2014 | F2015 | F2016 |  |
| Codes and Standards |  | 2.4 | 4.0 | 4.2 |
| Rate Structures |  | 6.5 | 2.0 | 1.7 |
| Programs |  |  |  |  |
| $\quad$ Residential | 30.4 | 17.7 | 18.9 |  |
| Commercial | 66.4 | 39.5 | 40.0 |  |
| Industrial | 101.9 | 64.3 | 42.9 |  |
| Total Programs | 198.7 | 121.5 | 101.8 |  |
| Supporting Initiatives | 28.7 | 20.6 | 20.3 |  |
| Total Energy Efficiency Portfolio | 236.3 | 148.0 | 128.0 |  |
| Capacity Focused DSM | 0.0 | 2.4 | 3.1 |  |
| Total |  | 236.3 | 150.5 | 131.1 |

## APPENDIX $B$

Electric Tariff Rates - F2015 and F2016

| Rate Class | Rate Schedule | Rate | F2015 | $\underline{52016}$ |
| :---: | :---: | :---: | :---: | :---: |
| Residential | 1101/1121 | Basic Charge(\$/day) | 0.1664 | 0.1764 |
|  |  | Step 1 energy rate ( $\$ / \mathrm{kWh}$ ) | 0.0752 | 0.0797 |
|  |  | Step 2 energy rate (\$/kWh) | 0.1127 | 0.1195 |
|  |  |  |  |  |
| Residential | 1105 (closed) | Energy rate ( $\$ / \mathrm{kWh}$ ) | 0.0492 | 0.0522 |
|  |  | Energy rate during pariod of internuption ( $\$ / \mathrm{kWh}$ ) | 0.2865 | 0.3037 |
|  |  |  |  |  |
| Residential Zone II | 1107/1127 | Basic Charge (\$/day) | 0.1775 | 0.1882 |
|  |  | Step 1 energy rate (\$/kWh) | 0.0901 | 0.0955 |
|  |  | Step 2 energy rate (\$/kWh) | 0.1548 | 0.1641 |
|  |  |  |  |  |
| Residential | 1148 (closed) | Basic Charge(\$/day) | 0.1775 | 0.1882 |
|  |  | Energy rate (\$/kWh) | 0.0901 | 0.0955 |
|  |  |  |  |  |
| Residential | 1151/1161 | Basic Charge (\$/day) | 0.1775 | 0.1882 |
|  |  |  | 0.0901 | 0.0955 |
|  |  |  |  |  |
| Exempt General | $1200 / 1201$ | Basic Charge(\$/day) | 02129 | 02257 |
|  |  | Demand rate-Step 1 (\$/kW) | 0 | 0 |
|  |  | Demand rate-Step $2(\$ / \mathrm{kW})$ | 5.19 | 5.50 |
|  |  | Demand rate-Step 3 (\$/kW) | 9.95 | 10.55 |


| Rate Class | Rate Schedule | Rate | F2015 | 12016 |
| :---: | :---: | :---: | :---: | :---: |
|  |  | Energy Rate-Tier 1 (\$/kWh) | 0.1012 | 0.1073 |
|  |  | Energy Rate-Tier 2 (\$/kWh) | 0.0486 | 0.0515 |
| General Service | $\begin{aligned} & 1205 / 12061 \\ & 1207 \end{aligned}$ | Energy rate - Tier 1 (\$/kWh) | 0.0492 | 0.0522 |
|  |  | Energy rate - Tier 2 ( $\$ / \mathrm{kWh}$ ) | 0.0323 | 0.0342 |
|  |  | Energy rate during period of interruption ( $\$ / \mathrm{kWh}$ ) | 0.2865 | 0.3037 |
| Small General Service Zone II | 1234 | Basic Carge (\$/day) | 0.2129 | 0.2257 |
|  |  |  |  |  |
|  |  | Energy rate - Tier 1 (\$/kWh) | 0.1012 | 0.1073 |
|  |  | Energy rate - Tier 2 (\$/kWh) | 0.1686 | 0.1787 |
| Distribution Service | 1253 | Monthly Minimum energy charge (\$/month) |  |  |
|  |  |  | 39.03 | 41.37 |
| Distribation Service | 1268 | Energy charge (\$/kWh) | 0,00157 | 0.00166 |
|  |  |  |  |  |
| Power Service | 1278 (Closed) | \$/kVA | 2.526 | 2.678 |
|  |  | Energy charge (\$/kWh) | 0.06604 | 0.07 |
|  |  | Monthly minimum greater of $\$ / \mathrm{kVA}$ or (\$) | $\begin{array}{r} 4.93 \\ 9868.64 \\ \hline \end{array}$ | $\begin{array}{r} 5.23 \\ 10460.76 \\ \hline \end{array}$ |
|  |  |  |  |  |
| Large General Service Zone II | $\left\lvert\, \begin{aligned} & 1255 / 1256 / \\ & 1265 / 1266 \end{aligned}\right.$ | Basic Charge (\$/day) | 0.2129 | 0.2257 |
|  |  | Energy charge-Tier 1 (\$/kWh) | 0.1012 | 0.1073 |
|  |  | Energy charge-Tier 2(\$/kwh) | 0.1686 | 0.1787 |
| Net Metering <br> Service 1289 Energy rate (\$/kWh) 0.0999 |  |  |  |  |
|  |  |  |  | 0.0999 |
|  |  |  |  |  |
| Small General Service | $\begin{array}{\|l\|} \hline 1300 / 1301 / \\ 1310 / 1311 \end{array}$ | Basic Charge (\$/day) | 0.2129 | 0.2257 |
|  |  | Energy Charge (\$/kWh) | 0.1012 | 0.1073 |
| Irrigation |  |  |  |  |
|  | 1401/1402 | Irrigation season energy rate ( $\$ / \mathrm{kWh}$ ) | 0.0487 | 0.0516 |
|  |  | Non-irrigation season energy charge-Tier 1 ( $\$ / \mathrm{kWh}$ ) | 0.0487 | 0.0516 |
|  |  | Non-irrigation season energy rate Tier $2(\$ / k W h)$ | 0.3864 | 0.4096 |


| Rate Class | Rate Schedule | Rate | F2015 | F2016 |
| :---: | :---: | :---: | :---: | :---: |
|  |  | Minimum charge inigation season ( $\$ / \mathrm{kW}$ ) | 4.87 | 5.16 |
|  |  | Non-irigation season if consumption $>500 \mathrm{kWh}$ (\$per kW) | 38.98 | 41.32 |
| Medium General Service | $\left[\begin{array}{l} 1500 / 1501 / \\ 1510 / 1511 \end{array}\right.$ | Basic Charge (\$/day) | 0.2129 | 0.2257 |
|  |  | Demand rate - Step 1 (\$/kW) | 0.00 | 0.00 |
|  |  | Demand rate-Step 2 (\$/kW) | 5.19 | 5.50 |
|  |  | Demand rate - Step 3 (\$/kW) | 9.95 | 10.55 |
|  |  | Part 1 Energy Rate - Tier 1 ( $\$ / \mathrm{kWh}$ ) | 0,0934 | 0.0989 |
|  |  | Part 1 Energy Rate - Tier 2 ( $\$ / \mathrm{kWh}$ ) | 0.0651 | 0.0690 |
|  |  | Part 2 Energy Rate (\$/kWh) | 0,0971 | 0.0990 |
|  |  | Minimurn Energy Rate (\$/kWh) | 0.0311 | 0.0330 |
| Large General Service | $\begin{aligned} & 1600 / 1601 / \\ & 1610 / 1611 \end{aligned}$ |  |  |  |
|  |  | Basic Charge (\$/day) | 0.2129 | 0.2257 |
|  |  | Demand rate - Step 1 (\$/kW) | 0.00 | 0.00 |
|  |  | Demand rate-Step 2 ( $\$ / \mathrm{kW}$ ) | 5.19 | 5.50 |
|  |  | Demand rate-Step 3 (\$/kW) | 9.95 | 10.55 |
|  |  | Patt 1 Energy Rate Tier 1 ( $\$ / \mathrm{kWh}$ ) | 0.1010 | 0.1066 |
|  |  | Part 1 Energy Rate- Tier 2 ( $\$ / \mathrm{kWh}$ ) | 0.0486 | 0.0513 |
|  |  | Part 2 Energy Rate (\$/kWh) | 0.0971 | 0,0990 |
|  |  | Minimum Energy Charge (\$/kWh) | 0.0311 | 0.0330 |
| Large General <br> Service (150kW <br> and over) for <br> Distribution 2600/2601/ <br> Utilities  Basic Charge (\$/day) <br> 0.2129    |  |  |  |  |
|  |  |  |  | 0.2257 |


| Rate Class | Rate Schedule | Rate | F2015 | 52016 |
| :---: | :---: | :---: | :---: | :---: |
|  |  | Demand rate-Step 1 (\$/kW) | 0.00 | 0.00 |
|  |  | Demand rate - Step 2 (\$/kW) | 5.19 | 5.50 |
|  |  | Demand rate - Step 3 (\$/kW) | 9.95 | 10.55 |
|  |  | Part 2 Energy Rate $\$ / \mathrm{kWh}$ (RS1600) | 0.0971 | 0.0990 |
|  |  | Embedded Cost Rate \$/kWh | 0.0501 | 0.0531 |
|  |  | Discount (\$/kWh) | -0.0037 | -0.0039 |
|  |  |  |  |  |
| Street Lighting | 1701 | 100 SV fixture rate (\$/month) | 15.61 | 16.55 |
|  |  | 150 SV fixture rate (\$/month) | 18.61 | 19.73 |
|  |  | 200 SV fixture rate (\$month) | 21.49 | 22.78 |
|  |  | 175 MV fixture rate (\$/month) | 17.15 | 18.18 |
|  |  | 250 MV fixture rate (\$/month) | 19.76 | 20.95 |
|  |  | 400 MV fixture rate (\$/month) | 25.48 | 27.01 |
|  |  |  |  |  |
| Street Lighting | 1702 | Each Unmetered Fixtare (\$/wate per month) | 0.03 | 0.0318 |
|  |  | Each Metered Fixture (\$/kWh) | 0.0901 | 0.0955 |
|  |  |  |  |  |
| Streea Lighting | 1703 | Energy rate (\$/watt per month) | 0.03 | 0.0318 |
|  |  | Contact rate ( $\$ /$ contact per month) | 0.9057 | 0.96 |
|  |  |  |  |  |
| Street Lighting | 1704 | Energy rate (\$/kWh) | 0.0901 | 0.0955 |
|  |  |  |  |  |
| Street Lighting | 1755 (closed) | 1. Pole owned by Customer |  |  |
|  |  | 175 MV or 100 SV fixture charge (\$ per month) | 14.63 | 15.51 |
|  |  | 400 MV or 150 SV fixture charge ( $\$$ per month) | 25.22 | 26,73 |
|  |  | 2. Pole on public properiy |  |  |
|  |  | 175 MV or 100 SV fixtare charge (\$ per month) | 15.54 | 16.47 |
|  |  | 400 MV or 150 SV fixture charge (\$ per month) | 26.13 | 27.70 |
|  |  | 3. Pole paid by BC Hydro |  |  |
|  |  | 175 MV or 100 SV fixture charge ( ( per month) | 19.13 | 20.28 |
|  |  | 400 MV or 150 SV fixture charge (\$ per month) | 30.11 | 31.92 |



| Rate Class | Rate Schedule | Rate | F2015 | F2016 |
| :--- | :--- | :--- | ---: | ---: |
|  |  | Energy rate $(\$ / \mathrm{kWh})$ | 4.059 | 4.303 |

Appendix C
BC Hydre OATT Rates - F2015 and $\mathbf{F 2 0 1 6}$

| Service | Rate Schedule in Authority's Open Access Transmission Tariff | F2015 Rate | F2016 Rate |
| :---: | :---: | :---: | :---: |
| Network Integration Transmission Service | 00 | \$52.1 million/month | \$62.1 millioz/month |
| Long-term Fifm Point to Point Transmission Service | 01 | \$53 698/MW/year | \$64968/MW/year |
| Montily Shot-term Firm and Non-firm Point to Point Transmission Service | 01 | \$4 474.87/MW/month | \$5 413.99MW/month |
| Weekly Short-term Firm and Non-firm Point to Point Transmission Service | 01 | \$1 032,66/MW/week | \$1 249.38/MW/week |
| Daily Short-term Fitm and Non-firm Point to Point Transmission Service | 01 | \$147.12/mw/day | \$177.99/MW/day |
| Hoarly Short-term Firm and Non-firm Point to Point Transmission Service | 01 | \$6.13/MW/hour | \$7.42/MW/hour |
| Scheduling, System Control, and Dispatch Service Fee | 03 | \$0.102/MWh | \$0.099/MWh |

# F2015 to F2016 Revenue Requirements Rate Application 

## Appendix E

Direction No. 7

## PROVINCE OF BRITISH COLUMBIA ORDER OF THE LIEUTENANT GOVERNOR IN COUNCIL

## Order in Council No. <br> 097 <br> , Approved and Ordered March 05, 2014



## Executive Council Chambers, Victoria

On the recommendation of the undersigned, the Lieutenant Governor, by and with the advice and consent of the Executive Council, orders that
(a) the Heritage Special Direction No. HC2 to the British Columbia Utilities Commission, B.C. Reg. 158/2005, is repealed, and
(b) the attached Direction No. 7 to the British Columbia Utilities Commission is made.

## DEPOSITED

March 6, 2014

$$
\text { B.C. REG. } \quad 28 / 2014
$$



Minister of Energy and Mines and Minister Responsible for Core Review


Presiding Member of the Executive Council

Authority under which Order is made:
Act and section: Utilities Commission Act, R.S.B.C. 1996, c. 473, s. 3;

$$
\text { BC Hydro Public Power Legacy and Heritage Contract Act, S.B.C. 2003, c. 86, s. } 4
$$

Other: OIC 1123/2003

# DIRECTION NO. 7 TO THE BRITISH COLUMBIA UTILITIES COMMISSION 

Contents

Definitions<br>Application<br>Consideration in designing rates for transmission rate customers<br>Basis for establishing authority revenue requirements<br>Determining the cost of energy<br>6 Use of trade income in setting rates<br>Regulatory accounts<br>Annual distributable surpluses allowed<br>F2017, F2018 and F2019 rates<br>10 Deferral accomnt rate rider<br>11 Commission reviews<br>12 Expenditures for export<br>13 Powerex<br>14 Retail access<br>15 Burrard Thermal<br>16 Rates

## Appendix A.

Appendix B

## Definitions

1 In this direction:
"Act" means the Utilities Commission Act,
"asbestos remediation costs" means the costs that are subject to the asbestos remediation regulatory account;
"asbestos remediation regulatory account" means the regulatory account established under commission order 6-7-13;
"base line rate cliange" means, for each of F2017,FF2018 and F2019, the year-over-year increase in the authority's average rates that the commission determines it would have ordered but for section 9 (1) of this direction, expressed as a percentage;
"Burrard costs" means the costs incurred by the authority in F2014 or a later fiscal year arising from the decommissioning of those portions of Burrard Thermal that are not required for transmission support services, including, without limitation, employee retention costs incurred as a result of the decommissioning, costs incurred as penalties or damages that arise in consequence of the decommissioning, and the net increase in amortization expense in F2015 and F2016 arising from a commission order under section 15 of this direction;
"Burrard Thermal" has the same meaning as in the Clean Energy Act;
"Californja settlements" means the settlement of litigation between Powerex Corp. and various California parties arising from events and transactions in the

California power market during 2000 and 2001, as approved by the Federal Energy Regułatory Commission (US) on October 4, 2013;
"debt" has the same meaning as in Heritage Special Directive No. HC1 to the British Columbia Hydro and Power Authority;
"deemed equity" means, for any fiscal year, the product obtained by frultiplying the rate base relating to that year by $30 \%$;
"deferral account rate rider" means the surcharge, expressed as a percentage, as set out in rate schedule 1901 of the authority;
"distributable surplus" has the same meaning as in Heritage Special Directive No. HCI to the British Columbia Hydro and Power Authority;
"DSM regulatory account" means the regulatory account of the anthority established under commission order G-55-95;
"F2014" means the authority's fiscal year commencing April 1, 2013 and ending March 31, 2014;
"F2015" means the authority's fiscal year commencing April 1, 2014 and ending March 31, 2015;
"E2016" means the authority's fiscal year commencing April 1, 2015 and ending March 31, 2016;
"F2017" means the authority's fiscal year commencing April 1, 2016 and ending March 31, 2017;
"F2018" means the authority's fiscal year commencing April 1, 2017 and ending March 31, 2018;
"F2019" means the authority's fiscal year commencing April 1, 2018 and ending March 31, 2019;
"First Nations settlements" means the setflement of litigation between the authority and the Tsay Keh Dene and Kwadacha First Nations, and the settlement of damages claims by the St'at'ime First Nation against the authority, as agreed to between the authority and the first nation on August 31, 2009, November 27, 2008 and May 10, 2011, respectively;
"government policy directive" means a directive in writing to the authority from the minister responsible for the administration of the Hydro and Power Authority Act;
"heritage contract" means the document attached as Appendix A to this direction;
"heritage deferral account" means the Heritage Payment Obligation Deferral Account established under commission order G-96-04 and the direction in section 4.5 of the reasons that accompany that order;
"heritage euergy" has the same meaning as in the heritage contract;
"heritage payment obligation" has the same meaning as in the heritage contract;
"heritage resources" has the same meaning as in the heritage contract;
"nou-corrent pension costs" means the costs that are subject to the non-current pension costs regulatory account;
"uon-current pension costs regulatory account" means the regulatory account established under commission order G-16-09 and the direction in section 5.5.5 of the reasons that accompany that order;
"non-heritage deferral account" means the Non Heritage Deferral Account established under commission order G-96-04 and the direction in section 4.5 of the reasons that accompany that order;
"public awareuess program" has the same meaning as in the Demand-Side Measures Regulation;
"rate base" means, in relation to a fiscal year of the authority, the amount determined in accordance with the following equation and notes:

$$
\mathrm{RB}=\mathrm{WCA}+(\mathrm{A}+\mathrm{B}+\mathrm{C}) / 2-(\mathrm{D}+\mathrm{E}+\mathrm{F}) / 2
$$

where

$$
\begin{aligned}
\mathrm{RB} & =\text { rate base; } \\
\mathrm{WCA} & =\text { working capital amount of } \$ 250 \text { million; }
\end{aligned}
$$

| $\mathrm{A}, \mathrm{B}, \mathrm{D}, \mathrm{E}$ and $\mathrm{F}=$ | the sum of an amount the authority forecasts will <br> be listed as follows in the authority's audited |
| ---: | :--- |
|  | financial statements at the end of the previous |
| fiscal year and the amount the authority forecasts |  |
| will be similarly listed at the end of the applicable |  |
| fiscal year: |  |

A. is the amount listed as property, plant and equipment in service, less accumulated amortization;
B is the amount listed as intangible assets in service, less accumulated amortization;
D is the amount listed as contributions in aid of construction;
E is the amount listed as contributions arising from the Columbia River Treaty;
F is the amountlisted as leased assets included in A, less accumulated amortization;
$C=$ the sum of the balance the authority forecasts for DSM regulatory account at the beginning of the fiscal year and the balance the authority forecasts for the same account at the end of the fiscal year.

## Notes:

1 In determining rate base for a fiscal year, the amounts $A, B$ and $F$ must have subtracted from them any amount included in them that is an expenditure incurred by the authority on or after April 1, 2011, that the commission determines under the Act must not be recovered by the authority in rates.
2 In determining rate base for a fiscal year, the amount $D$ must have subtracted from it any amount included ini it that is related to an expenditure referred to in note 1;
"rate smoothing regulatory account" means the regulatory account the commission mast allow the authority to establish under section 7 (h) (i) of this direction;
"real property sales regulatory account" means the regulatory account the commission must allow the authority to establish under section 7 (h) (ii) of this direction;
"retail access program" has the same meaning as in commission order G-39-12;
"Rock Bay costs" means the costs of the authority in F2014 or a later fiscal year subject to the Rock Bay remediation regulatory account;
"Rock Bay remediation regulatory account" means the regulatory account established under commission order G-75-11;
"Rock Bay settlement" means the settlement of litigation between the authority and the Attorney General of Canada as concluded through the issuance of a consent dismissal order in favour of the authority on June 1, 2012;
"SMI regulatory account" means the regulatory account established under commission order G-64-09;
"specified demand-side measure" has the same meaning as in the Demand-Side Measures Regulation;
"traxe income" means,
(a) for all of the authority's fiscal years except F2014, the greater of the following:
(i) the amount that is equal to the authority's consolidated net income, less the authority's net income, less the net income of the authority's subsidiaries except Powerex Corp, less the amount that the authority's consolidated net income changes due to foreign currency translation gains and losses on intercompany balances between the authority and Powerex Cory;
(ii) zero, and
(b) for F 2014 , the amount that is equal to the authority's consolidated net income, less the authority's net income, less the net income of the authority's subsidiaries except Powerex Corp., less the amount that the authority's consolidated net income changes dne to foreign cutrency transaction gains and losses on intercompany balances between the authority and Powerex Corp.;
"trade income deferral account" means the regulatory account established under commission order G-96-04 and the direction in section 4.6 of the reasons that accompany that order;
"transmission rate customers" means industrial or commercial customers of the authority who are eligible for service under rates designed by the commission under section 3 (1).

## Application

2 This direction is issued to the commission under section 3 of the Act.

## Consideration in designing rates for transmission rate customers

3 (1) In designing rates for the authority's transmission rate customers, the commission must ensure that those rates are consistent with recommendations \#8
to \#15 inclusive in the commission's report and recommendations to the Lieutenant Governor in Council dated October 17, 2003.
(2) Without limiting subsection (1), the commission must ensure the following:
(a) the rates for the authority's transmission rate customers are subject to
(i) the terms and conditions found in Supplements 5 and 6 to the authority's tariff, and
(ii) any other terms and conditions the commission considers appropriate for those rates;
(b) customers who own multiple plants under common ownership may engage in load aggregation for energy, if each plant
(i) is in operation, and
(ii) meets the requirements to be a transmission rate customer that are set out in the authority's electric tariff, or is otherwise authorized by the commission to be treated as a transmission rate customer.

## Basis for establishing authority revenue requirements

4 Subject to section 7, in regulating and setting rates for the authority, the commission must ensure that those rates allow the authority to collect sufficient revenue in each fiscal year to enable the authotity to
(a) provide reliable electricity service,
(b) meet all of its debt service, tax and other financial obligations,
(c) comply with government policy directives, including, without limitation, govemment policy directives requiring the authority to construct, operate or extend a plant or system, and
(d) achieve an annual rate of return on deemed equity
(i) for F 2015 , F 2016 and F 2017 , that is equal to $11.84 \%$,
(ii) for F2018 and subsequent fiscal years the anmal rate of return on deemed equity that would be necessary to yield a distributable surplus in the applicable fiscal year equal to the product of
(A) the distributable surplus in the immediately preceding fiscal year, and
(B) $100 \%$ plus the percentage change in the British Columbia consumer price index in the applicable fiscal year.

## Determining the casi of energy

5 In setting the authority's rates, the commission
(a) must treat the heritage contract as if it were a legally binding agreement between 2 arms-length parties,
(b) must determine the energy required by the authority to meet its domestic service obligations and must determine the cost to the authority of the portion of that required eneegy that is in excess of the energy supplied under the heritage contract,
(c) may employ any mechanism, formula or other method authorized by section 60 (1) (b. ) of the Act, and
(d) unless a different mechanism, formula or method is employed under paragraph (c), must ensure that electricity used by the authority to meet its domestic service obligations is provided to customers on a cost-of-service basis.

## Use of trade income in setting rates

6 In setting rates for the authority, the commission must include the net income of the authority's subsidiaties, assuming that the net income of Powerex Corp. equals trade income.

## Regulatory accounts

7 When regulating and setting rates for the authority, the commission
(a) must allow the authority to continue to defer to the heritage deferral account the variances between the actual and forecast heritage payment obligation,
(b) must allow the anthority to continue to defer to the trade income deferral account the variances between actual and forecast trade income,
(c) must, in regard to the non-heritage deferral account, allow the authority to
(i) continue to defer to that account the variances between actual and forecast cost of energy arising from differences between actual and forecast domestic customer load, and
(ii) defer to that account the Burrard costs,
(d) must, in regard to the DSM regulatory account, allow the authorify to
(i) defer to that account the anthority's costs arising from its development, implementation and administration of demand-side measures, including costs arising from specified demand-side measures and public awareness programs, and
(ii) amortize from that acconnt in each fiscal year an amount equal to the sum of
(A) the amount amortized in the immediately preceding fiscal year less the amortization in that year associated with costs incurred more than 15 fiscal years prior to that year, and
(B) the product of the amount deferred to that account in the immediately preceding fiscal year and $1 / 15$,
(e) must allow the authority to continue to defer to the Rock Bay remediation regulatory account the Rock Bay costs,
(f) must allow the authority to continue to defer to the asbestos remediation regulatory account the wariances between actual and forecast asbestos remediation costs,
(g) must allow the authority to continue to defer to the non-current pension costs regulatory account the variances between actual and forecast non-current pension costs,
(h) must allow the authority to establish the following regulatory accounts:
(i) an account to defer for recovery in rates in future fiscal years of the authority those portions of the authority's allowed revente requirement in a particular fiscal year that were not or are not to be recovered in rates in that particular fiscal year;
(ii) an account to defer the variances between the authority's actual and forecast real property gain/loss,
(i) must allow the following regulatory accounts to accrue interest in a fiscal year at the authority's weighted average cost of debt in that year:
(i) the first nations costs regulatory account;
(ii) the real property sales regulatory account,
(i) may allow the anthority to establish one or more other regulatory accounts for other purposes, and
(k) subject to section 9 (1) of this direction, mast set the authority's rates in such a way as to allow the regulatory accounts to be cleared from time to time and within a reasonable period.

## Annual distributable surpluses allowed

8 When regulating and setting rates for the authority, the commission must ensure that those rates allow the authority to allocate annual distributable supluses in the manner specified by the Lieutenant Govemor in Council under section 4 of the BC Hydro Public Power Legacy and Heritage Contract Act or section 35 of the Hydro and Power Authority Act.

F2017, F2018 and F2019 rates
9 (1) When regulating and setting rates for the authority for F2017, F2018 and F2019, under sections $4,5,6,7,9(2), 10(3)$ and 11 of this direction, the commission must not allow the rates to increase by more than $4 \%$ in F2017, 3.5\% in F2018 and $3 \%$ in F 2019 , on average, compared to the rates of the authority immediately before the increase.
(2) If the base line rate change exceeds $4 \%$ in $\mathrm{F} 2017,3.5 \%$ in F 2018 or $3 \%$ in F 2019 , the commission must order the authority to defer to the rate smoothing regulatory account the amount that is determined by subtracting the amount in paragraph (b) from the amount in paragraph (a)
(a) the forecast revenue that the authority would have earned under a base line rate change, and
(b) the forecast revenue that the authority is expected to earn under this direction.

## Deferral account rate fider

10 (1) The commission must set the deferral account rate rider for F2015 and future fiscal years of the anthority at $5 \%$.
(2) The commission must not order any change to the deferral account rate rider, except on application by the authority.
(3) The commission must allow the anthority, in regard to a fiscal year of the authority, to account for the forecast revenue from the deferral account rate rider as follows:
(i) a portion of the forecast revenue from the deferral account rate rider is to be accounted for as revenue in that fiscal year in accordance with equation 1 and the following table;
(ii) a portion of the forecast revenue from the deferral account rate rider is to be amortized from the forecast net balance of the heritage deferral account, the non-heritage deferral account and the trade income deferral account at the end of the immediately preceding fiscal year in accordance with equation 2 and the following table:

$$
\begin{aligned}
\text { Equation 1: } \operatorname{DARR}(R e v) & =\operatorname{DARR}-(\mathrm{X} / 5) \times \text { DARR } \\
\text { Equation 2: DARR(DA }) & =(\mathrm{X} / 5) \times \operatorname{DARR}
\end{aligned}
$$

where
DARR (Rey) = the portion of forecast revenue from the deferral account rate rider in the applicable fiscal year of the authority that is to be accounted for as revenue;
$\operatorname{DARR}(D A)=$ the portion of forecast revenue from the deferral account rate rider in the applicable fiscal year of the authority that is to be amortized from the net balance of the herifage deferral account, the non-heritage deferral account and the trade income deferral account at the end of the immediately preceding fiscal year;
DARR = forecast revenue from the deferral account rate rider in the applicable fiscal year of the authority;
$X=$ the number in column $X$ of the following table that corresponds to the forecast net balances of the heritage deferral account, the non-heritage deferral account and the trade income deferral account at the end of the immediately preceding fiscal year that is between the values shown in columns $A$ and $B$ of the following table:

|  | Table |  |
| :---: | :---: | :---: |
| A (\$ million) | $\mathbf{B}(\$$ million $)$ | $X$ |
| $<-500$ | -500 | -5.0 |
| -500 | -450 | -4.5 |
| -450 | -400 | -4.0 |


|  | Table |  |
| :---: | :---: | :---: |
| $\mathrm{A}(\$$ million $)$ | $\mathrm{B}(\$$ million $)$ | X |
| -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 |

(iii) the portion of forecast revenue from the deferral account rate rider in the applicable fiscal year of the authority that is amortized from the net balance of the heritage deferral account, the non-heritage deferral account and the trade income deferral account at the end of the immediately preceding fiscal year must be amortized from the respective balances of those accounts in proportion to the ratios of the balances of those accounts to the net balance of all 3 .

## Commisslon reviews

11 When setting rates for the authority under the Act, the commission must not disallow for any reason the recovery in rates of the costs that were incurred by the authority or Powerex Corp. in consequence of decisions of either with respect to
(a) the construction of extensions to the authority's plant or system that come into service before F2017,
(b) energy supply contracts entered into before F2017,
(c) the Rock Bay settlement,
(d) the First Nations settlements,
(e) the Califonia settlements,
(f) the Burrard costs, and
(g) the costs deferred to the SMI regulatory account.

## Expenditures for export

12 The commission must refrain from performing its duty under section 4 (5) of the Clean Energy Act when setting rates for the authority for F2014, F2015, F2016, F2017 and F2018.

## Powerex Corp.

13 The commission may not exercise any power under Patt 3 of the Act in regard to the gas and electricity trading activities of Powerex Corp.

## Retail access

14 (1) By March 23, 2014, the commission must issue orders as follows:
(a) the commission must accept a withdrawal by the authority of any obligation to offer unbundled transmission services under the authority's open access transmission tariff to retail customers in British Columbia, and a withdrawal of any obligation to offer such services to those who snpply such customers;
(b) the commission must order the cancellation of the retail access program.
(2) Except on application by the authority, the commission must not set rates for the authority that would result in the direct or indirect provision of unbundled transmission services to retail customers in British Columbia, or to those who supply such customers.

## Burrard Thermal

15 On application by the authority the commission must
(a) grant permission to the authority under section 41 of the Act to cease operating those portions of Burrard Themal that are not required for transmission support services, and
(b) set depreciation rates for the classes of property, plant and equipment at Burrard Thermal as shown in Appendix B to this direction.

Rates
16
(1) The commission may not reconsider, vary or rescind the orders it issues under this direction or Direction No. 6 to the British Columbia Utilities Commission, except on application by the authority.
(2) For F 2014 , F2015 and F2016, the commission must not issue any orders in regard to the authority's regulatory accounts, except on application by the authority.
(3) In setting the anthority's rates for F2015, F2016, F2017, F2018 and F2019, the commission must exercise its powers and perform its duties consistently with the orders it issues under Direction No. 6 to the British Columbia Utiltties Commission, except on application by the authority.
(4) Nothing in this section prevents the commission from making determinations on applications made by the authority respecting reveme-cost ratios, rate design and regulatory accounts, including interim rate orders in regard to one or more of the authority's customers.

## Appendix A - Heritage Contract

## Definitions

1 In this Agreement:
"Agreement" means this Heritage Contract including Schedule A;
"Aucillary Service Requirements" means services necessary to deliver energy;
"BC Hydro" means the British Columbia Hydro and Power Authority;
"BCH Distribution" means BC Hydro's distribution line-of-business;
"BCH Generation" means BC Hydro's generation line-of-business;
"Commission" means the British Columbia Utilities Commission;
"heritage electricity" means the capacity, energy and ancillary services that BCH Generation is required to supply to BCH Distribution under this Agreement;
"heritage energy" means
(a) subject to paragraph (b), $49000 \mathrm{GW} . \mathrm{h}$ per year less the energy generated for delivery ander the Skagit Valley Treaty, or
(b) the quantity of energy determined by the Commission under section 8 of this Agreenent to be heritage energy;
"heritage payment obligation" means
(a) subject to paragraph (b), the annual payment determined in accordance with the procedure set out in Schedule A to this Agreement, or
(b) the annual payment determined by the Commission under section 8 of this Agreement to be the heritage payment obligation;
"heritage resources" means the Electric Facilities and Thermal Facilities described in Schedule A to the Terms of Reference, together with
(a) the related civil works and plant, and
(b) potential future investments that increase the capacity, energy or ancillary service capability of such facilities, including potential future units 5 and 6 at Mica and potential future units 5 and 6 at Revelstoke;
"Order" means an order of the Commission;
"Terms of Reference" means Schedule A, Terms of Reference, to Order in Council 253/2003;
"Transfer Pricing Agreement" means the Transfer Pricing Agreement for Electricity and Gas dated April 1,2003 between BC Hydro and Powerex Corp. as amended from time to time;
"Year" means fiscal year:

## Electricity supply

2 BCH Generation must provide the full capacity of the heritage resources to BCH Distribution on a priority call basis.

## Obligation to supply

3 BCH Generation must supply to BCH Distribution, in each Year, the heritage energy or such tesser amount of energy as may be required by BCH Distribution.

## Obligation to celiver

4 BCH Generation will deliver the heritage energy to BCH Distribution at the various points of interconnection of the generating stations included in the heritage resources with the BC Hydro transmission grid or at points of interconnection with other utilities, as appropriate.

## Responsiblity for obtaining transmission services

5 BCH Distribution will be responsible for obtaining transmission services for energy provided to BCH Distribution.

## Ancillary services

6 The parties may use the capacity available to them under section 2 to defiver energy to meet customer demand and to satisfy the parties' Ancillary Service Requirements, regardless of whether provision for self-supply is made under any tariff.

## Payment

7 BCH Distribution must, on or before the end of each Year, pay to BCH Generation an anount equal to the heritage payment obligation.

## Adjustment

8 The patties acknowledge that
(a) the Commission may, by Order, modify one or both of the definitions of "heritage energy" and "heritage payment obligation" if the Commission is satisfred that a change in circumstances has permanently affected
(i) the capability of the heritage resources to provide one or both of capacity and energy, or
(ii) the authority's cost of generating the feritage energy, and
(b) any such modification will automatically modify the heritage energy or the heritage payment obligation, as the case may be, without further action by the parties.

## Information exchange and cooperation

9 Each party will continue to freely provide the other with any requested information to facilitate the coordinated and optimal operation of the BC Hydro system.

## Dispute resolution

10 (1) The patties will make reasonable efforts to resolve disputes arising in relation to this Agreement at the staff level.
(2) As needed, issues may be dealt with by management levels within each party to achieve timely resolution.
(3) Issues that cannot be resolved in a timely manner at senior management levels may be referred by either party to the commission for resolution.

## Term

## SCHEDULE A TO APPENDIX A - HERITAGE PAYMENT OBLIGATION

1 The heritage payment obligation for any Year is the amount determined by
(a) adding those of the following costs incarred by BCH Generation in the Year that the Commission orders may be included in the heritage payment obligation:
(i) cost of energy such as the cost of water rentals and energy purchases, including purchases of gas and electricity, required to supply heritage electricity;
(ii) operating costs such as the costs of operating and maintaining the heritage resources, including an allocation of corporate costs;
(iii) all costs of owning the heritage resources, including, without limitation, depreciation, interest, finance charges and other asset related expenses;
(iv) all costs or payments related to generation-related transmission access required by the heritage resources, and
(b) subtracting from the sum obtained under paragraph (a) any revenues BCH Generation receives from other services provided from the heritage resources, including, without limitation,
(i) revenues related to Skagit Valley Treaty obligations,
(ii) revenues from provision of ancillary services to the transmission operator in respect of third party use of the transmission system, and
(iii) revenues from the sale of surplus hydro electricity under section 5 of the Transfer Pricing Agreement.

Appendix B - Burrard Depreciation Rates

| Class of Property, Plant and Equipment at Burrard Thermal | F2015 Depreciation Rate (\%/year) | F2016 Depreciation Rate (\%/year) |
| :---: | :---: | :---: |
| C12101 Tracks, Railway | 100.0\% | N/A |
| C12401 Drainage System Yard | 9.1\% | 10.0\% |
| C21901 Roofs | 9.1\% | 10.0\% |
| C22001 Plant Concrete Steel | 15.8\% | 18.8\% |
| C22002 Comm Concrete Steel | 9.1\% | 10.0\% |
| C22005 Building, Comp Pool | 9.1\% | 10.0\% |
| C22006 Equipment Shelter | 19.0\% | $23.5 \%$ |
| C22009 Building-HVAC Sys\&Cp | 10.1\% | 11.1\% |
| C22101 Off Trailer/Mob Home | 9.3\% | 10.0\% |
| C23801 Cranes | 9.1\% | $10.0 \%$ |
| C24402 Ramp, Boat/Barge | 85.7\% | 100.0\% |
| C25101 Structure Supp Steel | 9.1\% | $10.0 \%$ |
| C25301 Foundations | 9.1\% | 10,0\% |
| C25401 Ducts \& Trenches | 9.1\% | 10.0\% |
| C25601 Barriers \& Enclos | 20.0\% | 25.0\% |
| C30101 Casing, Boiler | 50.0\% | 100,0\% |
| C30102 Insulation, Boiler | 14.3\% | 16.7\% |
| C30103 Roof, Boiler | 50.0\% | 100.0\% |
| C30203 Superheater HighTemp | 50.0\% | $100.0 \%$ |
| C30204 Superheater Low Temp | 54.5\% | $100.0 \%$ |
| C30205 Reheater, Boiler | 50.0\% | 100.0\% |
| C30301 Header/Drum | 50.3\% | 100.0\% |
| C30401 Valyes, Safety | 14.5\% | 17.0\% |
| C30501 Piping, High Press | 33.4\% | 41.5\% |
| C30601 Fan, Forced Draft | 50.0\% | 100.0\% |
| C30602 Breaching / Fue Sys | $54.5 \%$ | 100.0\% |
| C30603 Stack, Fhae Gases | $50.0 \%$ | 100.0\% |
| C30605 Burner, Fuel | 50.0\% | $100.0 \%$ |
| C30506 Instrument, Boiler | 51,3\% | 98.6\% |
| C30607 DNU - Asbe Abatement | $9.1 \%$ | 10.0\% |
| C30611 Desuperheater System | 50.0\% | 100.0\% |
| C30612 Refractory, Boiler | 54.5\% | 100.0\% |
| C30613 Boiler, Package | 54.5\% | 100.0\% |


| Class of Property, Plant and Equipment at Burrard Thermal | F2015 Depreciation Rate (\%/year) | F2016 Depreciation Rate |
| :---: | :---: | :---: |
| C30701 Equip, Water Treat | 50.0\% | 100.0\% |
| C30801 Transfer Sys Ammonia | 92.3\% | 100.0\% |
| C30802 Water Sys Ammonia | $92.3 \%$ | 100.0\% |
| C30803 Vapouriser, Ammonia | 92.3\% | 100.0\% |
| C30804 Comp Vapour, Ammonia | 92.3\% | 100.0\% |
| C30805 Piping Sys, Ammonia | 50,0\% | 100.0\% |
| C30901 Monitor Equip, Cem | 54.5\% | 100.0\% |
| C30903 Deliver Sys, Ammonia | 55.5\% | 100.0\% |
| C31001 Water Intk/DisStruct | 9.1\% | 10.0\% |
| C31002 Protection, Cathodic | 9.1\% | 10.0\% |
| C31003 Gates, Infet/Ontlet | 9.1\% | 10.0\% |
| C31005 Conduit, Intake/Disc | 9.1\% | 10.0\% |
| C33001 Heat Exch, Shell Tube | 50.0\% | 100.0\% |
| C33002 Pamp And Motor | 50.0\% | 100.0\% |
| C33004 Condenser, Boiler | 50.0\% | 100.0\% |
| C34004 Turbine, Comp Pool | 22,2\% | 28.5\% |
| C34005 Coils, Stator | 9.3\% | 10.3\% |
| C34006 Rotor, Generator | 9.1\% | 10.0\% |
| C34007 Generator, Comp Pool | 28.6\% | 40.1\% |
| C34008 Supervisory Sys Turb | 70.9\% | 55.8\% |
| C34009 Cooiing Sys Hydrogen | 15.8\% | 18.7\% |
| C34015 Turbine Blades Sets | 31.7\% | 46.4\% |
| C42004 Major Maint.-Rewedge | 25.3\% | 33.88 |
| C42102 Exciter, Static | 42.7\% | $74.6 \%$ |
| C46701 Heat Exchanger | 50.0\% | 100.0\% |
| C47201 Turbine, Gas | 50.0\% | 100.0\% |
| C47202 Major Maint-Gas Tur | 80.0\% | 100.0\% |
| C48003 Generator, Composite | 29.7\% | 42.3\% |
| C48004 Generator, Diesel | 25.8\% | 34.8\% |
| C49001 Pamp | 44.4\% | 77.8\% |
| C49002 Motor | 12.3\% | 14.1\% |
| C51001 Condensor, SyncRotary | 9.1\% | 10.0\% |
| C52104 Transformer, 6100 Mva | 50.0\% | 100.0\% |
| C52105 Transformer, Stn Ser | 10.5\% | 10.0\% |
| C52302 Reactor, Dry Type | 99.9\% | 100.0\% |
| C52405 Transformer, Curr, Com | 35.3\% | 54.6\% |


| Class of Peoperty, Pant and Equipment at Burard Thermal | F2015 Depredifion Rate (\%/yeai) | F2016 Depreciation Rate (\% /year) |
| :---: | :---: | :---: |
| C52504 Trans; Volt, Encaps. | $9.17 \%$ | 10:0\% |
| C54101 Breaker AirMagnetic | 91\% | 100\% |
| C54201 Use Ind Disconiect | 200\% | $25.0 \%$ |
| C5401 Buswork \& StriConduet | 9.1 | $10.0 \%$ |
| C55501 Grounding Systems | $9.1 \%$ | 10.0\% |
| C56001 Insulators: | 9.1\% | 10.0\% |
| C59001 Pover Supp Uninter | 39.4\% | $65.1 \%$ |
| C59101 Regulator FeederCir | $91 \%$ | $100 \%$ |
| C59201 Chargersystein, Batt | $133 \%$ | $153 \%$ |
| C61001 Fenciug | 9.1 \% | 100\% |
| C61101 AlamiSecurity Sys | 9,1\% | 10.0\% |
| C62001 Fire Protection Sys | $120 \%$ | 13.6\% |
| C62501 Firefighing Eqtip | $33.3 \%$ | $50.0 \%$ |
| C6500 Pats/Cubicles, PeC | $13.0 \%$ | 149\% |
| O67003 Contin Fae Coricret | 9.45 | $100 \%$ |
| C67005 Oil Spill Conitainmen | 9.19 | 10.0\% |
| C68202 Tem Unit Retin(Slave) | 231\% | $300 \%$ |
| C68204 Distributed Cul Sys | 30.4\% | $429 \%$ |
| C68301 Radio, MW, Alialog | $9.1 \%$ | $10.0 \%$ |
| C68001 Tele Equip Pby/Pax | 100.0\% | N/A |
| C70104 Tistrumentation-Digi | $91 \%$ | $10.0 \%$ |
| C7400 Motor-Generatorsets | 923\% | $100.0 \%$ |
| 075104 Compressor, Air | $183 \%$ | 2130 |
| O75201 Tanks Steel: Auffuel | $91 \%$ | $10.0 \%$ |
| C75202 Tank, Fibrglas, DbiB | $9.1 \%$ | 10.0\% |
| C7.301 Water Supply System | $9.10 \%$ | 10.0\% |
| C82504 Lohde/Backlioe: | 8.3\% | 90\% |
| C82513 Manlift | $66.7 \%$ | 1000\% |
| C82550 Tools/Work EquipMise | 12.38 | $14.0 \%$ |
| C82551 DNU- Tools/ Work Equ | $21.7 \%$ | 27.1 |
| C82601 Test/Calibration | $43.9 \%$ | $73.2 \%$ |
| C82603 Manuifacturing/Test | $24.4 \%$ | $12.5 \%$ |
| C88002 Lab Equiphent, Misc | 308\% | 2780 |

## F2015 to F2016 Revenue Requirements Rate Application

## Appendix F

## Amendment to Heritage Special Directive No. HC1

## PROVINCE OF BRITISH COLUMBIA

## ORDER OF THE LIEUTENANT GOVERNOR IN COUNCIL

Order in Council No. 095 , Approved and Ordered March 05, 2014


## Executive Council Chambers, Victoria

On the recommendation of the undersigned, the Lieutenant Governor, by and with the advice and consent of the Executive Council, orders that the Heritage Special Directive No. HCl to the British Columbia Hydro and Power Authority, Order in Council 1125/2003, is amended as set out in the attached Appendix.


Minister of Energy and Mines and Minister Responsible for Core Review


Presiding Member of the Executive Council
(This part is for administrative purposes only and is not part of the Order.)
Authority under which Order is made:
Act and section: Hydro and Power Authority Act, R.S.B.C. 1996, s. 212, s. 35
Other:
February 18, 2014
0/79/2014/27


#### Abstract

APPENDIX 1 Section 3 of the Heritage Special Directive No. HC7 to the British Columbia Hydro and Power Authority, Order in Council 1125/2003, is repealed and the following substituted:


## Annual payment

3 (1) On or before June 30 of the years 2014, 2015, 2016 and 2017, the directots of the authority must cause the aathority to pay to the government an amount equal to
(a) $85 \%$ of the distributable surplas for the previous fiscal year of the authority, or
(b) if the payment required under this section would result in the debt/equity ratio of the authority exceeding 80:20, the greatest amount that can be paid by the authority without causing the authority's debt/equity ratio, after the payment is made, to exceed 80:20.
(2) On or before June 30 of each year after 2017, until and including the year in which the payment required by this Special Directive equals zero, the directors of the authority must cause the authority to pay to the govermment the greater of the following 2 amounts:
(a) zero;
(b) the payment required by this Special Directive in the immediately preceding year less $\$ 100$ million.
(3) On or before June 30 of each year after the year in which the payment required by this Special Directive equals zero, the directors of the authority must cause the authority to pay to the government an amount equal to
(a) $85 \%$ of the distributable surplus for the previous fiscal year of the authority, or
(b) if the payment required under this section would resulf in the debt/equity ratio of the authority exceeding 60:40, the greatest amount that can be paid by the authority without cansing the authoxity's debt/equity ratio, after the payment is made, to exceed 60:40.

# F2015 to F2016 Revenue Requirements Rate Application 

## Appendix G

DSM Expenditures and Savings

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## 1 DSM Expenditures and Savings

This appendix responds to the BCUC's direction in Order No. G-77-12A of the F12-F14 ARRA that BC Hydro provide a discussion of its accounting practices and policies concerning DSM expenditures. It also provides, for information only, a discussion of BC Hydro's DSM initiatives, along with identification of the expenditures and savings from initiatives undertaken in F2014, and for those anticipated for F2015 and F2016.

### 1.1 DSM Initiatives

BC Hydro employs three DSM tools and a number of supporting initiatives to achieve targeted energy and capacity savings. The long range plan, articulated in the November 2013 Integrated Resource Plan (IRP) is to target $7,800 \mathrm{GWh} /$ year in energy savings with an estimated 1,400 MW in associated capacity savings by F2021. The DSM tools and supporting initiatives are:

- Codes and Standards: BC Hydro supports the development of, and relies on government implementation of, a suite of changes to energy efficiency requirements in product/equipment regulations and building codes. Once government implementation has occurred, BC Hydro also works with industry and trades on education to improve codes and standards compliance. During F2015 and F2016, BC Hydro will continue to work with government and standard agencies to develop and promote energy efficiency codes and standards that can be used to regulate efficient products and equipment in the marketplace, and per Recommended Action 3 from the IRP, explore additional codes and standards opportunities.
- Rate Structures: BC Hydro has implemented conservation rate structures in all major customer sectors representing the vast majority of its domestic load. BC Hydro will continue to implement and adjust conservation rates in all
customer sectors in order to send price signals to customers regarding the incremental cost of electricity.
- Programs: BC Hydro designs and implements a suite of DSM programs and sector enabling activities targeting the residential, commercial and industrial sectors. Programs are designed to complement codes and standards and rate structures. BC Hydro plans to continue with the existing suite of programs, working with trade allies, other utilities, government agencies and customer groups. Per Recommended Action 2 from the IRP, investigation is also planned to pilot capacity-focused programs over the near term to assess the capability of these types of programs to deliver reliable capacity savings over the long term.
- Supporting Initiatives: In addition to the three DSM tools described above, there are a number of supporting initiatives - public awareness and education, community engagement, technology innovation, information technology, and indirect and portfolio enabling - that provide a critical foundation for awareness, engagement and other conditions to support the success of DSM. These initiatives provide external market and community support along with general internal management and infrastructure development. As such, these initiatives are integral to the success of the overall DSM portfolio and achievement of electricity savings. These supporting initiatives also address requirements contained within the Demand Side Measures Regulation (B.C. Reg. 228/2011 (Ministerial Order M335)).


### 1.2 DSM Expenditures

Table G-1 below shows the DSM expenditures for F2014 to F2016 as specified for approval in Direction No. 6 and as set out in schedule A of the draft order to this application.

Table G-1
F14-F16 DSM Expenditures (\$ million)

|  | $\begin{gathered} \text { F2014 } \\ \text { Plan } \end{gathered}$ | F2014 <br> Forecast | $\begin{aligned} & \text { F2015 } \\ & \text { Plan } \end{aligned}$ | $\begin{aligned} & \text { F2016 } \\ & \text { Plan } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: |
| Codes and Standards ${ }^{1}$ | 2.4 | 2.7 | 4.0 | 4.2 |
| Rate Structures | 6.5 | 2.0 | 2.0 | 1.7 |
| Programs |  |  |  |  |
| Residential | 30.4 | 17.4 | 17.7 | 18.9 |
| Commercial ${ }^{2}$ | 66.4 | 49.5 | 39.5 | 40.0 |
| Industrial | 101.9 | $\underline{57.1}$ | 64.3 | $\underline{42.9}$ |
| Total Programs | 198.7 | 123.9 | 121.5 | 101.8 |
| Supporting Initiatives | $\underline{28.7}$ | $\underline{22.7}$ | $\underline{20.6}$ | $\underline{20.3}$ |
| Total EE Portfolio | 236.3 | 151.3 | 148.0 | 128.0 |
| Capacity Focused DSM ${ }^{3}$ | 0.0 | 0.0 | $\underline{2.4}$ | 3.1 |
| Total EE \& Capacity Focused | 236.3 | 151.3 | 150.5 | 131.1 |

### 1.3 DSM Energy and Capacity Savings

F2014 was a year in transition for BC Hydro's DSM initiatives, with development of the IRP providing revised direction for the DSM savings activities over the next few years, while still preserving the ability to achieve the long-term targets. As explored in the IRP, DSM is a flexible resource. To some degree, DSM activity can be ramped up or down over time to better match BC Hydro's resource requirements. Given these considerations, the IRP recommended a moderation in DSM program and supporting initiative expenditures in the near term (starting with F2014) and then ramping back to the long term DSM target by F2021. Table G-2 below shows the new savings outlook established by the government approved IRP.

[^12]Table G-2 Cumulative Savings Targets ${ }^{4}$ (Base Year F2013)

|  | F2014 Forecast | $\begin{aligned} & \text { F2015 } \\ & \text { Plan } \end{aligned}$ | $\begin{aligned} & \text { F2016 } \\ & \text { Plan } \end{aligned}$ |
| :---: | :---: | :---: | :---: |
| Energy Savings (GWh/year) |  |  |  |
| Codes and Standards | 419 | 569 | 1149 |
| Rate Structures | 766 | 885 | 987 |
| Programs |  |  |  |
| Residential | 125 | 189 | 239 |
| Commercial | 275 | 366 | 442 |
| Industrial | 448 | 601 | 721 |
| Total Programs | 848 | 1,156 | 1,402 |
| Total | 2,033 | 2,611 | 3,537 |
| Associated Capacity Savings (MW) ${ }^{5}$ |  |  |  |
| Codes and Standards | 72 | 110 | 215 |
| Rate Structures | 102 | 131 | 154 |
| Programs |  |  |  |
| Residential | 24 | 37 | 48 |
| Commercial | 29 | 46 | 57 |
| Industrial | 43 | 63 | 81 |
| Total Programs | 96 | 146 | 186 |
| Total | 270 | 386 | 555 |

### 1.4 DSM Accounting Treatment

This section provides a discussion of the accounting practices for DSM expenditures.

As background, BC Hydro's accounting policies establishing the deferral of DSM expenditures are based upon BCUC Order No. G-55-95, which specifies:
"Direct program costs, indirect administration costs and allocated overhead, shall be deferred according to the intent of section 3450 - Research and Development, of the Canadian

[^13]Institute of Chartered Accountants, Accounting Recommendations Handbook. Generally speaking, those criteria treat research costs as expenses and treat as assets, those development costs that have a high probability of achieving net financial benefits."

Under this approach, BC Hydro has deferred all costs arising from the development, implementation and administration of DSM initiatives. This includes costs for applicable groups within customer care and corporate communications for their activities that relate to DSM.

As outlined in the IRP, DSM expenditures fund both DSM tools (such as codes and standards, rate structures, and programs) and supporting initiatives (such as public awareness and education, community engagement, technology innovation, information technology, and indirect and portfolio enabling). ${ }^{6}$ Both expenditure categories are integral to the achievement of the savings portfolio and accordingly are deferred to the DSM regulatory account and amortized over 15 years, based on the useful life of the DSM expenditure.

The 15-year useful life comes from the calculation of the weighted average persistence of DSM program savings, as described in the F12-F14 ARRA. ${ }^{7}$ The amortization of the DSM regulatory account therefore provides intergenerational equity by matching DSM cost recovery and savings benefits over time.

Paragraphs 7(d)(i) and (ii) of Direction No. 7 now require the BCUC to allow BC Hydro to defer to the DSM Regulatory Account the scope of DSM costs described above, and amortize them over 15 years, in both cases consistent with BC Hydro's previous practices and policies.

[^14]
# BChydro ${ }^{46}$ 

## F2015 to F2016 Revenue Requirements Rate Application

## Appendix H

## Regulatory Accounts Report

# Regulatory Accounts Report 

Fiscal F2013 to F2024

February 28, 2014

Appendix H

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## 1 Executive Summary

This report describes BC Hydro's regulatory accounts, its plan to reduce the total balance and number of accounts, and its principles regarding potential new accounts and the application of interest to the accounts. It is provided in the context of the Province's 10-Year plan for BC Hydro (the 10-Year Plan) announced on November 26, 2013, and Directions No. 6 and 7, issued on March 6, 2014 to the British Columbia Utilities Commission (BCUC).

BC Hydro uses various regulatory accounts, in compliance with BCUC orders, in order to:

1. Better match costs and benefits for different generations of customers
2. Smooth out the rate impact of a large non-recurring cost or to smooth out rate increases
3. Defer to a future period the differences between forecast and actual costs or revenues

BC Hydro is aware of concerns about the growth in the balances of its regulatory accounts, the length of time that will be required to recover the significant balances in the accounts, and potential impacts on intergenerational equity. This report addresses these concerns and sets out how the balances in BC Hydro's regulatory accounts will be recovered in a manner that reflects the nature of each regulatory account.

This report looks out to the end of F2024, at which time BC Hydro's regulatory accounts are forecast to total approximately $\$ 4.06$ billion, a reduction of just over $\$ 1$ billion from the forecast maximum of $\$ 5.1$ billion in F2018 and F2019. The number of regulatory accounts stands at 27 at the beginning of F2014, and based on the forecast amortization periods, 13 regulatory accounts will have been fully amortized by F2024. It should be noted that several of the regulatory accounts are
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 F2014, BC Hydro is already collecting in its rates 19 of the 27 regulatory accounts representing account balances of $\$ 3.5$ billion, or 80 per cent of the total balance. As well, by the end of F2024 just over 84 per cent of the outstanding regulatory account balances (approximately $\$ 3.4$ billion) consist of five regulatory accounts that either match costs with associated benefits (Demand Side Management (DSM), Site C and Smart Metering \& Infrastructure) or that relate to the transition to International Financial Reporting Standards (IFRS, - IFRS Property, Plant \& Equipment and IFRS Pension) and 14 per cent (approximately $\$ 550$ million) will consist of two non-cash provision accounts that are not recovered in rates until such time as an actual cash expenditure is made against the provision.

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

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
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 pension liability of approximately $\$ 300$ million. Therefore, BC Hydro expects that the balances in this account will also vary from those currently forecast.

Regulatory accounts are not uncommon in the utility industry, and BC Hydro is not alone in their use. Regulatory accounts are often used to reflect timing differences between when a utility spends money to provide a service or acquire an asset, and when that expenditure is recovered from ratepayers. The benefit of a particular service or asset may accrue to ratepayers over a long period of time, and regulatory accounts can serve to match the benefit with the cost, thereby supporting intergenerational equity for current and future ratepayers. In other words, BC Hydro's current customers are not required to pay for the full cost of an asset or service that will provide benefits to customers over periods of 10,20 or 30 years. A good example is DSM costs. BC Hydro is spending money in current years to reduce the amount of electricity that customers would otherwise use, resulting in lower future energy costs and delayed or reduced infrastructure costs. The benefit of such reduced costs through DSM impacts future customers and the cost of the DSM programs is properly matched to the benefits enjoyed by those future customers by deferring and amortizing those costs over 15 years, which is the average term of DSM program benefits.

In some cases, regulatory accounts may also be used to transfer uncontrollable risks and benefits to customers, in particular the differences between forecast and actual costs due to changes in items such as water inflow levels, interest rates, and market prices of energy, which cannot be accurately forecast. Expenditures deferred for this reason are generally recovered over a shorter time period than those associated with longer term benefits. This shorter recovery also supports intergenerational equity, in that the benefits associated with the deferred cost are generally much more immediate - for example, the cost of the energy which is used by current rather
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 the rate increases that may be required in any particular year due to their recovery. Mitigation of rate increases may result in longer recovery periods than would be the case if rate mitigation was not an issue. In addition, concerns about rate impacts may also lead to the establishment of a regulatory account for the sole purpose of smoothing the rate impact of a large one-time expenditure. The period of time over which a one-time expenditure is recovered takes into consideration the amount of the expenditure, its nature and other rate increase pressures that may exist at the time.

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

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.

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

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 and reviewed before being spent and placed into regulatory accounts. BC Hydro's planning and budgeting framework includes both top-down and bottom-up elements. The top-down element, which is strategic in nature, includes a review of BC Hydro's strategic objectives and performance measures. The bottom-up elements, which are operational in nature, involve reviews by the business groups of their needs, the identification of projects and initiatives and resourcing of work plans. Trade-offs, including cost reductions and productivity improvements to offset cost pressures, are
made to stay within the overall business groups operating cost target set by the 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.

With respect to the capital-like accounts, there is a matching of costs incurred with the long-term benefits that are being delivered to future generations of customers. Shortening the amortization periods of these accounts to reduce the balances sooner would be counter to one of BC Hydro's goals of achieving intergenerational 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 periods that BC Hydro is proposing in this report. In the report, accounts currently subject to the Deferral Account Rate Rider (DARR) will continue to be recovered at amounts determined through the existing mechanism, as discussed in section 3.1.1. Although, in accordance with Directions No. 6 and 7, and as further discussed in section 3.1.1, the DARR itself will remain at 5 per cent in each year, regardless of the balances of the three energy deferral accounts. In addition, BC Hydro proposes that the recovery mechanisms are to be applied consistently over the life of the regulatory account. As well, there is an alignment between costs and benefit recognition to achieve intergenerational equity.

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 (discussed further in section 2.2): a) to better match costs and benefits for future generations of customers; b) to smooth out the rate impacts of large non-recurring costs or to smooth out rate increases; or c) to defer to a future period differences between forecast and actual costs or revenues. However, BC Hydro only plans to apply for new regulatory accounts in exceptional cases or for un-forecasted or uncontrollable material expenditures that would have a significant impact on BC Hydro's net income if not recovered from customers. BC Hydro considers that cumulative expenditures that would have a net income impact of $\$ 10$ million or more in a year would be material.

The report begins by setting out a brief history of regulatory account use at BC Hydro and then describes BC Hydro's main regulatory accounts and their particular reasons for being in place. This is followed by a discussion of the rationale for the recovery plan for each regulatory account. The application of interest to the regulatory accounts and a forecast of regulatory account balances is then provided, followed by a discussion on the sensitivity of the regulatory account balances to changes in key earnings variables. Finally, in Appendix A, BC Hydro discusses the issues and concerns regarding the regulatory accounts that have been raised by the BCUC and interveners, the Auditor General of B.C., and by the Government Review Panel and in Appendix B, BC Hydro provides a detailed explanation of each regulatory account.

## 2 Regulatory Accounts at BC Hydro

### 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.

In 2002 BC Hydro applied for and received approval for a regulatory account to 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, 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.

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 BCUC $^{1}$, 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

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

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:

1. BC Hydro's ability to directly or indirectly influence the cost category
2. The volatility of the cost category
3. The predictability of the cost category
4. The materiality of the cost category to the revenue requirement
5. The frequency of major exceptions within the cost category ${ }^{2}$

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

## 3 Recovery of Regulatory Account Balances

### 3.1 Categorization of Regulatory Accounts

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

1. Variance Accounts (defer to a future period the differences between forecast and actual costs):
(a) Cost of Energy Variance Accounts
(b) Other Cash Variance Accounts
(c) Non-Cash Variance Accounts
2. Benefit Matching Accounts (matching of costs to benefits for future generations)
3. Rate Smoothing Accounts (smooth out rate impact of large non-recurring costs or rate increases)
4. 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 Provisions and which are required under Canadian Generally Accepted Accounting Principles (CGAAP) in order to create a regulatory asset to match an accounting 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 ten-year period of this report. First, accounts currently subject to the DARR will continue to be recovered through that mechanism, as modified by Directions No. 6 and 7 and as discussed further in section 3.1.1. BC Hydro believes that the DARR remains an appropriate recovery mechanism that minimizes the risk of not achieving intergenerational equity. Second, BC Hydro proposes that the recovery mechanisms are applied consistently over the life of the regulatory account. Finally, there is an alignment of costs and benefit recognition to address intergenerational equity concerns. This latter point is reflected in the contrasting shorter and longer recovery periods for different regulatory accounts based on the nature of the costs in the accounts. BC Hydro notes that these objectives may, from time to time need to be balanced with the objective of keeping rates low, which may give rise to rate mitigation or smoothing mechanisms or regulatory accounts, as discussed in the Executive Summary of this report.

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 Table 3 and a summary of the amortization periods for each account in Table 4.

### 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
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 forecasted and actual costs. However, for those costs that BC Hydro does not have control over, it can be difficult to accurately forecast them and therefore regulatory accounts are often set up to capture the difference between the forecast and actual costs and recover or refund the variance, through the rates charged to ratepayers.

This effectively transfers the forecast cost risk of these uncontrollable costs to customers. BC Hydro considers that it is appropriate that these costs be paid by ratepayers, as the costs are being incurred in the provision of service to its ratepayers.

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

## 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.

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 and actual costs of energy and trade income, for recovery in a future period. For example, the Deferral Accounts are used to smooth net income when energy costs are unexpectedly higher or lower than forecast. This may happen due to variations in reservoir water levels (due to 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 Deferral Accounts using the 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 Table 1 (this methodology is referred to as the DARR Table Mechanism).

Appendix H

Table 1 Deferral Account Rate Rider

| Net Forecast Balance 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 a deviation from the DARR Table Mechanism is warranted due to special circumstances then BC Hydro should seek BCUC approval of such deviation. In the Amended F12-14 RRA Decision Order No. G-77-12A, the BCUC determined that the DARR was to be set at 5 per cent for F2013 and F2014. In addition, on March 6, 2014 the Province issued Directives No. 6 and 7 which require that the DARR be maintained at 5 per cent and the amount collected in excess of what would otherwise be collected under the DARR Table Mechanism be used to offset general rate increases. The DARR percentages that are expected to be applied to
the Deferral Accounts over the next 10 years are shown in Table 2. Table 2 indicates 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 nature of these cost of energy Deferral Accounts, there will likely be balances in these accounts in each of the forecast years. The amounts shown in Table 2 are based on the forecast of balances shown in Table 6

Table 2 DARR Percentages Applied to Deferral Accounts

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

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 the cost of energy Deferral Account balances becoming zero at some point due to the revenues from the DARR and the fluctuations, positive and negative, in 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 100 per cent probability that the total balance in the deferral accounts would reach zero in the next 20 years.

## Other Cash Variance Accounts:

Other Cash Variance Accounts capture the difference between forecast and actual costs for other non-energy related costs that BC Hydro considers to be 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. Balances in these accounts are generally recovered in the next test period, as they represent costs that do not provide long-lasting benefits to future generations of ratepayers and that therefore should be recovered from current ratepayers.

## Non-Cash Variance Accounts:

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

### 3.1.2 Benefit Matching Accounts

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

[^16]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 future benefits from this project. If the Site C investigation costs were expensed as required under IFRS, it would cause an unfair rate impact on current customers, considering the long development period before the Site C dam will be completed and placed into service and the fact that customers over many decades after the completion of the project will be receiving the benefits that incurring these costs today will have allowed.

### 3.1.3 Non-cash Provisions

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

### 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

[^17]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.

### 3.1.5 IFRS Transition Accounts

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

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
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 to recover the transition costs of pension and capital assets over the same period of time as if the IFRS rules had not come into being, and therefore have very long recovery periods of 20 years for the IFRS Pension regulatory account and 40 years for the IFRS PP\&E regulatory account. The IFRS Transition regulatory accounts are forecast to have significant balances remaining at the end of F2024; the IFRS Pension regulatory account balance is forecast to be $\$ 306$ million, while the IFRS PP\&E regulatory account balance is forecast to be $\$ 976$ million.

Table 3 provides a summary of the rationale for determining appropriate recovery mechanisms for BC Hydro's regulatory accounts, based on the foregoing discussion regarding the nature of the accounts, and BC Hydro's objectives in recovering the account balances.

Appendix H

| Table 3 | Rationale for Regulatory Account Recovery |
| :---: | :---: |
| Type of Regulatory Account | Rationale for Recovery Mechanism |
| Variance Accounts: <br> 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. |

### 3.2 Summary of Regulatory Account Recovery Mechanisms

Table 4 provides a summary of the recovery mechanisms for each of BC Hydro's regulatory accounts.

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.

As shown in Table 4 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 accounts also attracting interest, as the carrying costs of maintaining the account balances may have a real cost in any particular period that needs to be recovered in rates. For cash variance regulatory accounts that come about through a direct cash outlay from BC Hydro, the related interest costs are generally included as part of the regulatory accounts. BC Hydro incurs financing charges to carry amounts that were paid in cash but not recovered in rates in the same test period. This category of account is recovered over a short period of time. For some accounts, the interest cost may be immediately expensed from the regulatory account to rates, rather than being carried over and amortized for recovery in future rates.

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).

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 from future ratepayers, rather than be recovered from current ratepayers, so that there is intergenerational equity between current and future ratepayers who will be enjoying the benefits of the earlier expenditures.

Interest applied to regulatory accounts does not have the effect of increasing or decreasing BC Hydro's allowed net income, as the capitalized interest merely offsets the unbudgeted incremental interest costs. BC Hydro uses the weighted average cost of debt of the current period as the interest rate for regulatory accounts and IDC. The current interest rate is 4.73 per cent, and is applied on a monthly basis to the regulatory accounts.

Based on the forgoing criteria, BC Hydro applies interest to all regulatory accounts, with the exception of the following accounts:
(a) Non-cash regulatory accounts (such as provisions)
(b) Rate-smoothing regulatory accounts (since the annual transfers to a rate-smoothing regulatory account already reflect the impact of the account on finance charges)
(c) The Total Finance Charges Regulatory Account (since interest costs are part of total finance charges)
(d) Regulatory accounts that capture timing differences (such as pre-1996 Contributions)

BC Hydro has three accounts that should attract interest based on the above criteria, but which have not been subject to interest historically:
(a) The Future Removal and Site Restoration Regulatory Account (FRSR Regulatory Account)

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

 Account)(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 these accounts.

In addition, interest is not charged to the DSM regulatory account, as DSM 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 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 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.

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 IFRS Pension | No | Rate Smoothing |
| IFRS Pension | No | Non-Cash |

## $5 \quad$ Forecast of Regulatory Account Balances

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

[^18]Figure $1 \quad$ BC Hydro - Actual and Forecast Regulatory Account Balances (\$ million)


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


As shown in Table 7, 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.

Table $7 \quad$ BC 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 |  | $53 \%$ | $59 \%$ | $84 \%$ |

Further detail on each of the three benefit-matching and two IFRS Transition regulatory accounts is provided below.

## DSM

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 expenditures has been set to achieve the targets set in the Clean Energy Act. As noted in section 2.1, in 1995 the BCUC directed that electric utilities in British Columbia were to defer and amortize into rates costs associated with DSM activities
that achieve energy savings. BC Hydro's historical and future DSM costs are amortized over 15 years in accordance with the ARRA Decision, BCUC Order No. G-77-12A. The DSM forecasted amounts in Table 6 and Table 7, above, are based on the amounts in the 2013 Integrated Resource Plan and expenditure levels may vary from the current forecast depending on targets established in the future. As a result, the DSM regulatory account balance could be greater or less in 10 years than is currently forecast.

## 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.

## 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 fully implemented and in operation across BC Hydro's system. BC Hydro is proposing in this report that the SMI account be amortized over a 15 -year period, based on the weighted average life of SMI assets.

## 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 can no longer be capitalized under IFRS into rates over a 10-year period, BC Hydro will reduce the amount of ineligible overhead costs that it would otherwise charge to this deferral account by 10 per cent per year, and instead charge the corresponding amount to operating costs. For example, BC Hydro charged 100 per cent of ineligible overhead costs to the PP\&E regulatory account in F2012, and starting in F2013 will reduce the percentage of ineligible overhead costs that will be charged to the deferral account by 10 per cent each year. The amounts not charged to the deferral account will be included in current year operating costs.

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.

## 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.

On the transition to IFRS, BC Hydro had to recognize all unamortized experience gains and losses on the pension and other post-employment benefit plans not 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 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 under IFRS as under previous CGAAP.

## 6 Sensitivity Analysis

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

Table $8 \quad$ Cost Sensitivities

| Factor | Change | Approximate change in costs before <br> regulatory account transfers <br> (\$ million) |
| :--- | :---: | :---: |
| Hydro Generation <br> $(\mathrm{GWh})^{6}$ | $+/-1 \%$ | $+/-15$ |
| Electricity trade <br> margins | $+/-10 \%$ | $+/-20$ |
| Interest rates | $+/-1 \%$ | $+/-50$ |
| Exchange rates (CAN\$ <br> relative to US\$) | $+/-\$ 0.01$ | $+/-5$ |
| Weather | +/- 1 degree C <br> (in average temperature) | $+/-20$ |
| (colder weather decreases costs) |  |  |

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

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 $\underline{6}$.


#### Abstract

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


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 existence and a clear matching of costs incurred either to be recovered from ratepayers over the short term for those costs that do not have a lasting benefit or over a longer term for those costs with long-term benefits that are being delivered to future generations of customers. Changing the amortization periods of these accounts to reduce the balances sooner would violate BC Hydro's principled approach of addressing intergenerational equity concerns and the proper matching of costs and benefits. However, BC Hydro also recognizes that there are concerns
about the growth in the balances of its regulatory accounts and the length of time that will be required to recover those balances.

In summary, BC Hydro acknowledges the concerns that have been raised by interveners and stakeholders and does not dismiss them out of hand. However, BC Hydro believes that the number and balances contained in its regulatory accounts, and the recovery periods as set out in this report are not unreasonable and are a reflection of BC Hydro's goals and objectives of ensuring intergenerational 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.

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## 1 Use of DARR Table Mechanism

## Background

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

1. Losses on energy hedges in F2009
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
3. The debiting to the Trade Income Deferral Account in F2014 of the California Settlement amount of $\$ 214$ million
4. 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

## BCUC and Intervener Concerns with Current DARR Table Mechanism

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

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 reasonable period of time, then these concerns would be mitigated to a large degree.
4. It was also suggested that a quarterly adjustment to the DARR might be appropriate, as is commonly done with cost of energy type riders in other jurisdictions. However, since water inflows and Powerex net income can vary widely from month to month, setting the DARR more frequently than annually could result in unstable customer bills.
5. Variations on the current DARR Table Mechanism, including the Revenue Stabilization Mechanism used by Pacific Northern Gas Ltd. and incorporating the deferral account recovery in base rates, were explored in information requests, but none offered any material improvement over the current DARR Table Mechanism
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.
8. In its decision on the Amended F12-14 RRA, the BCUC directed BC Hydro to include in its next RRA, as per Order No. G-77-12A, section 4:
a. 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.

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 subject to the DARR Table Mechanism.

However, for illustrative purposes, BC Hydro has undertaken the analysis and the impact of the suggested treatment of the Trade Income Deferral Account is shown in Table A-1 Trade Income Deferral Account Analysis below which provides the rate impact analysis of removing the Trade Income Deferral Account from the DARR mechanism and amortizing the Trade Income Deferral Account balance to rates over 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.

|  |  | Deferral / Regulatory Account Balance |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Options | \$ millions | F2015 | F2016 | F2017 | F2018 | F2019 | F2020 | F2021 | F2022 | F2023 | F2024 |
| 1. Remove TIDA from DARR; Amortize over 5 years (F15-F19) | 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\% |

Table A-1 Trade Income Deferral Account Analysis

With respect to item 4 (e), BC Hydro agrees with Direction No. 7 that the Trade Income Deferral Account should continue to be treated as one of the Deferral Accounts that are subject to recovery through the DARR Table Mechanism, for the following reasons:

- The balance in the Trade Income Deferral Account could be in a credit position while the overall balance in the Deferral Accounts is in a debit position. For example, as shown in Table 1 of Appendix H of the Amended F12-F14 RRA, in five of the seven years from F2005 to F2011 the Trade Income Deferral Account had a credit balance whereas there was an overall debit balance in the Deferral Accounts in every year. Had the Trade Income Deferral Account been treated separately, there would have been a refund of a portion of the Trade Income Deferral Account balance in those five years, thereby increasing the Deferral Account balances to be recovered through the DARR. Since balances in the individual Deferral Accounts may offset, it would be appropriate to continue to manage the overall balance in the Deferral Accounts on a net basis.
- $\quad$ Since there is overlap between the drivers of the balances in the Heritage Deferral Account, the Non-Heritage Deferral Account and the Trade Income Deferral Account, including uncertainty in both water inflows and the cost of


#### Abstract

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


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

BC Hydro believes that its recovery plan for the regulatory accounts will result in the recovery of existing regulatory account balances over a reasonable time frame. In addition, as discussed in section 2.2 of the report, BC Hydro will be limiting requests for new regulatory accounts that are material and unforecasted or uncontrollable and that should be collected from ratepayers, with material defined as have a net income 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.

## 3 BC Government Review Recommendations

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

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## 1 Introduction

This appendix provides a detailed description of BC Hydro's regulatory accounts.
Table B-1 below provides a summary of the actual balances in each of BC Hydro's regulatory accounts for the period F2007 to F2013.

Table B-2 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 Table B-2.

[^20]Table B-1 Historical Regulatory Account Balances

| End of Year Balance (\$ million) | F2007 | F2008 | F2009 | F2010 | F2011 | F2012 | F2013 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Cost of Energy Variance Accounts |  |  |  |  |  |  |  |
| Heritage Deferral Account | 178.1 | 78.0 | 328.9 | 324.9 | 247.7 | 243.8 | 69.9 |
| Non-Heritage Deferral Account | 208.8 | 51.6 | 74.4 | 119.5 | 362.1 | 367.0 | 467.5 |
| Trade Income Deferral Account | (202.2) | (102.6) | (79.9) | 121.7 | 187.5 | 174.7 | 190.2 |
| BCTC Deferral Account (closed) | 13.3 | 21.5 | 9.7 | 18.6 | 0.0 | 0.0 | 0.0 |
| Total | 198.1 | 48.5 | 333.2 | 584.7 | 797.3 | 785.6 | 727.6 |
| Other Cash Variance Accounts |  |  |  |  |  |  |  |
| Storm Restoration Costs | 32.9 | 43.2 | (2.0) | (4.8) | (1.4) | 0.6 | (2.5) |
| GM Shrum 3 (closed) | 0.0 | 0.0 | 42.4 | 41.5 | 43.2 | 0.0 | 0.0 |
| Net Employment Costs (closed) | 0.0 | 0.0 | (29.1) | (61.6) | 0.0 | 0.0 | 0.0 |
| Total Taxes (closed) | 0.0 | 0.0 | (1.7) | (7.4) | (13.4) | (0.0) | (0.0) |
| Amortization of Capital Additions | 0.0 | 0.0 | (2.8) | (5.7) | (9.5) | (1.7) | (5.8) |
| Total Finance Charges | 0.0 | 0.0 | 0.6 | (104.1) | (4.0) | 5.5 | 1.2 |
| Rock Bay Remediation Costs | 0.0 | 0.0 | 0.0 | 0.0 | 2.1 | 3.8 | 28.6 |
| Arrow Water Divestiture Costs | 0.0 | 0.0 | 0.0 | 0.0 | 7.7 | 8.1 | 8.5 |
| Asbestos Remediation Costs | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 8.0 |
| Home Purchase Option Plan | 0.0 | 0.0 | 0.7 | 11.0 | 18.4 | 20.1 | 21.3 |
| Total | 32.9 | 43.2 | 8.2 | (131.2) | 43.1 | 36.4 | 59.2 |
| Non-Cash Variance Accounts |  |  |  |  |  |  |  |
| Foreign Exchange Losses (Gains) | (15.8) | (66.0) | (57.0) | (100.8) | (106.7) | (103.1) | (100.1) |
| Non-Current Pension Costs | 0.0 | 0.0 | 0.0 | 85.6 | 71.5 | 54.6 | 543.9 |
| Total | (15.8) | (66.0) | (57.0) | (15.2) | (35.2) | (48.6) | 443.8 |
| Benefit Matching Accounts |  |  |  |  |  |  |  |
| Demand Side Management | 282.1 | 309.3 | 362.4 | 442.9 | 506.4 | 638.0 | 732.4 |
| First Nations Costs | 36.3 | 40.9 | 62.4 | 91.2 | 98.6 | 152.6 | 167.9 |
| Site C | 3.7 | 8.7 | 34.7 | 59.4 | 103.3 | 181.1 | 258.4 |
| Future Removal \& Site Restoration | (210.9) | (192.2) | (172.2) | (159.4) | (140.3) | (120.4) | (87.4) |
| Pre-1996 Contributions | 14.0 | 26.7 | 38.3 | 49.0 | 58.7 | 67.3 | 74.8 |
| Procurement Enhancement (closed) | 0.0 | 7.3 | 29.2 | 40.3 | 38.0 | 0.0 | 0.0 |
| Capital Project Investigation (closed) | 0.0 | 12.2 | 32.0 | 42.8 | 49.0 | 44.3 | 39.5 |
| Smart Metering \& Infrastructure | 0.0 | 0.0 | 8.9 | 18.5 | 34.0 | 91.9 | 191.6 |
| Total | 125.2 | 212.9 | 395.6 | 584.7 | 747.8 | 1,054.9 | 1,377.2 |
| Non-Cash Provisions |  |  |  |  |  |  |  |
| First Nations Provisions | 89.9 | 319.4 | 326.2 | 308.1 | 300.2 | 390.7 | 385.8 |
| Environmental Provisions | 0.0 | 0.0 | 0.0 | 320.5 | 229.0 | 230.2 | 330.9 |
| Arrow Water Systems Provision | 0.0 | 0.0 | 0.0 | 0.0 | 3.3 | 3.6 | 3.4 |
| Total | 89.9 | 319.4 | 326.2 | 628.6 | 532.5 | 624.5 | 720.2 |
| Rate Smoothing Accounts |  |  |  |  |  |  |  |
| F07/F08 RRA Depn Study (closed) | 19.2 | 14.4 | 9.6 | 4.8 | 0.0 | 0.0 | 0.0 |
| F2010 ROE Adjustment (closed) | 0.0 | 0.0 | 0.0 | 56.4 | 45.1 | 33.8 | 22.6 |
| Waneta Rate Smoothing (closed) | 0.0 | 0.0 | 0.0 | 0.0 | 30.0 | 40.0 | 25.0 |
| F12-F14 Rate Smoothing (closed) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | (69.7) | (110.9) |
| Total | 19.2 | 14.4 | 9.6 | 61.2 | 75.1 | 4.1 | (63.3) |
| IFRS Transition Accounts |  |  |  |  |  |  |  |
| IFRS PP\&E | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 221.8 | 446.7 |
| IFRS Pension \& OPEB | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 723.0 |
| Total | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 221.8 | 1,169.7 |
| Total | 449.5 | 572.4 | 1,015.8 | 1,712.8 | 2,160.6 | 2,678.8 | 4,434.3 |

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

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

## 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:
(i) 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.

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 $F 2007$ 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
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 F 2014 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 $B C$ 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 F 2013 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

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
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 $50 \mathrm{mg} / \mathrm{kg}$ but less than $500 \mathrm{mg} / \mathrm{kg}$. If the PCB concentration is $50 \mathrm{mg} / \mathrm{kg}$ 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
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)
- 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:
Table B-3 Waneta Rate Impact Smoothing

| (\$ million) | Deferral/ <br> (Recovery) |
| :--- | :---: |
| F2011 | 30.0 |
| F2012 | 10.0 |
| F2013 | $(15.0)$ |
| F2014 | $(10.0)$ |
| F2015 | $(15.0)$ |
| Total | 0.0 |

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.

# F2015 to F2016 Revenue Requirements Rate Application 

## Appendix I

## Rock Bay Remediation Project Status Update

## ROCK BAY REMEDIATION PROJ ECT STATUS UPDATE

BC Hydro has used a phased approach at Rock Bay in assessing the contamination and delivering cost-effective remediation, a common industry practice for complex contaminated sites. Phase 1 remediation was completed in December, 2013 and post-remedial sampling related to Phase 1 will end in September, 2015. Phase 2 remediation work is underway and expected to be completed by December, 2014 and post remedial sampling related to Phase 2 will end in June, 2016.

At this time BC Hydro has completed or is undertaking the following work:

- completed removal of the high risk contamination on BC Hydro's Stage 1 lands and adjacent City of Victoria roadways and demobilized from the work site
- continued with post remediation sampling of Stage 1 lands
- continued with the water and vapour monitoring program to verify post remediation site conditions and assess seasonality
- awarded contracts for the second phase of soil remediation construction work
- commenced demolition of the SuperSave building
- continued with investigation of the coal tar contaminated bay bottom sediment outside of the current foreshore, for example across Government Street.

Transport Canada continues with their plans to start remediation of their property in 2014, including the bay itself, and BC Hydro is on schedule to remediate all high-risk contamination ahead of Transport Canada in order to ensure that groundwater migration from BC Hydro and off-site properties does not re-contaminate Transport Canada-owned property.


[^0]:    1 The BC Hydro Plan can be found at the following website: http://www.newsroom.gov.bc.ca/2013/11/10-year-plan-means-predictable-rates-as-bc-hydro-invests-i n-system.html.

[^1]:    ${ }^{2}$ This was the BCUC order issued in response to Direction No. 3 and BC Hydro's F12-F14 Amended Revenue Requirements Application.
    3 The BC Hydro Plan contemplates a future rate design process to examine ways to provide industrial customers with more options to reduce their electricity costs, as recommended by the Industrial Electricity Policy Review Task Force. This element of the BC Hydro Plan is a reference to the Government's response to the Task Force's recommendation Number 11 regarding the retail access program, summarized in the following Backgrounder on the Industrial Electricity Policy Review Report:
    http://www.newsroom.gov.bc.ca/downloads/Backgrounder Industrial Electricity Policy Review Rep ort.pdf.

[^2]:    4 Section 3(I) of Direction No. 3 required the BCUC to order that BC Hydro defer to the NHDA the difference between (i) the forecast F2014 ROE calculated on the basis of a rate of ROE of 11.84 per cent, and (ii) the forecast F2014 ROE that was to be calculated at a later date as a result of a subsequent BCUC order arising from the BCUC's Generic Cost of Capital Proceeding. On May 10, 2013 the BCUC issued BCUC Order No. G-75-13 which resulted in a reduction in the Benchmark Utility Return on Equity from 9.5 per cent to 8.75 per cent, effective January 1, 2013. This resulted in a nominal reduction to BC Hydro's allowed ROE for F2014 from 11.84 per cent to 10.62 per cent. Paragraph 1(xxvii) of BCUC Order No. G-77-12A, consistent with section 3(I) of Direction No. 3, required that BC Hydro account for that reduction as a credit to the NHDA. Paragraph 14 of Draft Order A does the opposite, requiring BC Hydro to record a debit into the NHDA equal to the amount credited to that account under BCUC Order No. G-77-12A.

    5 Section 15 of Direction No. 7 contemplates a BC Hydro application to the BCUC for permission to cease operating the parts of Burrard Generating Station not required for transmission support. If and when BC Hydro proceeds with the decommissioning of the Burrard Generating Station, it will bring an application to set depreciation rates for the Burrard assets as set out in Appendix B to Direction No. 7

[^3]:    6 No interest is forecast on variance accounts.

[^4]:    7 The baseline amount for this item is included within the operating costs total shown on line 5/schedule 5.4.

[^5]:    Summary Regulatory Account Additions
    Interest on Regulatory Accounts Interest on Regulatory Accounts
    Regulatory Account Recoveries Regulatory Account Recoveries
    Transfer of Storm Restoration Transfer of GM Shrum 3 Adjustments to Opening Balances
    OCI Deferral (Pension) Regulatory Account Net Transfers

[^6]:    Heritage Payment Obligation
    Heritage Energy
    Costs in Operating/Amortization
    Commodity Risk
    Notional Water Rentals
    Skagit and Ancillary Revenue
    Load Curtailment
    Water License Variances
    Deferred Operating HDA
    Transfer to GMS 3 Reg Account
    Other
    Total
    Total System Inflow (\% of Normal)
    

[^7]:    Operating Costs and Provisions - Total Company
    (\$ million) Line Column Reference
    

    Lines $83+88$
    $\qquad$
    88

[^8]:    Operating Costs - Corporate Groups
    (\$ million)

[^9]:    Operating Costs by Function
    Allocation to Transmission (\%)
    Transmission
    Distribution
    Total

[^10]:    Interest Rate - Planned Issues
    Debt Costs - Excluding Planned Debt Costs - Planned Issues
    Total Long-Term Debt Costs

[^11]:    Distribution
    
    $\qquad$

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[^12]:    ${ }^{1}$ In previous DSM plans, Codes and Standards activities were included as a Supporting Initiative.
    2 F2014 Cross Sectoral program expenditures are included in the Commercial sector value.
    3 The IRP recommended this new activity starting in F2015.

[^13]:    4 Source: 2013 IRP.
    5 Peak demand savings are estimated using an average peak-to-energy ratio (capacity factor) based on customer class or end-use load shapes. This may add uncertainty to the estimates of peak demand savings.

[^14]:    6 Pages 3-14 and 3-15.
    7 Amended New Appendix II, Attachment 6, section 3 (pages 193 to 195 of 271).

[^15]:    1 BC Hydro Amended F12-F14 RRA - section 7.1.2.

[^16]:    ${ }^{3}$ 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.

[^17]:    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.

[^18]:    5 Forecast amounts will be updated in F15-F16 RRA.

[^19]:    6 Hydro generation levels can fluctuate by as much as $+/-5,000 \mathrm{GWh}$ from average based on higher or lower water inflow levels. Average hydro generation levels are approximately $45,000 \mathrm{GWh} / \mathrm{year}$.

[^20]:    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.

