

Forecast Values of Escalators for 2014 - 2017

prepared for: *EPCOR White Rock Water Inc. (EWR)*

by

David L. Ryan, Ph.D

Department of Economics
University of Alberta
Edmonton, Alberta
T6G 2H4

Phone: (780) 492-5942
FAX: (780) 492-3300
E-mail: David.Ryan@ualberta.ca

September, 2013

Executive Summary

This report provides information concerning historical values and forecast values of various escalators for 2014 through 2017 that are recommended for use by *EWR* in developing their 2014-2017 revenue requirements. The recommendations are summarized in the following table:

	Category	C	D	E	F	G	H
		2012	2013P	2014F	2015F	2016F	2017F
1	Salary Costs (%)	2.4	2.9	2.7	2.8	2.7	2.7
2	Construction Costs (%)	0.3	2.5	3.5	3.9	3.9	3.6

Notes: Values for 2012 are actual (realized) values, while those for 2013 are predictions, involving a mix of actual and forecast values.
 Values for 2014 – 2017 are forecasts (F).

1. Introduction

This report has been prepared for *EPCOR White Rock Water Inc. (EWR)*. The intent of this report is to provide information that can be used to develop cost forecasts for 2014 – 2017 that can be used by *EWR* in developing their 2014-2017 revenue requirements. The information that is provided in this report pertains to forecasts and historical values of various escalators.

Sections 2 and 3 of this report describe the various escalators that are proposed and provide annual forecast values for the escalators for the years 2014 through 2017. Since 2013 is not yet complete, predictions are also provided for 2013, involving a mix of actual numbers and forecasts. As described in these sections, forecast values are obtained from independent information released by various organizations that provide forecasts, including *The Conference Board of Canada* (latest complete quarterly forecasts completed on July 23, 2013), as well as the *British Columbia Ministry of Finance* (June 2013 budget update).

Section 2 contains forecasts of growth in wages and salaries per employee in British Columbia (B.C.), of average weekly wages and salaries per employee in B.C., and of average labour income per employee in B.C. These form the basis of salary growth forecasts that are appropriate for use by *EWR* in escalating salary costs.

Section 3 contains information to the Implicit Price Deflator for Business Gross Fixed Capital Formation, for non-residential structures for B.C. The growth rate of this price index can be used directly as an escalator for construction costs.

2. Salary Costs

There are relatively few forecasts or projections of various wage measures for British Columbia, especially for a period exceeding four years (to 2017). However, one source that has provided such forecasts for many years and which continues to provide them is *The Conference Board of Canada (TCBC)*. This organization is an independent, not-for-profit applied research organization that has some 500 member organizations. As it has for many years, and in contrast to most other Canadian forecasting groups that only provide short-term forecasts, *TCBC* continues to provide short-term, medium-term (5 years) and long-term (20 years) forecasts, both quarterly and annually, of various economic aggregates both for Canada and the individual provinces. For the purposes of forecasting less than five years, medium-term forecasts are used.

Unfortunately, *TCBC* does not provide separate forecasts for wages for employees in specific industries within British Columbia. Rather, the available series refer to the forecast growth in some measure of labour compensation for a composite across different industries in the province. Two series that are considered here pertain to (i) Wages and Salaries per employee, and (ii), Average Weekly Wages and Salaries per employee. Recent historical and forecast growth rates for these two series are shown below in Table 1.

TABLE 1:
**Actual and Forecast Values of Average Wage and Salary Growth
per Employee in B.C., 2011-2017**

Year	Wages and Salaries per Employee in B.C. (%)	Average Weekly Wages and Salaries per Employee in B.C. (%)
2011 (<i>Actual</i>)	4.0	1.5
2012 (<i>Actual</i>)	2.4	2.6
2013 (<i>Predicted</i>)	3.3	3.0
2014F	2.5	2.5
2015F	2.7	2.7
2016F	2.6	2.6
2017F	2.6	2.6

Source: Based on *The Conference Board of Canada* medium-term forecasts as at July 23, 2013. Values for 2011 and 2012 are actual (realized) values, obtained from *The Conference Board of Canada*, but are subject to revision. The values for 2013 are a mix of actual and forecast values. Values for 2014-2017 are forecasts (F).

Another source of forecasts for wage and salary growth in B.C. is the *B.C. Budget and Fiscal Plan, 2013/14 – 2015/16*, released by the *B.C. Ministry of Finance*. Specifically, based on the *June Budget Update*, dated 27 June, 2013, it is possible to infer the forecast values of wage and salary growth that are used in determining forecasts of various other measures. These calculations are shown in Table 2.

TABLE 2:
**Implied Forecast Values of Growth in Average Labour Income per Employee
in B.C., 2011-2017**

Year	Labour Income in B.C. (\$ million)	Employment in B.C. (000's)	Labour Income per Employee (\$ 000)	% Growth in Labour Income per Employee
(A)	(B)	(C)	(D)=(B)/(C)	(E)
2011 (<i>Actual</i>)	109,741	2,275	48.24	
2012 (<i>Actual</i>)	113,977	2,313	49.28	2.2
2013F	117,720	2,330	50.52	2.5
2014F	122,689	2,361	51.96	2.9
2015F	128,011	2,395	53.45	2.9
2016F	133,468	2,428	54.97	2.8
2017F	139,068	2,461	56.51	2.8

Source: Based on Tables 3.6.3 and 3.6.4, p.93 of the *June Budget Update*, dated 27 June, 2013, *B.C. Budget and Fiscal Plan, 2013/14 – 2015/16*, released by the *B.C. Ministry of Finance*. Values for 2013-2017 are forecasts (F).

In Table 2, Labour Income per Employee, in Column (D) is calculated by dividing Labour Income in Column (B) by Employment in Column (C). Column (E) shows the year-over-year percentage growth in Labour Income per Employee. Values of this series for 2013-2017 provide alternative forecasts of wage and salary growth.

The percentage growth values for 2014 to 2017 in Table 2 are slightly higher than those in Table 1. Given that there appears to be no obvious reason to prefer one set of forecasts to the other, and given that the *TCBC* forecasts in Table 1 for the two series are identical for 2014-2017, it is recommended that the average of either of the series in Table 1 and the values in Column (E) of Table 2 be used as forecasts of salary growth. This recommendation is summarized in Table 3 below. (Values for 2012 and 2013 are averages of the two growth rates in Table 1 and the growth rate in Column (E) of Table 2, since all three series values differ for these years).

**TABLE 3:
Recommended Escalation Factor for Salary Costs, 2014 – 2017**

	2012	2013P	2014F	2015F	2016F	2017F
<i>Recommended Rate (%)</i>	2.4	2.9	2.7	2.8	2.7	2.7

3. Construction Costs

There are almost no direct forecasts available for construction costs for B.C. for the period 2014 to 2017. However, *TCBC* provides forecasts of the Implicit Price Deflator, Business Gross Fixed Capital Formation, Non-Residential Structures, for B.C. (2007=1.0). An Implicit Price Deflator for any particular measure is the price index obtained by dividing nominal values of that measure by real (inflation-adjusted, or valued at base-year prices) values of that same measure, so it is the implied inflation rate (cost escalator) for that measure. For the series considered here, the base year is 2007. Note that in contrast to a price index such as the Consumer Price Index (CPI), the mix of goods included in the calculation of an implicit price deflator is not necessarily the same in each year, reflecting the different combination of products and services that may be used in different years. Business Gross Fixed Capital Formation, Non-Residential Structures, measures the value of acquisitions of new or existing fixed non-residential structures (not including financial assets) by the business sector, after subtracting disposals of fixed assets, with no adjustment being made for depreciation. This measure includes the value of land improvements, but does not include land sales and purchases. While by no means an ideal measure for construction costs, this series appears to be the best available forecast series that can be used as an escalator for construction costs.

Table 4 contains historical and forecast values of the Implicit Price Deflator, Business Gross Fixed Capital Formation, Non-Residential Structures, for B.C. (2007=1.0), along with growth rates in this series.

**TABLE 4:
Actual and Forecast Values and Growth in Implicit Price Deflator, Business Gross Fixed
Capital Formation, Non-Residential Structures, B.C., 2011-2017**

Year	Implicit Price Deflator, Business Gross Fixed Capital Formation, Non- Residential Structures, B.C (2007=100)	Growth rate. (%)
2011 (<i>Actual</i>)	116.0	
2012 (<i>Actual</i>)	116.3	0.3
2013 (<i>Predicted</i>)	119.2	2.5
2014F	123.4	3.5
2015F	128.2	3.9
2016F	133.2	3.9
2017F	137.9	3.6

Source: Based on *The Conference Board of Canada* medium-term forecasts as at July 23, 2013. Values for 2011 and 2012 are actual (realized) values, obtained from *The Conference Board of Canada*, but are subject to revision. The values for 2013 are a mix of actual and forecast values. Values for 2014-2017 are forecasts (F).

In the absence of any more appropriate series, and since Business Gross Fixed Capital Formation, Non-Residential Structures, for B.C. is expected to relate closely to the cost of construction, it is recommended that the Implicit Price Deflator for this series, that is the price index, be used as an escalator for construction costs. Thus, the recommended escalation factors are those presented in the last column of Table 4, which are summarized in Table 5 below.

**TABLE 5:
Recommended Escalation Factor for Construction Costs, 2014 – 2017**

	2012	2013P	2014F	2015F	2016F	2017F
<i>Recommended Rate (%)</i>	<i>0.3</i>	<i>2.5</i>	<i>3.5</i>	<i>3.9</i>	<i>3.9</i>	<i>3.6</i>