



BOILERMAKERS' NATIONAL PENSION FUND (CANADA)

FUNDING AND BENEFITS POLICY

PLAN REGISTRATION NO. 0366708

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The Trustees of the Boilermakers' National Pension Plan (Canada) ("the Plan") have adopted this Funding and Benefits Policy this 12th of December, 2018

MISSION STATEMENT

The Trustees' Mission Statement is:

The mission of the Boilermakers' National Pension Plan (Canada), established in 1971, is to fulfill pension obligations to all Plan beneficiaries through excellence in governance and service and by prudently investing the Fund's assets.

PURPOSE OF THE FUNDING AND BENEFITS POLICY

The Trustees' goal is to have sufficient assets to pay target benefits.

The purpose of the Funding and Benefits Policy (the "Policy") is to provide a framework for describing and monitoring funding of the Plan's benefits and for the management of the Plan's benefits. The Policy describes the objectives of the Plan and the methods for achieving them.

This Policy should be read in conjunction with the Declaration of Trust of the Boilermakers' National Pension Fund (Canada), the Boilermakers' National Pension Plan (Canada) Plan Text and the Pension Fund's Statement of Investment Policies and Procedures (SIPP) as amended from time to time.

DESCRIPTION OF THE PLAN

The Boilermakers' National Pension Fund (Canada) ("the Fund") provides a Collectively Bargained Multi Employer Plan (CBMEP). Contributions are defined under collective agreements and benefits are target benefits. The Plan is funded, in part, by contributions from Employers that are subject to collective agreements between The International Brotherhood of Boilermakers, Iron Shop Builders, Blacksmiths, Forgers and Helpers (the "IBB") and the Boilermaker Contractors' Association (the "BCA"), which represents Employer members of the BCA. There are collective agreements between the IBB and individual Employers that provide for contributions to the Fund. There are collective agreements between the IBB and other employer associations i.e. Electrical Power Systems Contractors Association – EPSCA – and the General Presidents' Maintenance Committee for Canada - GPMC.

The governing document of the Fund is the Declaration of Trust, dated June 17, 2014, as amended from time to time. It provides for:

- a) pension benefits under the Plan;
- b) the orderly payment of all contributions into the Fund; and
- c) the proper administration of the Fund.

The Plan also provides defined contribution (DC) benefits for Retired members, permit workers and temporary foreign workers, which is described in its own SIPP. This Funding and Benefits Policy does not apply to the Plan's DC benefits.

REGULATORY ENVIRONMENT IMPACTING ON THE PLAN

The Plan is a multi-employer pension plan registered under Alberta's *Employment Pension Plans Act* ("EPPA") as a Collectively Bargained Multi Employer Plan (CBMEP). The Plan is registered as a specified multi-employer pension plan (SMEPP) under the *Income Tax Act, Canada* ("the ITA").

Under normal funding rules, the EPPA requires that the Trustees file an Actuarial Valuation Report with Alberta Treasury Board and Finance (ATB&F) at least once every three years. As a measure of prudence and good governance the Trustees have carried out an Actuarial Valuation annually since 1980. The purpose of the Actuarial Valuation Report includes:

- Analyzing the experience of the Plan during a given period of time;
- Establishing the funding requirements of the Plan for the purpose of accumulating assets to provide for the Plan's benefits in advance of their actual payment;
- Determining the contribution requirements to satisfy the funding requirements of the EPPA;
- Identifying trends in Plan membership such as hours paid, life expectancy, levels of terminations, deaths and retirements, and;
- Analyzing the impact on the Plan of alternative circumstances, such as sensitivity to interest rate and hours paid fluctuations.

FUNDING AND BENEFITS OBJECTIVE

The Trustees will provide the maximum level of benefits that is reasonably sustainable on a long term basis, and is compliant with all applicable legislation.

The key to providing the maximum level of sustainable benefits is to accumulate and invest contributions made during the members' years of employment in order to build up a pool of assets. These assets, when added to investment income, are expected to be sufficient to pay a lifetime pension during the members' retirement years and, if required to their surviving Spouses.

FUNDING AND BENEFITS PRINCIPLES

The Trustees are guided by the following Principles:

As fiduciaries, the Trustees will act with the highest integrity and transparency as they undertake their duties.

The Trustees will, at all times, ensure that the Plan and Fund conform with the requirements of any regulatory authority having jurisdiction over the Plan and Fund.

The Trustees will use reasonable assumptions in the valuation of the Plan's liabilities.

The Trustees will take appropriate risk in the management of the Fund's assets.

FUNDING AND BENEFIT RISKS

In most instances, funding and benefits risk refers to the risk that the Fund will not have enough assets to fund the current benefit formula of the Plan including accrued benefits. However, funding and benefits risk can be both upside and the downside.

Upside funding and benefits risk includes the risk that the Fund will have excess assets on hand to fund the Plan's benefits and that the Plan may improve benefits or otherwise not be in compliance with applicable legislation because of its excess assets (surplus). In addition there is a risk that the prescribed Provision for Adverse Deviation (PfAD) will be too large and will result in negative intergenerational risk – the risk that the current generation is building surplus assets in the Fund that will subsidize the benefits of future generations. In all likelihood, in the current environment, the Trustees believe that upside funding risk is not significant however the Trustees are examining the risk of the PfAD, particularly its size and the impact on it, with the Plan's membership being national in scope.

Downside funding and benefits risk means not meeting the funding requirements of the Plan may result in contribution increases, benefit reductions or both, subject to applicable legislation. The indefinite solvency moratorium provided for under the EPPA helps to mitigate downside funding and benefits risk. However, the Plan faces funding risk due to changes in the industry in which Boilermakers are employed. In addition, the Plan operates in an environment where interest rates have been at near record lows for a sustained period and this has made investment of the Fund's assets extremely challenging. At the time of writing, it is reasonably expected that interest rates will move slightly higher. The Trustees continue to believe that downside funding and benefits risk is significant.

The Trustees have identified the following risks that they accept and manage:

Contribution risk:

Contribution risk is the risk that contributions to the Fund are insufficient to fund the target benefits. Contributions to the Fund are set in the collective agreements. The Trustees have no ability to increase or decrease contributions. The *ITA* requires that no more than 18% of Plan-wide earnings be remitted to the Fund as contributions. In the past the Plan received permission from Canada Revenue Agency (CRA) to receive more than the limit specified in the *ITA* due to the Plan's under-funded status determined at December 31, 2008. The CRA's permission was not permanent.

The Trustees conduct an annual review to determine the difference, if any, between 18% of Plan-wide earnings and contributions. The Plan contributions do not currently exceed the legislated maximum. Contribution risk is also managed by having a number of collective agreements funding the Plan with contributions paid by many unrelated Employers. Contribution risk is also somewhat mitigated by diversity in the sectors in which IBB members work, for example members are employed in construction and maintenance. Maintenance of plant and equipment is required on an ongoing basis even when new construction may be curtailed. Members are also employed in “shops” and other industrial sectors such as the cement industry. Continued expansion of the Plan into sectors already organized by the IBB is part of the strategic plan, and by following robust delinquency control policies and procedures.

Contribution risk can be introduced through the collective bargaining process if the process exerts downward pressure on the wage package.

Contribution risk also arises from economic or industry risk because contributions are based on hours paid and actual hours paid may differ from expected hours paid.

The Trustees have no control over the Plan’s economic or industry risk that can impact on contributions; however, they share their views of these risks with the IBB as the Fund’s Settlor.

Investment risk:

Investment risk is the risk that the long-term strategic asset mix of the Plan does not deliver sufficient risk adjusted returns to provide target benefits to Plan members. This risk is managed by investment strategies and policies that are set out in the Fund’s Statement of Investment Policies and Procedures (SIPP). Asset mix, investments and investment managers are selected to deliver an appropriate risk adjusted long-term rate of return that is projected to be sufficient to fund Plan benefits. Investments are structured with an understanding of the Plan’s liabilities. Appropriate resources are allocated to the oversight of the Fund’s investments, including the regular preparation of an asset/liability study, the examination of appropriate asset classes for the Fund’s assets and the measurement of investment performance on a risk-adjusted basis.

Regulatory risk:

Regulatory risk is the risk that the Plan is impacted by material changes (or lack of needed change) in the regulatory environment including changes that may result from a change in the federal or provincial government(s). This risk is managed through the Trustees' receiving timely update reports of regulatory changes, including proposed changes. The Trustees may also engage various methods of lobbying governments if it is felt that anticipated legislation will be detrimental to the Plan or if legislation could assist the Plan's funded status or in the improvement of Plan benefits.

The Trustees also engage in active discussions and a collegial relationship with the Plan's major regulator ATB&F.

Withdrawal risk:

Withdrawal risk is the risk that a significant number of members withdraw from the Plan. This risk is managed through Board communication and scenario testing when appropriate. The IBB has also amended its bylaws, where possible, to discourage withdrawals since, due to the current regulatory environment, such withdrawals can result in significant losses to the Plan. Recent regulation changes in three provinces (British Columbia, Alberta and Saskatchewan) has assisted in mitigating the losses the Plan experiences upon payment of a lump sum value. However not all provinces have approved similar legislation.

Work Level risk:

Work level risk is the risk that the Plan over or underestimates the annual forecast for work hours (see Average Hours Paid below) thereby over or under estimating expected contributions and the associated contribution margins. This risk is managed through an annual forecast of employment hours on which contributions will be made to the Fund. The Trustees receive quarterly reports from the IBB respecting the work forecast and have conducted due diligence on how such forecasts are created and the degree of reliance that can be placed on forecasts. The actuary also conducts stress tests on the level of Average Hours Paid.

The Plan also faces work level risk if the IBB cannot supply labour as needed. If a labour shortage should arise the IBB may need to bring workers in from other jurisdictions and may lose some of the Employer contributions (and the

associated contribution margins) by reciprocating monies out of the Plan. The IBB mitigates this risk by carrying out robust work forecasts, communicating labour supply requirements and recruiting. The Trustees mitigate contribution risk from reciprocal transfers by the implementation of a formula that retains a portion of the Employer contribution calibrated to the Plan's most recently determined solvency ratio. Non IBB members earn benefits in the Plan's DC benefit therefore also mitigating other risks such as withdrawal and longevity.

The Trustees have identified a wide range of risks to the Plan – some of which are significant. The Plan's risks are regularly reviewed to determine if they continue to be appropriate and inclusive of current conditions. The Trustees as a Board and each Board Committee regularly reviews the Fund's risk dashboard.

FUNDING METHODS AND ASSUMPTIONS

This section outlines the funding methods and assumptions used by the Plan's actuary, in consultation with the Trustees, and in accordance with all applicable professional standards and legislation in the preparation of the Going Concern Actuarial Valuation.

A target defined benefit pension plan expects to pay specified retirement benefits at a future date. In order to properly fund for the expected benefits, the Plan's actuary must calculate the cost of the expected benefits. In order to determine the cost of the expected benefits, the Plan's actuary must use certain assumptions about future events that affect the amount and timing of benefits to be paid and assets to be accumulated. Essentially, these assumptions represent a long-range estimate of what is expected to happen in the future.

In an effort to promote security of the target benefits under the Plan, the actuarial basis includes an appropriate provision for adverse deviation (PfAD) compliant with applicable regulations.

The *EPPA* determines funding requirements on a Going Concern Plus basis. For information, the typical "Going Concern" basis is also described as this method and is still common in most provincial jurisdictions.

- **"Going Concern"** assumes that the Plan will continue indefinitely and will not terminate in the foreseeable future. A comparative assessment is made between the Fund's assets and the accrued liability of the Plan's accrued benefits as at the Valuation date and also between the future level of contributions and the corresponding Current Service Cost of the benefits earned from those contributions.

In this type of Valuation, the Plan's actuary calculates the liability, at the Valuation date, of pensions earned to that date, as well as the liability for pensions-in-pay, using actuarial assumptions that conform to the Canadian Institute of Actuaries' generally accepted actuarial principles. The Funded Ratio is the result of dividing assets by liabilities.

The Unfunded Liability, if any, is the difference between liabilities and assets if liabilities are higher than assets. Surplus, if any, is the difference between assets and liabilities, if assets are higher than liabilities.

- **"Going Concern Plus"** is a set of funding standards that replaced the *EPPA's* regulations for funding on the basis of solvency for CBMEP plans. The Valuation discloses the Plan's position using Going Concern Plus funding methods.

Going Concern Plus requires implementation of a set of prescribed rules, including a specified provision for adverse deviation (PfAD), that will relate to a) the Plan's current funded status and b) the Fund's asset mix. Generally, the higher the Fund's allocation to equities, the greater the required PfAD. The goal of Going Concern Plus funding standards is for liabilities to be at a level where it is expected, with an 85% probability, that the Plan will be fully funded by the next triennial valuation. The PfAD, because it is also based on prescribed factors such as government and corporate bond yields, is outside of the Trustees' control and has been shown to be very volatile.

The Plan achieved a funded status of 102% as of December 31, 2017. Benefits cannot be improved until the Plan has fully funded the required PfAD.

Going Concern Plus funding standards would require immediate benefit reductions if the probability of full funding cannot be demonstrated.

There are two broad categories of assumptions; namely financial and demographic assumptions. These are described below.

1. Financial Assumptions

- **Administrative Expenses**

This is an assumption as to the level of administrative (i.e. all non-investment) expenses that will be paid from the Fund.

In the December 31, 2017 Actuarial Valuation \$1,250,000 was assumed for total Fund operational expenses.

- **Average Hours Paid**

This is an estimate of the Average Hours Paid, per Active member, for the year following the Valuation date. This assumption is significant in the calculation of the contributions to be made to the Fund and the corresponding benefits to be earned from the contributions.

The December 31, 2017 Actuarial Valuation used an assumption of 1,400 Average Hours Paid per annum for Plan members working under an IBB/BCA negotiated collective agreement or a similar agreement. The Average Hours Paid assumption for Plan members working under an IBB collective agreement negotiated with an Employer (ie an industrial sector agreement) is 1,600. There are approximately 6,300 Plan members working under IBB/BCA or similar agreements and approximately 1,000 Plan members working under industrial sector agreements.

The Trustees believe the Average Hours Paid forecast to be appropriate. Under applicable legislation, the actuary carries out stress testing on Average Hours Paid.

- **Investment Return**

The Fund's assets, along with future contributions and investment income, are used to pay the expected target benefits and the costs associated with administering the Plan. In determining the future contribution requirement, an assumption regarding the investment return expected on the Fund's assets is made. Currently 6% is the expected long-term rate of return for the Fund, net of investment expenses.

Given that the contributions to the Fund are fixed by collective agreements, it is important to the financial health of the Plan that the actual investment return at least meets the investment return assumption over the long term. The Trustees actively discuss the long term rate of return assumption for the Plan with the investment consultant and the actuary.

2. **Demographic Assumptions**

The demographic assumptions will be set individually for each member based on long-term best estimates for future events. Where significant events are expected to occur in the short term, appropriate provision for these events should be included.

Demographic assumptions include:

- **Mortality**

This is an estimate of how many members will die at a given age, prior to and after retirement, in a year. This is of particular significance in estimating the length of time a pension will be paid over a member's lifetime. Pensions paid over a longer period of time have more years of payments and thus have a higher actuarial liability. Pensions paid over a shorter period of time have fewer years of payments and thus have a lower actuarial liability.

The December 31, 2017 Actuarial Valuation used 132% of the mortality rates derived from the Canadian Pensioners Mortality 2014 Private Sector Table with generational projection using scale CPM-B before and after retirement. The same basis was used in the 2016 Actuarial Valuation.

The Trustees may ask the actuary or other appropriate party for a review of other appropriate mortality assumptions and may agree to use other mortality assumptions as appropriate.

- **Retirement Age**

The Actuarial Valuation as at December 31, 2017 assumed that Active members would retire at the following rate:

<u>Age</u>	<u>Rate (%)</u>
55	5
56	6
57	7
58	8
59	10
60-62	20
63	25
64	30
65	100

These were based on observations made in the unionized construction industry.

Inactive members were assumed to retire at age 65.

- **Turnover**

This is an estimate of how many Active members will leave employment in a given year. Those members leaving either become terminated deferred vested members (leaving their benefit in the Plan until retirement) or members that transfer their entitlements out of the Plan.

The Termination Rates before Retirement are assumed as follows:

<u>Age</u>	<u>Withdrawal Rate (%)</u>
20	20
25	20
30	15
35	10
40	10
45	7
50	5
55	0

These are based on observations made in the unionized construction industry.

3. Actuarial Cost Method

The actuarial cost method to be used for the Valuation of the Plan is the Accrued Benefit Cost Method.

Under this method the accrued liability of the Plan is calculated as the present value of benefits earned up to the Valuation date.

The Plan's Current Service Cost is calculated as the cost of the benefits earned during the year following the Valuation date. A comparison of the Plan's accrued liability to the actuarial value of the Plan assets establishes the actuarial surplus (Surplus) or deficiency position of the Plan (Unfunded Liability).

Under this method, the Current Service Cost is sensitive to changes in the age of the Plan members on a year-by-year basis. If the Plan's actual experience is close to the assumptions, the Current Service Cost will increase each year, for each Plan member, as he/she approaches retirement age. Should the average age remain constant, through the retirement of older members and the addition of younger members, the Current Service Cost will remain relatively constant. However, if the average age of the membership increases, the Current Service Cost will also increase.

4. Asset Valuation Method

The Fund's assets are measured at market value for financial accounting purposes.

The Trustees approved the use of Asset Smoothing for Valuations commencing January 1, 2011. Asset Smoothing is an asset valuation approach which levels fluctuations in investment performance over a number of years; in the case of the Plan, investment performance is leveled over a period of five years. Asset Smoothing leads to the realization of more level investment income than what would have resulted if all actual market gains and losses were recognized immediately in the year they arose. Asset Smoothing leads to reduced volatility of funding results and benefits.

The Trustees ensure that all assets are properly valued. This is particularly important for assets not traded in public markets, for example, private equity, private debt and similar instruments, including infrastructure and real estate.

5. Other Assumptions

Additional assumptions shall be determined and applied as deemed necessary for proper determination of the funded position of the Plan.

ANNUAL REVIEW OF ACTUARIAL ASSUMPTIONS

Prior to the commencement of each Valuation, the Actuary and the Trustees will review and adopt the actuarial assumptions to be used in the current Valuation.

BENEFIT POLICY AND ADJUSTMENTS DUE TO PLAN EXPERIENCE

Long term benefit security is the first and foremost objective of the Trustees. In determining any adjustment to benefits the Trustees will consider viable options.

The Trustees will consider benefit improvements at such time as the Plan has an adequate surplus and in compliance with applicable legislation. The EPPA prohibits plans from improving benefits unless the plan has demonstrated that:

- a) It is fully funded, meaning that assets are equal to liabilities and that liabilities include a provision for adverse deviation (PfAD) prescribed under the *EPPA*; and
- b) The Superintendent of Pensions has approved the improvement.

The Plan has been approved for a solvency moratorium under the EPPA and as part of this approval, the Plan cannot make benefit improvements until the PfAD is fully funded. The Trustees regularly evaluate the Plan's need to be covered under a solvency moratorium. It is expected that solvency moratoriums will be eliminated once the Alberta government passes its complete target benefit legislation however such a change would be balanced with a requirement to fund the Plan on the Going Concern Plus basis described earlier in the Policy.

In the event the Plan is in a surplus position, or is expected to be in a surplus position within a short period of time, the Trustees will consider:

- a) Improving the benefits of members who did not make a Special Funding Contribution but whose benefit formula was reduced to earn benefits on the same basis as members who did make a Special Funding Contribution;
- b) The benefit formula for the New Brunswick member jurisdiction where Active members bore the entire deficit burden for all New Brunswick members because, at the time of implementation of the Plan's 2010 recovery program, legislation in New Brunswick would not permit the Trustees to implement the same recovery plan applied to the rest of the members in the same classification;
- c) Reinstating previously-reduced benefits for Active and Retired members;

- d) Assigning a benefit to the Special Funding Contribution except for any Special Funding Contribution paid on behalf of a Retired member, temporary worker, or any person not then covered under a Reciprocal Agreement with the Plan (ie a permit worker);
- e) Increasing the pay-back factor for contributions paid to the Plan after January 1, 2010;
- f) Adding a form of subsidy or access to retirement benefits earlier than the normal retirement date.

A primary reason for the development of this Funding and Benefits Policy is to minimize the risk of the possibility of future benefit reductions due to funding requirements that cannot be met. Although it is not the intention of the Trustees to reduce benefits, the Trustees would expect that benefits could be reduced, or contributions increased, in the following circumstances:

- To avoid the revocation of the registration of the Plan under the *ITA*;
- To comply with the requirements of the *EPPA* or any other applicable legislation;
- If the Plan is unable, or will be unable, to meet the minimum funding requirements of any applicable pension legislation or Plan provisions; or
- To maintain the financial integrity of the Plan.

If the Plan is required to make benefit reductions the Trustees will give consideration to:

- a) Advising the IBB, the BCA, and other applicable parties, that a Special Funding Contribution is required, subject to compliance with applicable legislation;
- b) Reducing or eliminating early retirement subsidies;
- c) Reducing the pay-back factor for future benefits earned by Active members with a corresponding reduction in the benefits earned by Retired members;
- d) Reducing benefits accrued by Active and Retired members.

REVIEW OF THE FUNDING AND BENEFITS POLICY

The Trustees will review the Funding and Benefits Policy annually.

COMMUNICATION: TRANSPARENCY OF THE FUNDING AND BENEFITS POLICY AND PLAN FUNDING

The Trustees will ensure that Plan members are informed about the Plan's funding position and that the information given to Members will, as a minimum, meet all applicable legislative standards.

The Plan's funded status, including the funded position of any provision for adverse deviation (PfAD) required under applicable legislation, will be disclosed to Members.

The Plan's Funding and Benefits Policy is available to all Plan members and is posted on the Plan's Website.