



CONTRACT PRICE ADJUSTMENT FOR COST FLUCTUATION FOR PUBLIC TRANSPORT SERVICES CONTRACTS

SEPTEMBER 2021

VERSION 1.0

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Waka Kotahi NZ Transport Agency Published
March 2021

ISBN 978-1-99-004429-8 (online)

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1 INTRODUCTION

Waka Kotahi publishes indexes for contract price adjustment for cost fluctuation. This document explains how to use a Waka Kotahi published index to adjust payments made under a public transport services contract. It also describes how the bus and ferry indexes are calculated.

The Waka Kotahi [Procurement manual](#) (refer section 8.6) provides guidelines on contract price adjustment for cost fluctuation for public transport services contracts and section 10.25 *Contract price adjustment for input price variation public transport services*, provides further guidance plus requirements.

2 CALCULATING THE CONTRACT COST FLUCTUATION ADJUSTMENT

The formula used to calculate the amount of the quarter's cost adjustment 'C', up or down, is as follows:

$$\begin{aligned} C &= \text{Cost fluctuation adjustment for the quarter under consideration} \\ &= \text{Value} \times (I/I' - 1) \end{aligned}$$

Value = Value of services delivered during the quarter under consideration but without deduction for retentions and excluding the cost fluctuation adjustment (see note 1).

I/I' = The value of the nominated index for the quarter under consideration divided by the value of the index for the quarter during which tenders closed (see note 2).

Note 1: This will not include the value of work which is not to be adjusted for cost fluctuation. For example, if additional services are delivered under a negotiated contract variation, and the services are valued at current prices then the cost of these additional services would not be included.

Note 2: Purchasers may prefer to nominate (for 'I prime') the index value for the last completed quarter prior to tenders closing, rather than the index value for the quarter in which tenders close. A tenderer will know (for example) the average cost of fuel in the last completed quarter and will be able to base their tender price on that cost. By contrast the average price of fuel for the quarter in which tenders close will not be known until the end of the quarter, which will be after tenders have closed.

Note that the above description of the contract price adjustment calculation process assumes that one index is to be used. Two indexes may be used when the costs incurred to deliver services are not of a single type – for example a contract could be delivered by a combination of diesel and battery electric buses. The two indexes would thus be the *Waka Kotahi diesel bus index* and the *Waka Kotahi battery electric bus index*. The instructions for [Contract price adjustment for cost fluctuation: Infrastructure contracts](#) includes a discussion on how to calculate contract price adjustment using two indexes.

3 PUBLIC TRANSPORT INDEXES PUBLISHED BY WAKA KOTAHI

Public transport indexes are published by Waka Kotahi on its website with other [public transport contract price adjustment procurement tools](#).

Waka Kotahi index values for a particular quarter are usually published within 10 weeks of the end of the quarter. For example, the value applicable to services delivered in the quarter ending 30 September will usually be published early in December

The published bus indexes, plus the ferry indexes are described in the table below.

Waka Kotahi index	Typically used with public transport services contracts	Index base date	Comment
Diesel bus index	Delivered by diesel powered buses	September 2020	Originally introduced in 2008 and updated in 2020 – the first index value calculated using the updated input indexes and weights was for the December 2020 quarter
Battery electric bus index	Delivered by battery electric powered buses	September 2020	Introduced in February 2021
Diesel ferry index	Delivered by diesel powered ferries	December 2019	Originally introduced in 2008 and updated in 2021 – the first index value calculated using the updated input indexes and weights was for the June 2021 quarter
Battery electric ferry index	Delivered by battery electric powered ferries		Given that there are plans to introduce electric ferries it is anticipated that an index will be required to support electric ferry contracts

The above indexes are calculated by Waka Kotahi mostly from Statistics NZ (SNZ) indexes. Some of the SNZ input indexes are 'standard' publicly available indexes and others are 'special' indexes maintained for Waka Kotahi by SNZ.

A Transport Agency index value for a particular quarter is calculated by combining input indexes values using the following general formula:

$$I_q = \text{con} \times (w_1 \times C_1/C'_1 + \dots + w_n \times C_n/C'_n)$$

Where I_q is the index value for a particular quarter, 'con' is a constant, w_i is the weight applied to the input index value, C_i is the SNZ input index value for the particular quarter, and C'_i is the SNZ input index value for the base quarter.

The following table lists the input indexes and the weights applied to calculate the diesel bus indexes, the battery electric bus index and the diesel ferry index. A column will be added when a battery electric ferry index has been built and the input index detail will be added to the table.

Input index	Diesel bus index	Battery electric bus index	Diesel ferry index
Labour (bus) - Road and rail drivers Base June 2014 - Series ref: 31240206	0.465	0.534	0.414
Fuel - Commercial diesel (Bulk) Base December 1996 - NRGQ.SICZ7	0.079	–	0.176
Road user charges (RUC) – a Waka Kotahi index which is designed to track movement in RUC rates for a representative sample of buses used in delivering public transport services	0.085	–	–
Other costs (bus) - Road transport excluding fuel, road and water transport - Base December 2010 – Series ref: 31240165	0.371	0.426	–
Electrical energy - Electricity: Commercial Consumers - SQUC51110	–	0.040	–
Other ferry costs - Base December 2016 – Series ref: 3139751	–	–	0.411

4 UPDATING INDEXES

SNZ regularly revises the indexes it publishes to ensure that they continue to accurately track industry prices and replaces outdated indexes with new ones. Waka Kotahi will therefore on occasions need to amend the makeup of its public transport indexes as the SNZ input indexes used by Waka Kotahi change.

Waka Kotahi indexes will need to be updated when the inputs employed to deliver works and services change significantly. Most of the public transport indexes described above were introduced in 2009 and updated in 2020/21. The update process established the current mix of inputs, identified SNZ input indexes that would track their cost and established the relative proportions of each input required to deliver the service. Previous advice on structural revision of indexes from NZIER¹ stated (for the diesel bus index) that ‘the index probably only needs revision every 8 to 12 years’. Significant substitution within an industry is identified as a reason to update an index, in particular to update the weights being applied to the input indexes.

¹ NZIER report - Review of Cost Adjustment Mechanisms for Passenger Service Contracts - Bus and Ferries - Report to Land Transport New Zealand - 30 November, 2007