



Transfund General Circular No. 02/09 (web version)

Price Quality Method CPP for Physical Works

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Purpose

Transfund New Zealand has approved a new competitive pricing procedure (CPP).

This circular gives tendering authorities the information they need to use the new CPP for physical works contracts before it is formally incorporated into the *Competitive Pricing Procedures Manual: Volume 1, Physical Works & Professional Services* (CPP Manual). It also:

- summarises the main features of the new CPP, called the price quality method (PQM)
- tells you how to use PQM to evaluate tenders for physical works contracts
- outlines the changes we will make to the CPP Manual to incorporate PQM
- advises you of a forthcoming Transfund review of all physical works CPPs.

This circular refers to two documents:

- The attached text of the formal amendment that we will make to the CPP Manual. This attachment sets out the mandatory procedures and guidelines for using PQM.
- The spreadsheet that we have developed to perform the calculations for PQM and show how the process works. The spreadsheet is on the Transfund website ([click here to go to the download](#)).

Summary of PQM

PQM is designed for you to evaluate tenders when the quality of the supplier is very important, and you are prepared to pay more for that quality.

We have approved PQM because it is simple and transparent. It is almost identical to the weighted attribute method, and will result in the same decision in practically all situations. However, PQM has two significant improvements:

1. It gives you a clear and consistent process for deciding the supplier quality premium (SQP) (the extra amount you are prepared to pay for a better supplier) for each tenderer, and you see those dollar values. It also enables tenderers who don't win the contract to learn the difference between their SQP and the winning tenderer's SQP.
2. It makes evaluating alternative tenders much simpler. We believe that encouraging alternative tenders will also encourage innovation.

The added transparency in PQM means that you will need a well-managed process for using it. We recommend that before using PQM you:

- **become very familiar with the attachment to this circular, which sets out the mandatory procedures and guidelines for using PQM**
- **test PQM on recent tender evaluations that used the weighted attributes method**
- **decide how you will report the results of the tender evaluation, both within your organisation and to the tenderers.**

The weighted attribute method and the quality-price trade off method (QPTO) are still available for you to use. In 12 months we will review all three CPPs and decide which ones we will continue to approve. This review will include a survey of tendering authorities. We recommend that you start gathering information for this survey now.

The amendments that we will make to the CPP Manual affect mandatory procedures and guidelines in Chapters 1, 2, and 3.

Key points

This circular gives you all you need to start using PQM now for physical works contracts. A later circular will give similar information on how to use PQM for professional services contracts.

We recommend that you test PQM before you use it, and establish a process for reporting results.

The PQM spreadsheet on the Transfund web site ([click here to go to the download](#)) will perform the PQM calculations.

In 12 months we will review all the CPPs for physical works contracts, including PQM.

Using PQM: an overview

If you use PQM before we make the formal amendments to the CPP Manual, you should refer to this circular in the request for tenders (RFT), and include the attachment with the RFT.

In addition to the usual requirements, all RFTs for contracts that will use PQM should state that tenderers who do not win the contract will be told the difference between their SQP and the winning tender's SQP. Tenderers need to know that if they win, other tenderers will be told how they fared in comparison.

The RFT must state whether alternative tenders will be considered, and if so, the terms and conditions for alternative tenders.

Calculating the weighted sum of the non-price attribute grades

The process for calculating each tenderer's weighted sum of the non-price attribute grades is exactly the same under PQM as under the weighted attributes method. It is the next stage, deciding the SQP, that differs.

Deciding the SQP

The SQP is the extra amount that you are prepared to pay for a better supplier.

PQM provides a step-by-step, transparent method for deciding the SQP for each tender. The SQP formula involves dividing the weighted sum margin (the difference between the tender's weighted sum and the lowest weighted sum) by the price weight, and then multiplying the result by the estimate (less any amount fixed by the tendering authority).

Evaluating alternative tenders

The process for evaluating alternative tenders is simply integrated into PQM. We believe this will encourage alternative tenders, and promote innovation.

Using PQM, you first decide the SQP for each tender, including alternative tenders, and then determine the additional alternative tender premium (ATP) for each of the alternative tenders. This provides a simple and consistent way for you to compare each alternative tender with the other tenders.

Changes to the CPP Manual

By the end of December 2002 we will have made a number of changes and additions to the CPP Manual.

- We will make formal amendments to Chapters 1, 2, and 3 to incorporate PQM.
- We will move the current parts of Chapters 1, 2, and 3 which set out the weighted attributes method to an appendix.

- We will make detailed changes that set out how to use PQM to evaluate tenders for professional services contracts.
- We will complete the minor changes that are currently being considered by the CPP Industry Working Group¹.
- We will change the manual's overall structure, so guidelines come immediately after the section they refer to.

Once these changes are complete, we will reprint and reissue the CPP Manual volume 1 (the whole manual except the appendices) to all current manual holders. We will also place an electronic version of the manual on the Transfund website.

Review of competitive pricing procedures

In 12 months we will review the use of all CPPs for physical works contracts, including PQM. The Transfund Board will use the results of this review to decide which procedures it will continue to approve.

The review will start with a survey of tendering authorities about physical works contracts that Transfund funded and were:

- let after 30 September 2002
- for a sum not less than \$50,000.

The survey will ask these three questions for each contract let:

- Which CPP was used?
- Were alternative tenders received and evaluated?
- If PQM was used, were any of the SQP figures 'replaced' rather than simply 'reviewed and confirmed'?

We recommend that, to save time and money when the survey is formally underway, you start noting this extra information now when you fill out CPP Manual Appendix K forms for physical works contracts.

In addition to this survey, we will interview purchasers and suppliers who have been involved in tendering and evaluating tenders under PQM.

Attachment

The attachment is written in a plain language style. If you attended one of the CPP workshops held in May, June or July, you will notice that the mandatory procedures and guidelines are different to those used at the workshops. The content has not changed, only the style.

We are interested in your views on this plain language style. If you find it helpful we will write all future amendments to the manual in a plain language style.

¹ The CPP Industry Working Group is convened by Transfund and comprises representatives of INGENIUM, Transit New Zealand, NZ Contractors' Federation, NZ Pavement and Bitumen Contractors' Association and the NZ Association of Consulting Engineers (ACENZ).

Enquiries

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Attachment to General Circular 02/09 — price quality method CPP for physical works

This attachment sets out the changes that Transfund will make to Chapters 1, 2, and 3 of the *Competitive Pricing Procedures Manual: Volume 1, Physical Works & Professional Services* (CPP Manual). These changes concern the Transfund mandatory procedures, and guidelines for using the price quality method (PQM). They will involve the following changes:

References to weighted attribute method

Throughout Chapters 1, 2, and 3, references to the weighted attribute method will be replaced with references to the price quality method, or PQM.

Chapter 1: Introduction and definitions

New definitions will be added to Section 1.4.

Chapter 2: Tendering procedures—Physical works

Section 2.7 mandatory procedures and guidelines will be replaced.

Section 2.8 mandatory procedures and guidelines will be replaced.

Chapter 3: Request for tender requirements—Physical works

New information will be added to Section 3.2 mandatory procedures and guidelines.

Chapters 1, 2, and 3 of the CPP Manual currently include the mandatory procedures and guidelines for using the weighted attribute method. This information will be moved to an appendix.

Section 1.4: Definitions

The following amendments will be made to Section 1.4, Definitions:

- The current definition of an alternative tender will be replaced by a new definition.
- Two new definitions, of an alternative tender premium and a supplier quality premium, will be added.

Alternative tender

An alternative tender is a tender that offers a product that is within the scope of the request for tender (RFT) but is different to the product envisaged in the RFT. An alternative tender may have a different lifecycle cost or offer different benefits to users.

Alternative tender premium (ATP)

The difference in price that the tendering authority is prepared to pay for the product offered by an alternative tender.

Supplier quality premium (SQP)

The amount more that the tendering authority is prepared to pay for a higher-quality supplier.

Section 2.7: Tender evaluation—price quality method

- 1 Tenderers must submit tenders in two separate envelopes.
 - envelope 1 must contain all tender information other than tender price.
 - envelope 2 must contain the tender price information.
- 2 Tendering authorities must follow the six steps set out below to evaluate the tenders and the alternative tenders.
- 3 Tendering authorities must complete steps 1–5 before opening envelope 2.
- 4 Tendering authorities can only contract for the preferred tender.

Using PQM

Step 1: Grade the non-price attributes

- Open envelope 1.
- Grade each non-price attribute for each tender from 1-100.
- Reject any tender that scores 35 or less on any single non-price attribute.

Step 2: Calculate the weighted sum margin

- Multiply the weight (specified in the RFT) by the grade for each non-price attribute and divide by 100. The result is the index for each non-price attribute.
- Add all the indices for each tender. The result is the weighted sum of the non-price attribute grades.
- Deduct the lowest weighted sum from each tender's weighted sum. The result is the weighted sum margin for each tender.

Step 3: Calculate the supplier quality premium (SQP)

- Calculate the SQP for each tender using the following formula:
- $$\text{SQP} = \text{Estimate} \times (\text{weighted sum margin} / \text{price weight})$$
- The estimate used in the formula must exclude any amount fixed by the tendering authority.

Step 4: Confirm the SQP

- Review the SQP calculated for each tender.
- Confirm that the SQP for each tender represents the amount more that the tendering authority is prepared to pay for a higher-quality supplier.
- Replace any SQP with an acceptable figure if the review shows that any SQP does not represent the extra amount that the tendering authority is prepared to pay.
- Confirm the new figure with those responsible for determining the preferred tender.

Step 5: Calculate the alternative tender premium (ATP)

- Calculate the SQP for alternative tenders by following steps 1-4 above.
- Calculate the ATP for each alternative tender by following the method set out in Section 2.8.

Complete steps 1–5 before opening envelope 2.

Step 6: Identify the preferred tender

- Open envelope 2.
- Deduct each tender's SQP and each alternative tender's ATP from the tender price.
- Identify the tender with the lowest tender price less SQP and less any ATP. This is the preferred tender.

Guidelines to Section 2.7

PQM enables the tendering authority to pay more for a high-quality supplier, and clearly shows the process the tendering authority goes through to decide how much more to pay. It is a good method to use when the quality of the supplier is important. It is particularly appropriate for contracts such as design and build, and facilities management.

How to test PQM

Before using PQM, tendering authorities should test the method on recent tenders that used the weighted attributes method (which is very similar to PQM). This testing will provide a good understanding of how PQM works and the kind of results it gives.

This testing is also important because best practice use of PQM involves telling tenderers what their SQP was, and how it differed from the winning SQP. Tendering authorities must be able to justify the way they reached the SQP for each tender.

Grading the non-price attributes

Grade the non-price attributes of all tenders, including alternative tenders. Don't evaluate the products of alternative tenders until Step 5. This enables you to evaluate a supplier and a product in separate steps.

Refer to Appendix L ('Non-price attribute grading') for guidance on grading non-price attributes.

An industry working group set the 'fail' threshold of 35 or less.

Calculating the SQP

The estimate should usually be included in the RFT, to make the process transparent. If it is not included in the RFT, it must be determined before envelope 2 is opened.

An amount fixed by the tendering authority is usually a provisional sum, prime cost sum, or contingency sum.

Provisional sums and so on priced by the tenderer, not fixed by the tendering authority, must be included in the estimate. The estimate is for the part of the work that the tenderer has to price.

Confirming the SQP

The review of each tender's SQP is intended to confirm that no SQP is too high or too low. However, if the review shows that any SQP is not acceptable, you must record this conclusion and its reasons. The reasons for the tendering authority's decision must be clear (see Section 2.10).

Section 2.8 – Analysing alternative tenders

1. Tendering authorities must:
 - follow the steps set out below for analysing alternative tenders
 - calculate each ATP in a way that is rational and, wherever possible, consistent with Transfund's funding policies.
2. Tendering authorities must not consider:
 - alternative tenders that are outside the scope or requirements of the RFT
 - tenders that vary the duration of a contract when the RFT has not specified that such variations are acceptable and said how they will be evaluated
 - tenders that vary the duration of period contracts (see Section 2.5.4).
3. Tendering authorities can choose to reject an alternative tender, regardless of the outcome of the alternative tender analysis.
4. The steps set out below refer to 'alternative tenders', but also apply to what some tendering authorities call 'added value'.

Using PQM

Calculate the SQP

Evaluate the non-price attributes for each tender and alternative tender by following Steps 1-4 in Section 2.7.

Calculate the alternative tender premium (ATP)

Decide how much more or less the tendering authority is prepared to pay for a product offered by an alternative tender by comparing it to the minimum standard product specified in the RFT. The result is the alternative tender premium (ATP).

Select the preferred tender

Identify the preferred tender from all the tenders and alternative tenders by following Step 6 in Section 2.7.

Using the lowest price conforming tender method

The lowest price conforming tender method requires the tendering authority to calculate the ATP in the way set out above for PQM.

To evaluate the non-price attributes and select the preferred tender using the lowest price conforming tender method, follow the process set out in Section 2.6.2.

Guidelines to Section 2.8

Allowing alternative tenders encourages innovation. Alternative tenders might offer additional benefit to users or cost savings to the owner.

The supplier/product distinction

Evaluating non-price attributes for each tender enables you to focus on the qualities of each *supplier*. Calculating an ATP enables you to focus on the *product* offered by an alternative tender. Being aware of the supplier/product distinction enables you to avoid paying a premium once through the SQP (if you are using PQM), and then paying a second time through the ATP.

Alternative tender acceptability

Make sure an alternative tender is within the scope of the RFT and meets the tendering authority's requirements. The RFT must make the scope and requirements clear.

Reject any alternative tender that is not within the scope of the RFT or does not meet all of the tendering authority's requirements.

When an alternative tender is outside the scope of the RFT but offers a better outcome, consider declining all the tenders and re-inviting tenders based on a revised RFT. The revised RFT must not reveal the detail of any innovative idea used in the alternative tender.

Calculating the ATP

Calculating the ATP requires you to compare the minimum standard of product specified in the RFT with the product offered in the alternative tender.

Calculation of the ATP must be consistent, wherever possible, with Transfund funding policy. Refer to the rules in Transfund's Project Evaluation Manual (PEM)—Transfund Manual PFM2.

The ATP may be positive, negative or zero depending on whether the tendering authority is prepared to pay more than, less than, or the same as it is prepared to pay for a non-alternative tender.

Apply the incremental cost benefit analysis rules from the PEM.

When an alternative tender offers more benefits or fewer benefits, limit the ATP to no more than the present value of user benefits divided by the current incremental benefit to cost ratio (BCR).

When an alternative tender would affect the costs carried by the owner of the completed project, base the ATP on the discounted lifecycle cost for the alternative product. Compare it to the equivalent cost of the product specified in the RFT.

You must take any risks into account when calculating the ATP. For example, if there is a risk that the alternative tender will deliver the claimed lifecycle cost savings, the ATP will need to take account of that risk.

Section 3.2 – Request for tender contents

- The item ‘Alternative tender requirements’ will be added to the list of items under 3.2.1.

Guidelines to Section 3.2

The following amendments will be made to the Guidelines to Section 3.2:

- Changes will be made to the first two paragraphs under the heading *Project scope and specification*.
- An additional section, *Alternative tender requirements*, will be added.

Project scope and specification

Every RFT must:

- include a statement of scope
- wherever practicable specify the end results or outcome
- wherever possible avoid specifying the methods to be used.

Specifying end results sets the non-negotiable boundaries such as resource consent conditions, client-imposed conditions, and conditions related to land. However, it allows room for alternative proposals within these boundaries.

Specifying end results, but not specifying the methods to be used, allows the tenderer to decide how the end results will be achieved. For example, the RFT might specify ‘No potholes to remain unfilled for more than X hours’, but would not specify how the contractor would go about achieving that.

This end results approach is usually more efficient.

Alternative tender requirements

Every RFT must state whether alternative tenders will be considered.

If alternative tenders will be considered, the RFT must include any alternative tender conditions. Conditions will include information required on:

- the product
- the price
- the risks.

To adequately evaluate an alternative tender, the tendering authority needs to know what is being offered, have a defined price, and know who will be responsible for each risk.

The RFT must also make clear that, if tenders are re-invited, the scope of the new RFT won't reveal any innovative idea from an alternative tenderer and take away their advantage over other tenderers. You can use the following sample paragraphs to make these points.

An alternative tender (defined in Section 1.4 of the Transfund New Zealand Manual of Competitive Pricing Procedures, Volume 1) will be considered if its price is certain, and if it conforms in all other respects with the request for tender (RFT) documents. It will be evaluated according to the process set out in Section 2.8 of the CPP Manual.

Each alternative tender must:

- *state that it is submitted as an alternative tender.*
- *outline how it differs from the product specified in the RFT; for example, in form, material, benefit to road users, future maintenance cost, or risk of failure.*
- *provide sufficient information to allow the alternative form, material, and so on, to be evaluated.*

Alternative tenders will be treated as being of unique advantage to that tenderer. Their detail will not be included in the scope of any RFT used to re-tender the contract.

If you are interested in receiving alternative proposals for some part of the work then you should say so in the RFT. If you also explain how you will calculate the ATP you will help tenderers to:

- understand what you are prepared to pay a premium for, and
- decide whether an idea is worth submitting as an alternative tender.

Do not demand in the RFT that a tenderer submitting an alternative also submit a non-alternative tender without good reason. It may be difficult, or impossible, for the tenderer to supply anything but an alternative.