

## Management of Contingency Provisions for Major Projects

**Agencies seeking approval for new major infrastructure projects (with an estimated total cost over \$100 million) are required to identify the amount of contingency provision, controls and delegations proposed to manage those funds and monitoring and reporting arrangements.**

### Summary

Contingency provisions are sums allocated within a cost plan to cover the cost of unplanned activities or risks that are necessary to deliver project outcomes and require additional funds. Improved management of contingency for major projects can enable the NSW Government to better plan and manage risks and reuse surplus contingency for investment in other areas.

All General Government agencies and Public Trading Enterprises (PTEs), except State Owned Corporations (SOCs), are required to identify the amount of contingency provision and the controls/delegations proposed to manage the release of the provision for new major infrastructure projects (estimated total cost (ETC) >\$100 million) when seeking project approval through the Cabinet Standing Committee on Expenditure Review (ERC).

The Treasurer (as the Chair of ERC) will explicitly approve:

- the amount of contingency provision allocated with regard to the project risk profile
- the controls and delegations proposed to manage the release of the provision.

Decisions to approve the amount of contingency and controls/delegations for managing contingency expenditure for major new projects will be done on a case-by-case basis reflecting project risk.

A major project that is considered high risk might warrant the Treasurer controlling/holding a proportion of the contingency funds or delegating this responsibility to the Portfolio Minister. Other projects with a lower risk profile could be managed with delegations for the use of contingency funds set at lower levels (including Head of Agency and or Project Director/Manager).

Infrastructure NSW (INSW) will provide advice to the Treasurer as to the adequacy of the contingency funds allocated and the controls proposed. INSW will also report on the use of contingency for major projects to the Cabinet Standing Committee on Infrastructure (CIC) every two months.

To enable Treasury and where requested by the Treasurer, INSW, to assess the proposed amount of contingency and the controls and delegations, project business cases or project identification submissions should:

1. provide details of how the contingency has been determined with reference to the calculation method (e.g. deterministic or probabilistic), risk profile of the project, the investment lifecycle stage, the delivery method, the risk allocation and other key aspects of the business case
2. propose and provide a rationale for the delegations and controls, consistent with the risk profile, the business case and the governance arrangements for the relevant project, delivery entity and owner
3. provide details of arrangements for regular monitoring and reporting contingency requirements and performance throughout the investment lifecycle.

## Application of the Circular

This Circular applies to all General Government agencies and Public Trading Enterprises (PTEs), except State Owned Corporations (SOCs).

This Circular applies to all new major infrastructure projects seeking project approval through the Cabinet Standing Committee on Expenditure Review (ERC). The new requirements are in addition to existing submission requirements for new capital proposals.

More information on total asset management (TAM) submission requirements, Business Cases, Economic Appraisals and Financial Appraisals is available on the NSW Treasury website [www.treasury.nsw.gov.au](http://www.treasury.nsw.gov.au).

## Background

During 2013 NSW Treasury and INSW conducted a review of contingency management based on a sample of current major projects. The review highlighted opportunities to improve consistency, remove undue conservatism, improve transparency (consistent with good governance), improve capability across the whole portfolio and prevent loss of value for money in delivery.

NSW Treasury, Infrastructure NSW, Transport for NSW and Health Infrastructure worked together to develop guidelines for improving management of contingency. The *Contingency Management Guidebook* is based on best practice and includes examples from other jurisdictions, NSW agencies and the private sector.

The development of this leading practice guidebook provides an opportunity to build on observed good practices in the public and private sectors, and provide a framework for the optimisation of expenditure outcomes across the NSW capital portfolio.

The **attachment** to this circular summarises the guidebook sections relevant for the requirements of this circular.

The full guidebook can be found on the Infrastructure NSW website [www.infrastructure.nsw.gov.au](http://www.infrastructure.nsw.gov.au).

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**NSW Treasury website:** [www.treasury.nsw.gov.au](http://www.treasury.nsw.gov.au)

# Attachment

## 1. Determining contingency requirements

**When seeking project approval, submissions should provide details of how the contingency has been determined with reference to the calculation method (e.g. deterministic or probabilistic), risk profile of the project, the delivery method, the risk allocation and other key aspects of the business case.**

As the first step in the approval process, the calculation of contingency is a vital element because it determines the magnitude of funding to be held in reserve. At a time of significant pressure on government budgets, it is essential that contingency is calculated appropriately. If this calculation is overestimated it will undermine investment returns. Conversely, if it is underestimated the program delivery may be compromised.

The calculation of contingency requirements should align with the project risk profile, complexity, stage of the investment lifecycle and benchmarks based on past project cost performance. Calculation of contingency is not a 'one-time' calculation. Contingency requirements should be reviewed and amended in response to changes to the risk profile and progression through the investment lifecycle. Contingency requirements should narrow over time as more detailed planning is completed.

Project budgets should not contain contingency provisions for changes to the project beyond the intent of the business case.

### Approaches

The approach to calculating contingency will depend on the lifecycle stage, the level of detail known about project design and risk profile of the project or program. The two main approaches are:

- Deterministic – fixed percentages of the base cost estimate. This is a simplistic method for estimating contingency. It allows for estimates of contingency funds when little information is available. It will have greater certainty if it is based on actual cost performance of similar completed projects.
- Probabilistic – analysis to estimate contingency requirement based on probability of occurrence. This method is more complex than the deterministic method and estimates contingency requirements based on the risk profile of a project. It relies on an accurate and complete risk profile.

The deterministic approach may be more appropriate during early stages of project development while probabilistic approaches are more appropriate for later stages and higher risk projects.

### Example

Roads and Maritime Services use both deterministic and probabilistic approaches to calculate contingency requirements for projects depending on the phase of the investment lifecycle. Deterministic methods are applied to projects prior to reaching the Detailed Business Case phase, after which contingency requirements are calculated using probabilistic analysis methods.

#### Deterministic Approach

- Percentage based allowance made on Base Cost Estimate
- Standard contingency percentage ranges for Strategic, Concept and Detailed phases
- The percentage allowances are based upon an extensive database of tender prices and rates, and project out turn costs over the last decade.

#### Probabilistic Approach

- Probability distribution assigned to elements of Base Estimate and risk analysis performed
- Monte Carlo based analysis to determine 'most likely' outcome
- Both a P50 and P90 figure is calculated which informs a range of outcomes
- Contingency requirements taken as the value 90% likely not to be exceeded (P90).

## 2. Controls and delegations to manage release of contingency provisions

**When seeking project approval, submissions should propose and provide a rationale for the delegations and controls, consistent with the risk profile, the business case and the governance arrangements for the relevant project, delivery entity and owner.**

The allocation of contingency (and corresponding risk ownership) to the governance authority best placed to manage and control the risk is crucial to maximising project cost performance. In allocating contingency, there needs to be a level of delegation and control that aligns incentives at project delivery level and minimises the drawdown of contingency through robust risk management.

Contingency provisions are made only for the realisation of risks and are allowances made for changes in the project scope or for risks captured within the project Base Cost Estimate.

### **Approaches**

The best practice approach is to allocate contingency provisions across governance levels based on who is best placed to control and manage the corresponding risk. This requires agreement on the allocation of risks and transparency on how each risk will be managed.

Submissions should identify the approval process for release of contingency. Approval for release of contingency should be in line with the delegation of authority.

The approving authority is responsible for ensuring the appropriate release of contingency funds, as well as ensuring any new or residual risks resulting from realised risks are identified and appropriately captured.

### **Example**

Health Infrastructure manages contingency centrally under the Project's Executive Steering Committee (ESC). Allocation of contingency funds awarded to Project and Client levels is made through a formal submission process to the ESC, based on a nominated Risk Owner.

To be allocated contingency funds, formal requests for contingency are required to consider:

- Phase of the project
- Type of risk/level impacted by risk
- Allowance required for risk.

Project and Client contingencies are kept and maintained separately.

This approach allocates contingency to the governance level best placed to manage the risks, promoting efficiency and avoiding duplication of contingency funds. While contingency is set on a project-by-project basis, the overall management and control of the contingency is achieved at a portfolio level.

### 3. Monitoring and reporting use of contingency provisions

**When seeking project approval, submissions should provide details of arrangements for regular monitoring and reporting contingency requirements and performance throughout the investment lifecycle.**

Monitoring and transparently reporting use of contingency funds is essential to overall management of capital across the portfolio. This also supports decision-making associated with risk management and/or release and reallocation of surplus contingency funds.

To capture and disclose full performance details, contingency performance should be monitored and reported across each level of governance with accountability for managing contingency allocation.

In addition, Infrastructure NSW will independently report to the Cabinet Standing Committee on Infrastructure on the use of contingency for major projects every two months.

#### **Approaches**

The best practice approach applies regular and consistently timed reporting of contingency management performance throughout the investment lifecycle to enable effective decision-making.

Reviewing performance of contingency management against initial baseline estimates is a means for early identification of potential and/or realised risks and issues, enabling effective responses and optimising contingency performance across the portfolio.

Responsibilities for monitoring and reporting contingency performance against baseline estimates should be aligned with delegations of authority, such that monitoring and reporting activities are undertaken by the governance authority allocated contingency ownership.

#### **Example**

Health Infrastructure outlines financial reporting requirements for all projects and/or programs in the “Cost Planning and Reporting Standards” practices guidelines.

The guidelines provide details of standard monthly reporting practices required to be completed, and the delegation of authority and responsibility of various parties for completing monthly reports.

Along with contingency performance, the Health Infrastructure Monthly Financial Report captures information including project budget status, funding sources, cash flow, and financial risks. It can also be used as a base data source for Project Planning and Development Committee, Project Control Group and Executive Steering Committee governance groups.

This approach ensures the regular and transparent disclosure of contingency performance across all levels of governance and to all stakeholders throughout the investment lifecycle.

## Summary of requirements across the project lifecycle

### 1. Preliminary business case stage

- Estimate contingency requirements for preliminary financial assessment of the project.
- Identify roles and responsibilities for managing contingency based on the risk profile.
- Submit proposal for endorsement.

### 2. Final business case stage

- Revise and quantify contingency funds for accurate financial appraisal of the project.
- Assign roles and responsibilities for management of contingency based on the risk profile.
- Propose monitoring and reporting arrangements for use of contingency.

### 3. Project development stage (Pre-tender)

- Finalise contingency provision.
- Assign ownership for all contingent risks according to identified roles and responsibilities.
- Establish monitoring and reporting arrangements for use of contingency.

### 4. Project delivery stage

- Approve release of contingency as risks materialise according to governance framework.
- Monitor and transparently report on contingency utilisation against forecast.
- Return surplus contingency funds to be invested elsewhere in the portfolio.