



Development Bureau



## PRACTICE NOTES

New Engineering Contract (NEC)  
Term Service Contract (TSC) for  
Public Works Projects in Hong Kong

**Development Bureau**

**Practice Notes for New Engineering Contract (NEC)  
– Term Service Contract (TSC) for Public Works  
Projects in Hong Kong**

**~~February~~ July 2023**

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## 1 EXECUTIVE SUMMARY

### 1.1 PURPOSE OF THE PRACTICE NOTES

1.1.1 To cater for wider adoption of New Engineering Contract (NEC) form in public works projects in the coming years, the Development Bureau (DEVB) promulgates the Practice Notes to facilitate the Project Offices of the Works Departments (WDs) to take forward this initiative. The Practice Notes aim to provide guidance, performance benchmarking and alignment of practices of different Project Offices of WDs in the preparation and administration of public works contracts and consultancy agreements using the NEC form. The NEC form comprises the Engineering and Construction Contract (ECC), Term Service Contract (TSC) and Professional Services Contract (PSC) which are covered by three different Parts of the Practice Notes. The Practice Notes are intended to be a living document which will be updated from time to time on a need basis.

### 1.2 KEY TOPICS OF THE PRACTICE NOTES

1.2.1 Part B of the Practice Notes focuses on common challenges encountered by the Project Offices at pre-tender and tender stages and the practical issues in managing NEC TSC projects during construction, with due considerations to the prevailing Government guidelines and procedures. Among the various topics of the Practice Notes, the following are key ones that warrant special attention of the Project Offices:

#### **a. Option Selection**

Considerations in the detailed evaluation of the main Options are set out in Section B4.2 for reference by the Project Offices.

#### **b. Cost Savings Design and Alternative Proposals**

Where there is any *Service Manager's* cost or addition in future operation and maintenance (O&M) cost due to the Cost Savings Design, such costs will be deducted from the sum due to the *Contractor*. For Option A, upon the relevant Task Completion, the *Contractor's* share in the agreed construction cost savings due to the Cost Savings Design, after the deduction of the total of the *Service Manager's* cost and any addition in future O&M cost, will be paid to the *Contractor*.

#### **c. Preparation of Pre-tender Estimates, Contingency Sums and Provisional Sums for NEC Contracts**

Guidelines on preparation of pre-tender estimates (PTE), contingency sums and provisional sums for NEC contracts are outlined in Section B4.4. The guidelines try to unify the approach to derive the PTE, contingency sums and provisional sums.

#### **d. Building up a Partnering Culture**

Good practices adopted in previous NEC projects, such as the setting up of joint site office, champion group meetings, organization of partnering workshops, etc. are introduced in Sections B4.3.1.3, B4.3.1.4 and B6.0.

#### **e. Drafting of Tender Documents**

The set of standard amendments to NEC clauses (Library of Standard Amendments to NEC TSC), *additional conditions of contract* (Z clauses), General and Special Conditions of Tender, Notes to Tenderers, and sample templates of Contract Data Part one and Part two, Grand Summary of the Schedule of Percentages, General Particulars and Preambles to Specifications for the Service Information / Scope, Form of Tender and Articles of Agreement are posted on the DEVB's website under the heading "New Engineering Contract (NEC) – Term Service Contract (TSC) Documents" in "Standard Contract Documents" of the "Publications" section.

#### **f. Effective Project Management**

Guidelines on project management, including management of time, cost, risks and quality, are included in Sections B6.1 to B6.4. Issues such as proactive management of project risks, assessment of NEC-compatible plan, *period for reply*, etc. are addressed.

#### **g. Performance Benchmarking**

The Project Offices are required to submit returns to the DEVB or update the relevant parts of the Public Works Project Information System (PWPIS) regularly to provide key performance information for the purpose of benchmarking NEC performance in the long term.

#### **h. Effective Knowledge Sharing**

An Inter-departmental Working Group on NEC Projects has been set up as a knowledge exchange platform for further development or refinement of the Practice Notes in the medium term.

## **2 BACKGROUND**

### **2.1 THE HISTORY OF NEC IN HONG KONG**

2.1.1 In 2000, the Government of the Hong Kong Special Administrative Region (the Government) set up the Construction Industry Review Committee (CIRC) to review comprehensively the condition of the construction industry for improvement. The CIRC published a report in 2001 entitled “Construct for Excellence” which distinguished amongst others that the construction industry was highly fragmented with an adversarial culture and recommended wider adoption of partnering approach to construction projects, and the integration of partnering approach into a contractual relationship.

2.1.2 Since then, non-contractual partnering has been adopted in more public works projects to enable the delivery of projects based on cooperative working practices. In response to the recommendations in the CIRC report, the Government have also examined suitable form of contract embracing partnering approach through establishing a contractual relationship, and have decided to try out the NEC form, which has proven track record of excellent project results in the procurement of major infrastructure and building projects in overseas countries. The NEC promotes co-operation, mutual trust and collaborative risk management between contracting parties. The first NEC pilot project commenced in 2009 and was completed in 2012, with satisfactory results in terms of collaborative working and assurance in project time and cost.

2.1.3 By early 2016, a number of public works projects have adopted the NEC form using different Options and covering a wide variety of works. The Government have had satisfactory results for those completed and ongoing pilot projects, which responded and supported the use of NEC thereafter. As an overview, the NEC can generally provide a better environment for contracting parties to manage project and construction risks, and to deal with the issues in a collaborative manner for the benefit of the whole project. In this connection, the Government have extended the application of the NEC in public works project procurement after 2016, in particular, the adoption of target cost Options (i.e. ECC Options C and D) in suitable mega scale projects over HK\$ 1 billion, such as tunnelling works, high speed roads, land formation works, etc. The decision and justification as to whether or not to adopt NEC in works contracts and consultancy agreements should be documented and endorsed by public officers at D2 rank or above of WDs.

2.1.4 To provide guidance for the Project Offices of WDs in the preparation and administration of public works projects using the NEC form, the Government, acting through the DEVB, undertook a comprehensive study to prepare a set of Practice Notes which provide guidance on the use of the NEC including ECC, TSC and PSC for procurement of public works projects.

## **2.2 DIFFERENT EDITIONS OF NEC**

2.2.1 These Practice Notes were first issued in October 2016 and were prepared based on NEC3.

2.2.2 To facilitate the adoption of NEC4, these Practice Notes are revised to provide guidance for Project Offices of WDs in the preparation and administration of public works projects using NEC4.

2.2.3 In reading these Practice Notes, Project Offices are drawn to the attention of the new terminologies added or elaborated in NEC4, for example:

- “*Employer*” (NEC3) is replaced by “*Client*” (NEC4)
- “Service Information” (NEC3) is replaced by “Scope” (NEC4)
- “Risk Register” (NEC3) is replaced by “Early Warning Register” (NEC4)
- “*Employer’s* risks and *Contractor’s* risks” (NEC3) are replaced by “*Client’s* liabilities and *Contractor’s* liabilities” (NEC4) respectively.

2.2.4 Unless otherwise suggested, the term NEC refers to both NEC3 and NEC4.

### 3 GENERAL INFORMATION OF NEC CONTRACTS

#### 3.1 SELECTION OF CONTRACT (ECC/TSC/PSC)

3.1.1 The current list of published NEC contracts and a brief description of each type of NEC contract are stated as below:

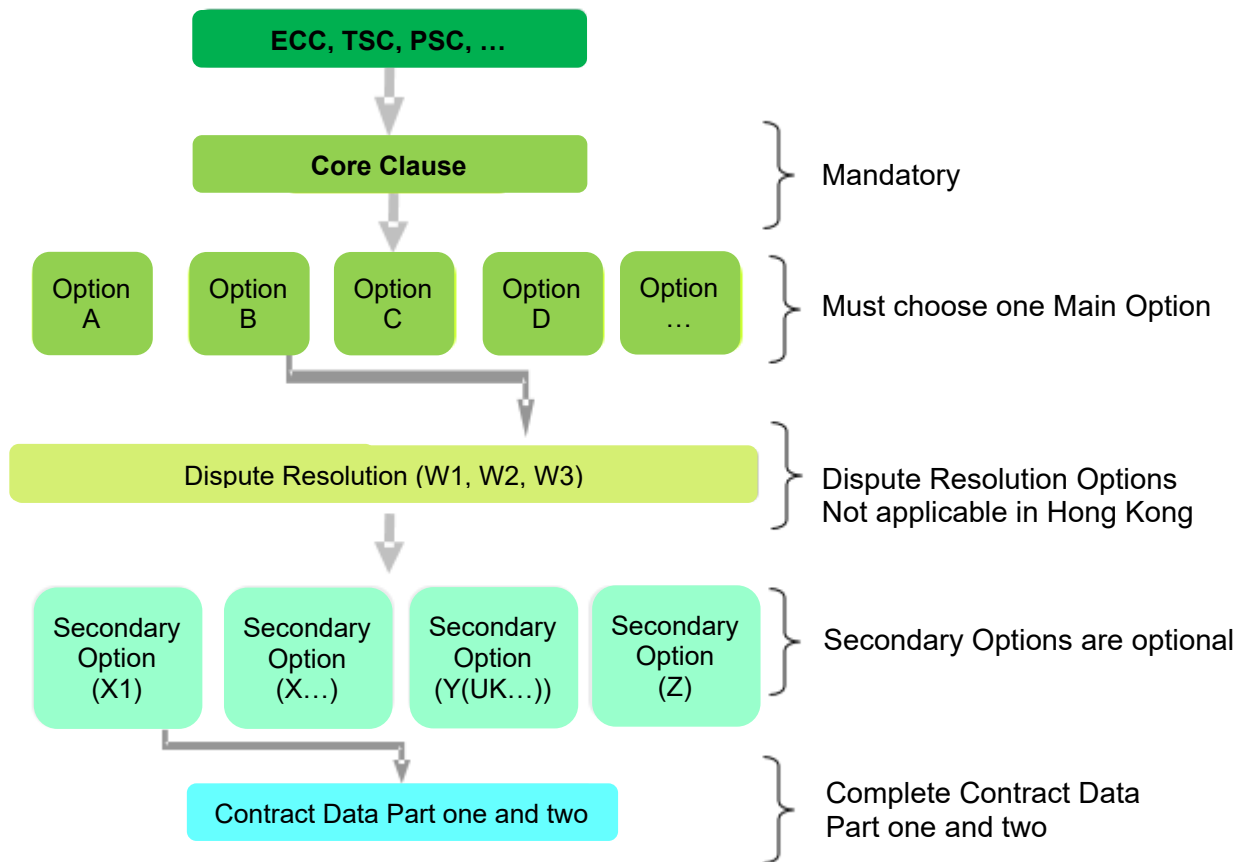
	NEC Title	Abbr.	When Should be Used
Works Contracts	Engineering and Construction Contract	ECC	For the appointment of a contractor for engineering and construction work, including any level of design responsibility
	Engineering and Construction Subcontract	ECS	For the appointment of a subcontractor for engineering and construction work where the contractor has been appointed under the ECC
	Engineering and Construction Short Contract	ECSC	As an alternative to ECC and is for use with contracts which do not require sophisticated management techniques, comprise straightforward work and impose only low risks on both the employer and the contractor
	Engineering and Construction Short Subcontract	ECSS	As a subcontract to ECC or ECSC and is for use with contracts which do not require sophisticated management techniques, comprise straightforward work and impose only low risks on both the contractor and the subcontractor
Term Contracts	Term Service Contract	TSC	For the appointment of a contractor for a period of time to manage and provide a service such as planned or unplanned maintenance
	Term Service Subcontract (NEC4 only)	TSS	For the appointment of a subcontractor for a period of time to manage and provide a service where the contractor has been appointed under the TSC
	Term Service Short Contract	TSSC	As an alternative to TSC and is for use with contracts which do not require sophisticated management techniques, comprise straightforward work and impose only low risks on both the employer and the contractor
Consultancy Services	Professional Service Contract	PSC	For the appointment of a consultant to provide professional services
	Professional Service Subcontract (NEC4 only)	PSS	For the appointment of a subconsultant to provide professional services where the consultant has been appointed under the PSC
	Professional Service Short Contract	PSSC	As an alternative to PSC and is for use with contracts which do not require sophisticated management techniques, comprise straightforward work and impose only low risks on both the employer and the consultant

	NEC Title	Abbr.	When Should be Used
Supply	Supply Contract	SC	For procurement of goods and related services
	Supply Short Contract	SSC	As an alternative to SC and is for use with contracts which do not require sophisticated management techniques and impose only low risks on both the employer and the supplier
Others	Framework Contract	FC	For the appointment of one or more contractors to carry out construction work or to provide design or advisory services on an “as instructed” basis over a set term
	Design Build and Operate Contract (NEC4 only)	DBOC	For the appointment of a contractor for the design, construction or modification and operation of assets over a period of time
	Alliance Contract	ALC	For the appointment of a number of partners to create an alliance with the employer to design and build an asset or assets on major projects or programmes of work where longer term collaborative ways of working are to be created
	Adjudicator’s Contract (NEC3) / Dispute Resolution Service Contract (NEC4)	AC / DRSC	For the appointment of an adjudicator or dispute avoidance board member to resolve disputes

### **Structure of NEC contracts**

3.1.2 The ECC, ECS, TSC, TSS, PSC and PSS offer a range of Options that build up the contract terms and conditions to suit individual works or services, of which the *Employer / Client* will select what he considers the most suitable Option to achieve value for money. At the heart of contract conditions are the core clauses, which will determine the essential common terms. To this, main Option should be selected and it will determine the particular payment mechanism and risk allocation between the *Employer / Client* and the *Contractor*. Then secondary Options should be chosen to combine with the main Option clauses to form the core parts of a contract. For DBOC and ALC, only selection of secondary Options is required.

3.1.3 A flowchart of the NEC formation is shown below:



3.1.4 In addition, a side by side comparison of the tender document components of ECC or TSC with traditional GCC form is shown below:

NEC ECC / TSC tender documents		Traditional GCC tender documents
General Conditions of Tender		General Conditions of Tender
Special Conditions of Tender		Special Conditions of Tender
Form of Tender		Form of Tender
Articles of Agreement and its Schedule		Articles of Agreement
Contract Data Part one and Part two		General Conditions of Contract / Special Conditions of Contract
<i>conditions of contract</i> <i>additional conditions of contract</i>		
Works Information / Scope (ECC)	Service Information / Scope (TSC)	
Site Information (ECC)		
<i>activity schedule / bill of quantities / price list</i>		Specification, Drawings
		Bill of Quantities / Schedule of Rates

3.1.5 For short contracts (i.e. ECSC, ECSS, TSSC, PSSC and SSC), the Supply Contract, the Framework Contract and the Adjudicator's Contract (NEC3) / the Dispute Resolution Service Contract (NEC4), selection of Options is not required.

3.1.6 The aim of these Practice Notes is to assist the Project Offices in preparing and administering ECC, TSC and PSC. NEC forms other than these three types will not be covered herein. Part B of this Practice Notes focuses on TSC.

## **PART B – TERM SERVICE CONTRACT (TSC)**

### **B4 PRACTICE NOTES FOR PRE-TENDER STAGE**

#### **B4.1 PREPARATION OF TENDER DOCUMENTS**

##### **B4.1.1 TSC Tender Documentation**

B4.1.1.1 The standard amendments to the NEC clauses (Library of Standard Amendments to NEC TSC), *additional conditions of contract* (Z clauses), General and Special Conditions of Tender and Notes to Tenderers, sample template of Contract Data Part one and Part two, etc. are posted on the DEVB's website under the heading "New Engineering Contract (NEC) – Term Service Contract (TSC) Documents" in "Standard Contract Documents" of the "Publications" section for reference. To suit the operational needs and characteristics of term contracts of the individual Works Departments, the Contract Advisory Units of the Works Departments are allowed to maintain their own libraries of further amendments to NEC TSC, *additional conditions of contract*, General and Special Conditions of Tender and Notes to Tenderers and keep proofs of legal vetting by LAD(W) and approval from the Head of Department/Office or his delegate at D2 rank or above before. The Contract Advisory Units of the Works Departments should minimize such further amendments as far as possible, review their latest libraries from time to time and upload them in a format agreed by the DEVB to the Works Group Intranet Portal if appropriate. The subsequent use of the departmental libraries by the concerned department only should be subject to further approval from the Head of Department/Office or his delegate at D2 rank or above. Such further amendments to NEC TSC, *additional conditions of contract*, General and Special Conditions of Tender and Notes to Tenderers maintained by the Contract Advisory Units of the Works Departments should not affect any prevailing public works policies, Stores and Procurement Regulations and other key procedures and/or control measures specified in the Practice Notes and associated documents unless otherwise agreed by the relevant Bureaux/departments. If the Project Offices wish to develop any other amendments to NEC TSC standard documents, *additional conditions of contract*, or Special Conditions of Tender for their repeated use or placing in the respective DEVB's library for use by others, they should submit their proposal with justifications to seek legal advice from LAD(W) and approval from the DEVB who may consult the Inter-departmental Working Group on NEC Projects, the Steering Committee on NEC Projects and/or the Conditions of Contract Committee where appropriate. For other non-standard amendments to the NEC TSC standard documents or non-standard *additional conditions of contract* to suit specific needs of individual contracts, the Project Offices should seek approval from the Head of Department/Office or his delegate at D2 rank or above unless otherwise specified in the Practice Notes and may seek legal advice from LAD(W) in case of doubt. Similarly, for other non-standard Special Conditions of Tender, Notes to Tenderers, Contract Data Part one and Part two, Form of Tender, Articles of Agreement, General Particulars and

Preambles to Specifications for the Service Information / Scope, and Grand Summary of the Schedule of Percentages for individual contracts, they should seek approval from a public officer at D2 rank or above unless otherwise specified in the Practice Notes and may seek legal advice from LAD(W) in case of doubt. For other parts of the tender documents, approval procedures in the Project Administration Handbook for Civil Engineering Works (PAH) published by the Civil Engineering and Development Department or equivalent guidelines of the Architectural Services Department and the Electrical and Mechanical Services Department should be followed. For the avoidance of doubt, the requirements in this Practice Notes are imposed for contracts adopting NEC form without prejudice to the legal vetting requirement mentioned in DEVB's memo ref. DEVB(W) 510/30/01 dated 29 March 2019 which was promulgated following the requirement of the Stores and Procurement Regulations. In other words, if a works contract has an estimated value exceeding \$500 million, the departments must send all the non-standard components of the tender documents to LAD(W) for vetting before the tender documents are issued to potential tenderers.

B4.1.1.2 While a sample Service Information / Scope (together with Specifications) is not provided in the Practice Notes, the Project Offices should bear in mind the characteristics of the NEC when drafting the Service Information / Scope. Since NEC clause 20.1 states that “the *Contractor* Provides the Service in accordance with the Service Information / Scope”, the Project Offices should set out clearly in the Service Information / Scope which parts of the *service* are to be instructed by way of Task Orders to suit the operational needs and characteristics of term contracts of the individual Works Departments. In accordance with NEC3 clause 11.2(15) / NEC4 clause 11.2(14), Service Information / Scope is “information which either specifies and describes the *service* or states any constraints on how the *Contractor* Provides the Service”. It should present the *Employer's / Client's* requirements on the *service* to be provided in a complete and precise manner. More guidance on the preparation of the Service Information / Scope can be found in relevant Guidance Notes / User Guides published by Thomas Telford Limited.

B4.1.1.3 Some of the important points to note in preparing the Service Information / Scope are :

(i) Clarity and effective project management

In drafting the Service Information / Scope, the Project Offices should bear in mind the need to state the requirements as clear as possible to avoid misinterpretation and unnecessary disputes. For example, the expressions such as “in the opinion of the *Service Manager*”, or “to the satisfaction of the *Service Manager*” should be replaced by more definitive standards or requirements as far as possible.

(ii) Payment methodology

Specifications in conventional contracts are drafted based on a price-based contract. However, for Option C which are cost-reimbursable based (i.e. Defined Cost plus the Fee basis), some of the commonly used terms such as “...at the *Contractor*’s own cost” etc., are no longer applicable.

(iii) Time for reply

As the *Service Manager* and the *Contractor* are required to reply within the *period for reply* unless otherwise stated in the contract according to NEC clause 13.3, the use of expressions such as “...within a reasonable time...” should be avoided.

### **Price List**

B4.1.1.4 The Price List is the pricing document and is not part of the Service Information / Scope. It should not be used to describe the *service*. For the projects in Hong Kong, the Price List is normally composed of the Schedule of Rates and the Method of Measurement. It should be read together with the Schedule of Percentages in the Contract Data Part two. As amended by the Library of Standard Amendments to NEC TSC, for Option A, the Contract Rate means the corresponding rate stated in the Schedule Rate column of the Price List adjusted by the relevant *contract percentage* (entered by the *Contractor* and corrected for any tender errors in the Schedule of Percentages at the Contract Data Part two for the relevant section or part of the concerned section of the *service*) rounded off to the nearest cent.

### **Marking Scheme**

B4.1.1.5 This section applies if the Marking Scheme Approach is adopted in accordance with DEVB Technical Circular (Works) TCW No. 4/2014 and 4/2014A.

B4.1.1.6 The Project Offices should consider including an assessment criterion taking into account relevant NEC experience possessed by proposed managerial staff in Section (3) – Tenderer’s technical resources where applicable.

B4.1.1.7 In addition to the relevant professional qualifications, the following requirement should be added in the contract such that relevant *key people / key persons* of the *Contractor* should possess the required experience:

“a minimum of [*insert the number as appropriate*] years of relevant post-qualification experience and shall (i) have a minimum of [*insert the number as appropriate*] years of proven experience as Construction

Manager or Site Agent in the use of NEC contracts, or (ii) be an accredited or certified NEC *Project Manager* or *Service Manager* recognised by an international or local construction-related professional institution/institute, or (iii) have successfully completed a recognised training course for NEC *Project Manager* or *Service Manager*. A recognised training course for NEC *Project Manager* or *Service Manager* refers to a training course that enables participants to be regarded as having acquired the required standard necessary to act in the respective role upon successful completion of the training course, as recognised by an international or local construction-related professional institution/institute.”

The relevant experience of the concerned *key people / key persons* should be required to input in the Contract Data Part two.

Note: Subject to the Project Offices’ consideration, the above requirement may be waived for works contracts with tenders invited from Group A or Group B contractors.

## **Plan**

B4.1.1.8 If the Project Offices wish to understand more on whether the tenderers have fully understood their obligations and whether they are likely to be able to complete the *service* within the stated time by using their proposed methods and resources (in particular for multi-disciplinary or complex service), they should consider requiring tenderers to submit a plan by adopting the standard Special Conditions of Tender Clause SCT 1 – Plan of *service*.

B4.1.1.9 The Accepted Plan is a crucial document for managing the contract and enabling the *Service Manager* and the *Contractor* to monitor the progress of the *service* and assess the effect of compensation events under the NEC.

B4.1.1.10 If a plan is required to be submitted at the tender stage, tenderers need to start the planning process and prepare a practical and carefully designed plan at an earlier stage. The requirements on the plan to be submitted at tender stage may make reference to similar requirements in NEC3 clause 21.2 / NEC4 clause 31.2 where appropriate.

B4.1.1.11 The plan submitted by tenderers will form part of the tender submission. However, it should be noted that such plan should not be considered as a plan identified in the Contract Data Part two nor be regarded as the Accepted Plan under NEC clause 11.2(1) under normal circumstances. The *Contractor* should submit the first plan for acceptance by the *Service Manager* after contract commencement. As such, the standard provision in the Contract Data Part two “If a plan is to be identified in the Contract Data” is normally suggested to be deleted.

### **Dispute Resolution Advisor**

B4.1.1.12 For NEC contracts, as they already entail partnering spirit and associated project management tools to facilitate early resolution of problems, the adoption of Dispute Resolution Advisor (DRA) System is **NOT** mandatory. It will be up to the procuring departments to adopt the DRA System in individual contracts if the engagement of DRA would offer additional merits in facilitating dispute avoidance and resolution. (Ref.: SDEV’s memo ref. ( ) in DEVB(W) 510/83/03 dated 11 February 2021)

### **Setting of Fee Percentage**

B4.1.1.13 A cap has been imposed on the *fee percentage*. This is to avoid tenderers to submit a disproportionately high percentage figure. According to the latest tender evaluation mechanism, the calculation of forecast total of the Prices / Total Value for Tender Assessment (TVTA) including contingency sums would take into account the *fee percentage* so that any unreasonably high *fee percentage* would reflect in the tender evaluation.

B4.1.1.14 In setting a cap on the *fee percentage*, care should be taken as to whether the *fee percentage* would cover the people cost of the site management and supervisory staff. In particular, for Options C, if the *fee percentage* has to include the cost of the *Contractor*’s site management and supervisory staff, it may cause a negative impact to the *Contractor*’s cash flow in the initial stage of the contract when the resulting fee would be relatively insignificant compared with the actual cost of people. Other considerations may also include but not limited to the project scale, size of site establishment, programme and duration of different site management and supervisory staff required. If Project Offices wish to cover the *Contractor*’s cost of site management and supervisory staff by

the *fee percentage*, approval from a public officer at D2 rank or above should be sought and document the justifications.

B4.1.1.15 For the purpose of setting up a cap on the *fee percentage* and cost estimation, WDs should keep a database of *fee percentage* for different contracts under different main Options for reference by the Project Offices.

B4.1.1.16 A *minimum fee percentage* of 5% should be set for NEC works contracts. If Project Offices propose to specify a *minimum fee percentage* other than 5%, DEVB's prior agreement should be sought.

### **Compiling Contract Documents**

B4.1.1.17 According to the Licence Agreement for NEC documents which can be found in the NEC Knowledge Management Platform in the Works Group Intranet Portal of the DEVB, authorised users are permitted to print out the NEC documents for their own business purposes. Nevertheless, the Project Offices are reminded to observe the provisions in the Licence Agreement when using the Licensed Materials, in particular the provisions related to copyright. Owing to the copyright of NEC documents, the Project Offices should not make copies of the NEC documents for inclusion in the tender or contract documents since the contractors may not be other authorised users as specified in the Licence Agreement.

B4.1.1.18 Further information on purchase of NEC contracts, guidelines or relevant publications can refer to [www.neccontract.com](http://www.neccontract.com).

## B4.1.2 Comparison of Terminologies used in GCC and NEC

B4.1.2.1 The common terminologies used in GCC and NEC are compared in the table below.

GCC	NEC – ECC	NEC – TSC	NEC – PSC
extension of time, variations, claims, disruptions, loss and expenses	compensation events	compensation events	compensation events
Bills of Quantities / Schedule of Rates	Bill of Quantities / Activity Schedule	Price List	Activity Schedule / Task Schedule / Time Charge
Architect/Engineer /Surveyor/ Supervising Officer	<i>Project Manager/ Supervisor</i>	<i>Service Manager</i>	<i>Employer/Employer's Agent (if secondary Option X10 of NEC3 PSC is selected) or Client</i>
Site	Site / Working Areas	Affected Property / Service Areas	—
Contract Sum	The Prices	The Prices	The Prices
date of completion	Completion Date	Service Period	Completion Date
estimated value of works	Price for Work Done to Date	Price for Service(s) Provided to Date	Price for Service(s) Provided to Date
Maintenance Periods	<i>defects date, defect correction period</i>	—	<i>defects date</i>

## **B4.2 GUIDELINES FOR CHOICE OF OPTION**

### **B4.2.1 Main Options**

B4.2.1.1 The three main Options of the TSC comprise:

- Option A - Priced contract with price list
- Option C - Target contract with price list
- Option E - Cost reimbursable contract.

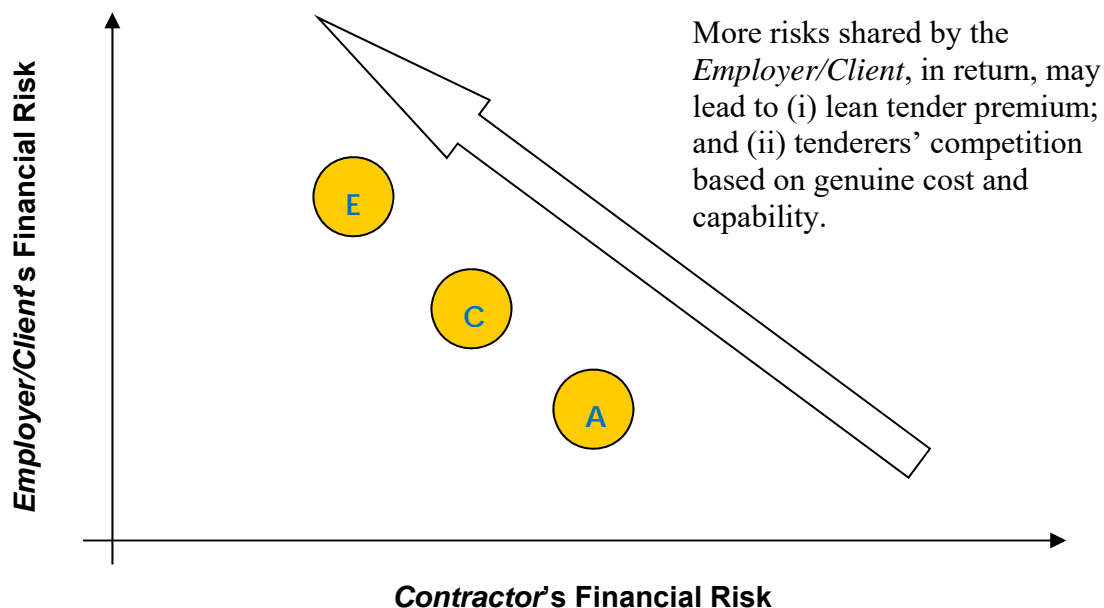
B4.2.1.2 The three main Options each:

- use a different payment arrangement; and
- allocate risk differently.

B4.2.1.3 The core clauses are used for definition of the contractual relationship. They apply to each of the three main Options and therefore do not influence the selection of the most appropriate main Option.

B4.2.1.4 Amongst those three main Options available in the TSC, at least one of them has to be selected for the payment mechanism and the risk sharing approach suitable for the *service*, followed by the selection of the Dispute Resolution Option (not applicable in Hong Kong) and the secondary Options.

B4.2.1.5 In general, the *Contractor* will carry the greatest financial risk under Option A and the least under Option E. A graphical risk presentation showing financial risk allocated between the *Employer / Client* and the *Contractor* is shown below:



B4.2.1.6 In selecting the appropriate main Option for the *service*, the Project Offices should always take the service specific requirements into account in addition to the general features of the main Options. This Practice Notes mainly cover the main Option A which has been adopted in most of the term contracts for public works projects in Hong Kong.

## B4.2.2 Option Selection Considerations

B4.2.2.1 The main Options under the TSC cover most arrangements used in engineering and building maintenance contracts. The table under Section B4.2.2.3 compares the two main Options (Options A and C) which may have potential to be used in public works projects in Hong Kong in terms of risk allocation and other factors affecting the final tendered amount.

B4.2.2.2 Option A is a priced contract and Option C is a target contract.

B4.2.2.3 Time, cost and risks are generally considered to be the most important factors when selecting an appropriate main Option for the *service*. The two main Options include the similar time provisions and the essential differences between them are the risk sharing and payment mechanisms. Analysis and comparison of the characteristics of these main Options contribute to the considerations for selecting the appropriate main Option. Emphasis of the analysis should be placed on the suitability of the concerned main Options to the *service* taking into account the factors including but not limited to cost certainty, quantity certainty, risk allocation and sharing, completeness of design, potentials to drive more efficient project delivery and cost savings, and resources available for open book accounting for target contracts.

	Option A	Option C
Opportunity for cost savings	Less incentive is provided to the <i>Contractor</i> to submit value engineering / cost savings design proposal in delivery of <i>service</i>	More incentive is provided to the <i>Contractor</i> to submit value engineering / cost savings design proposal in delivery of <i>service</i>
Comparison with GCC	Similar to GCC contracts	Dissimilar to any GCC structure as the tendered prices only provides the “target”
Contractor is paid for	Completed items at tendered prices	Actual cost basis to which is added the <i>Contractor</i> ’s fee. The total amount to be paid to the <i>Contractor</i> is subject to the <i>Contractor</i> ’s share (the “pain/gain” share mechanism)
Financial risk	The financial risk of being able to carry out the <i>service</i> at the agreed price is largely borne by the <i>Contractor</i>	The financial risk is shared by the <i>Employer / Client</i> and the <i>Contractor</i> in an agreed proportion
Risk allowance	Included by the <i>Contractor</i> in his tender are paid by the <i>Employer / Client</i>	The <i>Employer / Client</i> pays for risks arising as actual cost, and risks allowed in the Prices are shared under pain/gain share mechanism
Changes to the Prices and price adjustment for inflation	Adjusted for compensation events and inflation	Adjusted for compensation events and inflation

### **B4.2.3 Justifications and Approval for Selected Main Option**

B4.2.3.1 In selecting the main Option, considerations peculiar to the *service* including cost certainty, risk allocation and sharing, completeness of design, potentials to drive more efficient project delivery and cost savings, resources available for open book accounting for target contracts, etc. should be taken into account and evaluated.

B4.2.3.2 Option A shall be the default main Option. For the main Option A commonly used in public works projects, the Project Offices should submit their option evaluation and justifications for the selected main Option to a public officer at D2 rank or above for approval. If the Project Offices wish to conduct trial of other main Options for appropriate projects, they should submit their proposal with justifications to seek approval from the DEVB who should consult the Inter-departmental Working Group on NEC Projects and / or the Steering Committee on NEC Projects as appropriate.

## **B4.2.4 Secondary Options**

B4.2.4.1 The secondary Options can generally be used with all of the main Options although there are some exceptions (e.g. Option X1 “Price adjustment for inflation” is not used with Options E).

B4.2.4.2 Similarly, the majority of the secondary Options may be used with one another in the same contract, although there is an exception for Option X20 “Key Performance Indicators” which is not used if Option X12 “Partnering / Multiparty collaboration” is included in the contract. For NEC4, Option X19 “Termination by either Party” also not used if Option X11 “Termination by the *Client*” is included in the contract.

B4.2.4.3 The core clauses, which apply to all three main Options, and the main Option clauses for the main Option selected are mandatory and should be included in the contract unless express provisions are incorporated into the contract to amend or omit these clauses.

B4.2.4.4 The secondary Option clauses are included at the discretion of the *Employer / Client* and none of them may need to be included in the contract, although this situation would be very unusual.

B4.2.4.5 The following considerations should be taken into account for inclusion of any secondary Options:

- whether it should be recommended for inclusion in the contract to achieve any project objectives or suit any project situations;
- whether there is any impediment to include it with the main Option recommended;
- whether there is any impediment to it being included due to other secondary Options recommended.

B4.2.4.6 In general terms, the recommendation of secondary Options should consider the prevailing Government procedures (e.g. requirements stipulated in the Stores and Procurement Regulations, the PAH, or equivalent guidelines of the Architectural Services Department and the Electrical and Mechanical Services Department, etc.) adopted for GCC contracts (e.g. selection of X1 – Price adjustment for inflation, etc.) and project specific needs and current practice.

B4.2.4.7 The secondary Options are designated as:

- ‘W’ Options
- ‘X’ Options
- ‘Y’ Options
- ‘Z’ Options

B4.2.4.8 The NEC TSC provides two dispute resolution procedures, namely Options W1 and W2.

B4.2.4.9 Neither of these Options W1 and W2 was adopted in Hong Kong and the Government's framework of dispute resolution procedures was incorporated into the contracts as the *additional conditions of contract*. The Project Offices should continue to follow the current framework unless prior legal advice has been obtained from LAD(W) and approval has been obtained from the DEVB who should consult the Inter-departmental Working Group on NEC Projects and / or the Steering Committee on NEC Projects where appropriate.

B4.2.4.10 The 'X' and 'Y' Options are set out in the NEC contracts but are not mandatory. They may be selected and included in the contract if appropriate. 'Y' Options are used followed by a further prefix to denote the country. Hence, Y(UK) denotes secondary Options that are applicable to the United Kingdom (UK).

B4.2.4.11 The 'Z' Options are the *additional conditions of contract*. Although there are standard UK public sector Z clauses for use with NEC contracts, they are not applicable to public works projects in Hong Kong. A Library of Standard *additional conditions of contract* (Z clauses) has been developed by the DEVB and posted on DEVB's website under the heading "New Engineering Contract (NEC) – Term Service Contract (TSC) Documents" in "Standard Contract Documents" of the "Publications" section.

### **'X' Options**

B4.2.4.12 The common secondary Options used in the NEC contracts for public works projects in Hong Kong include:

- X1 – Price adjustment for inflation
- X11 – Termination by the *Client* (for NEC4 only)
- X19 – Task Order (for NEC3 only, clauses related to Task Order have been incorporated as core clauses under NEC4)

### **Option X1 – Price adjustment for inflation**

B4.2.4.13 This secondary Option:

- is used when the *Employer / Client* accepts the risk of inflation.
- requires a table of Schedule of Proportions to be used for calculation of the Price Adjustment Factor in the Contract Data Part two for tenderers to complete.
- is calculated in a similar manner to contract price fluctuations with reference to the "Index Numbers of the Costs of Labour and Materials used in Public Sector

Construction Projects (April 2003=100)” and “Average Daily Wages of Workers Engaged in Public Sector Construction Projects as Reported by Main Contractor” compiled by the Census and Statistics Department. (Project Offices should refer to DEVB TCW No. 4/2021 for adoption of 2021-based Index Numbers).

- For Option A, the amount calculated for inflation is paid to the *Contractor*.
- the assessed value of compensation events is first adjusted to base date level (similar to the principle adopted for GCC contracts) before the price adjustment for inflation under this secondary Option.

B4.2.4.14 The Project Offices should determine whether to include this secondary Option in accordance with the prevailing Government guidelines (e.g. DEVB TCW No. 4/2021).

### **Option X2 – Changes in the law**

B4.2.4.15 This secondary Option:

- is used when the *Employer / Client* accepts the risk of a change in the law
- provides that a change in the law of the project is a compensation event if it occurs after the Contract Date
- Requires the *Service Manager* to notify the *Contractor* of a change in the law and instruct him to submit quotations (clause X2.1 refers) as there is no compensation event listed in the core clauses for a change in the law.

B4.2.4.16 This secondary Option was not included in the projects.

B4.2.4.17 Instead, the projects included the *additional condition of contract* clause dealing with changes in the law appropriate for public works projects in Hong Kong. A compensation event should be added to the NEC clauses to accommodate this *additional condition of contract* clause. As such, inclusion of this secondary Option should not be required.

B4.2.4.18 Under this arrangement, the *Contractor* is not at risk if a material change in the law occurs and has no need to include a risk allowance in this respect in his tender when the concerned law is covered by the list of enactment, regulations, by-laws or rules in the appendix of the *additional conditions of contract*.

B4.2.4.19 This arrangement is similar to the Special Condition of Contract included in GCC contracts entitled “risk allocation with respect to changes in the law” to provide a fair allocation of risk and the accompanying appendix lists out the relevant enactments.

### **Option X3 – Multiple currencies**

B4.2.4.20 This secondary Option:

- is used when the *Contractor* is to be paid in more than one currency and the *Employer / Client* accepts the risk of a change in the exchange rate; and
- is only used with Option A.

B4.2.4.21 This secondary Option was not included in the projects.

B4.2.4.22 In any event the Contract Data Part one should stipulate that the *currency* of the contract is the Hong Kong Dollar and this provision has no relevance. As such, inclusion of this secondary Option should not be required.

### **Option X4 – Parent company guarantee / Ultimate holding company guarantee**

B4.2.4.23 This secondary Option:

- is used when the *Employer / Client* requires additional security from the parent company of the *Contractor*.

B4.2.4.24 The Government has a very comprehensive technical and financial evaluation system for vetting the tenderers' capability before award of contract.

B4.2.4.25 The Project Offices are reminded to refer to the prevailing guidelines (e.g. Paragraph 9.21 of Chapter 5 of the PAH, etc.) for measures to reduce the risk of contract forfeiture.

B4.2.4.26 If the Project Offices wish to conduct trial to include this secondary Option in appropriate projects in particular for time critical contracts and/or large-scale contracts, and where the contract conditions impose a substantially higher degree of risk than normal on the *Contractor*, they should submit their proposal with justifications to seek legal advice from LAD(W) and approval from the DEVB who should consult the Inter-departmental Working Group on NEC Projects and / or the Steering Committee on NEC Projects where appropriate.

### **Option X11 – Termination by the *Client* (for NEC4 only and not used with Option X19)**

B4.2.4.27 The secondary Option X11 is used to cover termination by the *Client* for a reason not specified in NEC4 clause 91.

B4.2.4.28 The Project Offices should refer to the Library of Standard Amendments to NEC TSC for adoption of this Option.

## Option X12 – Partnering / Multiparty collaboration

B4.2.4.29 This secondary Option is used for partnering between more than two parties who are all not in contract with each other.

B4.2.4.30 It is anticipated that majority of public works projects will mainly involve two Parties, the *Employer / Client* and the *Contractor*, in the contract. This being the case this secondary Option is normally not required.

B4.2.4.31 If this secondary Option is adopted, the *Client's* (NEC3) / *Promotor's* (NEC4) objective, the Partnering information and the preliminary Schedule of Partners and Schedule of Core Group Members should be included in the Contract Data Part one. The Schedule of Partners and the Schedule of Core Group Members, like other schedules referred to in the Contract Data, may change from time to time.

B4.2.4.32 If the Project Offices wish to conduct trial to include this secondary Option in appropriate projects, they should submit their proposal with justifications to seek legal advice from LAD(W) and approval from DEVB who should consult the Inter-departmental Working Group on NEC Projects and / or the Steering Committee on NEC Projects where appropriate.

## Option X13 – Performance bond

B4.2.4.33 This secondary Option:

- is used when the *Employer / Client* requires additional security on the *Contractor's* performance;
- is generally used when the contract stipulates desired tolerances or includes a performance specification.

B4.2.4.34 The provision of a performance bond would have a cost implication and this additional cost would not be recoverable if the *Contractor* achieved the necessary performance.

B4.2.4.33 This secondary Option is anticipated to be included in time critical contracts and/or large-scale contracts, and where the contract conditions impose a substantially higher degree of risk than normal on the *Contractor*. Similar to the use of Option X4 “parent company guarantee / ultimate holding company”, the Project Offices should refer to the prevailing guidelines (e.g. paragraph 9.21 of Chapter 5 and Appendixes 7.62 and 7.70 of Chapter 7 of the PAH, etc.) for the measures (e.g. performance bond) to reduce the risk of contract forfeiture and the bond required for off-site manufacture of major prefabrication items.

B4.2.4.34 If the Project Offices wish to conduct trial to include this secondary Option in appropriate projects, they should submit their proposal with justifications to seek on performance bond amount to seek legal advice from LAD(W) and approval from DEVB who should consult the Inter-departmental Working Group on Pilot Projects and / or the Steering Committee on NEC Projects where appropriate.

### **Option X17 – Low performance damages**

B4.2.4.35 This secondary Option:

- is used when the contract includes a performance specification and liquidated damages are stated for degrees of under-performance;
- applies low performance damages to the *Contractor* when a part of the *service* does not meet the service level stated in the *service level table*.

B4.2.4.36 This secondary Option was not included in the projects. However, if the Project Offices wish to conduct trial to include this secondary Option in appropriate projects, they should submit their proposal with justifications to seek legal advice from LAD(W) and approval from the DEVB who should consult the Inter-departmental Working Group on NEC Projects and/or the Steering Committee on NEC Projects where appropriate.

### **Option X18 – Limitation of liability**

B4.2.4.37 Generally the Government does not accept any limitation of the *Contractor's* liability and it is not anticipated that this secondary Option will be used in the NEC contracts for public works projects.

B4.2.4.38 This secondary Option was not included in the projects.

### **Option X19 – Task Order (for NEC3 only)**

B4.2.4.39 For traditional term contracts in GCC form, the service is normally delivered through Works Orders. This secondary Option, bearing resemblance to Works Order in GCC form, was included in the projects. This secondary Option will continue to be used in NEC3 contracts for public works projects. For NEC4, clauses related to Task Order have been incorporated as core clauses.

### **Option X19 – Termination by either Party (for NEC4 only and not used with Option X11)**

B4.2.4.40 The secondary Option X19 is used to cover termination by the either Party for a reason not specified in NEC4 clause 91 after the *minimum period of service*.

B4.2.4.41 If the Project Offices wish to conduct trial to include this secondary Option in appropriate projects, they should submit their proposal with justifications to seek legal advice from LAD(W) and approval from the DEVB who should consult the Inter-departmental Working Group on NEC Projects and/or the Steering Committee on NEC Projects where appropriate.

### **Option X20 – Key Performance Indicators**

B4.2.4.42 This secondary Option:

- is used to monitor and measure the *Contractor's* performance against the Key Performance Indicators (KPIs) in the Incentive Schedule;
- is intended to incentivize the *Contractor* to meet the *Employer's* / *Client's* objectives;
- This secondary Option is not used when Option X12 is used since Option X12 includes “KPI”.

B4.2.4.43 This secondary Option has been used for “Pay for Safety Performance Merit Scheme (PFSPMS)” in the NEC ECC projects but PFSPMS is not applied to term contracts according to the Government guidelines. The incentive payments do not count towards the Price for Service(s) Provided to Date. If the Project Offices wish to conduct trial to include this secondary Option in appropriate projects, they should submit their proposal with justifications to seek legal advice from LAD(W) and approval from the DEVB who should consult the Inter-departmental Working Group on NEC Projects and/or the Steering Committee on NEC Projects where appropriate.

#### **Other ‘X’ Options included in NEC4**

B4.2.4.44 There are other ‘X’ Options available for selection in NEC4 contracts. These Options includes:

- X8 – Undertakings to the *Client* or Others
- X10 – Information Modelling
- X21 – Whole life cost
- X23 – Extending the Service Period
- X24 – The *accounting periods*

B4.2.4.45 For secondary Options X8, X10, X23 and X24, if Project Offices wish to conduct trial for inclusion of these Options, they should submit their proposal with justification to seek legal advice from LAD(W) and approval from DEVB who should consult the Inter-departmental Working Group on NEC Projects and / or the Steering Committee on NEC Projects where appropriate.

B4.2.4.46 With the inclusion of the requirement under Section F of the Library of Standard *additional conditions of contract*, inclusion of the secondary Option X21 is not required.

#### **‘Z’ Options**

B4.2.4.47 Further details on the ‘Z’ Options – *additional conditions of contract* are available in the Library of the Standard *additional conditions of contract* posted on DEVB’s website under the heading “New Engineering Contract (NEC) – Term Service Contract (TSC) Documents” in “Standard Contract Documents” of the “Publication” section. If the Project Offices propose to use new *additional conditions of contract* not shown in the standard library to suit specific needs, they should seek approval from the Head of Department/Office or his delegate at D2 rank and may seek legal advice from LAD(W) in case of doubt.

## **B4.3 ORGANISATION / SET-UP OF THE TEAM FOR NEC CONTRACTS**

### **B4.3.1 Roles and Responsibilities**

B4.3.1.1 NEC sets out the roles and responsibilities of the *Employer / Client, Service Manager* and *Contractor*.

B4.3.1.2 The duties of these parties are subject to amendments due to alternations or additions to the default contract provisions made in various parts of the contract documents, e.g. Schedule to the Articles of Agreement, *additional conditions of contract* (Z clauses), etc.

B4.3.1.3 Under the spirit of NEC, these parties are encouraged to work in a collaborative way. An effective communication channel has to be established as it is fundamental to joint and prompt problem solving when matters arise. Therefore, the *Service Manager* may consider drawing up a joint project organization chart with the *Contractor* at the beginning of the contract, with continuous updating by all parties, so that all project staff can identify easily the right person of the other parties whom he / she can discuss with when problems arise. Such practice can enhance the cooperation of the project team, and improve the efficiency in tackling problems.

B4.3.1.4 In addition, it may be desirable to combine the site accommodation for the *Service Manager* and the *Contractor* if such arrangement is reviewed to suit the project needs and situations. This has been proved to be a successful arrangement in some projects in which project team members of different parties could communicate with each other directly, and could realize the benefits of joint problem solving more easily, which turns out to be an effective means to build up trusting relationship. For more information, the Project Offices may refer to the details in the following video on the first NEC pilot project in Hong Kong:

<https://www.youtube.com/watch?v=3-S-GgZM4T4>

### **B4.3.2 In-house Contract**

B4.3.2.1 Project teams are set up to stimulate good management and to deliver projects effectively and efficiently.

B4.3.2.2 With regards to the *Service Manager* and his delegates, it is recommended that they should be aware of the difference between GCC form and NEC form well before they take up the respective roles for administering the contract. In particular, they should have a good understanding on the characteristics of NEC, that the contract focuses on partnering, and that the contract itself sets out effective project management tools for managing risks, changes, plan and costs.

B4.3.2.3 Another issue is that the *Service Manager* has to make quick decisions according to the time for reply in the contract. For matters involving variation of contracts as specified in Section 520 and Appendix V(B) of the Stores and Procurements Regulations (SPR) or creation of a new item in the Price List, the *Service Manager* or his delegates needs to seek the approval from the appropriate rank of public officers or authority before replying to the *Contractor* for making such commitment. Please refer to Section B6.1.1.11 for points to note on achieving the requirement of the time for reply.

### **B4.3.3 Consultant-administered Contract**

B4.3.3.1 Similar to in-house contracts, the *Service Manager* and/or his delegates employed by the consultants should have a good understanding on the characteristics of NEC as discussed in Section B4.3.2 above. For resident site staff (RSS), they are encouraged to go through NEC training before working for the contracts adopting NEC.

B4.3.3.2 Taking into account the characteristics of NEC form, the Project Offices should determine suitable notional RSS establishment prior to the invitation of technical and fees proposals for the consultancy agreements. Before the commencement of NEC contracts, the consultants should propose the appropriate scale of RSS establishment to the departmental RSS establishment committee (RSSEC) or equivalent for approval. WDs should establish a database of RSS establishment for NEC contracts with different project nature and scale.

B4.3.3.3 For consultants-administered contracts, the consultants taking up the roles of the *Service Manager* and/or his delegates should obtain the prior approval of the Director's Representative (DR) for any variation of the contract or other expenditure commitment exceeding the sum (normally \$800,000) or creation of a new item in the Price List as specified in the consultancy brief. Subject to the authorisation in SPR 520 and Appendix V(B) of the SPRs, the DR may consider to further delegate his power to the rank of senior professional and/or public officers at D1 rank for vetting and approval of such submissions if appropriate.

B4.3.3.4 Please refer to Section B6.1.1.11 for points to note on achieving the requirement of the time for reply.

### **B4.3.4 Delegation and Replacement of Personnel**

B4.3.4.1 NEC clause 14.2 requires the *Contractor* to be notified before the *Service Manager* delegates any of its actions if necessary.

B4.3.4.2 It is recommended to notify the effective period of time in which the action is delegated.

B4.3.4.3 Delegation needs to be in compliance with the prevailing Government guidelines (e.g. WBTC No. 20/92). A sample delegation letter for NEC3 ECC can be found in the NEC Knowledge Management Platform (i.e. Practice Notes for NEC-ECC > Other sample templates for reference) in the Works Group Intranet Portal of the DEVB. The Project Offices may reference to it for applicable actions and make necessary amendments (including the clause reference) to the sample delegation letter to suit the specific project needs.

## **B4.4 PRE-TENDER ESTIMATE (PTE) AND CONTINGENCIES**

**B4.4.1.1** Similar to conventional contracts, it is necessary to derive the PTE for NEC contracts based on the rates of previous similar contracts and other relevant market information. As most of the previous contracts adopt conventional contract form, the Project Offices may need to make necessary adjustments in the PTE to consider that the Prices may be allowed to be changed for compensation events. In conventional contracts, contractors may have included in the tender prices the risk allowance for some of such events.

**B4.4.1.2** Likewise, in estimating the contingencies for NEC contracts, the Project Offices may need to take into account the difference in allocation of financial risks for the above-mentioned events between conventional contracts and NEC.

**B4.4.1.3** Unlike conventional contracts, the default NEC does not have any term about “contingency sum” and “provisional sum”.

**B4.4.1.4** There are three different figures when preparing the PTE for NEC contracts:

“Pre-tender estimate using conventional approach” :

It is derived using rates of previous similar contracts and other relevant market information as in conventional contract form.

“Pre-tender estimate for tendered total of the Prices / Estimated Total Expenditure excluding estimated contingency sums and provisional sums / Total Value for Tender Assessment (TVTA) excluding estimated contingency sums and provisional sums”:

It is the “Pre-tender estimate using conventional approach”, with adjustment made for difference in treatment of compensation events under NEC compared with conventional contract form, and excluding estimated “contingency sums” and “provisional sums”.

“Pre-tender estimate for forecast total of the Prices / Estimated Total Expenditure / TVTA” :

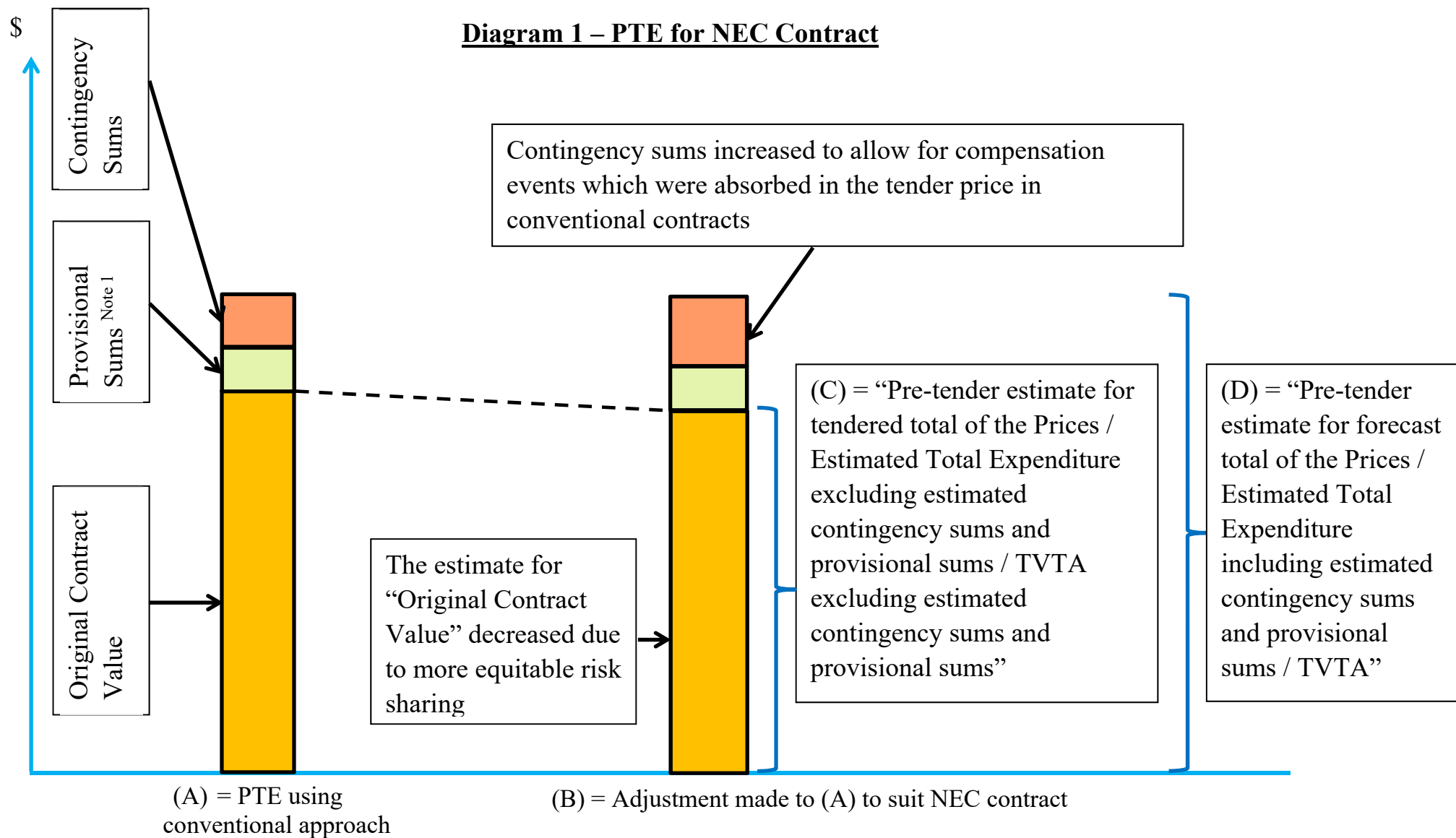
It is the “Pre-tender estimate for tendered total of the Prices / Estimated Total Expenditure excluding estimated contingency sums and provisional sums / Total Value for Tender Assessment (TVTA) excluding estimated contingency sums and provisional sums”, plus estimated “contingency sums” and “provisional sums”.

B4.4.1.5 The “Pre-tender estimate for tendered total of the Prices / Estimated Total Expenditure excluding estimated contingency sums and provisional sums / Total Value for Tender Assessment (TVTA) excluding estimated contingency sums and provisional sums” and “Pre-tender estimate for forecast total of the Prices / Estimated Total Expenditure / TVTA” shall be subject to vetting by the relevant departmental authority as in conventional contracts. While the “Pre-tender estimate using conventional approach” may contain some reference figures for deriving the “Pre-tender estimate for tendered total of the Prices / Estimated Total Expenditure excluding estimated contingency sums and provisional sums / Total Value for Tender Assessment (TVTA) excluding estimated contingency sums and provisional sums”, these figure may serve the purpose of comparison between the estimated prices using rates in conventional contracts and the tender return prices procured using NEC form.

B4.4.1.6 A diagrammatic representation of the above figures is shown on the following page.

B4.4.1.7 It is noted that, in some of the projects, the Project Offices have introduced the terms “contingency sums” and “provisional sums” to the NEC contracts, so as to align with the current practice stipulated in the Stores and Procurement Regulations to enhance the administrative efficiency and to take into account *fee percentage* inserted in the Contract Data Part two (which would have impact on the future assessment of compensation events) to improve the tender evaluation process.

B4.4.1.8 Enhancement to introduce the terms “contingency sums” and “provisional sums” for project administration and tender evaluation as well as unification of approaches are proposed in Section B5.2.



Note 1: It may include price adjustment for inflation, etc.

## **B5 PRACTICE NOTES FOR TENDER STAGE**

### **B5.1 BRIEFING TO POTENTIAL TENDERERS**

B5.1.1 Tender briefings have been held in some projects to facilitate tenderers' understanding of the NEC contracts, and points to note when preparing tenders.

B5.1.2 Tender briefings should be organized to facilitate tenderer's understanding of the submission requirements and the key features for the NEC contracts if considered appropriate. At the tender briefings, tenderers' attention should be drawn to:

- How to fill in tender submissions;
- Points to note in the pricing documents (*price list* and Contract Data Part two);
- Tender documentation;
- Tender evaluation methodology.

### **B5.2 POINTS TO NOTE FOR TENDER ASSESSMENT**

#### **Tender Correction Rules**

B5.2.1 A library of standard correction rules for tender errors for Option A with reference to Appendix A to the Environment, Transport and Works Bureau Technical Circular (Works) No. 41/2002 and characteristics of NEC contracts in Hong Kong has been developed by the DEVB and available in the NEC Knowledge Management Platform in the Works Group Intranet Portal of the DEVB. If the Project Offices wish to propose correction rules not in the standard library, they should seek approval from a public officer at D2 rank or above unless otherwise specified in this Practice Notes and may seek legal advice from LAD(W) in case of doubt. In cases where the proposed correction rules deviate from the policy promulgated under the aforementioned technical circular, the Project Offices should seek approval from DEVB who may consult the Inter-departmental Working Group on NEC Projects and / or the Steering Committee on NEC Projects where appropriate.

#### **Preparation of Tender Report**

B5.2.2 In preparation of the tender report, it should be noted that the forecast total of the Prices / TVTA taking into account contingency sums and provisional sums should be used for tender evaluation purpose. In general, the TVTA for tender evaluation purpose only is calculated based on the Estimated Total Expenditure, the weighting factors and the contract percentages.

B5.2.3 Referring to the standard tender report format in Appendix III(I) of the Stores and Procurement Regulations, the Project Offices should note the following and further amend to suit their contracts as appropriate when preparing the tender report :

“Recommended tendered total of the Prices / TVTA excluding estimated contingency sums and provisional sums for tender assessment purpose”

The original field “Recommended tender sum” is renamed as “Recommended tendered total of the Prices / TVTA excluding estimated contingency sums and provisional sums for tender assessment purpose”.

“Contingencies specified in the tender recommended for acceptance and allowed for the operation of the contract terms”

This is a new field which is equal to the total of the contingency sums and the provisional sums specified in the concerned tender.

“Recommended forecast total of the Prices / TVTA for tender assessment purpose”

This is a new field which is equal to the total of the recommended tendered total of the Prices, the contingency sums and the provisional sums specified or the total value for tender assessment in the concerned tender.

“Sum allowed for this contract in the approved project estimate” :

It should include the “Pre-tender estimate for forecast total of the Prices / Estimated Total Expenditure / TVTA including estimated contingency sums and provisional sums” plus any other allowances for the contract within the APE as appropriate.

“Pre-tender estimate for tendered total of the Prices / Estimated Total Expenditure excluding estimated contingency sums and provisional sums / Total Value for Tender Assessment (TVTA) excluding estimated contingency sums and provisional sums”

The original field “Pre-tender estimate” is split into two separate for “tendered total of the Prices / Estimated Total Expenditure excluding estimated contingency sums and provisional sums / Total Value for Tender Assessment (TVTA) excluding estimated contingency sums and provisional sums” and “forecast total of the Prices / Estimated Total Expenditure / TVTA” for clarity.

“Pre-tender estimate for forecast total of the Prices / Estimated Total Expenditure / TVTA”

The original field “Pre-tender estimate” is split into two separate for “tendered total of the Prices / Estimated Total Expenditure excluding estimated contingency sums and provisional sums / Total Value for Tender Assessment (TVTA) excluding estimated contingency sums and provisional sums” and “forecast total of the Prices / Estimated Total Expenditure / TVTA” for clarity.

B5.2.4 When conducting tender price assessment, the Project Offices should take the “forecast total of the Prices / TVTA for tender assessment purpose” as the “value for tender analysis” or “tender price” when adopting the Formula Approach and the Marking Scheme Approach promulgated in DEVB TCW No. 4/2014 and 4/2014A and assessing the competitiveness of the tenders.

B5.2.5 Sample template of Grand Summary of the Schedule of Percentages in tender documents of contracts where the TVTA is expressed in monetary value and a worked example for deriving the “forecast total of the Prices / TVTA for tender assessment purpose” for NEC contracts is illustrated below:

**Sample Format of Grand Summary in Tender Documents**

Page	Description	Value for Tender Assessment
...	...	
	Sub-total of above (A) [To be calculated based on the weighting factors and the <i>contract percentages</i> , the estimated total expenditure but excluding the estimated contingency sums and provisional sums]	
	Contingency sum for Defined Cost for compensation events* (B)	<i>Insert by project office before tender invitation</i>
	Contingency sum for Fee for compensation events* (C) = (B) x <i>fee percentage</i> inserted by the tenderer in the Contract Data Part two	
	Provisional sum for price adjustment for inflation under Secondary Option X1* (D)	<i>Insert by project office before tender invitation</i>
	Sub-total of all contingency sums and provisional sums above* (E) = (B) + (C) + (D)	
	<b>Forecast total of the Prices / Total Value for Tender Assessment (TVTA) (for tender assessment purpose)*</b> <b>(F) = (A) + (E)</b>	To be completed by the <i>Service Manager</i> designate after receipt of tender

## Remarks:

\* All contingency sums and provisional sums are regarded as “contingencies” for the purpose of internal administration of the *Employer / Client* under the Stores and Procurement Regulations only. The forecast total of the Prices / TVTA is included for tender assessment purpose only and shall not affect the *contract percentages* which shall remain contractually binding. All contingency sums, provisional sums and forecast total of the Prices / TVTA shall not form part of the contract. The *Contractor* shall not rely on any information supplied to it on the contingency sums, provisional sums and forecast total of the Prices / TVTA as estimated changes to the Prices due to the effect of compensation events or other estimated payments which shall be assessed in accordance with the relevant contract terms.

**Worked Example for deriving the “forecast total of the Prices / TVTA”**

	Description	Value (\$M)
<b>Pre-tender estimate for NEC contract (Referring to Diagram 1)</b>		
(a)	Pre-tender estimate for tendered total of the Prices / TVTA excluding estimated contingency sums and provisional sums	100.00
(b)	Estimated provisional sums	8.00
(c)	Estimated contingency sums	15.00
(d)	Pre-tender estimate for forecast total of the Prices / TVTA including estimated contingency sums and provisional sums	123.00
<b>Calculation of forecast total of the Prices / TVTA</b>		
(e)	Sub-total amount from return tender calculated based on the weighting factors and the <i>contract percentages</i> , the estimated total expenditure but excluding the estimated contingency sums and provisional sums	95.00
(f)	Contingency sum for Defined Cost for compensation events	12.00
(g)	<i>fee percentage</i>	20%
(h)	Contingency sum for Fee for compensation events	2.40
(i)	Provisional sums for price adjustment for inflation,	8.00
(j)	<b>Forecast total of the Prices / TVTA (for tender assessment purpose)</b>	<b>117.40</b>

## B6 PRACTICE NOTES FOR CONTRACT STAGE

### B6.0 BUILDING UP A PARTNERING TEAM

B6.0.1 Under NEC, parties are required to work in mutual trust and collaborative manner. Good partnering spirit of the project team has to be built up gradually during construction through joint efforts in resolving site problems and developing ideas for the project. This is the most difficult yet an essential element for a project to succeed.

B6.0.2 At the commencement of contract, the Project Offices are encouraged to arrange with the *Contractor* a joint partnering workshop for establishing an effective communication channel, and setting up project common objectives. During the workshop, parties may also suggest some cost savings or innovative ideas to achieve the project objectives, making it another suitable occasion for adding value to the project, albeit other value management workshops may have been conducted in planning / design stage as per ETWB TCW No. 35/2002 (now subsumed under Section 1.4.2 of Chapter 1 of PAH).

B6.0.3 In order to monitor and maintain the partnering relationship throughout the course of contract, parties may also set up a “Champion Group”, comprising members of management level of the project team, to regularly review the working relationship of their staff, and to propose improvement measures if any problem is identified.

**BA**6.0.4 Good communication is the key to build up trust and teamwork. It is considered a good practice that the project team members consisting of the working level staff from the *Service Manager*, *Contractor*, and perhaps the Subcontractors of key subcontract packages, can have frequent discussions on site conditions, works progress, and foreseeable problems. This enhances cooperation among the team and can be a quick way to resolve site problems with all relevant parties sitting together.

B6.0.5 The partnering workshops are normally covered by the services of consultancy agreements (including NEC advisory services). For in-house projects without engaging separate NEC consultants, the Project Offices may charge the cost of partnering workshops shared by the *Employer / Client* to the appropriate vote subject to funding availability. The costs incurred for organising the partnering workshops (e.g. engagement of facilitator, provision of catering service, etc. unless otherwise specified in the contract) should normally be equally shared between the *Employer / Client* and the *Contractor*. The Project Offices should prevent excessive and unjustified payments of expenditures and avoid over-socializing with the staff of the *Contractors/Subcontractors* for partnering activities from corruption prevention viewpoint.

B6.0.6 Pursuant to ACC D15 on “Ethical Commitment”, the *Contractor* is required to take action to prevent and stop “Corrupt Act” of its Subcontractor and supplier which it is or should be aware of. The *Contractor* may contact the Corruption Prevention Advisory Service of ICAC for advice on procedural corruption prevention controls. The *Contractor* could report corruption through one of the following means –

- by phone to ICAC hotline : 24 hours a day 2526 6366;
- by letter to The Commissioner, Independent Commission Against Corruption, GPO Box 1000, Hong Kong; or
- in person to the ICAC Report Centre : 24 hours a day at G/F, 303 Java Road, North Point, Hong Kong, or ICAC Regional Offices (Address of the Regional Offices can be found at <http://www.icac.org.hk/en/crd/struct/ro>).

## **B6.1 CONTROL OF TIME**

### **B6.1.1 Guidelines for NEC Project Management in Time and Risk**

#### **Communications**

B6.1.1.1 NEC has a discrete provision (clause 13) that defines the requirements on communication. Key points on the related requirements are given below:

- (a) Each communication which the contract requires is communicated in a form which can be read, copied and recorded. Writing is in the *language of the contract*.
- (b) In essence, the use of mobile instant messaging (“MIM”) can be recognized in NEC contracts if it is so expressly specified in the Scope (clause 13.2). However, as the authenticity and integrity of the communication are crucial for public works projects, the policy intent is not to accept MIM as a valid form of communication under public works contracts. In case Project Offices wish to accept MIM as a valid form of communication, they should seek policy support from DEVB and legal advice from LAD(W). In handling daily contract administration and management work, Project Offices and their consultants should be careful in using MIM (e.g. WhatsApp) as a communication means with the *Contractor* so as to avoid the situation that the messages conveyed to the *Contractor* by MIM are taken as formal instructions from the *Employer / Client* or *Service Manager* by conduct. To prevent unnecessary disputes, any important messages (e.g. messages with time and cost implications, acceptance/rejection of works, etc.) conveyed to the *Contractor* by MIM should be followed by formal records in writing. Project Offices are also reminded that any instruction issued for emergency works by MIM should be followed by a Task Order as per the requirement in optional ACC clause B6(2).
- (c) A communication has effect when it is received.
- (d) To ensure timely responses to a communication by the *Service Manager* or the *Contractor*, the parties are required to reply to a communication within the *period for reply* unless otherwise stated in the contract. This requirement will be further addressed in the “Period for Reply” section below.
- (e) A notification or certificate which the contract requires is communicated separately from other communications. Under the TSC Guidance Notes<sup>1</sup> / User Guides<sup>4</sup>, the intent for separated notification is to avoid overlooking of important information and easy tracking of the communication.

#### **Correspondence**

B6.1.1.2 All communications are to be as clear and concise as possible. To avoid loss or confusion regarding written correspondence, all letters, faxes, reports, etc, should be referenced chronologically. They should be dated and addressed for the attention of an identified individual. Sub-titles identifying the subject of the correspondence are to be used as appropriate.

B6.1.1.3 Notification which the contract requires is communicated separately from other communications (NEC clause 13.7). Thus, the project team is encouraged to develop proformas for communication (e.g. instructions and notifications). The project team is reminded to state relevant NEC clauses in the communication, so that the recipient would be able to understand at once the context and authority under the contract for the action to be taken.

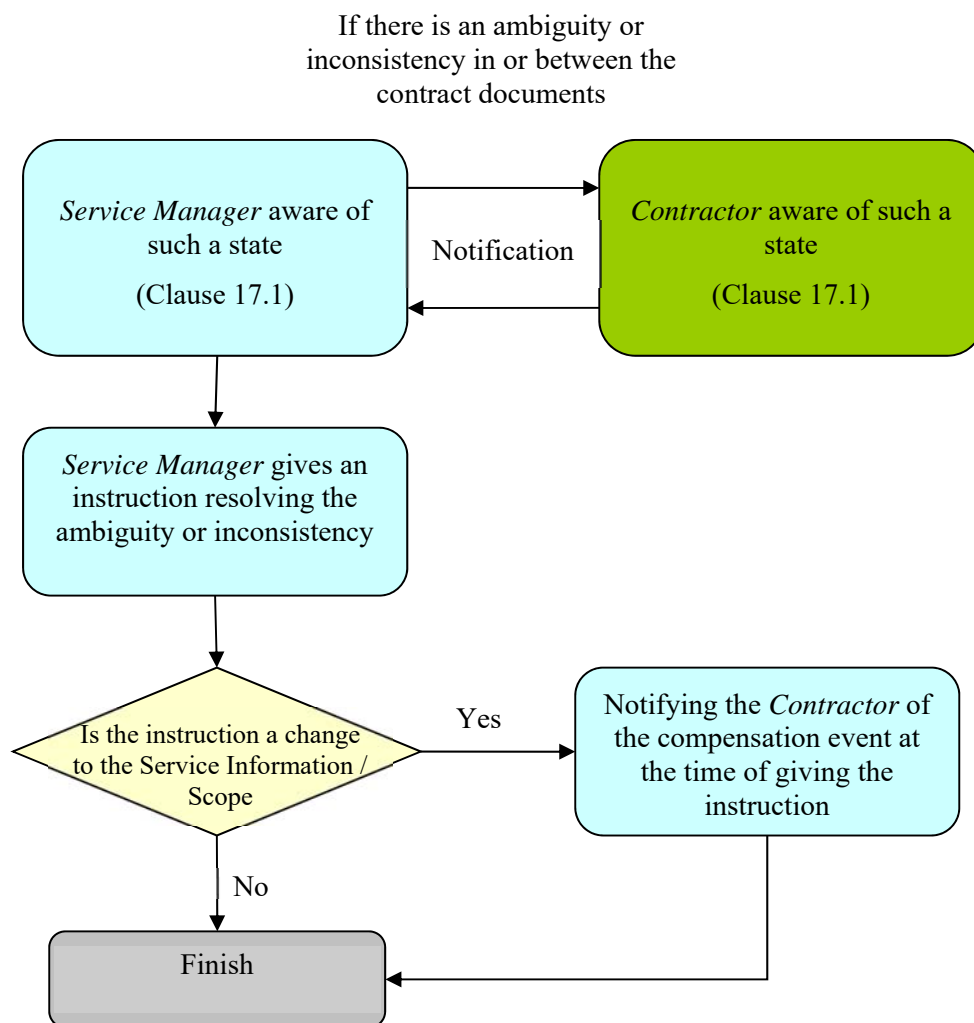
B6.1.1.4 Generally, all project correspondence should be retrievable and should be filed using a comprehensive filing register and be electronically backed up as appropriate.

## Ambiguities and Inconsistencies

B6.1.1.5 There is no stated precedence of documents under NEC. If there are any ambiguities or inconsistencies in or between the contract documents, the *Service Manager* or the *Contractor* should notify the other as soon as possible. The *Service Manager* has the responsibility of resolving the ambiguity or inconsistency in the documents (NEC clause 17.1).

B6.1.1.6 The *Service Manager* may instruct a change to the Service Information / Scope to resolve the ambiguity or inconsistency. Such an instruction is a compensation event provided it is covered by NEC clause 60.1(1).

B6.1.1.7 The process for resolving ambiguities and inconsistencies is summarised below.



## **Period for Reply**

B6.1.1.8 To ensure timely communication, NEC has requirements on the response time from the parties.

B6.1.1.9 Under NEC clause 13.3, if the contract requires the *Service Manager* or the *Contractor* to reply to a communication, he replies within the *period for reply* unless otherwise stated in the contract. Each party shall be aware of the *period for reply* as specified in the Contract Data Part one as such requirement cover types of communication stipulated under NEC clause 13.1, unless there is a specific response time stated in the contract including the amendments made in the Schedule to the Articles of Agreement and the *additional conditions of contract* clauses to suit the specific need of the contract.

B6.1.1.10 Under NEC clause 13.4, the *Service Manager* replies to a communication submitted or resubmitted to him by the *Contractor* for acceptance. If his reply is not an acceptance, the *Service Manager* states his reasons and the *Contractor* resubmits the communication within the *period for reply* taking account of these reasons. A reason for withholding acceptance is that more information is needed in order to assess the *Contractor's* submission fully. The *Service Manager* may withhold acceptance of a submission by the *Contractor*. Withholding acceptance for a reason stated in the contract is not a compensation event (NEC clause 13.8).

B6.1.1.11 The Project Offices should establish an effective communication channel in advance if they foresee the review or acceptance process for certain contract obligations would likely to exceed the response time stipulated in their contracts. Some of the typical examples would be meeting the time requirements under the contract (i) to reply to the *Contractor* on validity of the notified compensation event (NEC clause 61.4) and (ii) to reply to quotations submitted by the *Contractor* (NEC clause 62.3). For (i), the *Service Manager* may need to allow extra time for obtaining the *Employer's* / *Client's* confirmation on the validity of the notified compensation event after initial review by the *Service Manager* and / or his delegates. For (ii), the *Service Manager* may need to allow extra time in seeking the view of the *Employer* / *Client* and / or appropriate ranks of public officers or authority on the assessment of compensation events that have time and /or cost implications, particularly for cost significant compensation events (e.g. for consultant-administered contracts, any variation of the contract or other expenditure commitment exceeding the sum (normally \$800,000) or creation of a new item in the Price List as specified in the consultancy brief). The Project Offices should set reasonable *period for reply* for such scenarios in the amendment to NEC TSC for NEC clauses 61.4 and 62.3.

B6.1.1.12 For urgent compensation events which any delay of implementing it would inevitably affect the time and cost, the Project Offices are reminded to accord priority to it and to alert the senior management the time frame requirements under NEC when seeking views / obtaining approvals of such compensation events.

B6.1.1.13 Where necessary, the *Service Manager* may extend the *period for reply* to a communication if the *Service Manager* and the *Contractor* agree to the extension before the reply is due. The *Service Manager* shall notify the *Contractor* of the extension which has been agreed (NEC clause 13.5). The parties should also be aware of the provision on extension of time allowed for responses in individual sections, such as reply to quotations submitted by the *Contractor* under NEC clause 62.5.

## **Early Warning**

B6.1.1.14 Early warning mechanism is one of the key procedures in the NEC to stimulate good project management. It encourages both the *Service Manager* and the *Contractor* to raise any event which may cause an impact to the contract to the other party as soon as it is noticed. The successful implementation of the early warning mechanism hinges on the trusting relationship, and openness developed within the project team, which drive the parties to achieve their common project goals. If followed properly, the early warning mechanism gives an early opportunity for all parties to devise mitigation measures jointly and to select the best option.

B6.1.1.15 When risks are identified, either party shall alert another by giving an early warning. The processes begin and instead of fault-finding, the parties shall focus on resolving the risk, and take appropriate follow-up actions after risk reduction / early warning meeting. The question as to the responsibility or owner of the risk, which should be adequately set out in the contract, should not be the focus of discussion during the meeting. The contract mechanisms have been designed to ensure that:

- (i) The project team actively takes forward rigorous risk management, and
- (ii) The parties are financially motivated to manage risks successfully.

The general procedure of risk management under NEC is set out below.

## **Start-up of Risk Management Procedure**

B6.1.1.16 Before executing the contract, both Contract Data Part one and Part two have to be completed by the *Employer / Client* and *Contractor* respectively. A section within both Contract Data Part one and Part two require a list of matters to be identified, which will be included in the Risk Register / Early Warning Register.

B6.1.1.17 The matters will be collated by the *Service Manager*, who will in turn transfer these onto the Risk Register / Early Warning Register. It is from this initial Risk Register / first Early Warning Register that all parties should proactively seek to manage and update should issues arise throughout the duration of the contract.

## **Early Warning Notice**

B6.1.1.18 Under NEC3 clause 16.1 / NEC4 clause 15.1, either the *Contractor* or the *Service Manager* may give an early warning notice as soon as either becomes aware of any of the following:

- (i) Increase of the total of the Prices,
- (ii) Interfere with the timing of the *service* or
- (iii) Impairing the effectiveness of the *service*.

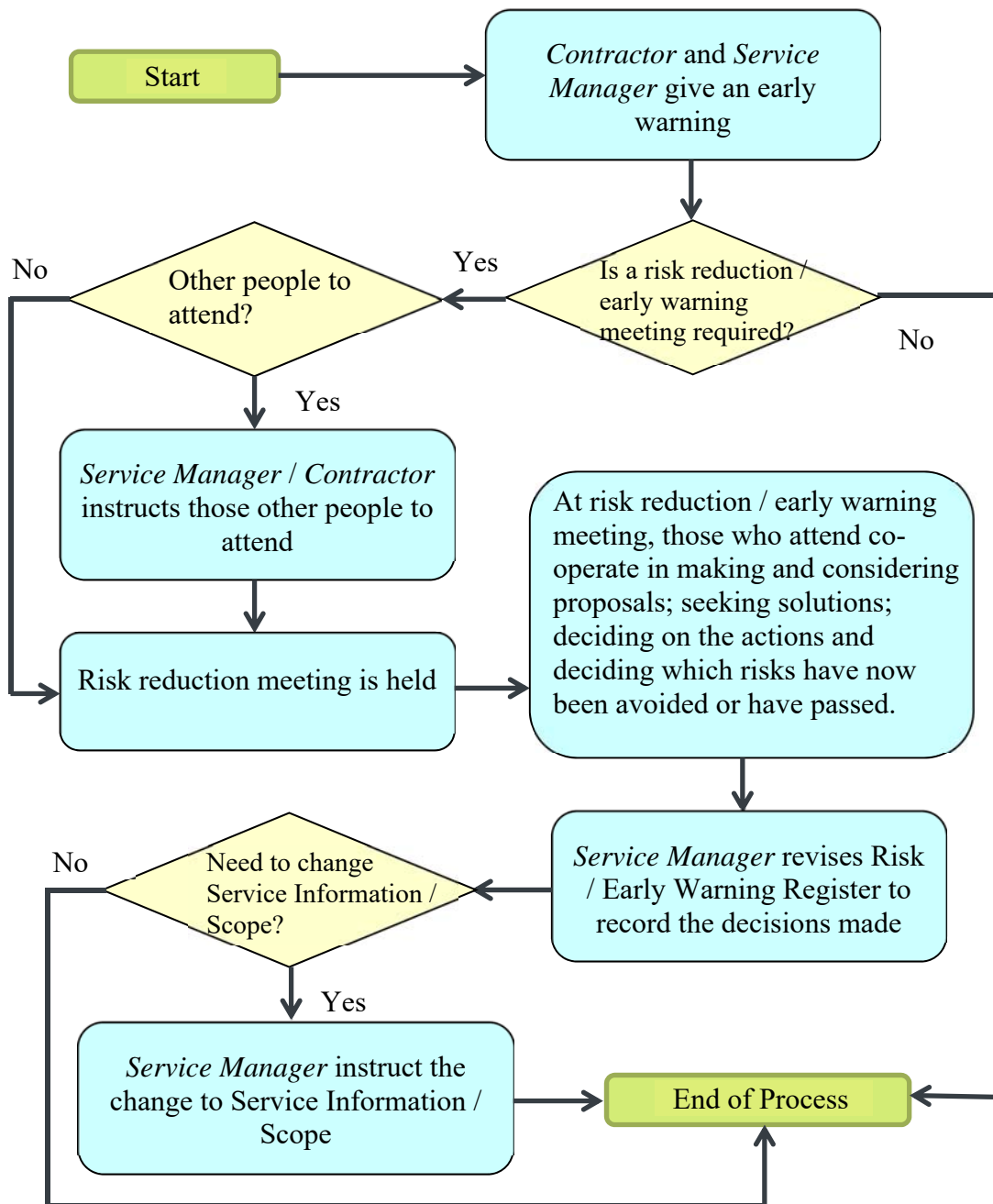
The *Contractor* may also give an early warning on any other matter which could increase his total cost.

B6.1.1.19 The purpose of the early warning is to maximize the time available for both the *Contractor* and the *Service Manager* to consider the implication of the matter and to take necessary actions to mitigate any potential consequences.

B6.1.1.20 It is important to note that an early warning notice is a contractual requirement. In accordance with the TSC Guidance Notes<sup>1</sup> / User Guides<sup>4</sup>, this make binding the obligation to warn as soon as possible of anything which may affect the cost and the proper performance of the *service* in relation to timing and effectiveness. Should the *Contractor* fail to comply with this requirement, the *Service Manager* should notify the *Contractor* his decision that the early warning should have been given (NEC clause 61.5) so that the *Contractor* knows the correct basis for his assessment including the sanction imposed for his failure to give early warning under NEC3 clause 63.6 / NEC4 clause 63.8.

B6.1.1.21 Under any compensation event, if the *Service Manager* decides that the *Contractor* failed in giving an early warning that he could have given, the *Service Manager* informs the *Contractor* of his decision when he instructs the *Contractor* to submit quotations (NEC clause 61.5). The *Service Manager* will assess the compensation event as if the *Contractor* had given early warning (NEC3 clause 63.6 / NEC4 clause 63.8). This is to ensure that the *Contractor's* failure in not notifying an early warning matter does not prejudice the *Service Manager* in his management of the contract.

B6.1.1.22 After receipt of an early warning notice, the *Service Manager* may respond according to the process flow chart shown as below:



### **Risk Reduction / Early Warning Meeting**

B6.1.1.23 NEC3 clause 16.2 / NEC4 clause 15.2 states either the *Service Manager* or the *Contractor* may instruct the other to attend risk reduction / early warning meeting (except the first early warning meeting). Each may instruct other people to attend if the other agrees.

B6.1.1.24 Depending on the potential consequence of the risks, the risk reduction meeting / early warning meeting will be chaired by the *Service Manager* or his delegates and the attendees will include the *Contractor*'s representatives and other people, who may be able to assist in solving the problem, agreed by both parties.

B6.1.1.25 If a decision needs a change to the Service Information / Scope, the *Service Manager* instructs the change at the same time as he issues the revised Risk Register / Early Warning Register (NEC3 clause 16.4 / NEC4 clause 15.4). If an early warning notice is considered to be a compensation event, the *Service Manager* will notify the *Contractor* of a compensation event and instruct the *Contractor* to submit a quotation, unless the event arises from a fault of the *Contractor* or the quotation has already been submitted (NEC clause 61.1).

### **Risk Register / Early Warning Register**

B6.1.1.26 NEC3 clause 16.4 / NEC4 clause 15.4 states that the *Service Manager* revises the Risk Register / Early Warning Register to record the decisions made at each risk reduction meeting / early warning meeting and issues the revised Risk Register / Early Warning Register to the *Contractor*. The Risk Register / Early Warning Register is both a specified component of the NEC contractual framework and an output of risk management process.

B6.1.1.27 The Risk Register / Early Warning Register typically summarises the following key matters in tabular form:

- (i) Identified risks;
- (ii) Mitigating measure(s); and
- (iii) Action party.

B6.1.1.28 The Risk Register / Early Warning Register is a “live” working document, used as a tool to manage the project pro-actively with a view to minimising the impact of risks on the project objectives. It is intended to be updated continually throughout the life of the contract. This updating includes both the inclusion of new risk items and the review of previously identified risks. Risk items shall be reviewed periodically and in every risk reduction meeting / early warning meeting, and they should be marked as “closed” if they have been removed or resolved or marked as “open” if agreed actions are being carried out. New risk items are added to the Risk Register / Early Warning Register by the *Service Manager* when the *Service Manager* or the *Contractor* give early warning of a potential risk event in accordance with NEC3 clause 16.1 / NEC4 clause 15.1 each time.

B6.1.1.29 The Risk Register / Early Warning Register is an important tool for all the members of the project team as it affords all relevant parties an opportunity to make informed decisions on the project and make appropriate decisions on events which may have time and / or cost implications.

B6.1.1.30 To ensure the effective use of the Risk Register / Early Warning Register, it should be regularly reviewed and updated through the participation of all parties.

B6.1.1.31 The following illustrates a sample format of an NEC risk register:

Item No.	Date of Receipt of Early Warning	Issued by	Date of Risk Reduction Meeting(s)	Potential Problem(s) and the Risk(s)	Action to be taken to avoid/reduce the risk(s)	Action taken	Action by	Status (Open / Closed)

### **Proactive Risk Management**

B6.1.1.32 NEC encourages early identification of problem and resolution of it in a collaborative manner. Therefore, the Project Offices should take a proactive approach in working with the contractors when risks are identified. Below sets out some recommended practices for proactive risk management :

- The parties should embrace the spirit of mutual trust and co-operation in dealing with early warnings. As long as the matter falls under the three bullet points described in NEC3 clause 16.1 / NEC4 clause 15.1, the *Contractor* and the *Service Manager* should deal with the early warning in a collaborative manner;
- In addition to being called following notification of early warning in respect of any newly identified risks, risk reduction meeting / early warning meeting should be held on a regular basis (frequency to be adjusted to suit the specific project situations) to check whether risks can be closed or re-rated, and to review the status of mitigation measures or risk treatment action plans. During such meetings, subcontractors and other stakeholders, such as utility undertakers, can also be invited to join, as the parties may capitalise on subcontractors' expertise in tackling site problems identified and minimizing the impact of the risks;
- The parties should bear in mind that during risk reduction meeting / early warning meeting, they should focus on discussing viable solutions to avoid/reduce the risk, and to assign suitable party to carry out follow-up actions as required. To ensure good monitoring and timely completion of these follow-up actions, the parties should agree in the meeting a tentative action completion date;
- If the early warning leads to a change to the Service Information / Scope, the *Service Manager* should notify the *Contractor* of a compensation event if covered by NEC clause 60.1(1) and instruct the *Contractor* to submit a quotation, unless the event arises from a fault of the *Contractor* or the quotation has already been submitted; and

- The parties should maintain a clear line of communications, and establish a highly efficient communication channels, such as the use of common mobile communication applications, so that risks or problems can be communicated in an effective way and solved as early as possible.

## **B6.1.2 Plan**

### **Information to be included in the plan**

B6.1.2.1 NEC makes plan a significant document in the contract that imposes contractual obligations upon the parties to follow. The *Contractor* needs to include information on the plan as required under NEC3 clause 21.2 / NEC4 clause 31.2.

B6.1.2.2- The *Contractor* should provide sufficient information to allow the *Service Manager* to make a decision whether to accept the plan. The *Service Manager* should exercise his own discretion in vetting the *Contractor's* plan thoroughly and in a pragmatic manner.

B6.1.2.3 Notwithstanding the above, it is recommended that discussion between the *Service Manager* and the *Contractor* should be facilitated before submission of plan by the *Contractor*. As a result, the parties will be aware of the key elements to be included in the submitted plan and will work collaboratively in the plan submission and acceptance processes.

### **Plan Submission and Acceptance**

B6.1.2.4 The Accepted Plan is either (i) the plan identified in the Contract Data Part two or (ii) the latest plan accepted by the *Service Manager* (NEC clause 11.2(1)).

B6.1.2.5 When Marking Scheme Approach is adopted for tender assessment, it may be useful to require the tenderers to submit a plan for tender assessment. However, it should be noted that such plan should normally not be regarded as the Accepted Plan under NEC clause 11.2(1). The *Contractor* is obliged under NEC3 clause 21.1 / NEC4 clause 31.1 to submit a first plan to the *Service Manager* for acceptance. The plan submitted under tender may be made reference to when the *Contractor* prepares the first plan.

B6.1.2.6 The *Contractor* should within the period required under the Contract Data Part one submit a first plan for acceptance and the *Service Manager* should either accept the plan or notify the *Contractor* of his reasons for not accepting it (NEC3 clause 21.3 / NEC4 clause 31.3). The *Service Manager* should note that a non-acceptance of the plan for reasons other than those listed in NEC3 clause 21.3 / NEC4 clause 31.3 is a compensation event under NEC3 clause 60.1(8) / NEC4 clause 60.1(9).

B6.1.2.7 If no plan is submitted, one quarter (25%) of the Price for Service(s) Provided to Date is retained in assessments of the amount due until the *Contractor* has submitted a first plan to the *Service Manager* for acceptance (NEC3 clause 50.3 / NEC4 clause 50.5). This clause is only applicable to the first plan. Great care must be exercised in accepting a plan which fall short of the information required and the *Service Manager* should ensure that he is satisfied with all relevant aspects of the plan before accepting the plan.

B6.1.2.8 If the plan does not satisfy the requirements under the contract, the *Service Manager* should refuse to accept the plan for reasons stated in NEC3 clause 21.3 / NEC4 clause 31.3. The information required to be shown on each plan is extensive, comprehensive and generally acknowledged to be onerous.

B6.1.2.9 If, after several rounds of correspondence, the plan is still considered to be substandard, this would become an issue to project management as an Accepted Plan is not in place. To deal with this, the *Service Manager* may:

- Arrange joint meeting or workshop among the key staff who prepare and assess the plan. In the meeting or workshop, the key requirements in the plan should be highlighted, and the logic or sequencing of the plan should be elaborated to enhance understanding by the other party. The definitions of terms namely “time risk allowances” and their provisions in the plan should also be elaborated to ensure mutual understanding of their importance.
- Carry out the assessment of the plan with due consideration to the stages of the *service*. In large contracts spanning across a considerable period of time, or complicated contracts which design input from the *Contractor* may be required, it may not be practical for the *Contractor* to schedule a detailed plan and submit his “statements of how he plans to do the work” for all activities, especially those in the later stage which the subcontracting package or the design is yet to be prepared. In this case, the *Service Manager* or his delegates may take a pragmatic approach in assessing the plan. The *Service Manager* may request for a sub-plan showing detailed planning and programming of activities for a period, say, for coming three months to a year, and with other later activities shown with a minimum required level of details. If such sub-plan is considered practicable and realistic, the *Service Manager* may accept this sub-plan with condition(s) for separate submission and acceptance of detailed planning and programming of later activities and the full plan may be accepted first and taken as an Accepted Plan if no major observation is identified.

B6.1.2.10 It should also be noted that, without an Accepted Plan, the *Service Manager* will assess a compensation event by his own assessment as per NEC3 clause 64.2 / NEC4 clause 64.3.

B6.1.2.11 If the *Service Manager* chooses not to accept the plan for reasons not listed under NEC3 clause 21.3 / NEC4 clause 31.3, or if he does not reply within the stipulated time frame, then that would become a compensation event under NEC3 clause 60.1(8) or 60.1(6) / NEC4 clause 60.1(9) or 60.1(7).

### **Plan Register**

B6.1.2.12 As a good practice, it is recommended to develop a plan register for the contract to record all plans submitted by the *Contractor* during the course of the contract and the approval status. It is primarily used for recording purposes and does not represent any formal acceptance or rejection of the plan.



## **B6.2 CONTROL OF COST**

B6.2.0 NEC promotes effective project management, and one of the key aspects is on project cost. Common problems in administering the project cost, including assessment of payment to the *Contractor*, management of the Price for Service(s) Provided to Date and the total of the Prices throughout the contract stage, would be discussed in the following sections.

### **B6.2.1 Payment to the *Contractor***

#### **Option A**

B6.2.1.1 In accordance with NEC3 clause 50.2 / NEC4 clause 50.3 and as amended by the Library of Standard Amendments to NEC TSC, the amount due is:

- the Price for Service(s) Provided to Date,
- plus other amounts to be paid to the *Contractor*,
- less amounts to be paid by or retained from or deducted from the *Contractor*.

B6.2.1.2 As defined in NEC3 clause 11.2(17) / NEC4 clause 11.2(25) and as amended by the Library of Standard Amendments to NEC TSC, the Price for Service(s) Provided to Date for the contract is the total of the Prices for Service(s) Provided to Date for all instructed Task Orders. The Price for Service(s) Provided to Date for each Task Order to which the provisions for Clause A11 of the *additional conditions of contract* is not applicable is the total of:

- the Price for each lump sum item, at its Contract Rate or where no Contract Rate is applicable, at a sum assessed in accordance with the provisions of the contract including the Price List, which the *Contractor* has completed; and
- the amount for each item of work, other than lump sum item, calculated by multiplying the quantity which the *Contractor* has completed by its Contract Rate or where no Contract Rate is applicable, a rate assessed in accordance with the provisions of this contract including the Price List.

B6.2.1.3 For a Task Order to which the provisions of Clause A11 of the *additional conditions of contract* are applicable, the Price for Service(s) Provided to Date is the relevant *standard base value* as stated in the Contract Data Part one upon the satisfactory completion of such Task Order.

B6.2.1.4 To enable payment for materials on site, Project Offices shall refer to clause 50.2A in the Library of Standard Amendments to NEC4 TSC. For the avoidance of doubt, payment for materials on site is also allowed if provisions similar to the aforementioned clause 50.2A is adopted in NEC3 TSC. In case of part payment for materials on site, the *Service Manager* shall document the assessment of apportionment of the work with justification.

## **Payment Application**

B6.2.1.5 In assessing the amount due, the *Service Manager* considers any application for payment the *Contractor* has submitted on or before the assessment date pursuant to NEC3 clause 50.4 and NEC4 clause 50.2 as amended by the Library of Standard Amendments to NEC TSC.

B6.2.1.6 Advance payment has been introduced to assist the construction industry amidst the epidemic situation (e.g. SDEV's memo ref. ( ) in DEVB(W) 510/33/02 dated 5 June 2020 and 10 March 2022). Project offices shall refer to relevant memos, the Library of Standard Amendments to NEC TSC and / or the Library of ~~Standard~~ *additional conditions of contract* for adoption of advance payment.

### **Assessment and Certification of Payment**

B6.2.1.5 The first assessment date is determined by the *Service Manager* (NEC clause 50.1), preferably after discussion with the *Contractor*. As amended by the Library of Standard Amendments to NEC TSC, the *Contractor* is required to submit to the *Service Manager* a draft statement (NEC3) / payment application (NEC4) by not later than 14 days before each assessment date. Under NEC clause 51.1, the *Service Manager* certifies payment within two weeks of each assessment date (as amended by the Library of Standard Amendments to NEC TSC) and the assessment of payment takes place at each assessment date. Then each certified payment should be made within three weeks of the assessment date in accordance with NEC clause 51.2. Based on the experience on projects using NEC, the timeframe for certification of payment would be tight for the *Service Manager*. The *Service Manager* should allow sufficient time and resources to fulfil such contract requirement.

B6.2.1.6 As stated in Section B6.2.1.5 above, the *Contractor* should submit the draft statement / payment application 14 days ahead of the assessment date. Further submission by the *Contractor* beyond the assessment date may not be considered by the *Service Manager* according to NEC clause 50.4 (as amended by the Library of Standard Amendment to NEC TSC).

B6.2.1.7 The day(s) or week(s) under the context of NEC are referred to as calendar day(s) or week(s) which include weekends and public holidays.

### **Late Payment and Corrected Payment**

B6.2.1.8 Interest will be paid to the *Contractor* if there is late payment (NEC clause 51.2).

B6.2.1.9 Under NEC clause 51.4, interest is basically calculated on a daily basis at the *interest rate* and is compounded annually. Amendments have been made in the Library of Standard Amendments to NEC TSC in relation to how interest should be calculated. As such, interest should be calculated at a simple interest rate according to the current practice.

B6.2.1.10 As amended by the Library of Standard Amendments to NEC TSC, the first bullet point of NEC clause 51.3 should be deleted so that interest will not be paid for any corrected amount in a later certificate due to compensation events or other reasons.

### **Price Adjustment for Inflation**

B6.2.1.11 Under NEC, contract price fluctuation is a secondary Option X1 – Price adjustment for inflation that gives the flexibility to the *Employer / Client* whether to allocate the risk of inflation to the *Contractor*.

B6.2.1.12 As in GCC form, the operation of contract price fluctuation should be referred to ETWB TCW No. 21/2003. For Option A, “Index Numbers of the Costs of Labour and Materials used in Public Sector Construction Projects (April 2003 = 100)” and “Average Daily Wages of Workers Engaged in Public Sector Construction Projects as Reported by Main Contractor” compiled by the Census and Statistics Department should be used for calculating the fluctuation. (Project Offices should refer to DEVB TCW No. 4/2021 for adoption of 2021-based Index Numbers).

B6.2.1.13 For Option A, the amount for price adjustment is calculated in accordance with NEC3 clause X1.4 / NEC4 clause X1.3, and it covers the total amount in respect of price adjustment up to the date of each assessment.

B6.2.1.14 It should be noted that under NEC3 clause X1.3 / NEC4 clause X1.5, for compensation events, the “current” Defined Cost including actual and forecast Defined Cost (NEC clause 63.2) assessed for the compensation events will be adjusted to base date level by dividing by one plus the Price Adjustment Factor for the last assessment of the amount due. For Option A, the amount due to compensation events will be all on base date level and will then be adjusted under NEC3 clause X1.4 / NEC4 clause X1.3.

## **B6.3 COMPENSATION EVENTS**

### **B6.3.1 Grounds for Compensation Events**

B6.3.1.1 Compensation events are events which may trigger the reassessment of the Prices and / or Task Completion Dates.

B6.3.1.2 Under default NEC, the compensation events listed under clauses 60.1 and X19.10 (NEC3) allows both time and monetary entitlement to the *Contractor*. As stated in the following sections, time and monetary entitlement or time entitlement principles should be applied in different scenarios in public works projects in Hong Kong. Nevertheless, the Project Offices may take into account project specific needs and propose amendments to the contract provisions. For such cases, the Project Offices should seek the endorsement of the DEVB who may consult the Inter-departmental Working Group on NEC Projects and/or the Steering Committee on NEC Projects for the proposed deviations if appropriate. Amendment in NEC3 clause 63.5 / NEC4 clause 63.7 should also be made to exclude rights by the parties to change the Prices under such types of “time only” compensation events.

#### **(a) Weather Events**

B6.3.1.3 As amended by the Library of Standard Amendments to NEC TSC for NEC3 clause X19.10(8) / NEC4 clause 60.1(21), taking into account the cost uncertainty brought about by weather risks and contract administration consideration in public works projects in Hong Kong, the weather events should be provided with time compensation only for Task Orders under Option A.

#### **(b) Shortage of Labour**

B6.3.1.4 For compensation events which arise from shortage of labour, the *Contractor* can be compensated through NEC3 clause 60.1(16) / NEC4 clause 60.1(19). The *Contractor* is entitled to time compensation only as amended by the Library of Standard Amendments to NEC TSC. The *Contractor* should provide the supporting information including but not limited to the evidence on recruitment difficulties, unemployment rates and labour shortage statistics (any material change from tendering period to contract period) of concerned trades for such compensation events.

#### **(c) Utility Interference**

B6.3.1.5 Utility interference, which in conventional contract entitles the *Contractor* extension of time only, is a compensation event with both time and money compensation under default NEC.

B6.3.1.6 Taking into account the cost uncertainty brought about by utility interference and contract administration consideration in public works projects in Hong Kong, the events associated with utility interference should be provided with time compensation only. The relevant amendment in the Library of Standard Amendments to NEC TSC should be adopted in the NEC contracts accordingly.

B6.3.1.7 If utility undertakings do not work within the times shown in the Accepted Plan or accepted Task Order programme or within the conditions stated in the Service Information / Scope, the *Contractor* may be entitled to compensation in accordance with NEC3 clause 60.1(5) or X19.10(5) / NEC4 clause 60.1(6).

B6.3.1.8 For unchartered underground utilities, its diversion not stated in the accepted Task Order programme may lead to interruption of the Task and it may be dealt with under NEC3 clause X19.10(5) / NEC4 clause 60.1(6).

B6.3.1.9 If the *Service Manager* decides to change the design to get around the utility interference that leads to a change to the Task Order, it should be dealt with through NEC3 clause X19.10(1) / NEC4 clause 60.1(1).

**(d) Delay by the *Employer* / *Client* or Others**

B6.3.1.10 As part of the submission requirements for plan or Task Order programme listed under NEC3 clause 21.2 or X19.6 / NEC4 clause 31.2 or clause 33.2, the *Contractor* should show the dates when the order and timing of the work of the *Employer* / *Client* and Others in the plan or programme. The *Service Manager* should note that once the plan or programme together with these information are accepted, any delay by the *Employer* / *Client* or Others will be a compensation event under NEC3 clauses 60.1(5) or X19.10(5) as appropriate / NEC4 clause 60.1(6). Therefore, the *Service Manager* should reasonably assess if the *Contractor*'s proposed plan or programme is reasonable and the time required for the *Employer* / *Client* or Others to action is achievable. Similar to the utility interference, the compensation events under NEC3 clause 60.1(5) or X19.10(5) / NEC4 clause 60.1(6) should be provided with time compensation only. The relevant amendment in the Library of Standard Amendments to NEC TSC should be adopted in the NEC contracts accordingly.

**(e) Change in Law**

B6.3.1.11 For compensation event which arise from Change in Law, the *Contractor* will be compensated with both time and money through NEC3 clause 60.1(15) / NEC4 clause 60.1(18) (as amended under the Library of Standard Amendments to NEC TSC). Following the current practice in which only changes in the ordinances and regulations given in the list attached to *additional conditions of contract* clause A1 are subject to compensation events, the Project Offices should be reminded that Change in Law as a compensation event is exercised under NEC clause 60, rather than adopting the secondary Option X2.

**(f) Prevention Events**

B6.3.1.12 For prevention events arising from the *Employer* / *Client* or Others happening in Task Order(s), the *Contractor* can be compensated through NEC3 clause X19.10(6) / NEC4 clause 60.1(23). The *Contractor* is entitled to time compensation only as amended by the Library of Standard Amendments to NEC TSC.

**(g)                    *Service Manager’s Failure to Respond to a Communication or Withhold an Acceptance***

B6.3.1.13      The *Service Manager* should be aware of failure to respond to a communication or withholding an acceptance that will lead to compensation event under NEC3 clause 60.1(6) and 60.1(8) / NEC4 clause 60.1(7) and 60.1(9) respectively.

**(h)                    *Correction to an Assumption of a Compensation Event***

B6.3.1.14      As explained in the TSC Guidance Notes<sup>1</sup> / User Guides<sup>4</sup>, if there is considerable uncertainty over the effect of a compensation event, the *Service Manager* can decide, in consultation with the *Contractor* where appropriate, to limit this uncertainty by stating the assumptions the *Contractor* is to base his quotation on. This should be read together with NEC clause 61.6, that if the *Service Manager* decides that the effect of a compensation event are too uncertain to be forecast reasonably, he states assumption about the event in his instruction to the *Contractor* to submit quotation. Any correction to the *Service Manager’s* assumption is an entitled ground for a compensation event for the *Contractor* (NEC3 clause 60.1(13) / NEC4 clause 60.1(14)). It should however be noted that such assumptions in this context can only be stated by the *Service Manager* but not the *Contractor*.

B6.3.1.15      After the *Service Manager* has stated assumptions when instructing the *Contractor* to submit quotations, the assessment is then made based on the stated assumptions, which will be corrected if the assumptions are later found to be incorrect. To facilitate the agreement of the quotations for compensation events with uncertainties, the *Service Manager* should make use of this provision and state suitable assumptions.

## **B6.3.2 Response Timeframe**

### **Notifying Compensation Events**

B6.3.2.1 Notification of compensation event is dealt with under NEC clause 61.

B6.3.2.2 Both the *Service Manager* and the *Contractor* should notify potential compensation event to each other based on NEC clause 61.1 and 61.3.

B6.3.2.3 NEC clause 61.1 is a clear instruction to put the work “into effect” and the *Service Manager* instructs the *Contractor* to provide quotation at the same time. The *Contractor* should undertake the work that has been requested. Acceptance of quotation is not a prerequisite for the *Contractor* to undertake the work under the compensation event.

B6.3.2.4 NEC3 clause 61.2 / NEC4 clause 65.1 is not a compensation event but an instruction to provide a quotation as the *Contractor* does not put the instruction into effect. The *Service Manager* can know the time and cost effect of the proposed instruction before he notifies a compensation event.

### **Service Manager’s Instruction on Quotations**

B6.3.2.5 When the *Service Manager* considers issuing an instruction or changing a decision but wishes to know its effect on time and cost first, he may instruct the *Contractor* to submit quotations for the proposed instruction or proposed changed decision which will not be put into effect (NEC3 clause 61.2 / NEC4 clause 65.1).

### **Notification of Compensation Event by the Contractor**

B6.3.2.6 If the *Contractor* believes that the event is a compensation event but the *Service Manager* has not notified the event to the *Contractor*, the *Contractor* should notify the *Service Manager* a compensation event within eight weeks of becoming aware of the event. Otherwise, the *Contractor* will not be entitled for any compensation unless the event arises from the *Service Manager* giving an instruction, issuing a certificate, changing an earlier decision or correcting an assumption (NEC clause 61.3).

B6.3.2.7 After the *Contractor* submits the notification of compensation event, the *Service Manager* should decide if there are any changes to the Prices and/or Task Completion Date and notify the *Contractor* according to NEC clause 61.4 and/or NEC3 clause X19.12 as appropriate after applying the following tests:

- (i) whether the event arises from the fault of the *Contractor*;
- (ii) whether the event has happened and is expected to happen;
- (iii) whether the event has any effect upon Defined Cost and/or Task Completion;

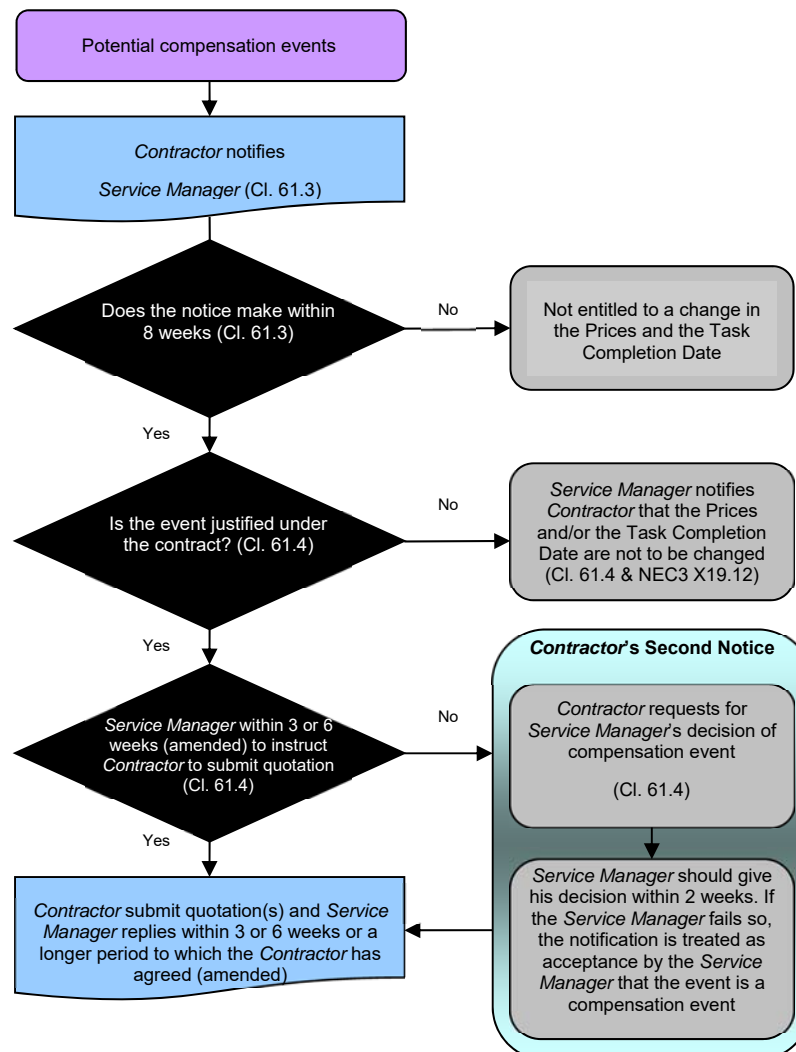
- (iv) whether the event is one of the compensation events stated in the contract; and
- (v) whether the event has been notified within the timescale set out in these *conditions of contract*.

B6.3.2.8 If the *Service Manager* considers the event is not a compensation event, the *Service Manager* should give brief explanation of his decision. If the *Service Manager* considers the event is a compensation event, the *Service Manager* notifies his decision to the *Contractor* and, if his decision is that the Prices are to be changed, request the *Contractor* to submit quotation for the work in relation to the compensation event.

B6.3.2.9 If the *Service Manager* does not notify his decision to the *Contractor* within six weeks for events requiring to obtain confirmation of no objection from the *Employer / Client* in accordance with clause B1 of the *additional conditions of contract* or three weeks for other events (as amended by the Library of Standard Amendments to NEC TSC) of the *Contractor's* notification or a longer period to which the *Contractor* has agreed, the *Contractor* may notify the *Service Manager* of his failure. The *Service Manager* should notify his decision to the *Contractor* within further two weeks of that notification or if not, be deemed to have accepted by his silence (NEC clause 61.4).

B6.3.2.10 It is advisable for the *Contractor* to indicate the order (not exact quantum) of time and cost implication in his notification for compensation event in order to facilitate the *Service Manager* to seek the *Employer's / Client's* agreement if the cost estimate for the compensation event to be issued is over his assigned authority, the *Contractor* should clearly state his ground in his notification for compensation event or discuss with the *Service Manager* before issuing the notification to avoid time-consuming exchange of correspondences.

B6.3.2.11 A process map showing the procedures in notifying compensation event is shown in the diagram below:



### Grouping Compensation Events

B6.3.2.12 Although default NEC recommends compensation event to be assessed separately, it may be practical to lump relevant minor issues in one compensation event.

### **B6.3.3 Assessment of Compensation Events**

B6.3.3.1 In accordance with NEC clause 63.1 (as amended by the Library of Standard Amendments to NEC TSC), for a compensation event which only affects the quantity of work shown in the Task Order, the change to the Prices is assessed by multiplying the changed quantities of work by the appropriate Contract Rate.

B6.3.3.2 For other compensation events, the monetary implication from compensation events is determined by the Defined Cost plus the resulting Fee basis which is further elaborated below:

B6.3.3.3 Under NEC clause 63.2, the changes to the Prices are assessed as the effect of the compensation event upon:

- actual Defined Cost of the work already done;
- forecast Defined Cost of the work not yet done; and
- the resulting Fee.

B6.3.3.4 While assessing the cost, the *Service Manager* should be aware of the requirement under NEC3 clause 63.7 / NEC4 clause 63.9 that assessment of the effect of a compensation event includes risk allowances for cost for matters which have a significant chance of occurring. As such, the *Service Manager* has to assess whether the risks allowed by the *Contractor* are appropriate. If it is assessed as appropriate and the quotation is subsequently accepted, the Prices will be adjusted and could not be changed afterwards even if the risks allowed for have not been materialized. Based on the experience in certain projects, pre-pricing by the *Contractor* for a compensation event was not easily done, as the *Contractor* might be reluctant to bear additional risks during the course of the work and prefer to value the events retrospectively when the actual impact was known. However, this is against the prospective approach adopted by NEC in assessment of compensation events.

#### **Quotations for Compensation Events**

B6.3.3.5 A quotation is the *Contractor's* assessment of the monetary and time effects of a compensation event (NEC clause 62.2 and NEC3 X19.11).

B6.3.3.6 There are three instances in which the *Service Manager* may instruct the *Contractor* to submit quotations in relation to compensation events:

- The *Service Manager* instructs the *Contractor* to submit quotations for a compensation event at the same time he notifies the compensation event under NEC3 clause 61.1 / NEC4 clause 61.2.
- The *Service Manager* instructs the *Contractor* to submit quotations for a compensation event once he has decided that an event notified by the *Contractor* has passed the test under NEC clause 61.4.
- The *Service Manager* instructs the *Contractor* to submit a revised quotation for a compensation event under NEC clause 62.4.

B6.3.3.7 Quotations for compensation events comprise (NEC clause 62.2 and NEC3 clause X19.11):

- proposed changes to the Prices;
- any delay to the Task Completion Date;
- details of the *Contractor's* assessment; and
- alterations to the Accepted Plan and/or accepted Task Order programme if applicable.

B6.3.3.8 The *Contractor* should submit quotations for compensation events within three weeks upon receipt of the *Service Manager's* instruction (NEC clause 62.3).

B6.3.3.9 The *Contractor* always gets the first chance at assessing the compensation events. Only under the circumstances listed under NEC clause 64.1, the *Service Manager* will assess a compensation event.

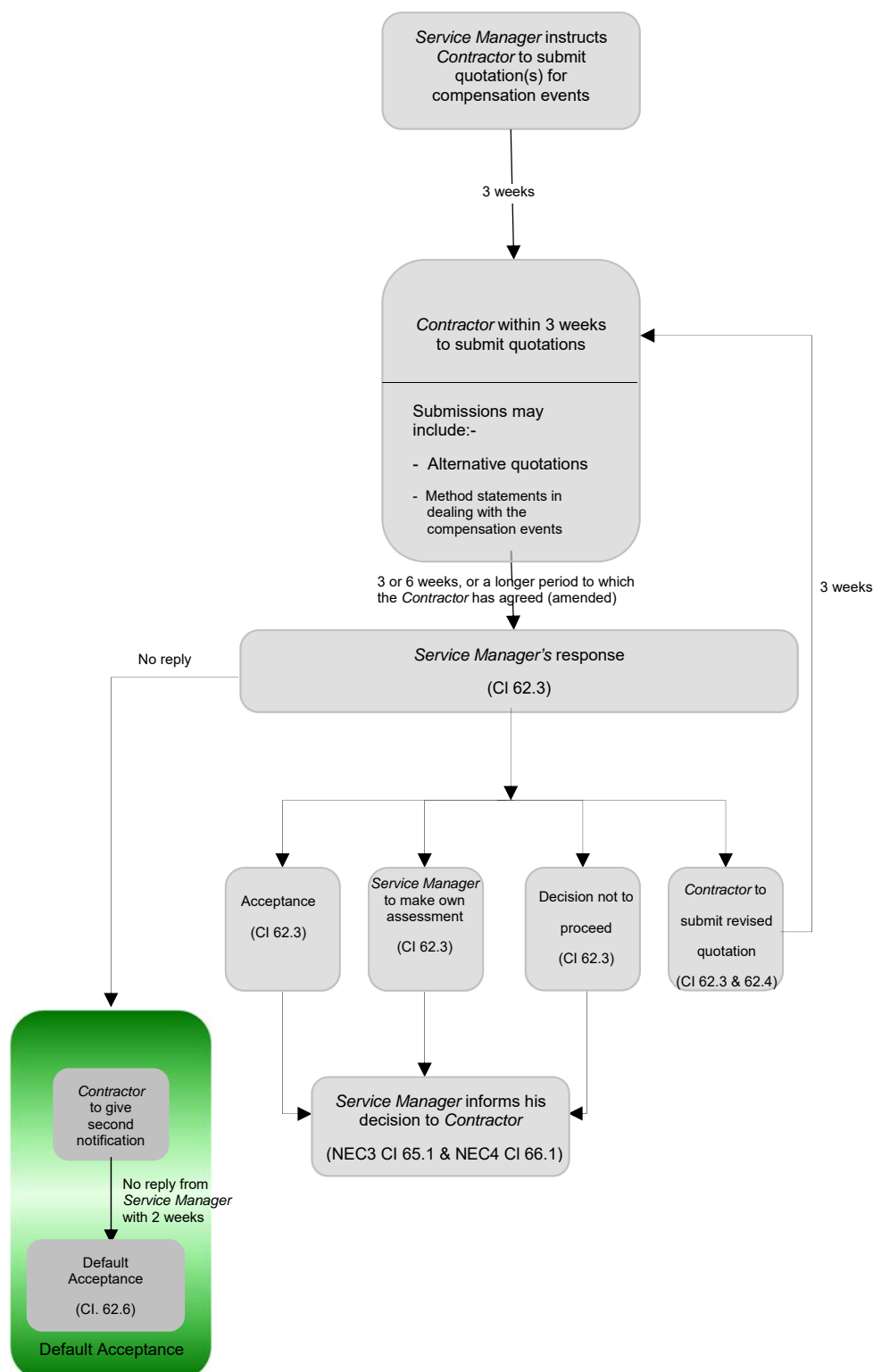
B6.3.3.10 Pursuant to NEC3 clause 64.2 / NEC4 clause 64.3, the *Service Manager* notifies the *Contractor* of his assessment of a compensation event and gives him details of it within the period allowed for the *Contractor's* submission of his quotation for the same event. This period starts when the need for the *Service Manager's* assessment becomes apparent.

B6.3.3.11 If the *Service Manager* does not reply to a quotation within the time allowed, the *Contractor* has to write the “second notification” highlighting the failure of the *Service Manager* to respond to the first notification. If the *Service Manager* fails to respond to the “second notification”, the quotation is treated as acceptance by the *Service Manager* (NEC clause 62.6).

B6.3.3.12 For consultants-administrated contracts, compensation events with estimated value over the sum (normally \$800,000) or creation of a new item in the Price List as specified in the consultancy brief would require sufficient lead time for the consultants acting as the *Service Manager* or his delegates to seek the *Employer's* / *Client's* agreement in accordance with the consultancy requirements as appropriate. Both direct and indirect costs should be included in the estimate.

B6.3.3.13 The *Service Manager* should properly document his assessment of the *Contractor's* quotations or his own assessment for compensation events and submit the documents to the Project Offices for auditing purpose.

B6.3.3.14 The process map of evaluation of quotations for compensation events is shown below:



### **Implementation of Compensation Events**

B6.3.3.15 The implementation of compensation events represents the formal conclusion of the administrative process. Implementation of compensation events takes place when (NEC3 clause 65.1 / NEC4 clause 66.1):

- (a) the *Service Manager* notifies his acceptance of the *Contractor's* quotation;
- (b) the *Service Manager* notifies the *Contractor* of his own assessment; or
- (c) the *Contractor's* quotation is treated as having been accepted by the *Service Manager*.

B6.3.3.16 Once the compensation event is implemented, the Prices should be updated and/or the Task Completion Date should be updated in Task Order programme. The changes to Prices and/or Task Completion Date due to an implemented compensation event may be changed due to change of assumptions stated by the *Service Manager* in the compensation events later under NEC clause 61.6.

## **B6.4 CONTROL OF QUALITY**

### **B6.4.1 *Contractor's Performance Report***

B6.4.1.1 With regard to the *Contractor's Performance Report*, the standard proforma and its Appendices are included in the Contractor Management Handbook published by the DEVB.

### **B6.4.2 Defects and Rectification**

B6.4.2.1 NEC3 clauses 40 to 43 / NEC4 clauses 40 to 44 set out the basic obligations of the parties in relation to testing and Defects. Below are brief descriptions of some clauses related to Defects and their rectification.

#### **Defects**

B6.4.2.2 As defined in NEC3 clause 11.2(4) / NEC4 clause 11.2(5), a Defect is

- a part of the *service* which is not in accordance with the Service Information / Scope or
- a part of the *service* which is not in accordance with the applicable law or the Accepted Plan.

B6.4.2.3 Essentially it refers to the defects which are in some way the fault of the *Contractor* and for which the *Contractor* is contractually responsible.

#### **Notifying and Correcting Defects**

B6.4.2.4 NEC3 clause 42.1 / NEC4 clause 43.1 requires the *Service Manager* and the *Contractor* to notify each other of each Defect as soon as they find it to enable Defects to be dealt with promptly.

B6.4.2.5 As required under NEC3 clause 42.1 / NEC4 clause 43.2, the *Contractor* is responsible for correcting all Defects, whether notified or not. For notified Defects, the Contractor corrects them within a time which minimizes the adverse effect on the *Employer / Client* or *Others* in accordance with NEC3 clause 42.2 / NEC4 clause 43.3. Project Offices should specify the relevant time required for correcting notified Defects in the Service Information / Scope as appropriate. NEC3 clause 42.2 / NEC4 clause 43.3 also states the procedure if the *Contractor* fails to correct a Defect within the time required by the contract.

## **Accepting Defects**

B6.4.2.6 Although a Defect may be minor in some cases, its correction may be costly to the *Contractor*. Its correction may also cause inconvenience to the *Employer / Client* out of proportion to the benefits gained. NEC3 clause 43.1 / NEC4 clause 44.1 allows accepting a Defect in these circumstances. NEC3 clause 43.1 / NEC4 clause 44.2 details the procedure for the acceptance of a Defect. Both the *Contractor* and the *Service Manager* can make such proposal. Acceptance of such proposal will then result in a reduction in the Prices.

## **B6.5 SUBCONTRACTING FOR WORK DUE TO COMPENSATION EVENTS**

**B6.5.1** For Option A, the *Contractor* should decide whether any work due to the compensation events is to be conducted by his own resources, the current Subcontractor(s), or to procure a new subcontract or supply contract for whole / part of the said work and submit his proposal with full justifications for acceptance by the *Service Manager*. The *Service Manager* should discuss with the *Contractor* to identify the most cost effective way for delivering the work due to the compensation events before offering his decision. Unless otherwise accepted by the *Service Manager*, for any work for the compensation events to be procured via new subcontracts or supply contracts, the *Contractor* should follow clauses C9 and C11 of the standard *additional conditions of contract* on the tender requirements for subcontracting for those compensation events to be assessed on the Defined Cost plus the resulting Fee basis under Option A.

## **B6.6 COST SAVINGS DESIGN**

**B6.6.1** The relevant clauses F3 and F4 in the Library of Standard *additional conditions of contract* deal with the Cost Savings Design. For Option A, the agreed construction cost savings due to the Cost Savings Design should be equally shared between the *Employer / Client* and the *Contractor*, which is the same as the arrangement in conventional contracts.

**B6.6.2** For situations where the Cost Savings Design would incur the *Service Manager's* cost and/or addition to the future operation and maintenance (O&M) costs, such *Service Manager's* cost and addition in future O&M cost for a design life in net present value should be deducted from the *Contractor's* share in the agreed construction cost savings due to the Cost Savings Design. The net payment should be made to the *Contractor* upon the relevant Task Completion. The design life of the concerned works should be well defined in the Cost Saving Design for determination of the net present value of any increase in the associated O&M costs. The Project Offices should consult the maintenance authority and other relevant Government Bureau/Department for any case involving increase in future O&M cost before acceptance of the Cost Savings Design. Normally, the *Employer's / Client's* decision to accept or reject the Cost Savings Design should be conveyed to the *Contractor* in writing by the *Service Manager* within six weeks or a longer period to which the *Contractor* has agreed in accordance with clause F4 in the Library of Standard *additional conditions of contract*.

## **B6.7 PROPOSAL ON INNOVATION AND TECHNOLOGY**

B6.7.1 For each Proposal on Innovation and Technology (I&T Proposal), before giving any instruction to change the Service Information / Scope, the *Service Manager*, should carry out thorough review on the potential benefits, cost-effectiveness, availability of funding, impact on the programme, etc. Project teams should exercise professional judgement in assessing each I&T proposal to ensure that it is soundly justified. The project team should also ensure the issuance of relevant instructions and approving authorities comply with applicable rules / criteria set out in the Stores and Procurement Regulations, as well as other applicable cost control mechanisms.

B6.7.2 For administrative convenience, the innovation and technology meetings for discussing the I&T Proposal may be arranged alongside any routine site meetings in place as appropriate, such as monthly progress meetings, early warning meetings, other liaison meetings.

B6.7.3 For decarbonisation efforts, focus areas may include:

- (i) reducing the use of timber/wood for packaging/formwork,
- (ii) reducing the production of waste through efficient sorting/recycling/reuse,
- (iii) wider use of EV, electrical site machineries and battery energy storage system (BESS),
- (iv) eliminating the use of diesel fuel,
- (v) using more renewable energy on site, and
- (vi) other areas that the *Service Manager* considers relevant.

## **B6.87**      **NEC PERFORMANCE MONITORING**

B6.78.1      Standard forms have been designed by the DEVB for the Project Offices to input the data of the NEC contracts in respect of cost and time aspects. Regular return will be called by the DEVB on a quarterly basis to collect data for monitoring the performance of NEC contracts.

B6.78.2      The Project Offices are encouraged to use suitable software or application to facilitate the contract administration, improve the management efficiency and enhance the project cost control if appropriate. The key functions of the software or application should include but not limited to registration and monitoring of risk register, early warnings, prevention events and the *Service Manager's* instructions, monitoring and processing of programme updates, interim payment applications and notifications and quotations for compensation events, keeping and processing of site diary and other site records, etc. The software or application should facilitate the communications amongst the *Employer / Client*, the *Service Manager* and the *Contractor*. The software or application should allow a function to generate real time management reports regarding the project cost, covering but not limited to the latest forecast final total of the Prices, current and estimated final Price for Service(s) Provided to Date, Defined Cost, Disallowed Cost, Fee, implemented compensation events and outstanding quotations for compensation events, price adjustment for inflation, other expenditure (e.g. the *Contractor's* share, incentive payments, delay damages), etc. The software or application should enable data export, backup and recovery, and have access right control and data security functions. Relevant requirements should be specified in the Service Information / Scope.

## **B6.89**      **RISK / LIABILITIES AND INSURANCE**

B6.89.1      The respective risks/liabilities and insurance obligations for the *Employer / Client* and *Contractor* are set out in NEC clauses 80 and 81.

B6.89.2      For NEC4, *Contractor's* liabilities are more elaborately defined in the Library of Standard Amendments to NEC4 clause 81.

## **B7 KNOWLEDGE SHARING AMONG NEC USERS**

**B7.1** At present, there are several committees in the DEVB / WDs in relation to the adoption of NEC in public works projects:

- Steering Committee on NEC Projects (meeting on a need basis) :  
To oversee the implementation and steer the direction (chaired by PAS(W)4, DEVB)
- Inter-departmental Working Group on NEC Projects (meeting on a need basis) :  
To co-ordinate and advise WDs on matters relating to NEC (chaired by CAS(W)7, DEVB)
- Departmental NEC Working Group or equivalent (meeting regularly / on a need basis) :  
To support the use of NEC within individual departments. Members involve staff from the Project Offices adopting NEC (chaired by D1/D2/D3 officers in WDs)

**B7.2** In view of the extensive upcoming NEC contracts, it would be beneficial if knowledge sharing could be done in a coordinated manner to facilitate WDs' preparation for NEC contracts, and to ensure a more consistent approach for all NEC contracts. In addition, after issuing the Practice Notes, feedbacks or comments from users are expected. To this end, the Inter-departmental Working Group on NEC Projects is proposed to be a knowledge exchange platform for further development or refinement of the Practice Notes in a medium term.

**B7.3** The Practice Notes take into account the relevant General Conditions of Tender, Special Conditions of Tender, Notes to Tenderers and Special Conditions of Contract for the GCC form promulgated under various technical circulars and circular memoranda issued by the DEVB and updates them to suit the NEC form. The tender and contract provisions promulgated under the Practice Notes replace those provisions appearing in these publications to the extent that the latter are relevant to the NEC contracts. For any ambiguity, the Project Offices should address to the DEVB who should consult the Inter-departmental Working Group on NEC Projects and/or the Steering Committee on NEC Projects where appropriate. The Practice Notes are living documents which will be updated from time to time when new technical circulars are promulgated or the existing works policies are fine-tuned which may affect the contents of the Practice Notes.

## REFERENCE

1. Thomas Telford Ltd. (2013), NEC3 Term Service Contract Guidance Notes
2. Thomas Telford Ltd. (2013), NEC3 Term Service Contract (April 2013)
3. Thomas Telford Ltd. (2017), NEC4 User Guide – preparing a term service contract
4. Thomas Telford Ltd. (2017), NEC4 User Guide – managing a term service contract
5. Thomas Telford Ltd. (2017), NEC4 Term Service Contract (June 2017)