

Executive Summary

Introduction

- The Construction Industry Review Committee's report, "Construct for Excellence" (CIRC Report) released in 2001, provided a number of recommendations to improve performance in construction including the use of an integrated approach with an emphasis on teamwork. Thereafter, the Hong Kong Government started its trial use of NEC3 forms of contract in 2009 to implement contractual partnering in project procurement.
- BCM Section of HK&I Division of DSD (BCM) let its first NEC Term Maintenance Contract DC/2012/01 – "Building and Civil Maintenance and Minor Works to DSD Plants and Facilities (2012 – 2016)", which adopts NEC3 Term Service Contract (TSC) Option A. DC/2012/01's preceding counterpart (i.e. Contract DC/2009/01) was let under the traditional Government Forms of Contract (GCC).
- The objectives of this research study are to understand the key differences between the provisions of the two BCM contracts and the impacts of using the NEC on the contract performance as compared with that under the GCC regime. A review of the contract performance could help establish the desired procurement approach to be taken for future term maintenance contracts.

Approach to Research Study

- Four questions were established in order to achieve the research objectives, namely:
 - How can the NEC enhance the contract performance as compared with that under the GCC regime?
 - How well have the contractual functions within NEC worked in practice under DC/2012/01?
 - What were the impacts of using NEC and GCC as procurement routes on the contract performance?
 - What enhancements could be made in the future term maintenance contracts particularly the BCM renewal contract after DC/2012/01 to add further improvement in contract performance?
- The methodology of the research study covers:
 - A desk top study of DC/2009/01 (GCC) and DC/2012/01 (TSC) contract provisions
 - An analysis of the project data of DC/2009/01 and DC/2012/01;
 - A questionnaire survey from the project teams; and
 - Group interviews to collect project teams' feedback and views.

Key Findings of Desk Top Study of Contractual Provisions

- The desk top review revealed significant similarities in contract provisions of both contracts, mainly due to the modifications made to the TSC to suit the Government procurement directives and guidelines and to align with the established Works Order administration procedures.
- However, there exist key differences in terms of collaborative working, risk management, accepted programme and compensation events.
- The key NEC principles such as early warnings and compensation events have remained unaltered in DC/2012/01 but the re-adoption of some of the established GCC procedures would certainly provide a step-change towards NEC implementation. Yet an apparent downside of this approach could be the dilution of the stimulating impact of the new concepts of NEC towards the contract parties.
- The NEC's proactive, "sort it now", collaborative working and risk management approach, if properly implemented, can enhance the contract performance from the time, financial, quality, safety and environmental perspectives.

Key Findings from Data Analysis

- From the analysis, the general performance of both contracts does not show obvious distanced trend.
- Improvements were identified in communication and management support under DC/2012/01 to have contributed to enhance the safety and environmental performance. Yet aspects such as time and financial control performance had not shown obvious quantifiable change when compared with DC/2009/01.

Key Findings from Questionnaire Survey and Group Interviews

- From the questionnaire survey, the use of NEC in DC/2012/01 had not shown any obvious improvement when compared to DC/2009/01 using GCC. However, an improvement in open communication had been identified to have contributed to a better safety and environmental performance.
- The group interview revealed that the conditions of contracts were very similar under both contracts with no significant impact on the day-to-day activities and contract performance identified via the use of NEC, and the project staff apparently lacking genuine appetite and motivation to undergo the requisite mindset and behavioural change to cope with the NEC implementation.
- Meanwhile, the common collaboration practice in Government term maintenance contracts (e.g. pre-order joint planning) would to a certain extent dilute the impact of collaborative working via the use of NEC, thereby further reinforcing the perception of no obvious change from GCC and NEC.

Conclusion and Way Forward

- The adoption of the NEC should in principle go some way to addressing issues such as slow resolution of financial settlement, lack of integration and proactive working behaviours of project participants and poor risk management as commonly encountered under the GCC regime.
- Despite that the key NEC principles such as early warnings and compensation events remain unaltered in DC/2012/01, their application was limited and thus had posed difficulty in reviewing their performance.
- Significant amendments made to the TSC have diluted the impact created by NEC and thus apparently reduced the project teams' appetite and motivation for the requisite mind-set and behavioural change.
- No obvious quantifiable difference between the use of GCC & NEC was identified but improvement in communication, collaborative working and management support was found to have contributed to a better safety & environmental performance in DC/2012/01.
- Along the findings, a number of enhancements are proposed to be adopted in the BCM renewal contract:
 - Expansion of the scope of Scheduled Activities without the need for separate orders for implementation to reduce administrative inputs and promote management inputs by the Contractor.
 - Enhanced simplicity and clarity in contract documents to ensure the requisite NEC consistency, thereby enhancing a reduced potential for disputes.
 - Reduced TSC amendments to extend the use of the NEC functions and allow more "on-job" NEC training to the project staff to help develop the collaborative working culture under the NEC regime.
 - Continued staff training in the NEC application and partnering to improve the technical and "soft" quality of the project staff for a proper NEC implementation.
 - Monitoring of performance of the NEC application and partnering development via periodic partnering performance reviews and procedural audits to ensure the requisite procedural compliance and identify actions, if any, for further enhancement in contract performance.
 - TSC Option C as a target contract option could be used to enhance the collaborative working and cost effectiveness of the works. Yet given the diverse nature of works, staff resource constraints and the culture and management practices within the term maintenance sector being unlikely to support on the more systematic target cost administration, it is not recommended for use in the renewal contract.