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22 November 2022

Clerk to Public Works Subcommittee  
Legislative Council Secretariat  
Legislative Council Complex  
1 Legislative Council Road, Central  
Hong Kong  
(Attn: Ms Connie HO)

Dear Ms HO,

**Public Works Subcommittee**  
**Follow-up Actions to Meeting on 26 October 2022**

At the Public Works Subcommittee meeting on 26 October 2022, Members requested the Administration to provide supplementary information to illustrate the principle and benefits of implementing New Engineering Contract (NEC) form. This Bureau hereby provides the requested information.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Y K HO', with a horizontal line extending to the right.

( Y K HO )  
for Secretary for Development

## **Legislative Council Public Works Subcommittee**

### **PWP Item No. 201WC**

#### **Relocation of Diamond Hill Fresh Water and Salt Water Service Reservoirs to Caverns – Construction Works**

#### **Follow-up Action to Meeting on 26 October 2022**

At the Public Works Subcommittee meeting on 26 October 2022, the Administration was requested to provide supplementary information to illustrate the principle and benefits of implementing the New Engineering Contract (NEC) form. In response to the request, we hereby provide the information as follows:

#### **Application of NEC Contract in Public Works Projects**

2. The Development Bureau (DEVB) has introduced the NEC form in public works contracts with a view to advocating the spirit of collaborative partnering and bringing the project team together to tackle difficulties, which would be conducive to the smooth implementation of the project. In 2009, the DEVB piloted the first public works contract in the NEC form. Since 2013, we have been extending the application of the NEC form in a progressive manner. In 2017, we issued guidelines<sup>1</sup> requiring all large-scale public works contracts to adopt the NEC form, making it the dominant form of contract in large-scale public works. From 2009 to now, there have been over 400 public works contracts adopting the NEC form with a total value of over HK\$250 billion, of which over 80 works contracts have been completed with the accounts finalised.

#### **The NEC Form**

3. The conventional form of contract previously adopted in public works, focusing more on the obligations and responsibilities of the two contracting parties, often put them in adversarial positions. Once problems or foreseeable risks occurred during the construction period, both parties tended to focus on identifying the responsible party, and hence more disputes arose in the process. As a result, the problem was not dealt with promptly and it might take more time or even cost to complete the works, which was not conducive to the smooth implementation of

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<sup>1</sup> For public works contracts engaging Group C contractors (viz. contract value above HK\$400 million), the NEC form shall be adopted unless there are justifications with prior endorsement.

the project. In contrast, the NEC embraces a collaborative culture and through contractual mechanisms fosters the building of a mutual assistance/trust partnering relationship between the contracting parties as well as joint risk management, thereby enhancing project management performance and cost effectiveness.

## **The Benefits of NEC**

4. Consolidating our experience in managing NEC works contracts and the feedback collected from the sector and various stakeholder groups through questionnaire surveys, focus group interviews and workshops, the NEC form in general has advantage over the conventional contract form, in the following three aspects:

### **(i) Enhancing Risk Management**

With the introduction of an early warning mechanism in the NEC, both the client's representative and the contractor are encouraged to identify and raise potential risks that may affect the project as early as possible, and when construction difficulties and problems are encountered, to negotiate and formulate the optimal solution for the smooth implementation of the project according to the prescribed procedure framework and timeframes.

Taking the “Tung Chung New Town Extension - Major Infrastructure Works in Tung Chung East” contract as an example, the contractor originally planned to procure precast concrete drainage pipes manufactured in the Mainland and deliver them to Hong Kong by land transport. As a result of the tightening up of the cross-border land transportation arrangements by the Mainland due to the COVID-19 pandemic, the contractor envisaged that the precast drainage pipes would not be delivered as scheduled via land transport. Under this situation, the NEC early warning system exhibited its effect positively, with the contractor promptly notifying the client's representative of the problem and the likely impact. The parties then went into active discussion in a collaborative manner, and reached timely agreement to change the land transport to marine transport, which enabled delivery of the precast concrete drainage pipes to Hong Kong as scheduled without causing delay to the works.

We also notice that the project team of the “Improvement of Water Supply to Sheung Shui and Fanling” contract fully displayed the partnering spirit under the NEC in dealing with the construction problems and difficulties. Under the contract, part of the mainlaying works were affected by existing

underground utilities, geological conditions, traffic issues, etc. The client's representative and the contractor made concerted efforts to work out the optimal solutions, including changing the alignment or laying method of part of the water mains, etc. As a result, there was no delay to the project with the budget under effective control, thus achieving a win-win situation.

In addition, the risk management system of the NEC has helped shorten the actual construction period of some construction projects. For example, the Drainage Services Department has been carrying out the construction of sewerage works in various rural areas in the New Territories. After adopting the NEC form, the actual construction period has been shortened by about 6% on average as compared with the conventional contract form.

## (ii) Optimising Claim Management

The NEC has a mechanism to deal with compensation events, which serves to compensate the contractor resulting from unforeseeable or uncontrollable difficult situations, etc. that take place at the construction stage. Comparing with the conventional contract form, the NEC expressly prescribes the timeframes for handling compensation events, thus making it possible for the majority of the compensation events to be properly dealt with in a timely manner during the course of the contract. This effectively reduces claim disputes and the need to refer such disputes to mediation, arbitration or even litigation, and in turn significantly shortens the time required for finalising the account. Based on statistical analysis, there is a time saving of over 30% on average to finalise NEC contracts as compared with conventional contracts.

## (iii) Enhancing Cost Effectiveness

The "Target Contract"<sup>2</sup> option of the NEC form provides a mechanism for the contracting parties to share the difference between the actual construction cost and the Target Cost, which offers incentives for the client's representative and the contractor to work in collaboration and formulate the optimal construction method, rendering the smooth implementation of the project and avoiding budget overrun. Taking the "Happy Valley Underground Stormwater Storage Scheme" contract as an example, with the concerted effort of the project team, a number of cost-saving measures were implemented. At last, there was

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<sup>2</sup> The actual construction cost of a "Target Contract" is based on the actual expenses of the contractor which is to be calculated on a reimbursement basis. When the actual construction cost is lower than the Target Cost, both contracting parties will share the difference equally. On the contrary, the client has to bear a half of the difference subject to a cap of 5% of the Target Cost. "Target Contract" is suitable for adoption in projects with higher complexity or risk level, or where the scope of works cannot be clearly defined.

about a 5% saving in the construction cost to the Government.

## **Conclusion**

5. To sum up, under the NEC's collaborative partnering principle, the project team works together proactively to resolve construction problems and difficulties in a timely manner, thereby reducing the risk of time or cost overrun in works contracts. We will carry out regular review on the application of NEC and, where necessary, introduce new contractual provisions to enhance our project management performance in public works projects.

**Development Bureau**  
**November 2022**