

THE HONG KONG INSTITUTION OF ENGINEERS

**RESEARCH ON PROCUREMENT POLICY REVIEW
FOR WORKS CONTRACTS AND CONSULTANCY CONTRACTS**

MARCH 2022

EXECUTIVE SUMMARY

There has been growing concern in the engineering industry on the trend for some accepted tender prices of Public Works Contracts and Consultancy Agreements being significantly lower than that allowed in the original Pre-Tender Estimates for the projects concerned. This could affect project programme and trigger quality, health and safety issues which are not to the best interest of the Government as well as the public. Significantly low tender prices could also lead to poor working environment for the engineering professionals, especially the younger ones. In view of this, The Hong Kong Institution of Engineers (the HKIE) has set up a Task Force to research into the current Procurement Policy of the Government of the HKSAR and how the current practices can be possibly enhanced. This report illustrates the result of the research and recommends proposals for possible enhancing the procurement systems, including three proposals for Works Contract and three proposals for Consultancy Contracts respectively.

Works Contract

1. Tender Evaluation with 50/50 Ratio for the Marking Scheme Approach
2. Extending the Fee Diving Control Mechanism of Consultancy to Works Contract to Mitigate Incentive for Significantly Low Bid
3. Report of Contractor's Performance - Further Elaboration / Use of Claim Attitude Attribute

Consultancy Contract

1. Enhancing the Fee Diving Control Mechanism to Discourage Unreasonably Low Bid
2. Quantifying Common Consultancy Services
3. Applying the MPS Salary Point Staff Rates for non-RSS Consultancy Staff

On top of the above recommended proposals, an observed practice named the "Cost-Plus Approach" is also outlined as a potential means for future consultancy applications for further study by relevant parties.

A. BACKGROUND

In recent years, it has been observed that there is a trend for some accepted tender prices of Public Works Contracts (including maintenance contracts) and Consultancy Agreements being significantly lower than that allowed in the original Pre-Tender Estimates (PTE) for the projects concerned. Whilst a deviation of around 30 percent is not uncommon, some accepted tender prices even go as low as half of that originally estimated.

The Government of the HKSAR (the Government) has long adopted the principle of “best value for money” in its tender assessment and award exercise. The Development Bureau (DEVB) has also over the years been putting in place a policy of allowing rejecting unreasonably low bids and tried hard to rationalize the market in order to encourage healthy competition among tenderers. Nevertheless, with the recent observations on the works and consultancy contracts awarded and feedback from the industry, the Hong Kong Institution of Engineers (the HKIE) is deeply concerned that the current procurement systems are not sufficiently guarantee to achieve the desired effects of choosing the best value tender. In addition, unreasonably low bids or much lower than expected tender prices are by no means results of healthy competition and could easily lead to an ensuing tendency for the contractors / consultants to make compromises and hence affecting project programme and generating quality, health and safety issues which are not to the best interest of the Government as well as the public. What more worrying is the low tender price often leads to a poor working environment (inadequate staff and long working hours) for the engineering professionals, especially the younger ones. With the consideration of the whole supply chain, it may also bring an adverse impact with undesirable outcomes for the subcontractors and suppliers.

In view of this, the HKIE has set up a Task Force consisting of members of the President’s Protégés Club to research into the Government’s Public Works Procurement Policy. This Report illustrates the views and suggestions of the HKIE on the Procurement Policy, with the view to enhancing the current practice to address the issues accordingly.

B. CURRENT PRACTICES OF TENDER EVALUATION

1. Works Contract

The approved List of Public Works Contractors is published in DEVB website which contains eligible contractors carrying out public works in one or more of the five major categories of building and civil engineering works. Contractors are required to meet the financial, technical and management criteria for admission and retention on the approved lists and for the award of public works contracts.

There are currently two approaches for tender evaluation, namely the Formula Approach and the Marking Scheme Approach.

a. Formula Approach

The Formula Approach is a more simplified method of tender evaluation, which is normally applied to normal and non-complex contracts. It takes into account the tender price and the tenderer's past performance under public works contracts. With respect to each conforming tender, a combined price and performance (overall) score will be worked out in accordance with the formulae¹ below.

For tenders with a tender price:

$$60 \times \frac{\text{the lowest tender price among those conforming tenders}}{\text{the tender price of the tenderer}} + 40 \times \frac{\text{the tenderer's performance score}}{\text{the highest performance score among those conforming tenders}}$$

For tenders without a tender price (such as term contract):

$$60 \times \frac{100 + \text{the lowest value for tender analysis among those conforming tenders}}{100 + \text{the value for tender analysis of the tenderer}} + 40 \times \frac{\text{the tenderer's performance score}}{\text{the highest performance score among those conforming tenderers}}$$

The tenderer's performance rating may have included some evaluation factors such as past performance rating, safety rating and training rating. For example, past performance records would include conviction records for employing illegal immigrants, conviction records for site safety related offenses, any past history of claims for contracts with a value exceeding \$100 million.

¹ As depicted in DEVB Technical Circular No. 4/2014.

b. Marking Scheme Approach

For contracts where the quality of service is a major consideration, e.g. of a high-value, containing high technical demand or requiring a high level of coordination, the Marking Scheme Approach may be adopted. The overall score for each tender is determined according to the formula below²:

$$\text{Price Weighting} \times \frac{\text{the lowest tender price among those conforming tenders}}{\text{the tender price}} + \text{Technical Weighting} \times \frac{\text{the technical score}}{\text{the highest technical score among those conforming tenders}}$$

The following two options of price to technical weighting may be adopted:

	Option	Weighting (Price / Technical)
(a)	Contracts with a high technical content that: i.require contractors' specialized input (such as design of certain critical parts of the works); and ii.entail highly complex functional requirements, and/or require construction methodology involving specialized plant/ equipment with special constraints (such as delivery programme, site/environmental constraints)	50/50
(b)	Other Contracts	60/40

In general, the respective weights of price and technical scores are 60/40. For the adoption of 50/50 weighting above, policy support should be sought from the Works Policy Section of DEVB.

For the Technical Weighting, the Standard Marking Scheme is normally applied, which would give weights to different attributes shown as follows:

² As depicted in DEVB Technical Circular No. 4/2014.

Attributes	Weighting (non-D&B)	Weighting (D&B w/o prequalification)
1. Tenderer's experience	0-20	0-20
2. Tenderer's past performance	20-40	20-40
3. Tenderer's technical resources	5-40	5-40
4. Tenderer's technical proposal	30-60	20-40
5. Tenderer's design (if required)	0-30	20-40

If a Project Office proposes any modifications to the Standard Marking Scheme, policy support from the Works Policy Division of DEVB must be sought before a Project Office proceeds to obtain approval from the relevant tender boards.

2. Consultancy Contract

The selection and appointment of consultants for all works related consultancies shall follow the guidelines of the Engineering & Associated Consultants Selection Board (EACSB) or the Architectural & Associated Consultants Selection Board (AACSB).

The selection for all consultancies, including Feasibility Study, Investigation, Design and Construction (D&C), is determined on the basis of assessment of technical merit combined with proposed consultancy fee. Consulting firms are required to submit, in separate envelopes, a Technical Proposal and a Fee Proposal. A Combined Score Assessment will then be performed according to the formula³ below:-

Combined Score = (a) Weighted Technical Score + (b) Weighted Consultancy Fee Score + (c) Fee Quality Score, where the specified weighting of each score shall normally be:

Complexity of Consultancy Agreement	Weighting of Technical Score	Weighting of Consultant Fee Score	Weighting of Fee Quality Score
Normal	63%	27%	10%
Complex	72%	18%	10%

³ As depicted in the EACSB Handbook.

The complexity of each assignment will be determined by the Assessment Panel.

a. Weighted Technical Score

In calculating the Weighted Technical Score, the Assessment Panel shall assess the Technical Proposal in accordance with following 7 selection criteria: Consultant's Experience, Response to the Brief, Approach to cost-effectiveness and sustainability, Methodology and work programme, Innovation and creativity, Staffing and Past Performance.

b. Weighted Consultancy Fee Score

In calculating the Weighted Consultancy Fee Score, consultants are required to submit in the Fee Proposal a lump sum fee which is derived from their manpower input and the corresponding staff rates. Consultants are also required to provide in the same Fee Proposal a set of all-inclusive time charge rates for additional Services which are not covered by the original scope. A "Consultancy Fee" shall be calculated for each fee proposal by summing (a) the lump sum fee (comprising staff costs and non-staff costs), (b) the adjusted notional value for additional Services, and (c), the notional resident site staff on-cost charges if applicable.

In addition, a fee-diving control mechanism has been introduced since 2018 to avoid unreasonable low bids. A threshold is set at 80% of the Median Consultancy Fee (F_x), which is the median of consultancy fees of all conforming bids and the pretender estimated consultancy fee. If the lowest fee quoted is less than $0.8F_x$, any fees quoted below $0.8F_x$ (including the lowest bid) will get the full Consultancy Fee Score and other fees quoted will get score by applying the formula below:

$$\text{Weighted Consultancy Fee Score} = \text{Specified weighting} \times \frac{0.8F_x}{\text{Fee of bid being assessed}}$$

c. Fee Quality Score

The Fee Quality Score is an essential component of the Combined Score with the objective of suppressing exceptionally low charge rates. The Fee Quality Score, on a sliding scale of 0 to 10 as shown in the table below, shall be determined based on the calculated Factor for Marking Fee Quality as defined in the formula below:

Factor for Marking Fee Quality =

$$\frac{\text{Lump sum fee of the bid}}{\text{Median of lump sum fees of all conforming bids}^+ \text{ (including the pre-tender estimate)}} \times \frac{1}{M_x}$$

whereas M_x is

$$\frac{\text{Weighted total manpower input of the bid}}{\text{Median weighted total manpower input of all conforming bids}^+ \text{ (including the pre-tender estimate)}}$$

The Fee Quality Score shall then be determined as follows:

Factor for Marking Fee Quality	Fee Quality Score
≤ 0.5	0
> 0.5 and < 0.8	On sliding scale between 0 and 10
≥ 0.8	10

C. PROPOSED RECOMMENDATIONS FOR WORKS CONTRACT

1. *Tender Evaluation with 50/50 Ratio for the Marking Scheme Approach*

As observed in the recent public tenders, the industry has apparently developed an unhealthy trend of submitting substantially low or unreasonably low price tenders (including maintenance contracts) with very thin or even no profit margin, with a view to secure the tender through obtaining the highest price score. Whilst their motives of doing so are not entirely clear, this could possibly lead to contractors subsequently compromising the quality of submissions, materials and workmanship in order to cut costs and hence, resulting in time overrun as well as triggering quality, health and safety issues on delivered works.

In accordance with DEVB TC(W) No. 4/2014 as published in 2014, the tender evaluation of Public Works Contract adopts a 60/40 ratio between the price to technical weighting for the Standard Marking Scheme. In the more recently published DEVB TC(W) No. 4/2014A in July 2021, it is further announced that in the case where a Works Contract “requires both contractors’ specialized input” and “entails highly complex functional requirements, and/or requires construction methodology involving specialized plant/equipment with special constraints”, a 50/50 ratio may be adopted with policy support from the Works Policy Section of DEVB. Therefore, it can be seen that DEVB is already taking a progressive approach in allowing some Works Contracts to adopt a 50/50 weighting between price and technical score.

In fact, following the Construction 2.0 Initiative put forward by the Government since 2018, the adoption of innovation and technology in public works contracts has become increasingly common, such as the Building Information Modelling (BIM) technology and the Modular Integrated Construction (MiC) method. It is also the objective of Construction 2.0 to encourage the industry to explore and apply new and innovative approaches that can enhance the planning, design, construction, cost saving and operation of public works projects. It can be **foreseen that innovation and technology will take up a larger role in the coming public works projects (so as to reduce the overall time and resources demanded for obvious environmental, manpower and programme reasons), gradually increasing the importance of technological content in Works Contracts.** The correlation between the weighting on the technical score with the performance of the contractor is expected to be significant. Hence, while keeping in view of the future trend, it is suggested that **a 50/50 price to technical score weighting could be generously applied to more Works Contracts and ultimately as a norm for all Works Contracts**, and that a 60/40 weighting would be adopted for only simple and smaller scale projects (e.g. Group A Tenders). This would also align with

the “value-for-money” principle undertaken by the Government's principle. Similar ratio could be generously considered for tenders with Formula approach.

2. Extending the Fee Diving Control Mechanism of Consultancy to Works Contract to Mitigate Incentive for Significantly Low Bid

Whilst in accordance with ETWB TC(W) No. 8/2003, a mechanism to reject unreasonably low bids has already been in place since 2003, it can be difficult to objectively determine or substantiate whether a bid is truly unreasonably low (as different public officials may have different interpretation on the level of “low”), especially given the tight procurement timeline and the lack of quantitative guidelines in the circular to aid the Assessment Panel. The suggested follow-up action in seeking clarification from the tenderer to determine whether the tenderer is capable of fulfilling the terms of the contract is equally subjective, especially for the case of Formula Approach where less information is available.

To take a more analogous approach, reference is made to the current fee diving control mechanism for Consultancy Contracts, which is described in Section B(2)(b) of this report. The fee diving control mechanism is used as a value-for-money measure to prevent bidders from submitting unreasonably low bids by imposing a minimum price threshold that is based on the median of the returned bid prices plus PTE. With this mechanism in place, a tenderer with a very lower fee would still benefit from a higher price score, but this would be subject to a threshold which would be the same as other tenderers who bid lower than that threshold. In other words, the **motivation for tenderers to bid extremely low in order to secure the bid would be reduced since their price advantage would be diminished**. To discourage unreasonably low bids, such a mechanism is recommended to be extended to the tender evaluation of Works Contract, with a few adjustments to align with the nature of Works Contract.

For Consultancy Contracts, a threshold is set at 80% of the Median Consultancy Fee (Fx) which is the median of consultancy fees of all conforming bids and the pretender estimated consultancy fee. Any fees quoted below 0.8Fx will get the full fee score, which implies that lower fee bidders will gain less advantage for their lower prices in the evaluation, hence discouraging them from submitting substantially or unreasonably low bids intentionally just to secure the contract.

Nevertheless, for Consultancy Contracts, the prices are mainly man-hour and rates. It is comparatively easier to determine a reasonable price range for man-hour and the hourly rates for a specific grade of consultant and the job. This is contrary to Works Contract where the

returned tender prices would depend greatly on the chosen construction technology, methodology and sequences of works for each tenderer. For example, a Contractor can reduce the project cost considerably by rotating the use of expensive tools among various projects. Therefore, tender prices for Works contracts could generally be much more varied.

Hence, modifications on the fee diving control mechanism of Consultancy Contracts will be required such that it can be effectively imposed on Works Contracts. **A threshold lower than 0.8Fx is recommended to be set for weighted fee score, for example 0.7Fx or 0.6Fx,** owing to the distinctive difference in nature between Works Contracts and Consultancy Contracts. A detailed assessment with reference to past tender pricing statistics is recommended to be performed by DEVB in order to determine the optimum threshold. It is believed that adopting the fee diving control mechanism with a lower threshold for Works Contract can guarantee that genuine cost reduction methods would not be discouraged, while a certain level of control is still in place for discouraging unreasonably low prices.

3. Report of Contractor's Performance - Further Elaboration / Use of Claim Attitude Attribute

For substantially low or unreasonably low bids, there may be cases in which the contractors would cut corners during construction stage in order to reduce the cost or notify an unjustifiable number of claims so as to compensate for the low bidding price. Under the current tender evaluation mechanism, the assessment of the tenderer's performance taking account their past history of claims for contracts is not that obvious and is not in the upfront. The past history includes the total number of quantified Extension of Time (EOT) and monetary claims. And under current Contractor Performance Reporting system, the reporting office is only required to leave comments in the performance report on unreasonable claims. During tender evaluation, project office assesses the tenderer's unsatisfactory claim attitude in past years in the final Tender Report after calculating the overall combined scores.

It is however worth noting that the past history of claims is unlike other attributes on contract's performance that have ratings to be converted to weighted factors which impact the technical scores in tender evaluation. In reality, it would be rather difficult, if not impractical, for tender evaluators to judge whether a tenderer has potential poor claim attitude by simply reading only comments marked by the reporting office in the unreasonable claim remark section; and that number of claims may also include genuine claims, such as claims that arose from client's variation orders and unexpected site conditions.

A more effective way to deter unreasonable claims could be **letting the reporting officer give rating on top of stating “reasonable/unreasonable” and comments remarks on the contractor's claim attitude.** It is better to incorporate these previous ratings into the tender scoring system, similar to the other performance items in Contractor's Performance Report. Such historical rating on contractor's claim attitude provides non-judgmental input to the technical score in tender evaluation. It must be stressed that the rating suggested above is on unreasonable claim attitude which shall be distinguished from genuine claims.

There are various ways to include an objective rating on such attribute. For instance, the tender evaluator may take an average for the performance rating on this claim attitude attribute in the past two years of a contractor. Given a 5-point grading mechanism is adopted (i.e. A(5), B(4), C(3), D(2) and U(1)), the average rating could be benchmarked with the reference score among all contractors' general performance. Where tenderers who have lower ratings compared to the pool will gain disadvantage on the technical score; and the past performance on claim attitude attribute would contribute to the technical score calculation. On the other hand, tenderers who have higher ratings compared to the pool would gain advantage on the technical score, who may get a higher chance to win the bid. As such, the claim attitude can be objectively considered in the upfront prior to the opening of the fee envelope. A passing mark may be set on this particular rating. In so doing, tenderers who had very unreasonable claim history in the past might be rejected right away at the technical marking stage. Similar mechanism can be worked out for the formula approach.

The long-term effect of enhancing the claim attitude mechanism suggested above could possibly provide incentive for contractors to notify claims more conscientiously and tenderers to price the Works Contract more reasonably at the first place. This could have the additional effect of reducing the risk of unexpected and intentional claims; and as a result should help prevent conflicts and adversarial relationship between contractor and project office and reduce disputes.

D. PROPOSED RECOMMENDATIONS FOR CONSULTANCY CONTRACT

1. *Enhancing the Fee Diving Control Mechanism to Discourage Unreasonably Low Bid*

As mentioned in Section B(2)(b) of this report, Consultancy Contracts currently adopt a Fee Diving Control Mechanism to discourage unreasonably low bids. It is proposed that the Mechanism could be further enhanced by **introducing a quantitative measure to tighten the control of unreasonably low bids, including (i) deducting the fee score of bids lower than a certain threshold; and (ii) rejecting a bid lower than a certain threshold.**

This stricter mechanism is considered applicable for Consultancy Contracts, as the lump sum fee of Consultancy Contracts is determined based on the number of staff and their respective man-hour rates. It is possible to estimate the quantity of expertise required for the contract and deduce a reasonable price range for the hourly rates of a specific grade of consultant, e.g. by taking reference to the market price. Substantially low or unreasonably low fees likely connotes the consultants not being able to deploy experienced expertise to deliver the required output, or pathetically low remuneration packages for the professionals. This could seriously affect consultants' performance and cause poor project outcomes, and should be discouraged as far as practicable. The new mechanism could not only prevent some consultants from bidding at unreasonably low prices as they might be disqualified, but also reduce the risk and potential impact of engaging inappropriate business partners for development projects and cause quality problems.

In determining the threshold of the new mechanism to discourage unreasonably low bids, it is noted that the Hong Kong Housing Society (HKHS) has recently introduced a similar consultancy evaluation mechanism, and reference may be taken to this approach for public works Consultancy Contracts.

The HKHS has pioneered a new consultancy evaluation mechanism named "Fee* Quality Score"⁴ to prevent the selection of unrealistic low-fee proposals. The total score consists of two components, Technical Score (70%), Fee (30%) plus Fee* Quality Score. The "Technical Score" is for assessing the feasibility and technical content of the proposal, while the "Fee* Quality Score" is a deduction mechanism for unreasonably low bids.

Total Score = Technical Score (70%) + Fee (30%) + Fee* Quality Score

⁴ An asterisk is added to distinguished this from the "Fee Quality Score" as stipulated in Section B2(c) of this report.

Under the "Fee* Quality Score" evaluation mechanism, if a bid price is lower than 50% of the median of all bids, the bid will be disqualified. If the bid price falls between 50% to 80% (80% exclusive) of the median of all bids, the total score will be deducted by 3 to 10 marks, based on the discrepancy between the bid price to the median of all bids. If the bid price is higher than or equal to 80% of the median of all bids, the bid is considered to be within normal bidding range and there will be no deduction for the total score.

The details of the deduction mechanism of the ""Fee* Quality Score" is as follows:-

Unreasonably Low Bid Price	Deduction from the Total Score [#]
70% ≤ Bid Price < 80% of the median bid	-3
60% ≤ Bid Price < 70% of the median bid	-7
50% ≤ Bid Price < 60% of the median bid	-10

[#] May be adjusted by HKHS if necessary

According to the Housing Society, this new mechanism has effectively deducted the score or disqualified some unreasonably low consultancy bids in the past two years. It is therefore recommended that DEVB could take reference to this mechanism for further curbing unreasonably low bids in Consultancy Contracts.

2. Quantifying Common Consultancy Services

Under normal practices, consultants are required to prepare reports for departmental circulation and obtain approval from relevant departments during the design process. The payment in percentage of lump sum fee will be paid in 2 instalments, (i) on submission of draft deliverable and (ii) on acceptance of final deliverable. This means that the professional services provided by the consultant regarding engineering designs cannot be reimbursed until they can issue the draft deliverables to the client.

Nevertheless, throughout the design development, it is unavoidable that more than one scheme usually needs to be prepared by the consultant and certain rounds of discussion with the client are incurred before the draft deliverables can be issued, which involves quite a number of schematic designs and meetings with various presentation materials. These professional services provided by the consultant in this design development stage could vary substantially and usually require a substantial amount of manpower and time; but unlikely

could be accurately estimated by the consultant at the tendering stage with the limited information provided before project development. In other words, these additional manpower and resources incurred often need to be borne by the consultant.

Under the current Consultancy Contracts, there is a provision for the Payment for Additional Services, where consultants are entitled to additional payment pursuant to General Conditions of Employment Clause 33, “the Consultants shall be entitled to payment for the performance of any Services which they could not reasonably have anticipated at the time of entering into his Agreement...”. The lump sum payment will be based on the estimated time required to complete the additional services, and the charge rates for calculating the lump sum payment are determined before the contract is awarded. However, despite of this provision, overly repeated scheme development during the design development stage as mentioned above for an optimal design, are usually difficult to be justified since there is no clear definition on the extent on this part of the work which is an essential element for completion of the assignment.

The prolonged approval process for reports is another major concern. It can take months, or in rare cases, year for obtaining approval for reports, depending on the numbers and types of departments involved for circulation. Comments from different departments often cannot be predicted at the tendering stage, but they could be critical for obtaining report approval, which is the prerequisites for the second instalment as it may lead to a significant change of design.

In pursuing the best value-for-money procurement policy, it is apparent that provision of as accurate an information to tenderers as possible during tender stage should suit the best interest of government; since tenderers could make the most accurate estimate in manpower demand and hence offering most optimal and competitive bids. In this regard, it is proposed to set a limit on the number of meetings and design proposals in the scope of work of the Consultancy Agreement, and allow additional payment to be made to the consultants for work beyond the agreed limit.

Referencing to the current additional services mechanism as described in Section 4.7 of EACSB Handbook, the project office should state the reasonable maximum number of external meetings in the Brief which the consultant will be expected to attend with regard to District Councils, Rural Committees etc. Additional attendance at meetings beyond that stated in the Brief should then be paid for as additional services. It is recommended to further **extend the aforementioned mechanism to cover a larger scope of key professional services provided by consultants, such as the number of internal meetings with the client or other Government departments, and the number of alternative design proposals or study papers for design review throughout design**

development. Reimbursement for these additional services could be made to consultants at the project stage with justifications and subject to the acceptance of the client. This practice could allow consultants to quote a much more accurate lump sum fee for Consultancy Contracts at the tendering stage; thus offering a reasonable but yet competitive bids.

Some may be concerned that the consultants may intentionally submit design reports with substandard qualities to increase the number of meetings required and maximize the profit from this proposed practice. To avoid disputes amongst the client and the consultants, the eligible additional payment should be paid only if the services (including its extent and content involved) could not have been foreseen by an experienced consultant based on the information available as at the tender closing date.

3. Applying the MPS Salary Point Staff Rates for non-RSS Consultancy Staff

The scheme of direct employment of Resident Site Staff (RSS) by consultants is currently being adopted in construction supervision for public works projects associated with AACSB/EACSB consultancy agreements. Under the RSS Scheme, consultants are required as part of their services to recruit, employ and manage all the necessary RSS for public works site supervision, and the Government will reimburse the consultants the actual payment made to the RSS subject to a ceiling. The reimbursement caps on salary and fringe benefits for RSS normally make reference to the prevailing Government practice (i.e. the salary of different ranks of RSS generally follows that of the relevant Government professional and associated technical and supervisory grade staff, etc. in accordance with the Master Pay Scale (MPS)).

Nevertheless, for non-RSS staff who are also employed by consultants for implementing these public works projects, such as those who carry out in-house design, investigation studies and help administer the works contracts, their staff rate do not follow that of the MPS and are usually observed to be much lower than that of RSS. This creates an unbalanced salary scale for staff who are working for Government projects or sometimes even the same Government project. Under an unhealthy competitive environment, consultants may have the tendency to cut the salary of non-RSS staff in order to cut cost or submit very low consultancy bids to increase their chance of winning.

In view of this, it is proposed that the Government could consider **applying a similar salary reimbursement practice of the RSS Scheme for non-RSS consultancy staff who are working for public works projects, such that their salary can also take reference to the MPS salary points** to improve the currently unbalance situation and discourage unreasonably low consultancy lump sum. Since RSS are remunerated in the same way as Government

staff as a measure to upkeep good quality, probity and value for money for management and supervision of public works projects, it is believed that the same logic could be and should be extended to non-RSS consultancy staff as the staff in the design office also investigate, design and administer the public works projects for the Government to uphold and achieve the above objectives.

It is however not considered necessary nor feasible to exercise this measure under a direct reimbursement principle since consultancy assignments are normally paid under a lump sum principle; and that non-RSS staff may not be working full time for one particular government project for one single Works Department. We propose that **remuneration on non-RSS staff cost at tender stage would merely be calculated by applying the tendered manpower input⁵ multiplied by the relevant government staff rates (MPS) pitched at the upper quartile level** (which often represents the salary pay from a good employer). To certain extent, this would mean the consultants would bid the fee proposal mainly based on manpower input. This would have the added benefit of encouraging the consultants to recruit staff of higher caliber to serve on government projects; thus could bid with less manpower resources.

⁵ Categorized into several main echelons, such as chief professional, professional, assistant professional, technical grades, etc.

E. OTHER OBSERVATION

Upon researching into various procurement practices across the globe, it is observed that a practice named the “**Cost-Plus Approach**” is currently being applied in Canada for consultancies. This approach is considered noteworthy and may be potentially applicable for future consultancy applications in Hong Kong apart from the traditional lump sum arrangement, particularly for large scale and complex projects which require a high degree of flexibility; specialized projects which require high expertise and technical content input; or urgent projects which require immediate mobilization.

In the Cost-plus Approach, service fee will be paid on an actual cost basis, where actual cost relates to the direct salary costs of the consultant. The consultant will then bid on the following two factors: (i) a multiplier for corporate overhead, which should cover all other costs incurred by the consultant in delivering the services that are not covered in the actual cost; and (ii) a profit percentage, which determines the profit amount payable for the services based on the Base Cost (i.e. the actual cost plus corporate overhead).

Total payment to the consultant = Actual Cost x Corporate Overhead Multiplier x Profit Percentage

The direct staff cost is made transparent to the client in this Approach, in which the consultant will need to submit evidence to substantiate their direct salary cost in the tendering stage, and justifications will be required for any substantial change in the team members or staff rates in the implementation stage. The consultant also needs to submit a resource plan forecast for client's approval, meaning that the number of manhours is almost pre-determined. This could prevent consultants from submitting unreasonably low staff rates in order to gain an advantage on the bid prices, which in turns help keep the salary and working hours of engineering professional rationalized. Instead, consultants would be focused on reducing their corporate overheads and profit margin in order to increase their competitiveness.

In addition to the actual cost basis, the Cost-plus Approach also includes an additional Incentive Fund to reward the consultant based on his performance. The Incentive Fund can be earned by the consultant for performing various incentivized services and achieving the agreed Key Performance Indicators, such as health and safety, delivery schedule, quality assurance, etc. It is believed that this incentivization regime can effectively encourage consultants to increase their profit by enhancing their performance quality, e.g. thinking of smarter and more efficient modes of working under the existing resources.

F. CONCLUSION

Engineers are one of the most important assets of Hong Kong supporting its stability and prosperity. The HKIE is devoted to facilitating our members' development and the profession's standing in the society. Our members are always mindful to uphold the professionalism, dignity, standing and reputation of the profession in the engineering industry. Upon reviewing the current Procurement Policy for both Works Contract and Consultancy Contract, it is believed that further enhancement on the Procurement Policy could provide clearer guidelines to involved stakeholders on the needs of establishing a stable and healthy tendering practice, thereby encouraging healthier competitions among tenderers which is conducive for upholding programme adherence, quality and safety, etc. for the projects; as well as offering a more reasonable and publicly acceptable remuneration package to engineers. The six recommendations aforementioned are potentially effective means for Government's consideration, while the observed Cost-Plus Approach is also worth consideration in future consultancy applications. It is hoped with the enhancement of the Procurement Policy, the development of the engineering industry and Hong Kong could be advanced as a whole.

The six recommendations include:

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~End~