SCOPE OF CONSTRUCTION CONTRACT IN CHINESE BILL OF QUANTITIES EVALUATING MODE

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Abstract: China’s entry to the World Trade Organization (WTO) has allowed overseas investors to establish construction and consulting firms in the mainland. In order to compete with domestic investors, they must be familiar with regulations in Chinese construction market, especially Chinese pricing system of construction products. In the planned economy, this pricing system was quota budgetary system. From 2003, the pricing system has been transformed into Chinese national standard “Code of valuation with bill quantity of construction works” (CVBOQ) (GB 50500-2003). Under the influence of quota budgetary system, this CVBOQ system is different from international pricing tradition. On the basis of cases which are investigated by the ministry of construction P. R. China(MOC), this paper discusses the discrepancy between the scope of BOQ and the scope of Chinese construction contract, construction investment, quota item limit. In order to gain a competitive bid, tenderers should make the scope of BOQ consistent to the construction contract range. This paper will help overseas investors to grasp some realistic issues in the evaluation of contract price under Chinese construction regulations and conventions.

Keywords: bill of Quantities; construction contract scope; contract price

1 Introduction

China’s entry to the World Trade Organization (WTO) has allowed overseas investors to establish construction and consulting firms in the mainland. In order to compete with domestic investors, they must be familiar with regulations in Chinese construction market, especially Chinese pricing system of construction products. In the planned economy, this pricing system was quota budgetary system. From 2003, the pricing system has been transformed into Chinese national standard “Code of valuation with bill quantity of construction works” (CVBOQ) (GB 50500-2003). Under the influence of quota budgetary system, this CVBOQ system is different from international pricing tradition.

On the basis of cases which are investigated by the ministry of construction P. R. China(MOC), this paper discusses the discrepancy between the scope of BOQ and the scope of Chinese construction contract, construction investment, quota item limit. In order to gain a competitive bid, tenderers should make the scope of BOQ consistent to the construction contract range. This paper will help overseas investors to grasp some realistic issues in the evaluation of contract price under Chinese construction regulations and conventions.

2 Applicability of BOQ under the Contract Scope

2.1 Definition of contract scope

Contract scope is the responsibility range of a contractor. In term of international construction conventions, contract scope includes instructions to tenderers, conditions of contract, specification, drawings, and bills of quantities. Instructions to tenderers and conditions of contract briefly describe the contract scope in words; Specification and drawings mainly show the work items and their technical requirements, including requirements for measurement and payment; Bill of quantities provides identifying descriptions and estimated quantities of work.

According to quota budgetary system, above descriptions and requirements are regulated in the quota documents which include series of explanation, notes, principle of measurement and item divisions. Consequently, Chinese project stakeholders take the quota documents as the Bible to estimate contract price while ignoring those regulations of contract scope. In the practice of bidding in China, there are only titles of specifications in tender documents; omissions and inaccuracies often occur in bill of quantities which should be avoided.
2.2 Meaning of BOQ applicability

In the CVBOQ, BOQ consists of component BOQ, measure BOQ and other BOQ. Component BOQ describes names and quantities of all the entity items included in the contracted project. Measure BOQ defines names and contents of all the nonentity items which will help project construction in technology, living and security. Other BOQ indicates several specific requirements of bid inviter and the evaluation of other BOQ should be calculated in the quoted price (MOC 2003a).

BOQ applicability means that in order to meet with demands of different projects, each BOQ item must vary in item characters, works contents and calculation rules according to specific environment, material standard and craft. That is, division of BOQ items, work contents, technical requirements, measurement and payment should be adapted to different project environment and bid inviter. This is essentially distinct from quota budgetary system. While ignoring distinction between different projects, quota system prescribes average consumption of construction condition, material standard and labor efficiency in the same kind of projects.

2.3 Necessity of the consistency between contract scope and BOQ applicability

The price form of contract scope is contract price. In the Chinese construction market, quota budgetary system has been established for over fifty years. Though price determined by government is not seemly, the quota documents and construction contract which are adapt to quota budgetary system are very perfect. Project stakeholders have consensus on the definition and range of contract price. Disputes seldom occur on such kind of thing. At the same time, BOQ evaluating mode is a neonatal offspring of the innovation of cost engineering. Not only there is a lack of detailed rules and construction contract that are adapt to the CVBOQ, but also project stakeholders astricted by quota budgetary system have different understandings about the CVBOQ. Hence, it is important for project stakeholders, especially overseas investors, to define BOQ applicability in focus, describe contract scope in strictness and to assess competitive bidding price.

In order to clarify how to set BOQ applicability under contract scope, this paper analyzes several problems about the CVBOQ which were investigated by MOC and puts forward that BOQ applicability is not only different from contractor’s obligations of Chinese construction contract, construction and installment cost included in the construction investment, but also from item limit of quota.

3 Discrepancies between BOQ Applicability and Obligations of Chinese Construction Contract

Obligations of Chinese construction contract should be consistent with BOQ applicability because BOQ applicability is regulated by contract scope. That is, one term of contractor obligations has one corresponding BOQ item cost.

Cost items in the quota budgetary system have coincidence with obligations of Chinese construction contract and meaning of contract price. Furthermore, Contract of Construction works(COCW)(GF-1999-0201) is adapt to quota budgetary system in which responsibilities and costs are suitable to quota system.

However, there are discrepancies between BOQ applicability and obligations of Chinese construction contract. Those jobs, that should be additionally paid according to the COCW, must be brought into measure BOQ or other BOQ in the CVBOQ(MOC 2003b). For instance, the job that provides facilities for employer’s living and business on the site(COCW Clause9.1(4)); the job that provides safeguards against power instruments, transmit electricity, underground pipelines, airproof-aseismic workshops, imflammable-explosive districts and main drags adjacent to downtown(COCW Clause21.1); the job that provides personal property insurance to own employee and third parties on the site(COCW Clause40.1) (MOC 1999).

According to regulations about costs in the CVBOQ, such clauses in the COCW should be amended to reduce disputes on settlement and assure the consistency between contract scope and BOQ applicability.
4 Discrepancies between BOQ Applicability and Composition of Construction Investment

4.1 Contrast between composition of construction investment and range of evaluating

In term of Chinese construction conventions, engineering cost has two kinds of meanings: for investors, the first is that construction investment which include all kinds of costs to construct a project, including construction and installment cost, instruments purchase cost and other costs(COEC 2006); for bid inviters, the second is that construction and installment cost on the bidding market. In Chinese planned economy, whether quota evaluating or BOQ evaluating just analyses the second meaning of engineering cost.

During a long period, under the strict constraint of plan and investment supervision, the second meaning of engineering cost has mainly indicated construction and installment cost. As a result, instruments are distinguished from materials. The cost of materials is embodied in construction and installment cost whereas the cost of instruments is embodied in instruments purchase cost. Furthermore, the cost of materials adding overhead and profit in is included in the contract price whereas the cost of instruments cannot add overhead and profit and is excluded from the contract price.

For example, the cost of transformer should be embodied not in the construction and installment cost but in instruments purchase cost; the cost of trial run between several specialties in installation works is embodied not in construction and installment cost but in other future corporation operation cost which is the sub-item of other construction cost(MOC 2003b).

Such kind of regulations in the composition of construction investment actually restricts the freedom of contract scope under the quota evaluating mode. Whether tenderers take transformer purchase and trial run in hand, these costs should not be calculated in the quoted price.

4.2 Cost form of contract scope in BOQ evaluating mode

In the socialist market economy, the price of construction products is determined not by construction and installment cost but by contract scope. For example, if the job of transformer purchase is involved in contract scope, this cost must be included in the quoted price; if the job of trial run is involved in contract scope, this cost must also be included in the quoted price. This is independent of whether construction and installment cost of construction investment includes these costs.

Moreover, BOQ evaluating mode is one sort of market evaluating modes. The main purpose of this mode is to resolve assessment of entity and measure items in the contract scope. All components and corresponding jobs in the contract scope should be considered in BOQ. For instance, those jobs of transformer purchase and trial run in the contract scope should be included in works contents of correlative BOQ items or be listed in measure BOQ.

On the other hand, whether these costs include overhead and profit should be separated from whether these costs are listed in BOQ. Tenderers have the power to determine how and how much overhead and profit may be included in these costs. The level of overhead and profit embodies the management and competitive strategy of tenderers and will affect bidding’s competence. As a market evaluating mode, BOQ evaluating mode should never regulate how and how much overhead and profit may be calculated in the quoted price.

5 Discrepancies between BOQ Applicability and Quota Item Limit

5.1 Contrast between works contents of BOQ and process contents of quota item

Quota system usually considers different productivities between several industries, including difference of works quantities, crafts and machines. Commonly, quota items are listed according to construction process which process contents are singularity. The division of BOQ items, however, follows the principle of forming components, in which works contents comprise several process contents. This is the discrepancy between works contents of BOQ and process contents of quota item.
For example, the works contents of BOQ item 050103001 irrigation facilities consist of: excavation of soil and stone; masoning of valve well; pavement of pipeline; consolidation of pipeline; installment of induction wiring; test of hydraulic pressure; spraying of protective materials and paint; backfill. This exclusive BOQ item comprises the process contents of multi-quota items, which are false dig of geosyncline, masonry works in Quota of garden virescence Works and automatic control instruments in Quota of installation works (MOC 2003a, BOC 1990, BOC 2001).

Therefore, during the period of innovation of cost engineering in China, there is a trend to add several quota items price to form one BOQ item price in virtue of existing quota system. Meanwhile, works contents of the same BOQ item may be divided into different tenders. For instance, those jobs of BOQ item 050103001 irrigation facilities, that are excavation of soil and stone, masoning of valve well and backfill, may be listed in the tender of construction and installment works; those jobs, that are pavement of pipeline, consolidation of pipeline, installment of induction wiring, test of hydraulic pressure and spraying of protective materials, may be listed in the tender of installment works. Under such situation, bidders should pay attention to the integrity of bids of these two BOQ items, that is the bid of construction and the bid of installment of irrigation facilities should form one full bid of irrigation facilities.

5.2 Contrast between item characters of BOQ and item steps of quota

In order to meet all kinds of works and differences in consumption level, quota budgetary system considers the plus-minus character in the division of items, such as plus-minus of sections, thickness, highness, transportation length and layers. For example, the quota item of high-rise added fee is to show the added fee of vertical transit and falsework of those buildings whose brim highness are above 20 meters (MOC 2003b).

The establishment of BOQ system is adapt to specific project and such item steps as plus-minus of sections, thickness, highness, transportation length and layers could be described in the item characters of BOQ. For example, the quota item of high-rise added fee could be replaced by measure BOQ items of vertical transit and falsework, or be replaced by one measure BOQ item of high-rise added fee whose characters are brim highness XX meters, layer highness XX meters and building area XX square meters.

In a word, the principle of the division of BOQ items is to form entity components instead of restrictions of process contents and item steps in the quota budgetary system. Under this principle, the division of BOQ items is flexible if there is no corresponding provision in the CVBOQ.

6 Conclusion

On the Chinese construction market, in view of the rooted affection of quota budgetary system to BOQ mode, while calculating the contract price, overseas investors should be aware of some realistic problems to establish BOQ Applicability under the contract scope. These problems are: the division of BOQ items is not necessary to be adapt to the scope of construction and installment cost of construction investment; works contents of BOQ is free from process contents and item steps of quota; item characters of BOQ aim at specific project requirements not at item steps of quota.

Under the frame of BOQ evaluating mode of the CVBOQ, bidders should take care of contract scope and check the BOQ against instructions to tenderers, conditions of contract, specification and drawings. The purpose of bidders is to make sure that there are no mistakes or omits in the quoted price and the BOQ Applicability is mature and correct under the restriction of contract scope.

References

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