Factors separating the initial (maximum) price of the state construction contract

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Abstract. The problem of increasing transparency and excluding the corruption component in procurement is the most acute in the modern community. The methodological bases of the formation of the initial maximum contract price are considered. The considered approach is a new approach, since this separation will allow manipulating the controlled part in the composition of the initial maximum contract price and, thereby, optimizing costs. The application of the approach will allow you to follow a scientifically based strategy to control the cost of all phases of construction, a detailed comprehensive study of investment and construction programs.

1. Introduction

The process of carrying out the procedure for the selection of the contractor and the conclusion of the contract through construction procurement has sufficient knowledge and is confirmed by scientific research. On this basis, various aspects have been investigated and there are a number of recommendations containing information about the conduct of such events. Of course, in the construction industry, contract bidding is a common practice with a developed regulatory framework. However, in practice, when conducting tenders, the classical form of their conduct was used for a long time, requiring the mandatory personal presence of representatives of construction participants, certain organizational efforts, a great investment of time, finances and other overhead costs. Despite the presence of negative characteristics, this method of concluding a contract, according to experts, is effective in solving a number of tasks when choosing an executor of a state construction order at the expense of budget savings [1].

2. Materials and methods

To optimize the bidding process, in particular the introduction of effective regulation from the pre-tender stage to contract risk management, monitoring of contract execution and audit, on April 5, 2013, Federal Law No. 44 "On the contract system in the field of procurement of goods, works and services for public procurement and municipal needs. " The main task of the law is the justification and planning of procurement, the establishment of the initial price and the essential terms of the contract. The considered law addresses the main problem of determining, forming and justifying the
initial (maximum) contract price (NMCC), which should be as accurate as possible, since it is used for planning and for procurement.

3. Results

In determining the NMCC, the following points should be considered: the terms of the contract; terms (periods) of supply of goods, performance of works, provision of services; place of delivery of goods, performance of work, provision of services; the term and terms of payment for the supply of goods, the performance of works, the provision of services; the amount of the enforcement of the contract. Based on the listed items contained in the terms of the contract, it is the price of the state contract that is the main criterion for determining the winners in the bidding held when placing the state order [10]. Based on this, the decision on whether or not to include certain costs in the price, providing detailed information on the object of procurement, will have a key influence on the choice of the method for determining the NMCC value and, subsequently, on the entire procurement process and, ultimately, on the final result.

4. Discussion

The state in the process of selecting the contractor and concluding a contract takes into account in detail the characteristics of goods, works and services that fully meet existing needs. When accepting work performed or services rendered for municipal needs, the customer is guided by average market prices when determining the NMCC, also taking into account the ratio of quality and price. In accordance with Art. 34 of the Budget Code of the Russian Federation, participants in the budget process, when drafting and executing budgets, must proceed from the need to achieve specified results using the smallest amount of funds or achieve the best result using the amount specified in the budget. Repeatedly, experts have proposed the introduction of the term “minimum” contract price by law. The term should act as a range within which bidders are entitled to give their price quotes. It should be noted that the introduction of this term will fall under anti-dumping measures, according to Art. 37-44 ФЗ, which directly contradicts one of the basic principles of procurement legislation.

In accordance with the 44-FZ law, there are no restrictions on price reduction, however, the boundary is set for reducing the contract price during the auction. This change in legislation is one of the most important advantages of the adoption of this law [2].

For the development of a technical base in determining the NMCC and the proposals of contractors for this price is the provision of detailed technical specifications and specifications contained in the tender documentation. Unlike other types of activities in construction, there is an information database to determine the estimated cost of construction using basic and territorial unit prices, aggregated indicators of construction costs and a system of current price indices. At this stage it is important to note that during the construction and reconstruction of state and municipal needs, the amount of funding is indicated at the level of real prices during the construction period [11].

Based on the above characteristics, when establishing the NMCC for construction, it is advisable to adhere to the following key provisions and principles:

• project documentation and the calculation of the estimated cost of construction (reconstruction, overhaul) at the basic price level, as well as at the price level as of the date of the development of the estimate documentation is the basis for conducting state interdepartmental examination of projects. Only with such a basis it is possible to place an order for construction [9];

• to calculate the cost at the price level as of the date of the development of the estimate documentation, it is necessary to use the program of budget calculations and take into account the updated information on current prices for resources consumed in construction [5]. Due to the frequent
use of the “initial price” indicator, it is not correct to calculate the cost at the current price level using the average price indices for construction and installation works to the base level of 2001:

- the cost at the price level at the date of publication of the notice of bidding should be determined on the basis of the estimate documentation compiled at the current price level at the date of the development of this documentation and price indices for the main calculation cost items (labor costs, cost of operating machinery and equipment, cost of materials) or resource method;
- the initial price set by the customer, as well as the contract price offered to the winner of the contract bidding, must be set at the level of the real prices of the construction period (major repairs);
- the basis for establishing the initial price is the cost at the price level at the date of publication of the notice of bidding, as well as deflator indices for capital investments and construction and installation works, established in the socio-economic development forecasts.

5. Conclusion

After the research conducted by the NMCC, the factors included in the composition of the controlled components are proposed. The factors included: the cost of land, the cost of connecting the facility to utilities, the cost of social infrastructure, the cost of overcoming administrative barriers, the cost of ensuring the warranty period of the facility, the life cycle costs of the facility (Table 1.). The above factors are not considered separately standards, however, have a direct impact on the formation of the initial maximum contract price (Fig. 1).

Table 1. Qualitative and quantitative indicators in the composition of conditionally controlled factors.

| Group of controlled factors | Factor | Quantitative components | Quality components (correction factors) |
|-----------------------------|--------|-------------------------|----------------------------------------|
| **F₁** Cost of land         | F₁₁    | Cost of land \( F₁₁ = V^K \cdot S \) | \( K^G_1 \) Location convenience ratio |
|                             |        | \( V^K \) – cadastral value per unit of area | \( K^G_2 \) Target use ratio |
|                             |        | \( S \) – land area | \( K^G_3 \) Market Factor |
|                             |        |                           | \( K^G_4 \) Existence of existing transport scheme |
| **F₂** The cost of connecting the object to the engineering networks | F₂₁ | The cost of connecting the object by type of engineering communications on electricity supply | \( K^{1T}_1 \) on electricity supply |
|                             | F₂₂ | on hot water supply | \( K^{1T}_2 \) hot water supply |
|                             | F₂₃ | on cold water supply | \( K^{1T}_3 \) cold water supply |
|                             | F₂₄ | on water disposal | \( K^{1T}_4 \) on water disposal |
|                             | F₂₅ | on heat supply | \( K^{1T}_5 \) on heat supply |
|                             | F₂₆ | gas supply | \( K^{1T}_6 \) gas supply |
| **F₃** Social Infrastructure Costs | F₃₁ | The cost of work on the creation of social infrastructure | \( K^{U} \) Social infrastructure availability ratio |
| **F₄** Costs of overcoming administrative barriers | | The cost of providing services for the passage of procedures for the coordination of documentation: | Coordination factors |
$F_{41}$ at the pre-project stage $K_1^A$ Coordination factor at the pre-project stage

$F_{42}$ at the stage of approval of design and estimate documentation (DED), $K_2^A$ Coordination factor for DED

$F_{43}$ under construction, $K_3^A$ Coordination factor at the construction stage

$F_{44}$ at the stage of commissioning $K_4^A$ Coordination factor at the stage of commissioning

$F_5$ The cost of ensuring the warranty period of the facility

$F_{51}$ The cost of activities for the preparation of real estate for commissioning $K_C^C$ The rate of accounting violations of the normal operation of objects

$F_6$ Object life cycle costs $F_{61}$ Post warranty service cost $K_P^P$ Post warranty service ratio

Thus, on the basis of the proposed price division, it seems possible to optimize the process of submitting the public procurement process, which will make it possible to approach the determination of the price of a state construction contract as accurately and economically as possible.

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