

Construction Claims Mitigation Through Early Contractor Involvement

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Abstract

Construction claims are causing various disputes in the projects and significant number of projects are not completed as per the signed contract but they are closed by dispute resolution procedure either to be presented to the litigation system or an alternative dispute resolution mechanism. Therefore, it is crucial to eliminate the disputes through the prevention of the claims causes which shall certainly mitigating the construction claims. The mitigation efforts vary in different form of contracts and dealing with the prevention with claims causes is the most efficient approach for the contracts and dealing with the prevention with claims causes is the most efficient approach for mitigation success. This paper is discussing the Early Contractor Involvement as an effective approach to prevent the causes of the claim related to different project trades like design, commercial, an extension of time, termination claims. The paper discusses also the ECI contract preparation, implementation, and it is providing the recommendations for the ECI success and the impact on the construction claims domain.

1. Introduction

Early contractor involvement (ECI) is an approach applied in construction procurement that enables the contractor early engagement in the project prior to completing the design phase. This approach ECI can be applied in different types of contracts including Lump-sum Guaranteed Maximum Price contract, Construction Management Contract, and Managing Contractor. The ECI approach entails an early contractor engagement with an agreed payment including also overhead cost, preliminaries, and profit margin. Because the contractor is engaged in an early stage where the project design is not completed and the project amount is not finalized. ECI This method of engagement can be contracted for the different endeavour, as it may be for the construction phase only, or can be agreed for design and build or the employer may engage the contractor for design finalization and then build the facility. Therefore, the fees may be agreed based on a lump-sum basis.

2. Benefits for early contractor Involvement.

The ECI approach entails different advantages as shown in figure 1.

- 1- Enables the long lead items procurement which saves time as the order is placed while the design phase is yet to be completed and it also early identifies the risks pertinent to long lead items availability and time for delivery.
- 2- The contractor can start working in distinct work portions while the design phase is ongoing, ECI is the best approach to link the project design phase with the construction phase (Löwit and Dostálová, 2014)
- 3- During the design phase, the contractor is adding value through past experience sharing, value engineering, and constructability verification which mitigates the claims classified under potential changes.
- 4- Contractor engagement can verify the cost elements which increases the cost estimation certainty as the contractor is consulting the sub-contractors and disciplines suppliers.
- 5- Overall project duration is compressed due to the fast track approach for being working on the site and procurement while the design phase is yet to be completed.
- 6- The ECI phase provides awareness and the quired information about the project to the parties. It enables joint coordination and workshops to refine the scope and project plan for the project constraints ahead of the construction phase.
- 7- The level of contractor realization is increased by the ECI approach which eliminates risks and enrich the contractor planning for the construction phase.
- 8- It is viable that ECI ensures that no commitment by the employer for final scope or final cost or legal engagement with the ECI phase contractor related to the construction phase.

Previous studies concluded that the prime advantages are: the advanced business relationship between the practitioners, the contractor design inputs, early risk identification, improved resource management and contract preparation which eliminates claims and ensures project success (Rahman and Alhassan, 2012).

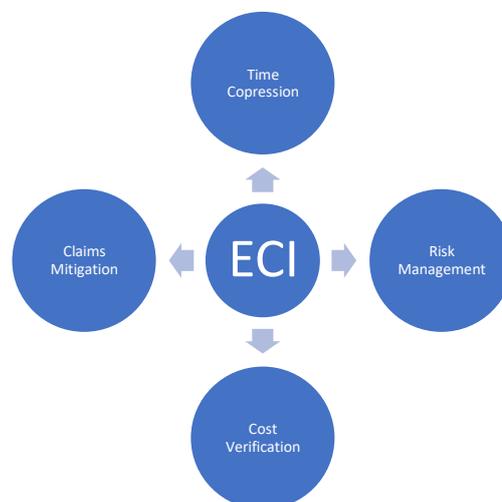


Figure 1 Benefits of ECI approach

3. Lump-Sum contracts versus ECI approach

- a. In the traditional Lump-sum contract the employer had agreed with the contractor for the contract amount deemed sufficient to complete the project. For the ECI approach, the contractor is assigned for and ECI engagement with an agreed fee for a specific endeavor as the employer had not reached the project amount due to incomplete design.
- b. The Employer in the ECI approach employs some of his trust worthy contractors where they had completed together past successful business relationship and proved transparent and honest performance. The involved contractor will be subjected to different confidential project information. He will carry on the subcontract tender process and vendor proposals submissions in order to provide potential cost and commercial advice regarding design change on material selection that impact the cost. The contractor in this situation needs to be working as a nominated and preferred potential contractor in order to avoid the bidding culture and burden influence.
- c. The contractor in ECI tendering provide the cost of the preliminaries in addition to the construction phase margin rates should be applied in the construction phase proposal.
- d. The Employer in the Lump sum contracts prepares a bid and invites different contractors to submit their technical and commercial proposals in a competitive culture. The competing price is more certain and may be less than that received through ECI but it implies the technical and cost risks which entail project control complications to manage the potential risks and probably significant amount of changes, which may be disputed and provide the fertilizer for construction claim.
- e. The engagement of the LS contractor will be project oriented where the contractor works to maintain the project constraints and ensures his own interests, nevertheless, if any contradiction with the employer's interests. In the contrary, the ECI contractor is deemed to be in the initial stage a project partner with the employer and provides the proper technical and commercial support.
- f. The ECI contractor may be subjected to conflict of interest challenge during the initial stage for being contributing to design and a contraction project planning. The contractor may find himself in the situation to select material and designs that his company cannot benefit as from another alternative where he is capable and even maybe a manufacturer or specialized in an alternative.

4. Applying ECI in different types of contracts

I. Framework agreement

Procurement procedure to procure different goods and services in an identified period, which I applied in KSA extensively with ALRAJ band and ZAMIL, Tatweer for 20 years

II. Design and built contract

It is applied under one or two stages and through FIDIC forms or KSA administrative contract.

III. Guaranteed maximum price contract

The GMP is a type of managing contractor agreement in which the contractor shall exert the best endeavor to maintain the contractual agreed maximum price. It valuable to consider that ECI in the early stage is considering less certain project cost and the employer should incorporate significant risk contingencies. The employer also should consider the cost of any instructed changes he may issue after signing the lump sum contract.

IV. Construction Management

The Employer engages a construction manager as an employer representative to manage the project based on an agreed amount for management activities in addition to providing the preliminaries. The employer also engages contractors to carry on the work and any contractor's default is at the employer's risk. The employer pays to the contractor upon recommendation by the construction manager.

V. Managing Contractor

This strategy is considered to operate the same as Construction Management with two practical differences. The first is that the Managing Contractor MC is employed as the main contractor who hires different contractors for every discipline/package. Second, the main contractor is liable for the hired contractors' defaults and deliverables. The MC contract may be under a cost-plus contract or LS contract, in the case of the cost-plus contract it remains the MC responsibility to provide detailed auditable cost record for the hired contractor in order to enable to review and verify the cost that is due to apply the agreed percentage to be paid to the MC.

VI. Competitive dialogue,

Procurement procedure suitable for complex projects

VII. Negotiated procedure

The same like competitive dialogue but suitable for simple projects

5. ECI Contracting Strategy

I. Employer driven approach

In the early stage of the design, it is viable to agree with the contractor or CM or the MC for the cost-plus contract strategy which will be restrained to achieving a certain level of design progress. While the design development is moving forward, and the agreed level of design development is achieved. It is preferred to accomplish the complete design with a level of detail complying with the required BIM model (4D or more) and contract documents to be prepared. It becomes more practical to go into the contract closeout process and contract under the Lump-sum contract. This approach is more successful in the private sector as it may involve the contractor/s for free with a promise to be awarded the construction phase. It is used frequently with the chain of projects like bank branches, restaurants, and schools.

II. Two Stages contract strategy

The employer invites a suitable number of qualified contractors to submit a proposal based on preliminary design and complete employer requirements. The employer selects a suitable proposal and negotiates with the potential contractor for a design and build contract based on the contractor's screened proposal. Hence, the employer enters into an agreement for the design and build contract in two stages the first stage is to provide descriptive Lump-sum priced proposal with a design-built contract document and sufficient illustrative design that enables the employer/stakeholder to make an informed decision based on their project perspective and needs, this stage is referred to the early contractor involvement. The first stage agreement mainly is paid under a cost-plus basis. Further to the employer acceptance for the proposal and after due technical and commercial negotiations, the employer may decide to enter an agreement for the second stage which incorporates a Lump-sum design and build contract based on the agreed contract document and the illustrative design where the contractor develops the detailed design and construction drawings and BIM model that suites the employer requirements (4D – 5D- or else agreed).

5.1 Early Contractor Involvement Agreement

The ECI stage agreement is providing the contractual relationship between the employer and the contractor in this stage in addition to procedure to move forward into the construction stage in case the contract parties agree to continue the business. The ECI contract includes the ECI conditions, and the parties may agree for an appendix that includes the construction phase conditions and contract contents that may be used on the employer discretion as he maintains the right to invite more tenderers and he is not bounded by the ECI phase contractor to continue in the construction phase. In some cases, I applied the ECI contract agreement as a stand-alone contract for the design phase or preconstruction phase and the construction phase contract was deferred to be negotiated between the parties in the due time. The ECI contract document includes different documents akin construction contract forms and for the purpose of this paper, the author will discuss the common scope of work included in this type of contract.

5.2 Contract Scope of Work for ECI

The SOW includes the deliverables required from the contractor to complete the ECI phase. The contractor in this engagement should provide the following:

- a. Clear and specific proposed scope of work.
- b. The contractor should prepare a complete proposal to execute the proposed SOW on Lump-sum basis with a cost break down to identify the cost of each component of the SOW. Additionally a work schedule and method statement for the proposed scope of work. It is worthy to emphasis on the importance of the schedule being provided by an experienced contractor as it will eliminate the chance to claim for an extension of time for procurement subject or non-available material and delays by third part.
- c. The Value Engineering selected options and outlines.
- d. The contractor will provide site visit report with its findings and test report.
- e. Design coordination and cost planning with the employer.
- f. Subcontract management, requesting quotations, and analyze and recommend suitable proposals.
- g. General obligation including contract privity, confidentiality, standard of care, the contractor obligation to maintain the employer interest and perform the services with due care.
- h. The SOW/ECI duration shall be mentioned, and the extension of time procedure is to be agreed. The complete Lump-sum proposal is the prime deliverable and entails the ECI phase completion.

The employer team and other selected stakeholders start working with the contractor from the start of the ECI and coordinate in the design, all SOW and the agreement deliverables through the ECI phase. In certain projects where the ECI phase contractor is awarded the construction phase, the employer team is novated to the contractor to continue the with construction phase.

5.3 Challenges in applying ECI

The ECI has some challenge to comply with the procurement regulations in the public sector should they need to apply it in an administrative contract. The challenge may be the strict competition and tendering procedure. This procedure mandates the authority to apply equity with all vendors and contractors and it does not account for the trustworthy contractor or is working with the authority in successful projects. All contractors are the same in the starting point by applying the prequalification system that screens the contractors to a shortlist. However, the public authority can still implement the ECI through different bases like direct purchase order with a contractor of unique or specific experience. It can be also applied in case of seeking a preliminary design solution. The authority frequently applies the ECI in the form of design and build contract in one stage based on the employer preliminary design and the employer requirements. General challenges in applying the ECI are that it is not practical for small projects as the cost-benefit ratio does not encourage the employer. Another challenge comes from the contractor side as he may not maintain his interest to continue in the project after completing phase one or some of his team members leave the project and the learning curve may dropdown to restart with a new team.

6. Potential claims in ECI engagement

Akin all construction contracts the ECI agreements have the risk of potential construction claims which need diligent management and control. The ECI can proactively mitigate the construction

claims through dealing with the root cause of the claim and breaking the link of causation by early involvement of the contractor. Impact for the purpose of this paper the author will emphasis a certain number of claims causes and demonstrate the mitigation approach.

i. Design claims

In ECI contract the contractor is early engaged in the design phase and shares his experience in the design solutions and design deliverables. From construction claims prospective the contractor will have no justification to submit a claim in the construction phase for incomplete or improper design as he will not be able to prove the chain of command:

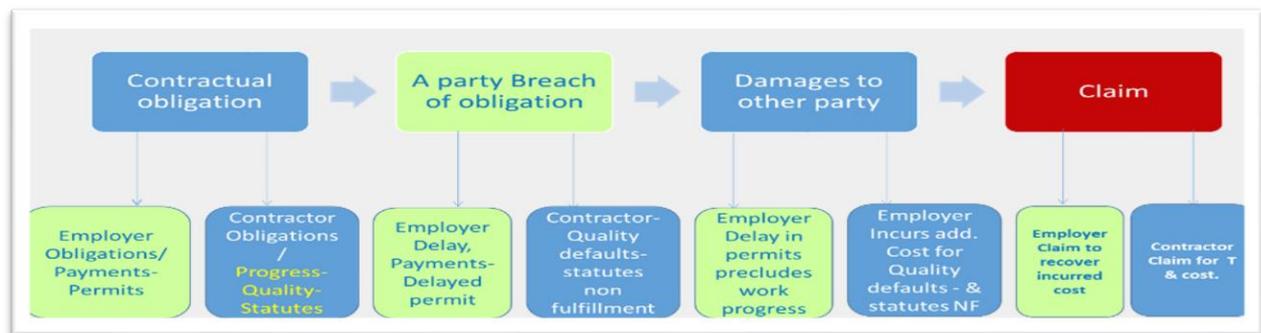


Figure 2 Obligation Breach Claim Chain

ii. Extension of time claim

The contractor SOW in the ECI engagement includes a time schedule for the construction phase to be prepared by the contractor. Since the contractor became acquainted with the project requirement, duration and scope the project duration are deemed defined in high certainty and the work can be completed in the defined time without pressure on the construction phase which generates claims evolving from the project improper duration.

iii. Scope claim

The Lump-sum contract documents are prepared by the ECI contractor for the construction phase through a coordinated effort with the employer and project stakeholders which provide comprehensive construction scope with the prior buy-in. The constructive change or claims for incomplete scope here becomes infrequent, and the claims in this area are simply challenged through the ECI engagement analysis and the original employer requirement which was the base for the project design and Lump-sum contract SOW.

iv. Liability Claims

For the claims for design defaults or professional indemnity that may arise, is transferred in this ECI to an insurance company to carry the liability insurance for the public and the professional indemnity insurance PII as well.

v. Termination claims

The implementation of the termination clause in ECI contract is seldom because of the involvement of the contractor in all contract preparation stage. The business relationship between the trustworthy contractor and the employer of high reputation and having series of projects that attract the contractors, enable the parties to avoid applying such choice or terminate the project in a disputed situation. Due to the consistent relationship between the parties, the termination clause is drafted in the language that facilitates the unexpected termination which may be the last choice by the parties and probably termination for convenience, not for default by a party.

As the termination claim is actually a synergetic effect of many risks and different type of claims so this type of claims is mitigated through managing the root causes of different claims types and the selection of a trustworthy contractor who will prioritize the win-win solutions and maintains the business relationship with the employer.

The impact of different advantages of ECI approach and different claims types provides the mitigation achieved from applying ECI approach as shown in figure 2.

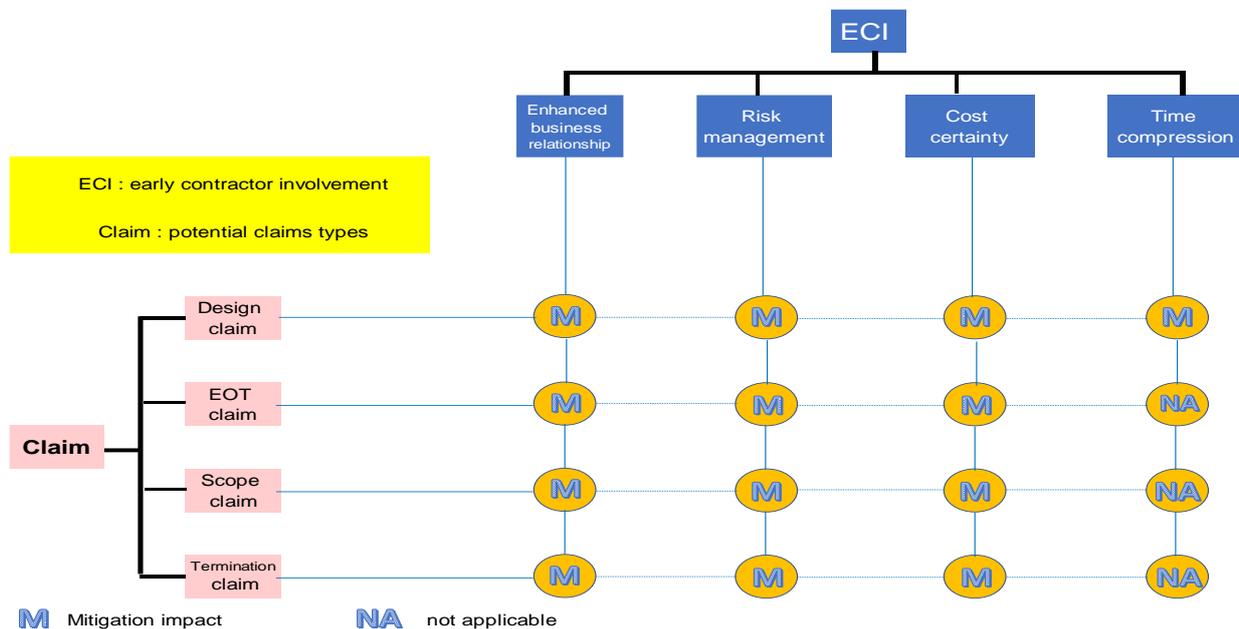


Figure 3 Impact of ECI approach on construction claims

7. Conclusion

The ECI approach is a mechanism used either with the stander forms of contracts like the “FIDIC” forms of contracts, Yellow Book for the Plant and design built and the X22 NEC4 or it may be tailored to suit the specific project and its parties. The ECI contract may be applied in two stages and for one contractor or it may engage different contractors one for every stage. The ECI approach can be used for the improvement of the project success certainty and mitigation of the most potential construction claims. The influence of ECI proved to mitigate different types

of claims like design claims, an extension of time claim, scope claim, liability claims, termination claims. The paper recommended some success factors for the ECI application to be ensured by the practitioners to ensure project success and mitigate the construction claims.

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