

# PROLONGATION COSTS IN CONSTRUCTION CONTRACTS

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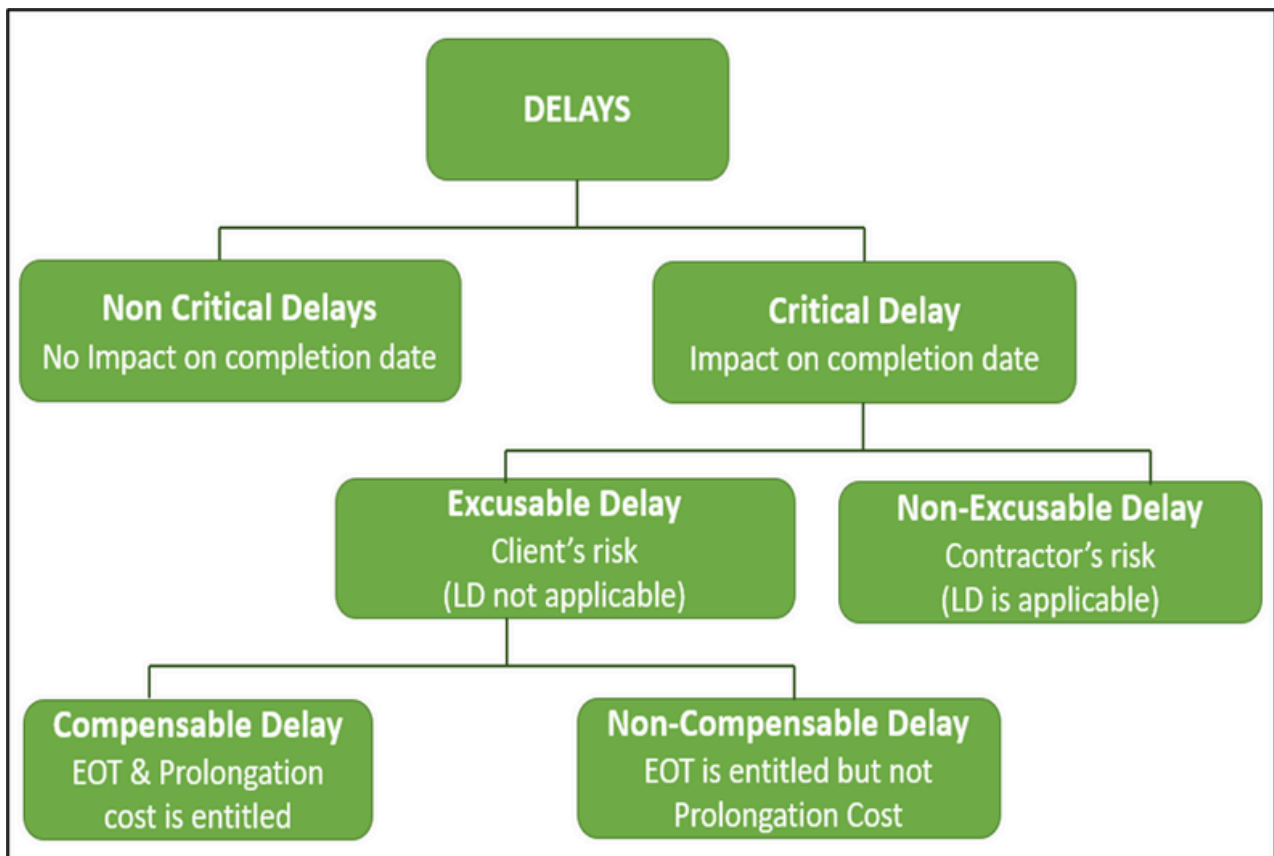
The meaning of prolongation is the 'extension of the duration of something'. In the construction contract, when the original duration of the contract elapses, the project is said to be in a 'prolonged period'.

Delays are common in the construction industry as the construction projects are complex and involve various variables and stakeholders. The assessment of the prolongation costs becomes crucial in construction claims when delays in the overall project result substantial extension of the project duration. The additional expenses due to the delays by project prolongation are referred to as "prolongation costs" and precise estimation of these costs is necessary for both efficient project management and fair dispute resolution.

## Types of Delay

In a typical construction project, the entitlement is based on the type of delay in the project. From the quantification of the cost claim/prolongation claims, the delays are mainly identified as follows:

1. Excusable delay
2. Non-Excusable delay
3. Concurrent delay



**Excusable Delay:** This delay is beyond the control of the contractor and gives rise to the entitlement to an extension of time to the project's completion. However, not all Excusable delays are compensable depending on whether they are entitled the contractor to additional cost recovery.

**Non-Excusable Delay:** These are the delays for which the contractor is responsible and do not entitle them to an extension of time (EOT) or compensation.

**Concurrent Delay:** It refers to the situation where two or more delay events occur simultaneously, one an Employer Risk Event, the other a Contractor Risk Event, and the effects of which are felt at the same time impacting the project timeline.

SCL Protocol 2017 (2nd Edition) talks about the period for evaluation of compensation as follows:

*“Once it is established that compensation for prolongation is due, the evaluation of the sum due is made by reference to the period when the effect of the Employer Risk Event was felt, not by reference to the extended period at the end of the Contract”.*

Based on the prolongation events the contractor is entitled to claim the below sub-heads of the prolongation cost claims.

- Costs due to extended stay (On-site Expenses)
- Additional head office overheads (Un-absorbed Overheads)
- Costs due to extended insurance and bank guarantees/bonds
- Loss of opportunity to make profits
- Claims consultant's fee
- Interest and financing charges
- Any other costs that are recurring (time-related) in nature

## **Assessment Method**

### **On-Site expenses due to extended stay**

These expenses represent the actual costs incurred as a result of an extended stay at the site. The following steps are followed to assess such prolonged on-site expenses:

1. **Identify actual costs:** Gather all actual costs incurred during the project by reviewing sources such as the project cost ledger, invoices, bank statements, timesheets, and ERP systems.
2. **Categorize costs:** Classify the costs based on the standard or existing accounting practices typically followed in construction projects.
3. **Segregate costs:** From the categorized costs, distinguish between direct and indirect costs (time-related and non-time-related). Further, exclude all direct costs from this analysis.
4. **Calculate time-related indirect costs:** Identify time-related indirect costs over the entire project period and compute the per-day time-related costs for each month or defined delay window period.
5. **Determine extended stay costs:** Multiply the calculated per-day time-related indirect costs by the number of delay days for each delay window to determine the extended on-site expenses.

### **Additional Head Office Overheads (Un-absorbed Overheads)**

The following formula is recommended under the SCL Protocol, 2017 (Page 65) for assessing additional head office overheads and profits. The protocol suggests the use of the Hudson, Emden, and Eichleay formulas for this purpose.

## head office overheads & profit formulae

### Hudson formula

$$\frac{\text{Overheads \& profit}}{100} \times \frac{\text{contract sum} \times \text{period of delay}}{\text{contract period}}$$

Overheads & profit: head office overheads and profit percentage in tender.

### Emden formula

$$\frac{\text{Overheads \& profit}}{100} \times \frac{\text{contract sum} \times \text{period of delay}}{\text{contract period}}$$

Overheads & profit: head office overheads and profit percentage (actual).

### Eichleay formula

Step 1: establish the head office overhead costs attributable to the contract as follows: divide the final contract sum (excluding the claim for head office overhead) by the total revenue for the contract period, then multiply the result by the total head office overhead costs incurred during the actual period of performance of the contract.

Step 2: divide the figure resulting from Step 1 by the number of days of actual performance of the contract, to establish a daily rate.

Step 3: Multiply the figure resulting from Step 2 by the number of days compensable delay.

## Loss of opportunity to make Profits

During the prolongation, most often the Contractor's resources are tied in such a way that the Contractor would be neither able to undertake any other Projects nor can manage its existing project. Consequently, contractors may claim reimbursement for the loss of opportunity to generate profits resulting from the extension of time for project completion. The calculation for such a claim is as follows:

- Original Contract Sum = INR X
- Original Contract duration = Y days
- Average Planned Turnover per day =  $X / Y = \text{INR } Z$
- Percentage of Profit from any similar project = 10% (based on Audited Financial Statements)
- Amount of Profit per day planned during original Contract duration = 10% of  $Z = \text{INR } Z1$
- EOT entitlement duration for the completion of Project = A days
- The amount of Profit claimed by the Contractor on account of Loss of Profits for the extended period =  $\text{INR } Z1 \times A = \text{INR } Z2$

## **Costs due to extended insurances and bank guarantees/bonds and Claims Consultant's fee**

The assessment of costs for extended bank guarantees/bonds, insurance, and claim consultant's fees is based on the actual costs incurred during the extended period. These costs are calculated by multiplying the actual per-day cost by the duration of the delay.

### **Interest and financing charges.**

The applicable interest rate and the method of assessment are determined by the contractual provisions of the construction project. However, in the absence of specific guidelines within the contract, the following standard practices are typically applied:

- **Indian Contracts:** Interest and financing charges are typically calculated using the SBI PLR (State Bank of India Prime Lending Rate) on a compounding basis.
- **International Contracts:** These charges are usually calculated using EURIBOR or LIBOR rates on a compounding basis, depending on the governing financial standard.

### **Substantiation of Prolongation Claims**

The burden of proof for a prolongation claims rests with the contractor, who must establish that:

1. The claimed costs have been or will be incurred,
2. The costs must have arisen directly due to a relevant delay event, and
3. These costs are recoverable under the terms of the contract by providing sufficient and credible evidence to meet this obligation.

Henceforth, maintaining well-organized records is crucial for the contractor as it helps them assess the availability of necessary documentation and identify any missing records, especially when certain documents may be held by third parties.

The following documents are essential for calculating prolongation costs:

- **Project Cost Ledger** (with relevant supporting documentation)
- **Bill of Quantities (BOQ)**
- **Indirect Manpower Records** (verified by the client)
- **Indirect Equipment Records** (verified by the client)
- **Audited Financial Statements**
- **Evidence of Bank/Financing Interest Charges**

The adage "**time is money**" aptly applies to delays in construction projects, as such delays can be exceedingly costly for both the contractor and the client.

A significant delay not only leads to substantial financial losses but also impacts the contractor's overall profitability. To ensure effective claims management, contractors and their project management teams must evaluate delays and their associated costs with precision and efficiency.

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