Appendix-C

Formula for Price Adjustment

*[**Note to Procuring agency/Employer:** It is recommended that in the case of very large and/or complex works contracts, it may be necessary to specify several families of price adjustment formulae corresponding to the different works involved. **When finalizing the contract document, ensure that the finalized Schedule of Cost Indexation is attached to*** **the Contract Agreement.**]

a) Price Adjustment/ escalation shall not be applicable on Civil, Mechanical and Electrical projects /contracts having contract life less than 365 days from the date of the signing of the contract.

b) Procuring Agency/Employer is advised not to change any provisions hereof unless otherwise stated by the Authority.

c) No method, other than given in this formula will be applicable to compute the price adjustment.

d) This document will be applicable only for Price Adjustment in local currency (Pak. Rs.). Price Adjustment in foreign currency is not allowed.

e) Price Adjustment formula and corresponding references to be inferred for price adjustment shall be agreed and firmed up before signing of the contract. Procuring agency and contractor shall firm up the weightages and co-efficient for respective items before signing of the contract and there shall be no change permissible in the weightages after signing of the contract.

f) For imported plant/ equipment and materials quoted in local currency (Pak. Rs.), foreign currency, exchange rates shall be fixed at the respective interbank currency exchange rates, 28 days prior to the tender opening date. The change in foreign currency exchange rate will be applicable to the foreign currency component stated in the Letter of Credit established by the Contractor or his Vendor.

g) This procedure is to assist the Procuring agency/Employer and bidder for the preparation of provisions for price adjustment in their bidding / contract documents. All the coefficients of the price adjustment formula shall be specified in the bidding document at the time of advertisement.

[The formulae for price adjustment shall be of the following general type:]

$$P_n = A + b\frac{L_n}{L_o} + c\frac{M_n}{M_o} + d\frac{E_n}{E_o} + \ldots\ldots\ldots\ldots\ldots$$

where,

"P_n" is the Price Adjustment factor for the work carried out in the period "n".

"**A**" is a constant or the Non-Adjustable Portion of the Price Adjustment Factor to be specified in Appendix-C to Bid, representing the Non-Adjustable Portion of the Contract Price.

"**b**, **c**, **d ....**" are Coefficients or weightages of the order of 0.xx (i.e., fractions rounded off to two decimals) for each specified element of adjustment in the Contract.The sum of **A**, **b**, **c**, **d**, etc., shall be one.

"Ln", "En", "Mn", ... are the current cost indices or reference prices for period "n", expressed in the relevant currency of payment, each of which is applicable to the relevant tabulated cost element on the date 28 days prior to the last day of the period (to which the particular Payment Certificate relates); and

"Lo", "Eo", "Mo", ... are the base cost indices or reference prices, expressed in the relevant currency of payment, each of which is applicable to the relevant tabulated cost element on the Base Date.

1. Construction schedule should be provided by the contractor as required in the Contract. Price Adjustment shall be applicable as payable in full for the original scheduled completion period.

2. In the event the completion of contract exceeds the original scheduled period:

   2.1 In case of default on the part of the contractor causing delay in original scheduled completion, the rate of Price Adjustment will be frozen at the original scheduled date of completion; however Price Adjustment will be applicable till actual completion. While computing Price Adjustment beyond the scheduled completion period, in the event the rate is reduced, then that reduced rate will be applied.

3. The Price Adjustment will be payable in full for the extended period if the contractor has been granted an extension of time for no fault on the part of the contractor, duly approved by the Employer.

4. Unless specifically stated otherwise in the contract, the basis for compensation will be only those elements, which are specifically listed as specified items in the tender documents. This list will specify the elements for Civil, Electrical, Mechanical, Sanitary, HVAC, etc., separately.

5. Formula for Price Adjustment provided herein will be applicable for all the contracts such as Civil, Electrical, Mechanical, etc.

6. There shall be no Price Adjustment for the elements which the Employer has either supplied free of cost or at fixed prices as well as for those elements for which an umbrella *ex gratia* or escalation cover is provided by the Government through an Executive Order or Statutory Regulatory Order (SRO).

Weightages of Specified Items

Each of the cost elements, having cost impact of five (05) percent or highercan be selected for adjustment.

In determining the weightages, the following procedure shall be adopted:

a) Base Date Price alone of an element based on market rate shall be considered excluding cost of construction/ installation, overheads and profit.

b) Engineer's Estimate shall be prepared for complete project.

c) Appropriate Rate Analysis of the Engineer's Estimate shall be made to determine costs of the basic elements.

d) For such cost elements having various types of a particular element, individual cost of such family of the element used in the project to be determined and added to work out the element cost. (Grade-40 andGrade-60 steel shall be treated under same category).

e) Each cost element determined as above, shall be divided by the total amount of Engineer's Estimate to determine various weightages.

Weightage of Fixed Portion

Weightage of fixed portion (Non-adjustable portion of the estimated cost of the contract), shall be determined as under:

a) First the weightages of all the cost elements having value of five (5) percent or more to be added up to see whether the total is 75 percent or less. In that case the total is to be subtracted from one (01) to determine the weightage of the fixed portion,

b) In case total weightage of the cost elements including HSD and labour exceeds 75 percent, the element(s) having lowest weightage(s) other than HSD and labour, shall be excluded in considering the adjustable costs elements.

c) Fixed portion shall be 25 percent and in case the fixed portion exceeds 25 percent it shall be supported by calculations attached with the bidding documents.

d) Sum of fixed portion and weightages b, c, d, ….etc., of the adjustable portion shall always be one (01).

Base Date Price

The base date price (or base date index) of any element shall be the price of the element for the month on the day falling 28 days prior to the last day for submission of bids.

Current Date Price

The current date price (or current date index) of any element shall be the price of the element for the month falling on the day 28 days prior to the last day of the period to which the particular Payment Certificate relates.

Sources of Prices

The prices of elements subject to Price Adjustment shall be to the extent possible as given in the Statistical Bulletins published by Federal Bureau of Statistics (FBS), Statistical Division Government of Pakistan. Statutory notifications and official price from public sector organizations, where available, may be used at the option of the Employer. The source for prices of High Speed Diesel (HSD) shall be either Statistical Bulletins or Pakistan State Oil (PSO) or Oil and Gas Regulatory Authority (OGRA). However, for a particular adjustable element, the same source should be used throughout the currency of contract as also stipulated in the tender documents before issuing the tender documents.
The Base Date Prices and Current Date Prices of the specified elements shall be obtained from the sources specified in the contract.

Method for payment of bills

The billed amount of the Works for each calendar month will be obtained from the checked bills submitted by the Contractor. In case the billed amount is for more than one month, the amount of the bill shall be segregated for actual workdone in each month.

Coefficient or Weightages

a) The coefficient for each specified element shall be calculated and given in the bidding/tender documents. The coefficient for each specified adjustable element shall be determined by the user proportionate to its ratio in the total amount of the Engineer's Estimate, in accordance with the prescribed procedure. The sum of these coefficients shall form the adjustable portion of the Contract, which shall not exceed 0.75.
b) Coefficients for each adjustable item shall be agreed by both parties and shall be fixed and locked at the time of the signing of the contract and shall remain constant during the currency of the contract.

Price Adjustment for Lump Sum Contract

a) Formula of Price Adjustment shall be used in determining Price Adjustment for contracts having detailed breakdown of cost. However, when a contract is assigned on lump sum basis without detailed breakdown of quantities and cost, Price Adjustment for the Specified Elements in the contract will be computed as follows:

$$\text{Increase/ Decrease in Cost (Price Adjustment Factor)} = \frac{\text{Current Date Price} - \text{Base Date PriceBase}}{\text{Date Price}}$$

b) If the resulting Price Adjustment Factor is positive (+ve), the price should be added tothe contractor's payable amount. If the result is negative (-ve), the price should be subtracted from the payable amount.

c) The executed quantities of the elements subject to Price Adjustment can be obtained from the actual measurement or from certified invoice of the contractor or any other mode agreed between the parties which shall be stipulated in the contract.