

# **Schedule 2: Schedule of Payments**

# MEASUREMENT/ VERIFICATION MECHANISM FOR

# PROGRESSIVE PAYMENT OF WORKS



### MEASUREMENT/VERIFICATION MECHANISM OF PROGRESSIVE PAYMENT OF WORKS

The Contractor can submit two invoices of PKR 20M each only, remaining all invoices to be PKR 50M and above for all below mentioned scopes (Civil, Electrical, Instrumentation, Mechanical)

## A) Mechanical, Electrical & Instrument Works

The progressive payment of Mechanical, Electrical & Instrument works will be made based on following milestones:

I.	Erection/installation of skid. After erection/installation at foundation	500/ ich completed
i)		50% job completed
ii)	After Mechanical Completion	80% job completed
iii)	After punch list clearance & provisional acceptance by EPCL	100% job completed
II.	Installation of Static Equipment.	
i)	After erection/installation at foundation	50% job completed
ii)	After Mechanical Completion	80% job completed
iii)	After punch list clearance & provisional acceptance by EPCL	100% job completed
III.	Erection/installation of Rotary Equipment (e.g. pumps, generators, fan	s, compressors, etc.)
i)	After installation/ erection	50% job completed
ii)	After Mechanical Completion	80% job completed
iii)	After punch list clearance & provisional acceptance by EPCL	100% job completed
IV.	Installation of Piping	
i)	After laying/ installation/	50% job completed
ii)	After Hydrotesting and Mechanical Completion	80% job completed
iii)	After punch list clearance & provisional acceptance by EPCL	100% job completed
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V.	<u>Installation of steel structure</u>	
i)	After laying/ installation/ tack welding	80% job completed
ii)	After punch list clearance & provisional acceptance by EPCL	100% job completed
VI.	Installation of Electrical Items.	
i)	Installation of Electrical Equipment	50% job completed
ii)	Testing of Electrical Equipment	80% job completed
iii)	After Punch List Clearance and provisional acceptance by EPCL	100% job completed
VII.	Installation of Instrument Items.	
i)	Installation of Instrument Equipment	50% job completed
ii)	Testing of Instrument Equipment	80% job completed
iii)	After Punch List Clearance and provisional acceptance by EPCL	100% job completed
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## B) Civil Works

Measurement / Verification of acceptably completed works shall be based on the units of items as mentioned in the bill of quantities (BOQ) / Price Schedule. For example, concrete works shall be measured in cubic meter  $(m^3)$  / cubic feet  $(ft^3)$  and pavement / floor shall be measured in square meter  $(m^2)$  / square feet  $(ft^2)$  etc.

The dimensions marked on the drawings shall be used for the measurement of all BOQ items. However, site measurements shall be referred for the verification of items related with works modified as per site condition. The steel reinforcement shall be verified on the basis of Bar Bending Schedule prepared by Contractor and verified by



EPCL Representative. The sample of Bar Bending Schedule to be mutually agreed between the parties during KICK OFF Meeting.

The quoted unit rates of the item(s) of BOQ shall be deemed to have included the cost of all the supporting works that may required for satisfactory completion of the relevant BOQ item(s). Therefore, no measurement / payment shall be made for works not shown on drawing, but, carried out by contractor for the ease of construction or for any other reason. For example, the survey work required for layout / demarcation of works, verification of FGL's / NGL's and additional excavation for ease of construction etc. Similarly, the works shown on drawing, or are required to be carried out as per requirement of specifications, but are not separately mentioned in BOQ(s) shall also be not measured and shall deemed to be included in the relevant BOQ item(s). For example, the leveling /compaction of sub grade, providing and fixing templates, chairs / laps for steel reinforcement, form work / scaffolding, expansion joints and removal / disposal of undesired material etc. shall not be measured separately and the cost of all such works shall be deemed to have been included in the unit rates, quoted by the contractor for relevant item(s).

For the Measurement / Verification of completed work, the contractor shall prepare measurement sheet(s) of completed BOQ item(s), clearly marking the relevant BOQ item(s), reference drawing number and the title of work etc., and shall submit for the verification of EPCL Representative. The Contractor shall ensure that prior to covering or before the start of next activity, the BOQ item to be covered is verified by EPCL Representative. The sample of Measurement Sheet to be agreed between the parties during the KICK Off Meeting (standard break up of each element of works is provided below as Annex A).

The contractor shall include the above referred measurement sheet(s) in final / running invoice (s) to form basis for the claimed amount.

#### Annex A:

Major break down of civil work will be broken as per following percentage:

Civil works related to equipment foundations:

Excavation	5 %
Rebar completion	15%
Concrete casting	35%
Backfilling	45%

Civil works related to all buildings:

FOUNDATION	5%
PLINTH	10%
MASONARY WORK / COLUMNS & BEAMS	15%
ROOF SLAB	10%
FINISHING	60%



Inspection of each kilometer of completed road/concrete paved section in compliance with design for level and grading of internal and access roads.

#### **Payment Schedule:**

The payment of the Contract Price will be made as per schedule given below.

- **A.** Onshore Supply Services Contract:
  - (i) Five percent (5%) of the Contract Price against Onshore Services Contract within ten (10) working days of mobilization of the Onshore Contractor (not limited to establishment of camp, Project team mobilization, equipment and tool mobilization, availability of all equipment to meet HSE and COVID requirements) on Project site against an unconditional, irrevocable and on-demand bank guarantee in an aggregate amount of the Pakistani Rupee (PKR) Advance Bank Guarantee acceptable to EPCL (the "Advance Bank Guarantee");
  - (ii) Five percent (5%) of the Contract Price against Onshore Services Contract within ten (10) days after Onshore Contractor start the site works against an unconditional, irrevocable and on-demand bank guarantee in an aggregate amount of the Pakistani Rupee (PKR) Advance Bank Guarantee acceptable to EPCL;
  - (iii) The mobilization advance amount shall be amortized four (4) months after release of first mobilization advance;
  - (iv) Ten percent (10%) of the Contract Price Shall be paid after issuance of provisional acceptance certificate;
  - (v) The remaining Contract Price shall be payable upon completion of milestones
  - (vi) Project Measurement procedure (to be set out in the EPC Contracts) shall be considered while verification of milestones.