

PART 2: PRICING DATA

ECC3 Option A

Document reference	Title : Electrical recovery of cross-over plant	No of pages
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C2.1 Pricing assumptions: Option A

1. How work is priced and assessed for payment

Clause 11 in NEC3 Engineering and Construction Contract, (ECC3) Option A states:

Identified and defined terms 11
11.2 (20) The Activity Schedule is the *activity schedule* unless later changed in accordance with this contract.

(27) The Price for Work Done to Date is the total of the Prices for

- each group of completed activities and
- each completed activity which is not in a group.

A completed activity is one which is without Defects which would either delay or be covered by immediately following work.

(30) The Prices are the lump sum prices for each of the activities on the Activity Schedule unless later changed in accordance with this contract.

This confirms that Option A is a lump sum form of contract where the work is broken down into activities, each of which is priced by the tendering contractor as a lump sum. Only completed activities are assessed for payment at each assessment date; no part payment is made if the activity is not completed by the assessment date.

2. Function of the Activity Schedule

Clause 54.1 in Option A states: "Information in the Activity Schedule is not Works Information or Site Information". This confirms that specifications and descriptions of the work or any constraints on how it is to be done are not included in the Activity Schedule but in the Works Information. This is further confirmed by Clause 20.1 which states, "The *Contractor* Provides the Works in accordance with the Works Information". Hence the *Contractor* does **not** Provide the Works in accordance with the Activity Schedule. The Activity Schedule is only a pricing document.

3. Link to the programme

Clause 31.4 states that "The *Contractor* provides information which shows how each activity on the Activity Schedule relates to the operations on each programme which he submits for acceptance". Ideally the tendering contractor will develop a high level programme first then resource each activity and thus arrive at the lump sum price for that activity both of which can be entered into the *activity schedule*.

4. Preparing the *activity schedule*

Generally it is the tendering contractor who prepares the *activity schedule* by breaking down the work described within the Works Information into suitable activities which can be well defined, shown on a programme and priced as a lump sum.

The *Employer*, in his Instructions to Tenderers or in a Tender Schedule, may have listed some items that he requires the *Contractor* to include in his *activity schedule* and be priced accordingly.

It is assumed that in preparing his *activity schedule* the *Contractor*:

- Has taken account of the guidance given in the ECC3 Guidance Notes pages 19 and 20;
- Understands the function of the Activity Schedule and how work is priced and paid for;

- Is aware of the need to link the Activity Schedule to activities shown on his programme;

- Has listed and priced activities in the *activity schedule* which are inclusive of everything necessary and incidental to Providing the Works in accordance with the Works Information, as it was at the time of tender, as well as correct any Defects not caused by an *Employer's* risk;
- Has priced work he decides not to show as a separate activity within the Prices of other listed activities in order to fulfil the obligation to complete the *works* for the tendered total of the Prices.
- Understands there is no adjustment to the lump sum Activity Schedule price if the amount, or quantity, of work within that activity later turns out to be different to that which the *Contractor* estimated at time of tender. The only basis for a change to the Prices is as a result of a compensation event.

Supply, installation , termination and commissioning of power cables :

3.1 Sludge drying bed					
Item	Description	Unit	Est. Qty	Rate Each	Total Price
1	Cleaning and removal of ash on both sludge drying bed 1 and 2 – estimated ash volume	m ³	50		
2	Repair damaged concrete wall of both sludge drying bed 1 and 2 – estimated concrete volume	m ³	6.5		
3	Refurbishment of isolation gates - 400mm X 200 mm stainless steel with handles	-	4		
4	<i>Replacement of all missing isolation gates</i> - 400mm X 200 mm stainless steel with handles	-	2		
5	Installation of surf guards to prevent foreign objects from entering the sludge sump - rectangular guards with stainless steel frame and menlath sheet (700mm X 300mm X 400mm)		2		
6	Removal of hard ash on sludge drying bed dissipater flow diverter	m ³	0.5		
TOTAL PRICE EXCLUDING VAT					

3.2 Sludge sump					
Item	Description	Unit	Est. Qty	Rate Each	Total Price
	Complete removal of ash inside the sludge sump	m ³	4		
	Removal, strip, assess and service of sludge pump 2 (if the pump can't be repaired or serviced then a new pump must be purchased) <ul style="list-style-type: none"> ○ <i>Hazleton submissible sludge pump</i> ○ <i>Model : 50L SSB</i> ○ <i>Serial No.: KDP 004</i> ○ <i>Head: 12 m</i> ○ <i>Flowrate : 5 l/s</i> 	-	2		
	<i>Purchase of new sludge pump 1</i> <ul style="list-style-type: none"> ○ <i>Model : 50L SSB</i> ○ <i>Serial No.: KDP 004</i> ○ <i>Head: 12 m</i> ○ <i>Flowrate : 5 l/s</i> ○ <i>Hazleton submissible sludge pump</i> 	-	1		
	Installation of new pipe work <ul style="list-style-type: none"> ○ <i>6m 100mm galvanized carbon steel pipe</i> ○ <i>1 X 90° bend</i> 	m	6		

3.2 Sludge sump					
Item	Description	Unit	Est. Qty	Rate Each	Total Price
	Installation of sludge pump 1 and 2	-	2		
	Installation of a new valve 100mm butterfly valve with a lever	-	1		
	<i>Installation of electrical panel roof for rain cover</i> - 1 m X 1 m	-	1		

Item	Description	Unit	Est. Qty	Rate Each	Total Price
	3.3 Clarifier oil separator plant				
	Replacement of all 12 clarifier separator vertical pipes/tubes with stainless steel tubes -3m 350mm Schedule 40 stainless steel pipes	-	12		
	Replacement of 2 all clarifier discharge valves - 50mm Saunders diaphragm valve	-	2		
	Replacement of all 8 clarifier sludge sump pump supply isolation valves - 100mm Saunders diaphragm valve	-	8		
	Servicing of both pneumatic pump system <ul style="list-style-type: none"> o ARO pneumatic pump o Model : 666150 – 322 o Serial No.: 10043810 o Max working pressure: 8 Bar 	-	2		
	Replacement of all filters Ultraspil filter	-	1		
	Replacement of oil separation compressor system <ul style="list-style-type: none"> ➤ Min pressure output = 1200 kPa ➤ Max pressure output = 1560 kPa 	-	1		
	Empty and clean oil catchment tank 2m3 tank	-	1		
	Replacement of all missing pipework on the oil catchment tank <ul style="list-style-type: none"> o 30m 50mm PVC pipe o 10 X 90° elbows 	m	30		
PART C2: PRICING DATA	50mm PVC ball valve	PAGE 4		C2.1 ECC3/A PRICING ASSUMPTIONS	

ESKOM HOLDINGS NEC3 ECC3	Replacement of all plastic piping and fittings for oil separation system to stainless steel <ul style="list-style-type: none"> ○ Electrical recovery of cross-over plant ○ 50mm 35m stainless steel pipe ○ 12 X 90° 	m	35	CONTRACT NO. _____
	Clean and remove weeds on all 4 coalescence streams	m ²	30	
	Draining and inspection of supported propylene plates installed at a 60' angle of inclination in rectangular packs – Polypropylene coalescers packs	-	4	
	Removal all 4 clarifier sludge pumps <ul style="list-style-type: none"> ○ Hazleton submissible sludge pump ○ Model : 50L SSB ○ Serial No.: KDP 004 ○ Head: 12 m ○ Flowrate : 5 l/s 	-	4	
	Conduct detail technical assessment on the pumps and if found to be serviceable then service or refurbish all	-	4	
	If the pumps are not repairable then purchase 5 new pumps including a spare	ea.	5	
	Install all 4 sludge pumps	ea.	4	
	Replace all rusty and defective pipe work <ul style="list-style-type: none"> ○ 102m 100mm galvanised carbon steel pipe ○ 12 X 90° ○ 2 X T-piece ○ 22m 50mm galvanized carbon steel pipe 10 X 90° 	m	102	
	Replace all rusty and defective pipe work <ul style="list-style-type: none"> ○ 22m 50mm galvanized carbon steel pipe 10 X 90° 	m	22	
	Replace all defective isolation gates			
PART C2 PRICING DATA	<ul style="list-style-type: none"> ○ 600mm X 250mm stainless steel plates 	ea.	4	C2.1 ECC3/A PRICING ASSUMPTIONS

Item	Description	Unit	Est. Qty	Rate Each	Total Price
	Installation of roof across the clarifier plant to prevent rain water from entering electrical panels	M2	40*40		
TOTAL PRICE EXCLUDING VAT					

3.4 Thicker					
		ea.	1	Rate Each	Total Price
	• <i>Installation of the gearbox</i>				
	• <i>Installation of filters</i>	-			
	• <i>Refurbishment of the Eimco Thickener</i> <i>Consisting of the following</i> <i>An open reinforced concrete tank, full bridge truss structure, central rotating drive mechanism, submerged rotating rake arms, blades, central feed well baffle, central 45" conical discharge outlet and cone scrappers.</i>	-	1		
	• <i>Bridge Truss structure refurbishment.</i>	-	1		
	<i>Refurbishment of all submerged rotating arms, blades, baffles, outlets, and scrappers</i>	-	1		
	<i>Commissioning the plant</i>	-	1		
TOTAL PRICE EXCLUDING VAT					

3.5 Underground pumping system					
		unit	Est qty	Rate Each	Total Price
	<i>Cleaning and removal of underground water and debris</i>	m ³	1		
	<i>Removal of both underground centrifugal pumps since the casings are rusted</i> <ul style="list-style-type: none"> ○ <i>2 X Warman 4/3 C slurry pumps</i> 	ea	2		
	<i>Removal of all rusted and defective piping</i> <ul style="list-style-type: none"> ○ <i>6m 150mm galvanized carbon steel pipe</i> ○ <i>3 X 150 mm 90° bends</i> ○ <i>2 X 150mm to 80mm reducer</i> ○ <i>1 X 150mm T-piece</i> ○ <i>1 x 250mm to 150mm reducer</i> ○ <i>8m 80mm galvanized carbon steel pipe</i> ○ <i>2 X 80 mm 90° bends</i> ○ <i>1 X 80mm T-piece</i> ○ <i>90m 50mm galvanized carbon steel pipe</i> ○ <i>14 X 50 mm 90° bends</i> ○ <i>3 X 50mm T-piece</i> 	-	1		
	<i>Purchase of new centrifugal pumps and piping</i> <ul style="list-style-type: none"> ○ <i>2 X Warman 4/3 C slurry pumps</i> 	ea	2		

Item	Description	Unit	Est. Qty	Rate Each	Total Price
	<p><i>Installation of pipe work</i></p> <ul style="list-style-type: none"> ○ <i>6m 150mm galvanized carbon steel pipe</i> ○ <i>3 X 150 mm 90° bends</i> ○ <i>2 X 150mm to 80mm reducer</i> ○ <i>1 X 150mm T-piece</i> ○ <i>1 x 250mm to 150mm reducer</i> ○ <i>8m 80mm galvanized carbon steel pipe</i> ○ <i>2 X 80 mm 90° bends</i> ○ <i>1 X 80mm T-piece</i> ○ <i>90m 50mm galvanized carbon steel pipe</i> ○ <i>14 X 50 mm 90° bends</i> ○ <i>3 X 50mm T-piece</i> 	-	1		
	<p><i>Installation of new centrifugal pumps</i></p> <ul style="list-style-type: none"> ○ <i>2 X Warman 4/3 C slurry pumps</i> 	ea	2		
	<p><i>Installation of electric motors</i></p> <ul style="list-style-type: none"> ○ <i>7.5 Kw Three phase induction motors</i> ○ <i>Valtage : 380V</i> ○ <i>Current : 14,4 A</i> ○ <i>RPM : 1450</i> ○ <i>Serial No.: 1001431406 (Delba Electrical Co)</i> 	ea	2		

Item	Description	Unit	Est. Qty	Rate Each	Total Price
	<i>Replacement of isolation valves</i> <i>2 X 100mm Saunders diaphragm valves</i> <i>2 X 80mm Saunders diaphragm valves</i>				
TOTAL PRICE EXCLUDING VAT					

3.6 Clean and dirty water inlet					
Item	Description	Unit	Est. Qty	Rate Each	Total Price
1	<i>Replacement of all defective sluice gates</i> <ul style="list-style-type: none"> ○ <i>3 X 2 m stainless steel plate</i> ○ <i>0.5 X 3 m stainless steel plate</i> ○ <i>3 X 3 m stainless steel plate</i> ○ <i>0.5 X 2 m stainless steel plate</i> 	ea	1		
2	<i>Replacement of all defective screens</i> <ul style="list-style-type: none"> ○ <i>1 X 4 m grating</i> ○ <i>3 X 6 m grating</i> ○ <i>3 X 6 m grating</i> 	ea	1		
TOTAL PRICE EXCLUDING VAT					

3.7 Civils					
Item	Description	Unit	Est. Qty	Rate Each	Total Price
	<ul style="list-style-type: none"> • <i>Repair all damaged concrete walls</i> - <i>Estimated concrete surface area to be repairs</i> 	m ²	45		
TOTAL PRICE EXCLUDING VAT					

The activity schedule must be aligned to the programme and the method statement.

The *Contractor* prepares a method statement for each activity in the Activity Schedule and submits it to the *Project Manager* for acceptance prior to commencement of such activity.

The rates/prices are exclusive of VAT but include all other related cost for this scope of work such as, consumables, equipment, transport, bonuses for employees, accommodation etc.

Contractor:

.....
Print name

.....
Signature

.....
Date

HEALTH AND SAFETY

Item	Description	Qty	Price ea/ person	Total price
1	Medicals (only if annual medical certificate expired)			
2	Health and Safety File			
3	Safety Training			
4	Health and Safety Officer			
5	Hard hats- chain straps			
6	Overalls			
7	General purpose gloves			
8	Shoes (Safety boots)			
9	Welding shoe protector (caps)			
10	Hearing protection			
11	Safety goggles			
12	Safety harnesses (with big hooks not small hooks)			
13	Site Establishment			
14	Site De-establishment			
15	First Aid box for every 50 employees			
16	Dust mask (FFP2/FFP3)			
17	Welding gloves			
18	Welding shield			
19	Welding aprons			
20	Covid-19 requirements			
21	Thermal Suit			
22	Special underwear – only cotton			
23	Flash Suit			
*24	Training:Appointed Operator - ORHVS (8 days)			
*25	Training:Appointed Person - PSR (10 days)			
*26	Training:Responsible Person - ORHVS & PSR (18 days)			
*27	Training: Authorised Supervisor - PSR (2.5 days)			
TOTAL VALUE FOR HEALTH AND SAFETY FOR THE TOTAL CONTRACT PERIOD				R

The above prices excludes VAT

* Training:

1. Includes Manual, Assessment Documents, Theoretical Training, Practical Training & Panel Test.
2. Receipt must be provided to the Instructor as proof of payment before training will commence.
3. Payments to be made to the Finance Department, Kendal Power Station. GL Account 750400 / CC 311407

It is compulsory for the Contractor to visit Kendal Safety Department after contract award and before any work may commence to:

1. be appointed in writing, and
2. sign an Agreement according to Section 37(2) of the Occupational Health and Safety Act No 85

Suppliers are not, under any circumstances, to deviate from the required stipulated format for the provision of pricing.

Contractor:

 PRINT NAME

 SIGNATURE

 DATE

ESKOM

KENDAL POWER STATION

RATES SCHEDULE FOR ANY COMPENSATION EVENT CALCULATIONS

Rates Schedule to apply on “as – and - when required” basis for any maintenance work, outside the scope of this contract and for any compensation event calculations

Item	Description	Rate per hour Normal time	Rate per hour Overtime and Saturday	Rate per hour Sundays and Public Holidays
1	Supervisor			
2	Authorised Supervisor			
3	Rigger			
4	A class Welder			
5	Responsible Person (RP)			
6	Unskilled Labour			
7	Semi-Skilled Labour			
8	Skilled Labour			
9	Fitter			

NOTE:

- The above mentioned tendered prices are exclusive of Value Added Tax and CPA, but include all other costs related to this works such as, consumables, equipment, transport, bonuses for employees, accommodation etc.

PRICES/RATES FIXED FOR FULL CONTRACTUAL PERIOD?

YES NO

OR

PRICE/RATES SUBJECT TO ESCALATION CLAUSE ABOVE?

YES NO

Contractor:

.....
PRINT NAME

.....
SIGNATURE

.....
DATE

C2.2 the *activity schedule*

Use this page as a cover page to the *Contractor's activity schedule*.