

**WORK ORDER**

Lr.No. NLCIL/Talabira II & III OCP/2024/1636

Date: 16.03.2024

To

Chief General Manager (EIS & EPS),
EdCIL (India) Limited,
Noida-201301, Uttar Pradesh, India

Sir,

Sub: North Dhadu (Western Part) Coal Mine Project-Setting up STEM labs-Reg

Ref: Your offer No.: EdCIL/EIS&EPS/2024/BD/NLC/096 Dated: 23/01/2024

It is pleased to inform that your offer for the work of Setting up STEM labs is accepted for a total value of Rs. 1,61,38,015 (Rupees One crore sixty-one lakhs thirty-eight thousand fifteen rupees only) including GST.

You are requested to contact Project Head /North Dhadu (WP) Coal Mine and get instructions to commence the work immediately.

The Scope of Work, Terms & Conditions, Time Schedule and Terms of Payment are detailed in the enclosed scope of work and terms & conditions.

The enclosed scope of work and terms & conditions is also a part of this work order.

This work Order is issued in duplicate. One copy of the same maybe returned duly signed and with a declaration "Received and accepted the Work Order in full"

Yours faithfully,
For NLC India Limited

DGM (C&P)
Talabira II & III OCP

16.03.2024.

Encl.: Scope of Work and Terms & Conditions

Received and accepted the Work Order in full

Signature of the Contractor

SCOPE OF WORK AND TERMS & CONDITIONS

1. Setting up of 17 numbers of STEM labs in the schools selected by the NLCIL and verified with the District Administration. The list of schools is attached as Annexure I. However, NLCIL is free to choose other schools as per the need in line with the District Administration, Latehar.

2. EACH STEM LAB WILL HAVE FOLLOWING:

Setup of 80 Nos. plug & play physical models along with user's manual, colourful backgrounds, Safety Placard, Teachers' Manual. The models should be of excellent quality. STEM lab includes following model:

Sl.	Model's Name	Sl.	Model's Name
1	Constellation Viewer	41	Transverse wave pendulum
2	Newton's Disc	42	Area of triangle
3	Colour Shadow	43	Area of parallelogram
4	Periscope	44	Coupled Pendulum
5	Kaleidoscope	45	Solar Light
6	Laws of Reflection	46	Wind Mill
7	Corner Mirror	47	Shape of earth due to rotation
8	Infinity Well	48	KE PE Track
9	Magic Water Tap	49	Loop The Loop
10	Total Internal Reflection.	50	Rope Puzzle
11	Fun with Magnets	51	Refraction Cylinder
12	Law of Inertia	52	Newton's Cradle
13	Circle and Ball	53	Reflection Transmission
14	Action and Reaction	54	Hand Battery
15	Parrot in the Cage	55	Day and Night
16	Zoetrope	56	Cone Run Uphill
17	Pin screen	57	Tower Of Pisa
18	Floating Ball	58	Lever
19	Floating Fan	59	Pulley Blocks
20	Tornado	60	Wheel and Axle
21	Hand Pump	61	Heat Absorption
22	Anamorph	62	Conductor and Insulators
23	Floating Magnets	63	Viscosity Tube
24	Magnetic Field Tube & Immiscible Fluid	64	Rock and Minerals
25	Moment of inertia	65	DNA
26	Lazy Tube	66	Lateral Shift
27	Hyperbola	67	Force & types of friction
28	Magnetic effect of electric current	68	Funny mirrors
29	Pythagoras Model & Moire Pattern	69	Marble Slide
30	Elliptical Carrom Board	70	Resonance
31	Two Congruent Right Triangles	71	Centrifuge Puzzle
32	Area of a Circle	72	Area of Trapezium



33	$(a+b)^2 = a^2 + 2ab + b^2$	73	Sum of angles of Quadrilateral
34	$(a+b+c)^2 = a^2 + b^2 + c^2 + 2ab + 2bc + 2ca$	74	$(A+B)^2 - (A-B)^2 = 4AB$
35	$a^2 - b^2 = (a+b)(a-b)$	75	Electric bell
36	Sum of the angles of a triangle	76	Human Torso
37	Tangram	77	Ear & Eye
38	Parking Puzzle	78	Human Joints
39	Organ pipes	79	Plant Cell
40	Area of rhombus	80	Animal Cell

3. TEACHERS TRAINING PROGRAM:

- The teachers' training will be done two times in a year;
- Each training session will last from 4 hours to 5 hours;
- There must be a gap of at least 3 months between the two trainings.

4. INFRASTRUCTURAL SETUP, ELECTRICAL CONNECTION & INSTALLATION OF THE MODELS:

Agency shall deliver & provide Infrastructural Setup (Tables-plywood with mica top with steel supports) & Electrical Connection & Installation of models.

5. BASELINE, ENDLINE SURVEY PER SCHOOL INCLUDING ALL TOUR & TRAVEL, BOARDING, LODGING ETC. FOR COMPLETE PROJECT, MONITORING & EVALUATION

Agency shall conduct baseline & End line survey- including all tour & travel, boarding, lodging etc. for complete project.

Total-2 visits in individual school.

- Agency will undertake school visits to enable the implementation and monitoring of program.
- NLCIL may organize a review meeting on half yearly with agency and schools to take stock of the activities undertaken to discuss the implementation strategy and improving in learning/teaching levels in students/teachers.
- Concerned officials from NLCIL may make school visits to monitor quality of intervention and the progress
- Agency need to submit baseline at the start and endline report in the end of project with progress, challenges, and way ahead.
- Guidelines for Baseline Survey:

Final baseline survey report (Hard and soft copy).

The final baseline survey report will contain:

- Title/cover page
- Table of contents
- Executive summary
- List of acronyms and abbreviations
- List of tables and figures
- List of photos
- Introduction
- Survey methodology-detailed
- Findings



- Conclusion
- Annexures (List of documents reviewed, survey tools/questionnaires, etc.)

Guidelines for Endline Survey:

Will contain

- # Background
- # Purpose
- # Research Objectives
- # Methods # Study location, selection criteria, sampling procedure, sample size, survey tools/instruments, survey team, required consent form.
- # Data Collection - data entry and analysis, timeline, ethical considerations, consent,
- # Findings and Recommendations
- # References

6. PRICE SCHEDULE:

Sl. No.	Description	Amount
A. For setting up each STEM labs in individual School		
a	<ul style="list-style-type: none"> i. Setup of 80 Nos. plug & play physical models along with user's manual, colorful backgrounds, Safety Placard, Teachers' Manual; ii. Infrastructural Setup, Electrical connection & Installation of the models; iii. Teachers Training Program-02 times within contract duration (4-5 Hour duration for each session); iv. Baseline survey per school including all tour & travel, boarding, lodging etc. v. End line survey per school including all tour & travel, boarding, lodging etc. 	804,487
b	GST @ 18% (b=18% of a)	1,44,808
c	Total Amount for setting up each STEM labs in individual School Including GST (c=a+b)	9,49,295
B.	Total Amount for setting up 17 STEM labs in individual Schools Including GST (B= 17 X c)	1,61,38,015

7. PAYMENT TERMS:

i. Payment Terms for Setting up each STEM Labs in Individual School

Sl. No.	Milestone	Payment Term
a	Completion of Deliveries and Installation {ie. 6.A.a. (i. Setup of 80 Nos. plug & play physical models along with user's manual, colorful backgrounds, Safety Placard, Teachers' Manual; ii. Infrastructural Setup, Electrical connection & Installation of the models;)}	85% of Total Amount for setting up each STEM labs in individual School Including GST (ie. 6. A. (c))
b	Completion of Baseline Survey & Teacher's Training {i.e. 6.A.a. (iii. Teachers Training Program-02 times within contract duration (4-5 Hour duration for each session; iv. Baseline	10% of Total Amount for setting up each STEM labs in individual School Including GST (ie. 6. A. (c))



	survey per school including all tour & travel, boarding, lodging etc.);}	
c	Completion of End line survey (i.e. 6.A.a.v. End line survey per school including all tour & travel, boarding, lodging etc.);), Completion warranty & fulfilment of all obligations as per work order	5% of Total Amount for setting up each STEM labs in individual School Including GST (ie. 6. A. (c))

- ii. All payments shall be made by Account Payee cheque / e-payment only.
- iii. Income Tax, GST and any statutory levies, as applicable, shall be deducted at source (TDS) and necessary certificates shall be issued.
- iv. GST shall be regulated on the basis of rates in force from time to time.
- v. Invoice to be raised on delivery/invoice address against the given line items as per relevant GST rules in vogue. The GST amount should reflect in GSTR-2A at the time of payment and should later appear in GSTR-2B within the prescribed time limit by the Government of India. If the amount does not appear in GSTR-2B further bills will be withheld till the previous ones appear in GSTR-2B.
- vi. Payments for setting up each STEM Labs in Individual School shall commence after completion of base line survey of respective school as mentioned in the scope of work shall be submitted by EdCIL and accepted by NLCIL.

8. TIME SCHEDULE:

- i. STEM Labs shall be setup within 3 months from the date of issuance of work order.
- ii. The total duration of the service period shall be one (1) Years and 3 months from the date of issuance of work order.
- iii. NLCIL reserves the right to extend the time schedule for any further period as considered necessary, under the same terms and conditions and rates agreed.

9. FORCE MAJEURE

- i. Force Majeure here in defined is a cause which is beyond the control of the agency or NLCIL, which they could not foresee and which substantially affect the performance of the "work order" such as:
 - Natural phenomena, including but not limited to floods, droughts, earthquakes and epidemics,
 - Acts of any government, domestic or foreign, including but not limited to war, declared or undeclared priorities, quarantines, embargoes,
 - Accidents and disruptions including but not limited to fires, explosions, break downs of essential machinery or equipment and power shortages,
 - Transportation delay due to force majeure or accidents,
 - Strikes, lock outs and sabotage,
 - Riots and civil commotions,
 - Piracy Provided either party shall within 15 (fifteen) days from the occurrence of such a cause notifies the other in writing of such cause.
- ii. The Agency or NLCIL shall not be liable for delays in performing the respective obligations resulting from any Force Majeure condition occurred. The date of completion shall be extended by a reasonable time without Price Reduction.
- iii. If the performance as a whole or part by the agency or any obligations under the Contract is prevented or delayed by "Force majeure" condition for a period exceeding



120 (One hundred and twenty) days, NLCIL may at its option terminate the contract by notice in writing.

10. PRICE REDUCTION:

- i. STEM Labs shall be setup within 90 days from the date of issuance the work order. However, NLC India Limited reserves the right to extend the time schedule for any further period as considered necessary, under the same terms and conditions and prices/rates agreed with or without levy of Price Reduction on the merits of the case.
- ii. Time is the essence of the CONTRACT. In case the agency fails to complete the Works within the stipulated period, then, unless such failure is due to Force Majeure or due to PURCHASER'S defaults, the Total Work Order price shall be reduced by 1/2% (Half percent) of the Total Work Order price per week of delay or part thereof subject to a maximum of 5% of the Total Work Order price by way of reduction in price for delay and not as penalty.

11. WARRANTY

The comprehensive warranty period is 1 year and will be started from the date of Installation and acceptance to items.

12. DISCHARGE/COMPLETION OF WORK ORDER:

The work order will be deemed to have been completed after satisfactory fulfilment of all the obligations as per work order and final bills paid. However, if any claim arises in respect of the obligations in connection with the agency, the agency has to settle the claim.

13. DISPUTE RESOLUTION:

- i. **Informal Dispute Resolution:** If any dispute between the Agency and NLC India Limited arises, it shall in the first instance be referred in writing to NLC India Limited, who shall endeavor to resolve the dispute amicably and render a decision within 30 days. The period of 30 days shall be reckoned from the date of receipt of intimation of the dispute by NLC India Limited. Save as hereinafter provided, in respect of a dispute so referred, the decision of NLC India Limited shall be final and binding upon the Parties until the completion of the Contract and shall forthwith be given effect to by the agency who shall proceed with the contract within all due diligence, whether or not either party has sought conciliation / arbitration of the dispute as hereinafter provided.
- ii. The Parties agree to use reasonable efforts to resolve all disputes equitably and in good faith.
- iii. If an amicable settlement could not be reached then all the disputes/differences shall be settled as per Administrative Mechanism for Resolution of CPSEs Disputes (AMRCD) as mentioned in DPE OM No. 4(1)/2013-DPE(GM)/FTS-1835 dated 22-05-2018 for CPSEs and Government Departments/ Organizations (excluding disputes concerning Railways, Income Tax, Customs & Excise Departments)

14. TERMINATION OF CONTRACT/SHORT CLOSING:

The Agency will be terminated, if the performance is found to be unsatisfactory, even after issue of due Notice. In such a case, the Agency shall not have any claim for any



compensation. The balance work will be executed by NLCIL by other means at the risk and cost of the Agency.

The work order may be short closed at any time during the work order period due to special circumstances after due notification. Payment due to the agency for the works done by party till such time will be made.

15.LEGAL JURISDICTION:

Courts having jurisdiction over Latehar, Jharkhand shall have the ordinary jurisdiction as per law.

16.LANGUAGE:

English language shall be the language on all matters.

17.PROGRESS REVIEW:

A progress report shall be submitted by agency as per the requirements of NLCIL.

18.FINALIZATION:

Finalization shall be done within six months from the date of completion of work. In case if any agency fails to furnish the required documents for finalizing the work order, an ultimatum letter shall be issued to the agency on the last known address for furnishing the same.

If the agency does not respond even after receipt of the ultimatum, those contracts would be treated as deemed to be finalized for a value as decided by NLCIL and no further claim other than the finalized value would be entertained.

However, if the ultimatum letter issued by NLCIL, on the last known address available with NLCIL is returned, a publication in daily Newspaper will be issued requesting, to furnish the required documents. If still not responded, then those contracts would be treated as deemed to be finalized for a value as decided by NLCIL and no further claim other than the finalized value would be entertained.



Annexure -I

Schools for Establishment of STEM Lab			
Sl No.	Sl No.- Lr Dt 04.01.2024	Name of the School	Block
1	1	UPG GOVT HS Pochra	LATEHAR
2	3	UPG GOVT HS KONE	
3	4	UPG GOVT HS NAWAGARH	
4	5	UPG GOVT HS PANDEYPURA	
5	6	UPG GOVT HS KHAIRATOLI	
6		UPG GOVT HIGH HS MURUP	
7		HIGH SCHOOL LUTI	CHANDWA
8	10	RAJYAKRIT GIRLS HS CHANDWA	
9	12	UPG GOVT HS BANHARDI	
10		SRI SRI UGRATATA HS NAGAR	
11	24	UPG GOVT UHS MASIYATU	BALUMATH
12	25	UPG GOVT HS SEREGARA	
13	26	UPG GOVT HS GANESHPUR	
14	27	PROJECT INDIRA GANDHI MEMORIAL GIRLS HS BALUMATH	
15	29	UPG GOVT HS MURPA	BARIYATU
16	34	UPG HS GONIYA	
17		RK HS BALU	Balumath

