NAME OF WORK: "*REHABILIATION OF EXISTING POWER FENCE AT I.I.A,KODAIKANAL, TAMILNADU* "

The institute has revised the technical specification and the bill of quantities. The bidders are requested to consider this addendum and submit their offers accordingly.

Any related clarifications may be obtained from the Institute contacting the following engineers

G.SRINIVASALU / J.MANOHARAN – 09448092037/ 09448712358

M.V.RAMASWAMY - 09742410480

REVISED TECHNICAL SPECIFICATION OF MATERIALS

- **The materials specification shall be read and referred together with the corresponding items specified in the Bill of Quantities.**

- **All the rates shall be inclusive of taxes, duties as applicable and transportation of materials to the site.**

General Requirements:

2-Part tender is proposed to be held for refurbishing of the existing solar fences around the IIAP campus and Staff Quarters at Kodaikanal, measuring approx. 2600m and 900 m respectively for Bison / Gaur control.

The main campus fence should be powered by 2 energizers, to serve as back-up, in case of failure.

2 more lines are to be provided in addition to the existing 2m high, 8- line fence.

The fence posts should be capable of surviving large impacts from bison contact, without shorting the fence and without needing replacements.

The existing fence may be inspected to ascertain the field conditions and present state of the old fence, to ascertain the need for replacement and for the addition of 2 more lines.

The fence line has to be cleared of vegetation growth and a walkway of 1m should be formed, to give access for inspection and maintenance of the fence.

Specific Requirements:

The energizer should not be rated more than 5 Joules and should carry safety certification markings, BIS-302-76-2 or international equivalents, IEC/ EN 60335. The energizer should be capable of tolerating vegetation growth up to 2 feet. (item 1)

The energizer should be housed in a powder coated console box, to prevent rain water ingress.(item 2)

The lightning Divertor should be sensitive and adjustable, to prevent damage to the energizer in the event of thunderstorms. (item 3)

Earth Kits with stainless steel core, encased with electrolytes should be deployed in sufficient numbers to protect energizer from lightning strikes and to ensure uniform shock, along the entire length of the fence. (Item 4)

Fence Flasher should be provided to indicate the strength of pulse energy on the fence. (item 5)

Digital Voltmeter should be provided to monitor the voltage on the fence. (item 6)

Low maintenance battery of 100 Ah should be provided, to support uninterrupted fence operation through continuous monsoon weather of 2 months. (item 7)

The battery should be housed separately in a powder coated, water proof, lockable box. (item 8)

Double insulated cable of galvanized steel core, capable of withstanding 15 KV should be provided to prevent bimetal salt formation at connections. (item 9)

Audio alarm should be provided, to notify drop in fence voltage below a threshold of 4 Kv (item 10)

Solar photo voltaic panels of sufficient capacity may be provided to charge the battery, in order to support 24x7 hours operation of the energizer and alarm circuits. (item 11)

The required solar panel should be mounted on a hot dip galvanized stand, atop a 3m solar mounting pipe of at least 50 NB. (item 12)

The reinforced concrete pole will of RCC and the size will be 150 mm X 150 mm at bottom and tapers at top with size 125 mm X 125 mm. The height of the pole is 3 mts. 60 cm pole will be grouted to the ground with cement concrete. The detail of the pole will be provided by the engineer in charge during execution of the work (ITEM No. 13)

The end strain insulators should be made of necessary engineering plastics to prevent failure and be shatter- proof, during large impacts from Bison/ Gaur attack and falling branches of trees.(item 16)

The non-load bearing reel insulators should be rated for 15 KV and should not fail during impact and self-short the fence against the post. (item 17)

The fence wire should be 12 gauge high tensile steel and should be hot dip galvanized to at least 250 Gsm, to ensure rust-free performance of 10 years. (Item-18)

The 14 Gauge wire used to tie the reel insulators to the posts should be at hot dip galvanized to prevent rusting. (item 19)

The wire tightener should be of aluminum alloy, to ensure the wire does not break during large impacts from bison contact or falling branches. (item 20)
The Tool Kit used for tightening fence wires should be hot dip galvanized. (Item 21)

The joint clamps should be hot dip galvanized and should have a positive lock mechanism to prevent loose contacts. (item 22)

Permanent Wire Tension springs should be hot dip galvanized and should be capable of preventing collapse of the fence during impacts from Bison and falling tree branches. (Item 23)

Warning Sign Boards in Tamil and English should be UV stabilized at appropriate places (Item 24)

REVISED BILL OF QUANTITIES

NAME OF WORK: "*REHABILIATION OF EXISTING POWER FENCE AT I.I.A,KODAIKANAL, TAMILNADU* "

Item No	Materials on Fence	Unit	Total	Unit Rate (Rs.) in words and figures	Amount Rs.
1	Energizer 4.2 Joules	Nos.	3		
2	Console Box	Nos.	3		
3	Lightning Diverter Kit	Nos.	3		
4	Earth Kit	Nos.	44		
5	Fence Flasher	Nos.	3		
6	Digital Volt Meter	Nos.	1		
7	Battery 100 AH (EXIDE make)	Nos.	3		
8	Battery Box	Nos.	3		

Item No	Materials on Fence	Unit	Total	Unit Rate (Rs.) in words and figures	Amount Rs.
9	Double Insulated Cable	Metres	200		
10	Audio Alarm	Nos.	2		
11	Solar Panel (75 w)	Nos.	2		
12	Solar Panel Pipe & Stand	Nos.	3		
13	Providing and fixing R.C.C. Standards post/ struts/rails/ pales of mix 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 12.5 mm nominal size) with wooden plugs or 6mm bar nibs, shuttering wherever required as per direction of Engineer-incharge. The rate shall be inclusive of cost of earth works in excavation for fixing the pole with concrete 1:4:8 , concrete. The poles shall have the reinforcement of 6mm dia of 4 Nos. with	Nos.	300		

Item No	Materials on Fence	Unit	Total	Unit Rate (Rs.) in words and figures	Amount Rs.
	stirrups as required.				
14	**ITEM DELETED**				
15	Hot dip galvanized Support post clamp, Bolt & nut	Nos.	164		
16	End Strain Insulators	Nos.	1710		
17	PP Reel Insulators	Nos.	7175		
18	12 G Wire	metres	20181		
19	14 G Wire	Kgs	74		
20	Wire Tighteners	Nos.	740		
21	Tool Kit	Nos.	2		
22	Joint Clamps	Nos.	300		

Item No	Materials on Fence	Unit	Total	Unit Rate (Rs.) in words and figures	Amount Rs.
23	Tension Springs	Nos.	296		
24	Warning Sign board	Nos.	70		
25	Installation & Commissioning Charges	metres	35000		
26	Civil Work		Lump sum		
		GRAND TOTAL AMOUNT Rs.			

(Grand Total Amount in words Rupees……..

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Date:
Place: Signature of the bidder with stamp