



BHARAT HEAVY ELECTRICALS LIMITED
ELECTRONICS DIVISION
POST BOX No: 2606, MYSORE ROAD, BANGALORE-560026.

BHEL enquiry no. HGNRC01/13 DT: 02/03/2013

Sub: - Enquiry for Rate Contract of "Mosaic System Miniature Control Room Items"

Sir/Madam,

Please find attachments of specification no. PS4152193, terms & condition sheet.

Request to submit your offer as per specification, terms & conditions on or before 25.03.2013.

Issued by

S.R. Jayakumar
AGM-CE/MM



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PS 4152193

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PURCHASE SPECIFICATION FOR MOSAIC SYSTEM MINIATURE CONTROL ROOM ITEMS

REVISIONS:

APPROVED

(A. GANGULY)


PREPARED


ISSUED


DATE


415


02.10.2012


		 <p>बि एच ई एल</p> <p>A4 - 11</p>	<p>PS4152193</p> <p>REV.NO. 00</p> <p>PAGE 02 OF 07</p>
		<p><u>PART – I</u></p> <p><u>GENERAL REQUIREMENTS</u></p>	
<p>COPY RIGHT AND CONFIDENTIAL</p>	<p>The information on this document is the property of Bharat Heavy Electrical Limited. It must not be used directly or indirectly in anyway detrimental to the interest of the company.</p>	<p>AA) Vendors desirous of quoting against this specification are required to be reputed manufacturers of mosaic type components and grid structures, or their authorized representatives. The manufacturer should have manufactured and supplied such mosaic items for at least five years preceding the date of quotation. The offered brand/items should have been in operation and use in various utilities for a minimum period of three years. At least three of such utilities shall have to be for instrumentation and electrical controls of power plants, and preferably in India.</p> <p>BB) Vendors not based in India should preferably have authorized agency in India for providing technical support and services for their products. Technical support shall include clarifying technical queries, attending to any problems of technical nature for the products, including rectification/replacement of non-conforming items, and servicing or providing technical solutions for them. These are to be differentiated from issues which are purely commercial in nature.</p> <p>CC) It will be desirable if vendors not based in India have any authorized Indian agency, who are equipped to carry out partial manufacturing, or providing of value-added services, without compromising on quality-related aspects, of/for such items which are not of standard nature, and require variable, project-specific information, such as: (a) fabrication/alteration of mosaic grids as per BHEL specifications, (b) screen-printing of mimic diagrams on blank tiles as per BHEL drawings, (c) printing/engraving of inscriptions as per BHEL specifications. This is desirable due to the requirements for these items spelt out in Part-II of this specification. Such an agency must fulfill BHEL's quality and other vendor qualification requirements.</p> <p>DD) The quantity requirements of items given in Annexures are projections for a period of one year only. Varieties of items are many, and their actual requirements are dependent on specific project inputs which can be finalized only after detailed engineering is completed for each of them. Due to these reasons, there may be variations in the final quantity ordered for various items at the end of the specified period of one year. Bidders must agree to such item-wise quantity variations which may occur at the end of the year. No changes in agreed unit rates of items shall be entertained by BHEL due solely to this reason.</p>	

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<p style="writing-mode: vertical-rl; transform: rotate(180deg);">COPY RIGHT AND CONFIDENTIAL</p> <p style="writing-mode: vertical-rl; transform: rotate(180deg);">The information on this document is the property of Bharat Heavy Electrical Limited. It must not be used directly or indirectly in anyway detrimental to the interest of the company.</p>		<p><u>PART – II</u></p> <p><u>TECHNICAL SPECIFICATIONS & GUIDELINES FOR QUOTATION</u></p>	
		<p>1.0 This specification covers the requirements of modular and miniature control components, more widely known as Mosaic System. The Mosaic System shall include mosaic grid structure, various active control components like pushbutton/LED combination modules, LED signal modules, LED symbol modules, annunciation facia windows, semaphore (switch position) indicator, illuminated push buttons, various types of selector switches, key-operated switches etc., various passive components like blank tiles, mimic diagrams screen-printed on blank tiles, complete with texts engraved/printed as per the requirements of BHEL.</p> <p>2.0 GENERAL TECHNICAL REQUIREMENTS</p> <p>2.1 In general, the basic size of components shall be either of the DIN size combines: 48(W)x24(H) mm and 48(W)x48(H) mm, or 50(W)x 25(H) mm and 50(W)x50(D) mm, as specified against each type of item in Annexure-1.</p> <p>2.2 The material of mosaic item modules and blank tiles shall be flame-retardant polycarbonate plastic. It should have anti-static, non-reflecting, non-toxic properties, and be halogen-free. It should also be possible to wipe clean the surface of mosaic tiles with ordinary detergent solution.</p> <p>2.3 The surface colour of all mosaic item modules and blank tiles shall be RAL 7035 (Light Grey), and surface finish shall be semi-glossy.</p> <p>2.4 If the mosaic vendor's system requires any specific items that are needed to suit their design and for completeness of an assembled mosaic structure, such items, even if not listed in any of the subsequent annexures, should be separately brought out, listed, and individually quoted.</p> <p>2.5 A bidder must invariably mention the particular type no./article no./ordering no. of the items being offered by him against each of those specified in the subsequent annexures, supported by detailed catalogs/data sheets, without which, an offer will be deemed incomplete, and will be liable for rejection.</p> <p>3.0 ACTIVE (FUNCTIONAL) MODULES</p> <p>3.1 The list of various types of functional modules being used by BHEL for various applications along with short specifications is given in Annexure-1.</p>	
		<p>3.2 The colour combinations of different push buttons and LEDs may vary depending upon actual usage, and the prices quoted against each of the items in Annexure-1 shall be irrespective of the colour of push buttons or LEDs. In other words, difference in colour of push buttons or LEDs shall not affect the price of one type of item. Actual colour combination of different push buttons and LEDs shall be specified in individual purchase orders that will be issued from time to time to the successful bidder.</p> <p>3.3 All push button/LED modules and annunciation facia modules shall have the electronic circuit installed in high quality printed circuit boards, incorporating SMD technology.</p>	

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<p style="writing-mode: vertical-rl; transform: rotate(180deg);">COPY RIGHT AND CONFIDENTIAL</p> <p style="writing-mode: vertical-rl; transform: rotate(180deg);">The information on this document is the property of Bharat Heavy Electrical Limited. It must not be used directly or indirectly in anyway detrimental to the interest of the company.</p>		<p>3.4 Preferably, all items should use plug-in type connectors for cable terminations. Terminations on connectors shall preferably be crimp type. If the bidder's system requires different types of connectors for different items, they shall be clearly brought out and separately quoted. In Annexure-1, three types of connectors have been listed. However, if, for any bidder, all items require only one type of connector, or more than these three types of connectors, it should be clearly mentioned and individually quoted.</p> <p>3.5 The specific type of crimping pins, and its required tool, shall be quoted with respective type/model numbers against these items in Annexure-1. In case the bidder's system requires any other different type of termination for any particular product, or for all of the items, then the required termination material and tools shall be offered in lieu of listed items in Annexure-1.</p> <p>3.6 All push buttons shall have two sets of normally open contacts, unless otherwise specified in Annexure-1, and shall be individually brought out on separate terminal points; a common terminal point for a set of two NO contacts is not acceptable. All contact material shall be gold plated copper. Push button contacts shall be rated for up to 60V DC, and their rated continuous current at 24V DC shall not be less than 300 mA.</p> <p>3.7 All LEDs shall be designed to operate at 24V DC +/- 10%, and shall have requisite resistors in series with each of them. For a combination of LEDs in one module, a shorted common current return path shall be used and brought out in one terminal point. Rated continuous current at 24V DC for the LEDs should not exceed 20 mA.</p> <p>3.8 Annunciator facia modules shall be rated for 24V DC. They shall have planar LEDs in SMD design so as to have uniform illumination over the surface of the front facia. Normally, three colours of facia are required, i.e., yellow, red and green. A design incorporating the possibility of any of these three colours in a single window by selecting colour-specific input pins will be preferred. If such a design is not available, and unit prices of windows of different colours are different, each shall be separately quoted against this item in Annexure-1. Continuous current at 24V DC for any facia window shall not exceed 36 mA.</p> <p>3.9 Semaphore indicators shall be rotating disc type only, LED type is not acceptable. Operating voltage shall be 24V DC +/- 10%.</p> <p>3.10 All selector switches and key-operated switches shall be sourced from reputed international manufacturers, if not available in the product range of the mosaic manufacturer. Switch contacts shall be gold-plated. Switching current rating of individual contacts of the switches shall not be less than 10 A at 24V DC. All key-operated switches shall have a common key.</p>	
		<p>4.0 MOSAIC GRID</p> <p>4.1 The mosaic grid material shall be metallic alloy, with necessary anti-corrosion plating/treatment. Grid of plastic materials is not acceptable.</p> <p>4.2 Design of the mosaic grid assembly shall ensure sufficient rigidity, strength and ruggedness. All necessary hardware for ensuring support and strength to the mosaic grid shall constitute part of supply for any mosaic grid structure that will be ordered by BHEL.</p> <p>4.3 Design of the grid structure shall also include a buff-finished, metallic (preferably aluminium) framework on all four sides of the assembled grid. Identification of rows and columns as per BHEL drawings shall be done on the frame by way of transparent, self-adhesive, printed stickers.</p>	

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<p style="writing-mode: vertical-rl; transform: rotate(180deg);">COPY RIGHT AND CONFIDENTIAL</p> <p style="writing-mode: vertical-rl; transform: rotate(180deg);">The information on this document is the property of Bharat Heavy Electrical Limited. It must not be used directly or indirectly in anyway detrimental to the interest of the company.</p>		<p>4.4 It should be possible to make alterations to, or filling up of, openings on a grid by simple methods and utilizing readily available tools at any time even after the assembly of the grid. Vendor shall submit explanatory literature/drawing about how this can be done along with the offer.</p> <p>4.5 As per BHEL practice, row height shall be taken to be either 24 mm or 25 mm, and column width shall be either 48 mm or 50 mm.</p> <p>4.6 Sizes, i.e., number of rows and columns of each mosaic grid to be ordered by BHEL shall be project-specific and variable. This means that a number of mosaic grids of different row-column combinations shall be ordered at different stages during the pendency of the contract. Because of this reason, the bidder is required to quote a price per square meter area of the mosaic grid, inclusive of the frame and all necessary hardware which will be required as per 4.2 and 4.3 above. Individual mosaic grid assemblies shall be ordered based on the total area of each, multiplied by the rate for unit area.</p> <p>4.7 Each mosaic grid thus ordered, shall be delivered fully assembled along with all necessary hardware and supports, such that it can be mounted with ease on to a control panel with requisite cut-out.</p> <p>4.8 The bidder must submit full technical details, catalogs and drawings for the mosaic grid system being offered. It should be possible to arrive at the overall and required cut-out dimensions for a grid structure with a particular combination of rows and columns from these drawings that will be submitted.</p> <p>4.9 It will be necessary at times to mount on the mosaic grid, instruments whose sizes do not conform to DIN standards. The mosaic grids that will be acceptable need to have a method of accommodating such non-DIN size instruments on a grid of DIN-size openings, by suitable mounting frame with the required instrument cut-out, and of the next possible overall DIN-size. Vendors need to explain with applicable drawings, how this requirement can be fulfilled. A grid system where this requirement cannot be fulfilled, will not be technically acceptable.</p> <p>5.0 OTHER ITEMS</p> <p>5.1 INSCRIPTIONS:</p> <p>5.1a. Inscriptions are required for all types of functional components and also on blank tiles/tagging tiles. Inscriptions shall vary from project to project, and will be as per specified texts to be given by BHEL for different project/panel requirements.</p> <p>5.1b. Inscriptions can be in printed, or in engraved form, and the bidder has to clearly specify the method, as well as material, of inscribing texts on the family of mosaic items being offered against this specification.</p> <p>If there are different types/sizes of inscription material for different family of functional components, annunciation facia, blank tiles etc., they should be individually listed with clear identification of their intended usage, and rates for each to be quoted separately. In this specification, only major categories of items that may require inscriptions have been listed in the Annexure-2. Bidders may follow the list if these match their product requirements. If they vary due to specific systems/practice of different bidders, the bidder has to list the different variants of inscribing required for his system, and quote individual rates for each different variant. Rates should include both material and process cost for a particular type of inscribed item.</p> <p>It is clarified that prices of items listed in Annexure-1 shall exclude inscription cost, and shall</p>	

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		<p>be supplied without inscriptions. Inscription prices have to be separately quoted in the manner explained above for Annexure-2 items. They also shall be separately supplied against specific purchase orders by BHEL. The method of physically putting inscriptions to various items should, therefore, be simple and possible to be done at BHEL works.</p> <p>5.1c. Often, to accommodate changes in design, or customer requirements, or rectification of human errors, certain quantity of inscriptions, over and above those specified for a particular panel as stated in 5.1a above, may be required to be supplied at a later date, and also at a very short notified time. Bidders must agree to supply inscribed items for such requirements free of cost, and also deliver by express couriers, so as to be able to reach BHEL in the shortest possible time; in most cases, preferably within 3 working days of the requirements being conveyed by BHEL. Quantity of such items, however, may not exceed 5% of the total quantity specified in one specification.</p>	
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">COPY RIGHT AND CONFIDENTIAL</p> <p style="writing-mode: vertical-rl; transform: rotate(180deg);">The information on this document is the property of Bharat Heavy Electrical Limited. It must not be used directly or indirectly in anyway detrimental to the interest of the company.</p>		<p>5.2 MIMIC DIAGRAMS:</p> <p>5.2a. Mimic diagrams are to be screen printed on individual blank tiles of either dimensions as mentioned in 2.1.</p> <p>5.2b. Mimic diagrams shall depict various symbols and shall be in different colours. For the purpose of specifying the requirements, BHEL shall make available required drawings. Usually, BHEL follow colour shades as per RAL standard as well as Indian standard IS:5. Bidders must convey acceptance to supply mimic diagrams specified in both these standards.</p> <p>5.2c. For the purpose of uniformity and simplicity of pricing, one single price shall be quoted for one size of mimic tile as mentioned in 5.2a, irrespective of the colour/s required for that size of tile, even though mimic diagrams may be of different colours or colour combinations. There can, however, be different prices, if so desired by the vendor, for mimics printed on different sizes of individual blank tiles.</p> <p>5.2d. In order to meet contingency requirements for completion of a project, or to meet certain quality requirements, or customer commitments, it may be required that certain quantity of mimic tiles be delivered at a very short notice and outside of regular purchase orders. Bidders must agree to supply such requirements free of cost, and also deliver by express couriers, so as to be able to reach BHEL in the shortest possible time, in most cases, preferably within 3 working days of the requirements being conveyed by BHEL. Quantity of such items, however, may not exceed 5% of the total quantity ordered.</p> <p>5.3 MISCELLANEOUS ITEMS</p>	
			<p>5.3a. Any item/s specifically required for completeness of a particular design of mosaic system shall be considered under this category of items. It is recognized that these items may not be necessarily offered by every vendor, but each vendor shall quote for such items which are specific for their design; others may state that these are not applicable for their design.</p> <p>5.3b. From available knowledge and experience of different mosaic systems, the following types of items are listed in Annexure-1 under this category:</p> <ol style="list-style-type: none"> a) Reducer frames for mounting instruments of sizes which are multiples of 24 mm, in a grid structure, the basic unit of which is 25 mm. b) Different spacers which may be required for mounting DIN-size instruments in a mosaic grid such that their front surfaces are level with the surrounding mosaic surface. c) Tools as required. In Annexure-1, two tools have been mentioned. Depending upon the vendor's products and practices, these may vary, or different/additional tools may be required. Any such required tools may be offered in lieu of, or in addition to, the mentioned ones.

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		<p>5.3c. Any other item not specifically listed but required for a particular mosaic system as explained in 5.3a above shall have to be offered by its vendor with unit prices.</p> <p>6.0 QUALITY ASSURANCE</p> <p>6.1 All electronic components and other raw materials used in the mosaic items must be of reputed makes from manufacturers with proven credentials or their authorized dealers. A list of makes/sources of various bought-out items used in the products shall be enclosed in the offer.</p> <p>6.2 Bidder shall enclose in the offer, for review by BHEL, the Quality Assurance Plan/Procedure of the manufacturer for the entire process from incoming goods to finished products.</p> <p>6.3 At the purchaser's (BHEL) end, the items shall be subjected to inspection at 'Goods Inwards' stage for physical verification matching to purchase order details, as per BHEL standards. Subsequently, they shall be further inspected at the stage of assembly of panels at works, and then all (100%) active (functional) modules shall be functionally tested during system testing of the panels. If, during any of these stages, any component/item is found to be non-conforming to specifications, or functionally defective, they shall be rectified/replaced by the manufacturer or their authorized representative (as stated under cl. BB of Part-I of this specification), without any financial implications, and in the shortest possible time-frame.</p> <p>7.0 DOCUMENTS REQUIRED WITH TECHNICAL BID</p> <p>7.1 Following documents, as a minimum, are required to be submitted along with the technical bid:</p> <ol style="list-style-type: none"> 1) Company/Organisation details. 2) General catalog giving overall details of the mosaic system being offered. 3) Individual catalogs/data sheets, giving full technical details including type/model numbers, electrical specifications, circuit diagrams, terminal details etc., of the items being offered against Anexure-1. 4) Catalog/data sheet giving full technical details of the mosaic grid being offered, including dimensional drawing, and explanations for modification procedures as stated in cl. 4.4 and 4.9 of this specification. 5) Reference list of customers/utilities, with specific stress on power plant applications, where the offered items are in service for not less than three years. 6) List of makes/sources of bought-out items as per cl. 6.1 of this specification. 7) Quality Assurance Plan/Procedure as per cl. 6.2 of this specification. 8) Any other information deemed necessary by the bidder for completeness of the technical bid. <p>Technical bids not accompanied with the above documents are liable to be rejected.</p>	
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ANNEXURE-1 TO PS4152193


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SL. NO.	ITEM DESCRIPTION	APPROX. QUANTITY
01	3 PUSH BUTTON + 5 LED MODULE WITH ANY COMBINATION OF PB & LED COLOUR; 2 NO CONTACTS PER PB	40
02	3 PUSH BUTTON + 5 LED MODULE WITH ANY COMBINATION OF PB & LED COLOUR; 1 NO + 1 NC CONTACT PER PB	120
03	3 PUSH BUTTON + 3 LED MODULE WITH ANY COMBINATION OF PB & LED COLOUR; 2 NO CONTACTS PER PB	900
04	3 PUSH BUTTON MODULE WITHOUT LED WITH ANY COMBINATION OF PB COLOUR; 2 NO CONTACTS PER PB	3
05	2 PUSH BUTTON + 3 LED MODULE WITH ANY COMBINATION OF PB & LED COLOUR; 2 NO CONTACTS PER PB	3500
06	2 PUSH BUTTON + 2 LED MODULE WITH ANY COMBINATION OF PB & LED COLOUR; 2 NO CONTACTS PER PB	600
07	2 PUSH BUTTON MODULE WITHOUT LED WITH ANY COMBINATION OF PB COLOUR; 2 NO CONTACTS PER PB	400
08	1 PUSH BUTTON + 3 LED MODULE WITH ANY COMBINATION OF PB & LED COLOUR; 2 NO CONTACTS PER PB	350
09	1 PUSH BUTTON + 2 LED MODULE WITH ANY COMBINATION OF PB & LED COLOUR; 2 NO CONTACTS PER PB	8
10	1 PUSH BUTTON MODULE WITHOUT LED AND ANY PB COLOUR; 2 NO CONTACTS PER PB	30
11	4 LED WITHOUT PUSH BUTTON WITH ANY COMBINATION OF LED COLOUR	5
12	3 LED WITHOUT PUSH BUTTON WITH ANY COMBINATION OF LED COLOUR	1200
13	2 LED WITHOUT PUSH BUTTON WITH ANY COMBINATION OF LED COLOUR	50
14	EMERGENCY OFF PUSH BUTTON MODULE WITH RED PB AND RED HINGED COVER; 48(50)X48(50) MM; 2 NO CONTACTS PER PB	750
15	RECESSED PUSH BUTTON MODULE WITH ANY PB COLOUR; 2 NO CONTACTS	1000
16	ILLUMINATED PUSH BUTTON, ROUND SHAPE, ANY COLOUR, WITH A 'X' ENGRAVED ON THE LENS, MOUNTED ON 48(50) X 24(25) MM TILE/MODULE, WITH LED; 2 NO + 2 NC CONTACTS	1000
17	ILLUMINATED PUSH BUTTON OF ANY COLOUR, SQUARE SHAPE 24(25)X24(25) MM, WITH LED; 2 NO + 2 NC CONTACTS	30
18	LAMP(LED) UNIT WITH ANY COLOUR LENS, SQUARE SHAPE +24(25)X24(25) MM	30
19	SINGLE CHIP LED T5.5K, OR ANY, SUITABLE FOR SL. NO. 18	50
20	SIGNAL MODULE, 12 LED, WITH ANY COMBINATION OF LED COLOUR	5
21	SIGNAL MODULE, 6 LED, WITH ANY COMBINATION OF LED COLOUR, LEDS IN 2 COLUMNS OF 3 EACH	700
22	SIGNAL MODULE, 3 LED, WITH ANY COMBINATION OF LED COLOUR; LEDS VERTICALLY PLACED	900
23	SIGNAL MODULE, 2 LED, WITH ANY COMBINATION OF LED COLOUR, LEDS HORIZONTALLY PLACED ON TOPMOST ROW	600

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QUANTITY</th> </tr> </thead> <tbody> <tr> <td>24</td> <td>SIGNAL MODULE, 2 LED, WITH ANY COMBINATION OF LED COLOUR, LEDS VERTICALLY PLACED</td> <td>600</td> </tr> <tr> <td>25</td> <td>SIGNAL MODULE, 1 LED, WITH ANY LED COLOUR</td> <td>225</td> </tr> <tr> <td>26</td> <td>SYMBOL MODULE WITH 1 LED AT THE CENTER, ANY LED COLOUR</td> <td>275</td> </tr> <tr> <td>27</td> <td>ANNUNCIATOR FACIA MODULE, 48(50) X 48(50) MM, ILLUMINATION BY LEDS, ANY LED COLOUR (RED, GREEN, YELLOW)</td> <td>8000</td> </tr> <tr> <td>28</td> <td>SEMAPHORE (SWITCH POSITION) INDICATOR MOUNTED ON 48(50) X 24(25) MM TILE/MODULE</td> <td>900</td> </tr> <tr> <td>29</td> <td>BLANK TILE 48(50) X 24(25) MM</td> <td>130000</td> </tr> <tr> <td>30</td> <td>BLANK TILE 48(50) X 48(50) MM</td> <td>250</td> </tr> <tr> <td>31</td> <td>PLUG-IN TYPE CONNECTOR ASSEMBLY FOR PUSH BUTTON + LED MODULES (#)</td> <td>9700</td> </tr> <tr> <td>32</td> <td>PLUG-IN TYPE CONNECTOR ASSEMBLY FOR LED SIGNAL MODULES (#)</td> <td>4500</td> </tr> <tr> <td>33</td> <td>CONNECTOR ASSEMBLY FOR ANNUNCIATOR FACIA MODULES (#)</td> <td>8500</td> </tr> <tr> <td>34</td> <td>CRIMP CONTACTS SUITABLE FOR CONNECTORS OF SL. NOS. 31, 32 & 33 (+)</td> <td>175000</td> </tr> <tr> <td>35</td> <td>SPARE LED, RED</td> <td>500</td> </tr> <tr> <td>36</td> <td>SPARE LED, YELLOW</td> <td>500</td> </tr> <tr> <td>37</td> <td>SPARE LED, GREEN</td> <td>500</td> </tr> <tr> <td>38</td> <td>SPARE PB CAP, GREY</td> <td>300</td> </tr> <tr> <td>39</td> <td>SPARE PB CAP, RED</td> <td>250</td> </tr> <tr> <td>40</td> <td>SPARE PB CAP, GREEN</td> <td>250</td> </tr> <tr> <td>41</td> <td>MANUAL CRIMPING TOOL (+)</td> <td>70</td> </tr> <tr> <td>42</td> <td>MODULE EXTRACTOR</td> <td>70</td> </tr> <tr> <td>43</td> <td>SELECTOR SWITCH MODULE, 4 POSITION, 3 POLE, 48(50) X 48(50) MM, KNOB COLOUR RAL 7037</td> <td>70</td> </tr> <tr> <td>44</td> <td>SELECTOR SWITCH MODULE, 4 POSITION, 2 POLE, 48(50) X 24(25) MM, KNOB COLOUR RAL 7037</td> <td>150</td> </tr> <tr> <td>45</td> <td>SELECTOR SWITCH MODULE, 3 POSITION, 2 POLE, 48(50) X 24(25) MM, KNOB COLOUR RAL 7037</td> <td>160</td> </tr> <tr> <td>46</td> <td>SELECTOR SWITCH MODULE, 2 POSITION, 2 POLE, 48(50) X 24(25) MM, KNOB COLOUR RAL 7037</td> <td>150</td> </tr> <tr> <td>47</td> <td>SELECTOR SWITCH MODULE, TWO MOMENTARY AND 1 CENTRAL STAYPUT POSITIONS, WITH SPRING RETURN TO STAYPUT POSITION, 3 POLE, 48(50) X 48(50) MM, KNOB COLOUR RAL 7037</td> <td>100</td> </tr> <tr> <td>48</td> <td>SELECTOR SWITCH MODULE, TWO MOMENTARY AND 1 CENTRAL STAYPUT POSITIONS, WITH SPRING RETURN TO STAYPUT POSITION, 3 POLE, 48(50) X 24(25) MM, KNOB COLOUR RAL 7037</td> <td>350</td> </tr> <tr> <td>49</td> <td>SELECTOR SWITCH 12 POSITION, 1 POLE, 48(50) X 48(50) MM, KNOB COLOUR RAL 7037</td> <td>1</td> </tr> <tr> <td>50</td> <td>SELECTOR SWITCH MODULE, 5 POSITION, 2 POLE, 48(50) X 24(25) MM, KNOB COLOUR RAL 7037</td> <td>1</td> </tr> </tbody> </table>			SL. NO.	ITEM DESCRIPTION	APPROX. QUANTITY	24	SIGNAL MODULE, 2 LED, WITH ANY COMBINATION OF LED COLOUR, LEDS VERTICALLY PLACED	600	25	SIGNAL MODULE, 1 LED, WITH ANY LED COLOUR	225	26	SYMBOL MODULE WITH 1 LED AT THE CENTER, ANY LED COLOUR	275	27	ANNUNCIATOR FACIA MODULE, 48(50) X 48(50) MM, ILLUMINATION BY LEDS, ANY LED COLOUR (RED, GREEN, YELLOW)	8000	28	SEMAPHORE (SWITCH POSITION) INDICATOR MOUNTED ON 48(50) X 24(25) MM TILE/MODULE	900	29	BLANK TILE 48(50) X 24(25) MM	130000	30	BLANK TILE 48(50) X 48(50) MM	250	31	PLUG-IN TYPE CONNECTOR ASSEMBLY FOR PUSH BUTTON + LED MODULES (#)	9700	32	PLUG-IN TYPE CONNECTOR ASSEMBLY FOR LED SIGNAL MODULES (#)	4500	33	CONNECTOR ASSEMBLY FOR ANNUNCIATOR FACIA MODULES (#)	8500	34	CRIMP CONTACTS SUITABLE FOR CONNECTORS OF SL. NOS. 31, 32 & 33 (+)	175000	35	SPARE LED, RED	500	36	SPARE LED, YELLOW	500	37	SPARE LED, GREEN	500	38	SPARE PB CAP, GREY	300	39	SPARE PB CAP, RED	250	40	SPARE PB CAP, GREEN	250	41	MANUAL CRIMPING TOOL (+)	70	42	MODULE EXTRACTOR	70	43	SELECTOR SWITCH MODULE, 4 POSITION, 3 POLE, 48(50) X 48(50) MM, KNOB COLOUR RAL 7037	70	44	SELECTOR SWITCH MODULE, 4 POSITION, 2 POLE, 48(50) X 24(25) MM, KNOB COLOUR RAL 7037	150	45	SELECTOR SWITCH MODULE, 3 POSITION, 2 POLE, 48(50) X 24(25) MM, KNOB COLOUR RAL 7037	160	46	SELECTOR SWITCH MODULE, 2 POSITION, 2 POLE, 48(50) X 24(25) MM, KNOB COLOUR RAL 7037	150	47	SELECTOR SWITCH MODULE, TWO MOMENTARY AND 1 CENTRAL STAYPUT POSITIONS, WITH SPRING RETURN TO STAYPUT POSITION, 3 POLE, 48(50) X 48(50) MM, KNOB COLOUR RAL 7037	100	48	SELECTOR SWITCH MODULE, TWO MOMENTARY AND 1 CENTRAL STAYPUT POSITIONS, WITH SPRING RETURN TO STAYPUT POSITION, 3 POLE, 48(50) X 24(25) MM, KNOB COLOUR RAL 7037	350	49	SELECTOR SWITCH 12 POSITION, 1 POLE, 48(50) X 48(50) MM, KNOB COLOUR RAL 7037	1	50	SELECTOR SWITCH MODULE, 5 POSITION, 2 POLE, 48(50) X 24(25) MM, KNOB COLOUR RAL 7037	1
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ANNEXURE-2 TO PS4152193

REV.NO. 00

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SL. NO.	ITEM DESCRIPTION	APPROX. QUANTITY
01	MOSAIC GRID ASSEMBLIES, METALLIC/METAL ALLOY TYPE, COMPLETE WITH FRAMEWORK, AND ALL NECESSARY HARDWARE, ACCESSORIES, FOR MOUNTING IN HORIZONTAL OR VERTICAL ORIENTATION ON DESKS/PANELS. BASIC GRID OPENING SIZE SHALL BE 24(25) X 24(25) MM. NOTE: ACTUAL MOSAIC GRID ASSEMBLIES THAT WILL BE REQUIRED FOR VARIOUS DESKS/PANELS SHALL BE OF DIFFERENT DIMENSIONS (SPECIFIC NUMBERS OF ROWS+ COLUMNS CONFIGURATION FOR EACH APPLICATION). RATE PER SQUARE METER AREA OF THE FRONT DIMENSIONS WITH FRAMEWORK TO BE QUOTED.	120 SQ. MTRS.
02	INSCRIPTIONS/TEXT FIELDS ALONG WITH MATERIALS FOR EACH OF THE FOLLOWING:	
a	RECESSED PUSH BUTTON MODULES (SL. NO. 15 OF ANNEX.-1)	1000
b	PUSH BUTTON+LED MODULES (SL. NOS. 01 TO 13 OF ANNEX.-1)	7500
c	EMERGENCY OFF PB MODULES (SL. NO. 14 OF ANNEX.-1)	775
d	1,2,3-LED SIGNAL MODULES (VERTICAL) (SL. NOS. 22, 24 & 25 OF ANNEX.-1)	4200
e	12 LED SIGNAL MODULES (SL. NO. 20 OF ANNEX.-1)	5
f	6 LED SIGNAL MODULES (SL. NO. 21 OF ANNEX.-1)	750
g	2 LED SIGNAL MODULES (HORIZONTAL) (SL. NO. 23 OF ANNEX.-1)	625
h	ANNUNCIATOR MODULES 48(50)X48(50) MM (SL. NO. 27 OF ANNEX.-1)	8200
i	BLANK TILES 48(50)X48(50) MM (SL. NO. 30 OF ANNEX.-1)	50
j	BLANK TILES 48(50)X24(50) MM (SL. NO. 29 OF ANNEX.-1)	10000
	NOTES: A) RATES SHOULD INCLUDE COST OF BOTH MATERIALS AS WELL AS INSCRIBING. B) IF THERE ARE ANY OTHER VARIANT OF ITEMS WHICH REQUIRE INSCRIPTIONS, THEY SHALL BE SEPARATELY LISTED. IF SOME OF ABOVE LIST REQUIRE SIMILAR ITEMS AND CHARGES ARE SAME, THEY CAN BE COMBINED.	
03	MIMIC DIAGRAMS ON TILES OF THE FOLLOWING SIZES. EACH DIAGRAM/SYMBOL AND THEIR COLOUR SHADE SHALL BE AS PER BHEL'S DRAWINGS/SPECIFICATIONS.	
a	48(50) X 48(50) MM	700
b	48(50) X 24(25) MM	6000

TERMS AND CONDITIONS
Annexure I to RFQ HGNRC01/13

BIDDERS TO NOTE: THIS ANNEXURE DULY FILLED AND SIGNED MUST BE SUBMITTED ALONG WITH THE TECHNICAL BID

NO	Details	CONFIRMATION FROM BIDDER AND VENDOR
1	Package Purchase: all items are required from one bidder only. <u>L1 evaluation basis:</u> over all lowest price for all items put together will be considered by BHEL for evaluation of bids considering net lowest cost to BHEL.	
2	Quantity indicated in enquiry is approximate quantity for a period of 12 months. Quantity against each item is tentative and it may change during Rate contract period depending upon Requirement	
3	In case of any short shipments /defective items observed after receipt of material at BHEL EDN, the same will be made good and supplies arranged to BHEL EDN Bangalore by M/S (Bidder) free of cost and charges.	
4	Rate contract validity: 12 months from the date of first purchase order.	
5	BHEL will decide procurement of items depending upon requirements.	
6	Port of Destination: Port of Destination for imports is Bangalore If the quote is for supply items anywhere in India then item to be delivered to BHEL EDN stores. For non agreement on delivery at BHEL EDN (for quote anywhere in India) loading factor 10 %	
7	IN CASE QUOTATION IS IN FOREIGN CURRENCY THEN TERMS OF SHIPMENT SHALL BE FCA-INTERNATIONAL AIRPORT AS PER ANNEXURE A. TERMS WITH EX-WORKS OR EX-WAREHOUSE ARE NOT ACCEPTABLE. BHEL WILL APPLY 3.5% OF THE BASIC QUOTED VALUE TO THE BIDDERS WITH THE QUOTE AS FCA-INTERNATIONAL AIRPORT FOR ARRIVING AT THE COST FOR CIF-BANGALORE/MUMBAI BASIS.	
8	Offer Validity: Bidder/vendor to confirm the offer validity 90 days from Due date as per enquiry.	
9	Description/Nomenclature of items in Order acknowledgement / confirmation & invoice to be mentioned as per PO.	
10	DELIVERY: preferable delivery by BHEL 4 weeks from the date of purchase order. we request you to indicate normal delivery date from the date of po.	
11	BIDDER to confirm that prices quoted are FIRM till completion of orders for multiple Purchase orders / multiple shipments till completion of rate contract period. Packing shall be air worthy/ road worthy best suited for multiple transshipment and to take care of transit damages if any.	
12	Payment terms: A) FOR SUPPLY IN INDIAN RUPEES BHEL standard payment terms as per enquiry is 100 % payment within 30 days after receipt of materials for non agreement to terms of	

	<p>payment of 100% payment within 30 days credit ... If the quotation is payment through bank ; loading factor : 10 % ... If the quotation is payment on receipt of material at BHEL EDN : Loading factor : 10 %</p> <p>B) FOR SUPPLY IN FOREIGN CURRENCY:</p> <p>BHEL standard Payment for FE quote is " SIGHT DRAFT" SIGHT DRAFT MEANS: BIDDER SHOULD DESPATCH THE ITEM AND SUBMIT DESPATCH DOCUMENTS i.e. 1. INVOICE 2. PACKING LIST 3. AIR WAY BILL 4. WARRANTY CERTIFICATE 5 CLEARANCE CERTIFICATE ISSUED BY BHEL EDN BANGALOE DOCUMENTS TO BE SUBMITTED TO OUR BANK THROUGH FOREIGN BANK. ON RECEIPT OF DOCUMENTS BHEL WILL RELEASE THE PAYMENT IMMEDIATELY. BANK CHARGES OUT SIDE INDIA TO BIDDER'S ACCOUNT AND WITHIN INDIA TO BHEL ACCOUNT</p> <p>Any deviation will attract loading factors as mentioned below. In case of foreign currency quote if LC is insisted, Irrevocable LC will be opened with bank charges to respective accounts after receipt of order</p> <p>confirmation / acknowledgement</p> <p>A) Negotiable documents for LC incase of imports: Airway bill: Original AWB of our authorized air consolidator with two copies. Invoice: Original signed commercial invoice with 2 copies indicating nomenclature of items. Packing list with 2 copies. Copy of clearance certificate issued by BHEL for releasing payments.</p> <p>-----</p> <p>LOADING FACTOR FOR PAYMENT TERMS:</p> <table border="1" data-bbox="272 1306 1242 1621"> <thead> <tr> <th data-bbox="272 1306 560 1339">BHEL REQUIREMENT</th> <th data-bbox="625 1306 917 1402">INCASE FOLLOWING IS INSISTED BY VENDOR</th> <th data-bbox="966 1306 1226 1339">LOADING PERCENT</th> </tr> </thead> <tbody> <tr> <td data-bbox="272 1438 446 1491">AGAINST SIGHT DRAFT (PRESENTATION OF DOCUMENTS</td> <td data-bbox="544 1438 933 1491">A) 100 % THROUGH IRREVOCABLE LC BANK CHARGES OUTSIDE INDIA TO BENEFICIARY'S ACCOUNT ON PRESENTATION OF DOCUMENTS</td> <td data-bbox="966 1438 1193 1474">2.5% ON 100% QUOTED PRICE/ FCA VALUE WILL BE LOADED</td> </tr> <tr> <td></td> <td data-bbox="544 1501 933 1537">B) IF BANK CHARGES OUT SIDE INDIA TO BHEL ACCOUNT IS INSISTED</td> <td data-bbox="938 1501 1205 1537">4% ON THE 100% QUOTED VALUE/ FCA VALUE IN ADDITION TO (A)</td> </tr> <tr> <td></td> <td data-bbox="544 1537 885 1606">C) IF CONFIRMED LC IS INSISTED CONFIRMATION CHARGES TO BENEFICIARYS ACCOUNT IF CONFIRMATION CHARGES TO BHEL ACCOUNT IS INSISTED</td> <td data-bbox="938 1564 1209 1621">4% ON THE 100% VALUE/ FCA VALUE WILL BE LOADED IN ADDITION TO (A) AND (B).</td> </tr> </tbody> </table> <p>NO ADVANCE PAYMENT WILL BE MADE.IF PAYMENT IS INSISTED FOR ADVANCE YOUR OFFER WILL BE REJECTED.</p>	BHEL REQUIREMENT	INCASE FOLLOWING IS INSISTED BY VENDOR	LOADING PERCENT	AGAINST SIGHT DRAFT (PRESENTATION OF DOCUMENTS	A) 100 % THROUGH IRREVOCABLE LC BANK CHARGES OUTSIDE INDIA TO BENEFICIARY'S ACCOUNT ON PRESENTATION OF DOCUMENTS	2.5% ON 100% QUOTED PRICE/ FCA VALUE WILL BE LOADED		B) IF BANK CHARGES OUT SIDE INDIA TO BHEL ACCOUNT IS INSISTED	4% ON THE 100% QUOTED VALUE/ FCA VALUE IN ADDITION TO (A)		C) IF CONFIRMED LC IS INSISTED CONFIRMATION CHARGES TO BENEFICIARYS ACCOUNT IF CONFIRMATION CHARGES TO BHEL ACCOUNT IS INSISTED	4% ON THE 100% VALUE/ FCA VALUE WILL BE LOADED IN ADDITION TO (A) AND (B).	
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13	Gross wt, volume and no of packages of each consignment to be informed to BHEL 10 days prior to shipment													
14	SPECIAL NOTE: GUIDE LINES FOR INDIAN AGENTS OF FOREIGNSUPPLIERS ARE ENCLOSED PL GIVE FULL INFORMATION (ANNEXURE B)													

15	<p>IN CASE SEZ CLEARANCE BHEL WILL GIVE AUTHORISATION LETTER TO BIDDER TO CLEAR THE GOODS FROM CUSTOM. ALL CLAIMS OF CUSTOM DUTIES AS AGREED UPON MUTUALLY SHALL BE PAID BY THE BIDDER & CLAIM TO BE MADE SUBSEQUENTLY FROM BHEL ALONG WITH THE ORIGINAL INVOICE AND RELEVANT DOCUMENTS AS APPLICABLE. BHEL WILL NOT CLEAR THE GOODS FROM SEZ AREA OFFER SHOULD BE IN INR FOR SEZ CLEARANCE AND DELIVERY TERM AS FOR BHEL EDN STORES ONLY .</p> <p>BIDDERS TO INDICATE CLEARLY PERCENTAGE OF TAXES AND DUTIES FOR WHICH THEY WILL GIVE NECESSARY DOCUMENTS TO CLAIM MODVAT BENEFIT. IN THE ABSENCE OF RELEVANT DOCUMENTS OFFER IS LIABLE FOR REJECTION.</p>	
16	<p>As for as possible, the quotations shall be free from corrections/overwriting. Corrections if any should be initialed with your seal. Any typographical error, totaling mistakes, currency mistake, multiplication mistake summing mistake observed in your priced bids,</p> <ol style="list-style-type: none"> i. If, in the price structure quoted for the required material, there is discrepancy between the unit price and the total price which is obtained by multiplying the unit price by the quantity), the unit price shall prevail and the total price corrected accordingly, unless in the opinion of BHEL EDN there is an obvious misplacement of the decimal point in the unit price, in which case the total price as quoted shall govern and the unit price corrected accordingly. ii. If there is an error in total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected: and iii. If there is a discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail subject of (i) and (ii) above. iv. If there is such discrepancy in an offer, the same shall be conveyed to the bidder by BHEL EDN with target date up to which the bidder has to send his acceptance on the above lines and if the bidder does not agree to the decision of the purchaser, the bid is liable to be ignored. <p>BIDDER SHALL HONOUR THE SAME IN CASE ORDER IS AWARDED FOR THE SAI TENDER ENQUIRY / RFQ.</p>	
17	<p>QUOTATION SHALL BE SUBMITTED IN TWO PART BID TECHNO-COMMERCIAL AND UN PRICED offer in sealed envelope and Priced offer in a separate sealed envelope along with price summary. BOTH THESE ENVELOPES SHALL BE AGAIN KEPT IN SINGLE SEALED ENVELOPE. BIDDER SHALL ENSURE TO SUPERSCRIBE THE ENVELOPE WITH RFQ NUMBER , RFQDATE, RFQ DUE DATE</p> <p>TENDER(QUOTATION) TO BE DROPPED IN THE TENDER box WITH CE,M&C, SC&PV, TCS, DEFENCE BEFORE 13.00 HOURS . ON THE DESIGNATED DATE</p>	
18	<p>Penalty for late delivery: For reckoning the date for delayed delivery</p>	

	<p>for penalty purpose the quoted delivery will be considered. In the event of any negotiation/ recorded discussion the agreed delivery period will be considered for penalty purpose. In case of imports the date of handing over the packages along with commercial invoice and packing slip to our freight forwarder along with written confirmation from our air consolidator that packages are handed over to them for further air freight to India will be treated as proof of delivery or alternatively HAWB/AWB no and date will be treated as proof of delivery for penalty purpose. Penalty applicable is 0.5% per week max limited to 10% of Po value.</p> <p>LOADING FACTOR FOR NON AGREEMENT FOR PENALTY FOR DELAYED DELIVERY:</p> <p>... If the quotation is NOT AGREEABLE : loading factor 10 % ... If the quotation is 5% maximum agreed ; loading factor 5% ... If the quotation is other than the above : Loading factor (10 % _ quoted Max%)</p> <p>PENALTY FOR DELAYED WILL BE RECKONED WITH RESPECT TO PO DELIVERY AS GIVEN BELOW:</p> <p>.. If the delivery is at BHEL EDN by supplier, then delivery date at BHEL EDN will be the reference ... If the delivery is ex works (transportation by BHEL EDN) then invoice date will be the reference. (for supply of items anywhere from India only) ... If the dispatch is with documents through bank then invoice date will be the reference.</p> <p>For imported items: For imported items items handed over to our freight forwarders will be the reference of delivery (acknowledgement for having received the packages along with all documents with date as a proof is required).</p>	
	<p>19 Reverse auction: against this enquiry for the subject item /system with detailed scope of supply as per enquiry specifications, BHEL EDN reserves the right to follow REVERSE AUCTION PROCEDURE i.e., ON LINE BIDDING ON NETWORK, before finalizing the purchase order on technically competent bidders, as per the guidelines given in Annexure C enclosed. In case BHEL does not resort to Reverse Auction the price bids and price impacts (if any) already submitted and available with BHEL shall only be opened as per BHEL's standard practice without seeking any more price impacts on account of BHEL not going for Reverse Auction.</p>	

BHEL

BIDDER

LIST OF INTERNATIONAL AIRPORTS

Sl. No	Country	Air Ports
1	Austria	Vienna, Linz, Graz
2	Australia	Sydney, Melbourne, Perth
3	Belgium	Antwerp, Brussels
4	Canada	Toronto, Montreal
5	China	Shangai
6	Cyprus	Lamaca
7	Czech Republic	Prague (Via Frankfurt)
8	Denmark	Copenhagen
9	Egypt	Cairo
10	Finland	Helsinki
11	France	Paris (Rosy), Lyon
12	Germany	Darmstadt, Manihiem, Nurnberg, Hamburg, Stuttgart, Munich, Koln, Dusseldorf & Hannover, Frankfurt, Berlin
13	Hongkong	Hongkong
14	Italy	Rome, Milan, Turin, Bologna, Florence
15	Ireland	Dublin
16	Isrel	Telaviv
17	Japan	Tokyo, Osaka
18	Malaysia	Kaulalampur, Penang
19	Neatherlands	Amsterdam, Rotterdam
20	Newzealand	Auckland
21	Norway	Oslo
22	Oman	Muscat
23	Philiphines	Manila
24	Romania	Bucharest
25	Russia	Moscow
26	Saudi Arabia	Riyad
27	Singapore	Singapore
28	Slovakia	Bartislowa
29	South Africa	Johannesburg, Durban
30	South korea	Kimpo
31	Spain	Barcelona
32	Sweden	Stockholm, Gothenburg, Milano
33	Switzerland	Basle, Zurich, Geneva
34	Taiwan	Taipei
35	U.A.E.	Dubai
36	U.K.	Landon (Heathrow), Newcastle, Oxford, Cheltham, Bristol, Wellingborough, Birmingham, East Midland, Manchester, Leeds, Glasgow.
37	U.S.A.	Newyork, Chicago, Sanfrancisco, Los Angeles, Atlanta
38	Ukraine	Kiev

This format is applicable only to Indian Suppliers/ Agents supplying indigenous portion of Foreign Purchases.

SEARP (SRF) Clause No	Detail
	Name & address of the firm
1.0	Products/ Systems / Services being considered for
2.0	General Information
2.2	Name of Chief Executive
2.3	Details of authorized signatory
3.0	Ownership Information
3.1	Type of firm
3.2	Nature of Business <ul style="list-style-type: none"> • Attach authorization letter and agency agreement from Principal (from whom capital equipment is procured) • Attach copy of declaration from Foreign Principal for total guarantee/ warranty of indigenous supplies
3.3	Year of establishment
3.4	Year of commencement of business
4.0	Registration particulars
4.1	Permanent Account No.
4.2 / 4.3	Sales Tax / TIN no
4.6	Service tax no. (in case of E&C)
5.0	Organisational strength
6.0	Other particulars
6.1	If the company is already registered with other units
6.2	Directors/ Partners, if related to any BHEL Employee
6.9	If any Ex BHEL Personnel employed by the Company
6.12	Details of pending legal issues with BHEL
6.13	Bank Account information
9.0	Financial information
9.6	Sales/ Turnover details of last 3 years (or from the date of incorporation whichever is less)

GUIDELINES FOR REVERSE AUCTION PROCEDURE

Against this enquiry for the subject item/system with detailed scope of supply as per enquiry specifications, BHEL-EDN proposes to resort to "REVERSE AUCTION PROCEDURE" i.e., ON LINE BIDDING ON NETWORK, before finalizing the purchase order on technically competent bidders as per the guidelines given below:

1. Reverse Auction procedure shall be applicable for 2 Part bid tenders only.
2. For the proposed reverse auction, technically and commercially acceptable bidders only shall be eligible to participate, BHEL will engage the services of a service provider, having network all over the world. The online bidding can be done from the vendor's respective offices on their computers with Internet facility or at any of the cyber cafe, for which service provider's representative will provide all necessary training and assistance before commencement of on line bidding. Training is free of cost .
3. Vendors have to fax the Compliance form in the prescribed format (provided by Service provider) before start of Reverse auction. Without this, Reverse auction will not be started. Delay in faxing the above will lead to disqualification.
4. BHEL will send the Auto formulated EXCEL sheet which will help to arrive at "Total Cost to BHEL" like Basic Material cost, Packing & forwarding charges, Excise duty, Sales Tax/VAT, Freight charges, Insurance (by BHEL), Service Tax for Services,(-) ED disclaimer if any, and loading factors (for non-compliance to BHEL standard Commercial terms & conditions) for each of the vendor to enable them to fill-in the price and keep it ready for keying in during the Auction.
5. Reverse auction will be conducted on a mutually agreed schedule and time.
6. After Reverse auction is conducted , successful bidder has to Fax the Filled-in Excel sheet showing the final value accepted in Reverse Auction with breakup of each element as indicated in SI No. 4 above to the service provider within 48 hours of Auction without fail.

Note: No changes are allowed in Rate of Excise Duty, Sales Tax, Freight, Insurance, Service Tax and Loading factors after auction is completed.

After the reverse auction is conducted, the bidder whose price is lowest (total cost to BHEL, after considering all factors as per enquiry including Loading factors for deviations to BHEL standard Commercial Terms & conditions), BHEL will process the tender as per BHEL purchase norms. Purchase order will be issued without loading factors for deviations.

Note: BHEL will also reserve the right to open the sealed price offer submitted by the vendors for comparison purpose, if deemed necessary, without any intimation to the technically and commercially accepted bidders.

8. In case BHEL decides not to go for Reverse Auction procedure for this tender enquiry, the Price bids and price impacts (if any) already submitted and available with BHEL shall only be opened as per BHEL's standard practice

without seeking anymore price Impacts on account of BHEL not going for Reverse Auction. Hence please quote your best lowest price in first instant itself.

9. Training by service provider will be given only once for the subsequent reverse auction. Training will not be given for a company which has already taken training for the FIRST REVERSE AUCTION conducted by BHEL-EDN, Bangalore.

10. Activities involved in Reverse Auction :

a) BHEL will inform the vendor in writing, the Service provider's information to enable them to contact & get trained. Alongwith the above information Business rules/policy also will be sent.

b) Vendors have to contact Service provider and send Compliance form for having understood Reverse Auction procedure and ready for Auction.

c) BHEL will send the Auto formulated Excel sheet (blank format without prices) as mentioned in SI No.4 above to the respective vendors.

d) Vendors have to fill-in the Excel sheet (provided by BHEL) including Loading factors and get ready for Reverse Auction.

e) Date & Time of Reverse Auction and Website address will be intimated by Service Provider.

f) Bid decrement will be indicated in the Website after the Sealed bid is over and before start of Reverse Auction.

g) Vendors will have to key-in the "Total cost to BHEL" (as worked out in the Excel sheet mentioned in SI No.4 above) in the "Sealed Bid" of the Reverse Auction within specified time duration of 20 to 30 minutes. After "Sealed Bid" auction, the lowest bidder's value or BHEL's start bid price will be the starting bid value for the commencement of Reverse Auction (English Reverse).

h) At the end of Reverse Auction time (English Reverse), the lowest bidder value will be known on the network.

i) Successful bidder has to fax the filled-in EXCEL sheet showing the final value accepted in the Reverse Auction with breakup of each component within 48 hours of completion of the Reverse Auction without altering any of the terms to the service Provider. Any alterations will be taken as sabotaging the tender process and will invite disqualification of vendor to conduct business with BHEL for the period of 2 years.

j) The loading factors for non-conformance to BHEL standard commercial terms are only for arriving at lowest Bidder. In the event of Purchase order, same will be issued without loading factor values indicated in EXCEL Sheet. We repeat PO, will be issued for scope of supply+ Packing & Forwarding charges if any, Excise duty, Sales Tax, Service Tax for services and Freight & Insurance. Insurance will be to BHEL Account.