

**BANGLADESH RURAL ELECTRIFICATION BOARD**

**PBS INSTRUCTION 100-06**

**CONSTRUCTION METHODS FOR PBS ELECTRICAL NETWORK SYSTEM,  
BUILDING AND CIVIL WORKS.**

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**PBS INSTRUCTION 100-06**

Approval Date: 07/03/1979

Revision Date : 19/02/2020

**SUBJECT: CONSTRUCTION METHODS FOR PBS ELECTRICAL NETWORK SYSTEM, BUILDING AND CIVIL WORKS.**

**I. PURPOSE**

To set forth BREB policy and procedure with respect to construction of Electric Network System, Building and Civil works facilities.

**II. GENERAL**

- A. It is the responsibility of each PBS, as owner of its system, to determine the methods of construction best suited to its needs. However, it is recognized that from the viewpoint of (1) protecting the security interests of the BREB's loans, and (2) accomplishing the objectives of the REB Act 2013 is properly concerned that the costs of construction, material, and equipment are reasonable and within the limits of economic feasibility and that the physical properties constituting security for loans are constituted and maintained adequately to serve the purposes for which they are intended.
- B. This Instruction outlines general requirements and procedures in connection with new construction and additions to plant whether financed with loan funds or general funds. Electric system construction is a continuing activity and both loan funds and PBS general funds are often used concurrently.
- C. BREB may make exceptions to the requirements and procedures in this Instruction, since it is not always possible to foresee and include all the types of situations and conditions which can arise. PBSs are urged to consult with appropriate BREB officials in individual instances when such exceptions appear to be necessary or desirable.
- D. Engineering system studies and reports, such as construction work plans, and other engineering support for loan applications, provide BREB with the basis for proper

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evaluation of the indicated need for the construction PBSs' Electric System. When appropriate studies have not been made, or when existing studies are obsolete, arrangements should be made to have an up-to-date study prepared either by an engineering consultant or by the PBS's staff engineer.

### III. POLICY

#### A. SELECTION OF METHODS OF CONSTRUCTION

Construction works in PBS level have been done in two ways-

- Construction works are done by BREB under PBS, GOB, donor, or development partner's funded project. This type of works are in large volume and comparatively complex,
- Construction works are done by PBS with it's own work force or under contracts with contractors, such as small extension or maintenance work of electrical network system. This type of works are in small volume and comparatively simple in nature.

This instruction covers mostly, how BREB functions in doing Electrical Network System (Lines and Sub-stations), Building, and/ or Civil works of PBS in the light of PPA (Public Procurement Act) and PPR (Public Procurement Regulations).

#### B. STANDARDS, SPECIFICATIONS AND GENERAL REQUIREMENTS

- Material or equipment and construction standard must not be below the minimum requirements of the standards and specifications established by BREB. Material and equipment for electric network facilities meeting these standards are included in the standard specification as BREB approved Publication and construction standard drawings as PBS Instruction 100-28, 100-45, 100-70.
- If operating conditions or requirements appear to make the use of construction, which is not included in instruction 100-28, 100-45, 100-70 such type of very essential fittings/ drawings can be approved by the concern competent authority of BREB prior to purchase of material and equipment or commencement of construction. Whenever such materials are approved by concern Directorate of BREB, Director, MP&SS will take necessary measure to amend the existing specification and standard to include newly approved material or Equipment as BREB publication. If material or equipment and construction is approved due to exigency of a particular situation, which otherwise can not be regarded as

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acceptable standard, in such situation approval will be qualified by marking "Approved for one time use only" and it must be clearly mentioned in approval document.

3. Only new material and equipment shall be purchased after drawing design has been approved by the Director, System Engineering and Design.
4. All material and equipment shall be obtained from BREB stores unless otherwise approved allocation by the Director, Material Planning & Standardizing Specification.

### C. BREB APPROVAL OF PBS'S CONSTRUCTION AND CONSTRUCTION PROCEDURE

- (1) PBS will obtain approval for Electrical Network System construction from BREB as per PBS instruction 100-23 and construction will be carried out as per PBS Instruction 100-41 and 100-42.
- (2) In case of Building and other Civil works necessary approval shall be needed as per BREB guideline and PBS instruction 100-57.

### IV. CONSTRUCTION PROCEDURE BY BREB

#### A. General:

- (1) All electrical contractors (Line and Sub-station) shall be pre-qualified by the Board before being permitted to participate in the tenders offered by BREB. They may also be classified into few categories as per Board policy laid down from time to time. If necessary, electrical works (Line and Sub-station) will be opened to contractor having required experience.
- (2) All Civil Works will be opened to enlisted civil contractors of the Government, Semi-Government, Autonomous Bodies and Corporations, who has completed similar works of threshold value as per condition laid down in bidding document.
- (3) At present there are three types of construction executed in PBS system. They are-
  - (a) Electrical line construction,
  - (b) Electrical sub-station construction and
  - (c) Building and Civil construction.

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B. Construction procedures of those three are not same. They are illustrated below:

### B.01 ELECTRICAL LINE CONSTRUCTION PROCEDURE

- (1) On behalf of PE, zonal Superintending Engineer or PE him/ herself {Concern Project Director (PD)} will contract with lowest responsive bidder maintaining all procedure as per PPR.
- (2) Construction work will be executed by the Executive Engineer of concern project division. Contractor will report to him/ her within 7(Seven) days of contract with manpower, tools, tackle etc.
- (3) Construction materials will be issued from concern departmental store except EPC (Engineering, Procurement and Construction, widely known Turn-Key) Contract. Materials only be issued to the contractor or his/ her authorized representative. For the security of materials, all materials will not be issued at a time. It is better, pole will be issued first, than guy and anchor log, than pole top materials, than conductors and at last conductor accessories materials will be issued.
- (4) As-built drawings are very important for future maintenance and extension works. As-built drawings will be prepared and handed over to concern PBS. PBS will preserve it for future reference.
- (5) Finally, closeout document will be prepared using necessary forms and materials issue- return statement. Closeout document will be duly signed by all concern. After approval, closeout document with as-built will be distributed as per PBS instruction 100-13 (BREB Instruction 500-03)

### B.02 ELECTRICAL SUB-STATION CONSTRUCTION PROCEDURE

- (1) On behalf of PE, zonal Superintending Engineer or PE him/ herself {Concern Project Director (PD)} will contract with lowest responsive bidder maintaining all procedure as per PPR.
- (2) Construction work will be executed by the Executive Engineer of concern project division. Contractor will report to him/ her within 7(Seven) days of contract with manpower, tools, tackle etc.
- (3) To find out accurate earth filling, at first, contour map shall be prepared in presence of representatives of concern Executive Engineer of BREB, PBS, Consultant and Contractor's. All representatives will sign the contour map. Contour map will be preserved by the concern Executive Engineer of BREB for future reference.

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- (4) After preparing contour map, lay out map will be prepared as per approved drawing. Lay out map will be signed by all concern. Construction will be started as per lay out map.
- (5) Usually, Electrical Equipment are issued from concern departmental store except EPC (Turn-Key) Contract. Materials only be issued to the contractor or his/ her authorized representative. Civil works materials, such as bricks, sand, cement, MS bar etc. are supplied by contractor.
- (6) All major items supplied by contractor as required, shall be tested from renowned testing laboratories. Without accepting test report, no bill shall be paid against that concern item. Photographs of each major construction stage shall be preserved, such as piling (if needed), earth filling, foundation, concrete casting etc. It is necessary for future use and reference.
- (7) As-built drawings are very important for future maintenance and extension works. As-built drawings will be handed over to concern PBS. PBS will preserve it for future use and reference.
- (8) Finally, closeout document will be prepared using necessary forms and materials issue- return statement. Closeout document will be duly signed by all concern. After approval, closeout document with as-built will be distributed as per PBS instruction 100-13 (BREB Instruction 500-03)

### B.03 BUILDING AND CIVIL CONSTRUCTION PROCEDURE

- (1) On behalf of PE, zonal Superintending Engineer or PE him/ herself {Concern Project Director (PD)} will contract with lowest responsive bidder maintaining all procedure as per PPR.
- (2) Construction work will be executed by the concern Executive Engineer of BREB. Contractor will report to him/ her within 7(Seven) days of contract with manpower, tools, tackle etc.
- (3) To find out accurate earth filling, at first, contour map shall be prepared in presence of representatives of concern Executive Engineer of BREB, PBS, Consultant and Contractor's. All representatives will sign the contour map. Contour map will be preserved by the concern Executive Engineer of BREB for future reference.
- (4) After, preparing contour map, lay out map will be prepared as per approved drawing. Lay out map will be signed by all concern. Construction will be started as per lay out map.
- (5) Usually, no material will be issued departmentally.
- (6) All major items supplied by contractor as required, will be tested from renowned testing laboratories. Without acceptable test report, no bill shall be

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paid against that concern item. Photographs of each major construction stage will be preserved, such as piling (if needed), earth filling, foundation, concrete casting etc.

- (7) As-built drawings are very important for future maintenance and extension works. As-built drawings will be handed over to concern PBS. PBS will preserve it forever for future use and reference.
- (8) Finally, closeout document will be prepared using necessary forms and as-built drawing. Closeout document will be duly signed by all concern. After approval, closeout document with as-built will be distributed as per PBS instruction 100-14 (BREB Instruction 500-04).

## V. BIDDING PROCURES

When competitive bids are taken for the construction of facilities it is essential that the arrangements prior to the bid opening are suitable and the bid opening is conducted as per PPR (Public Procurement Regulations). It is to be expected that unusual problems and situations may arise under various circumstances. Considering local situation cooperation from concern police administration may be taken.

### A. TENDER OPENING DATE

The tender opening date and time should be scheduled by the PE (Procuring Entity) during invitation of tender. Sufficient time should be available as per PPR and concern instruction to prospective tenderers/ bidders to prepare their tender/ bid and, when necessary, examine the site of the project. Normally the longer period associated with large and complex construction projects. If possible, the tender/ bid opening date should be scheduled at the middle or end of the week.

### B. INVITATIONS TO TENDER

- (1) LTM (Limited Tendering Method): The PE (Procuring Entity) is responsible for sending out invitations to enlisted all eligible prospective tenderers, informing scheduled tender/ bid opening date & time and other action necessary to procure full, free and competitive tendering/ bidding. For construction of electric facilities and civil works, sufficient invitations should be sent out to assure adequate competition. Which Tenderer/ bidder shall be permitted to participate a tender will be decided by HOPE (Head Of Procuring Entity) in the light of PPR.

- (2) OTM (Open Tendering Method): Advertise for procurement shall be published in necessary number of Bengali & English daily nation wide circulated newspaper.

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Apart from this advertise also be published in web site of CPTU, & BREB, notice board etc. All advertise must be as per guideline of PPR so that tendering/ bidding process will be competitive.

### C. RECEIPT OF TENDERS

Tender Opening Committee will be formed before tender opening. One member of TEC (Tender Evaluation Committee) will be included in Tender Opening Committee. No tender/ bid shall be received after specified date and time. Time shall be followed of Bangladesh Betar.

### D. CONDUCT OF TENDER OPENING

Tender opening shall be conducted by the Tender Opening Committee on fixed date and time as described in tender notice, in presence of tenderers/representatives (if any). All members of Tender Opening Committee will sign tender submission letter and price schedule of submitted each original tender. All members of Tender Opening Committee and tenderers/ representatives (if any present) will sign tender opening sheet.

### E. READING OF TENDERS

Tender prices shall be read out by the Tender Opening Committee. Each tender price shall be announced minimum two times and recorded by ink or computer print. The tender price may be read out in order to received or alphabetically by the name of tenderer/ bidder. In case of two envelop tendering/ bidding process, envelop of quoted price offering letter will not be opened and quoted price will not be read out during tender opening.

### F. BID REJECTIONS

As per tender notice any or all bids may be rejected by PE (Procuring Entity) with the approval of HOPE (Head Of Procuring Entity) not showing any reason.

### G. TENDER EVALUATION

Tender evaluation Committee (TEC) will be formed before tender opening with the approval of HOPE(Head Of Procuring Entity) comprising required members, out of which two will be from other than line ministry as per PPR. Presence of at least one out-side member in any TEC meeting is required.

### H. REPORT SUBMISSION

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After opening tender TEC (Tender Evaluation Committee) will meet and evaluate received tenders and will submit their evaluation report to PE within stipulated time as per PPR.

#### I. AWARD OF CONTRACT

As per financial delegation PE, HOPE, Ministry or Purchase Committee of government will approve evaluation of TEC with recommendation to whom award will be issued. According a Notification Of Award (NOA) will be issued as per proforma given with PPR mentioning to sign contract within stipulated time.

#### J. SIGNING A CONTRACT

Within the stipulated period mentioned in NOA, awarded bidder shall sign the contract. If the bidder fails to sign, second lowest responsive bidder may be awarded maintaining all formalities as mentioned in PPR.


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