

BANGLADESH RURAL ELECTRIFICATION BOARD

PBS INSTRUCTION 100-06

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

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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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