

Quality Management System	POWER GRID COMPANY OF BANGLADESH LTD.					QUALITY FORMS			
	TITLE: LIST OF GRID SUB-STATIONS								
Document No.:	QF-SPL-01	Revision No.:	00	Effective Date:	15/02/07	Page:	1	of	2

POWER GRID COMPANY OF BANGLADESH LTD.
System Planning

LIST OF GRID SUB-STATIONS
(As on, 20...)

A. 230/132 KV SUB-STATIONS .

Sl. No	Name of Grid Sub-Station	Transformer Capacity (MVA)	Maximum Flow (Amps)	Remarks
a. PGCB				
b. BPDB				

B. 132/33 KV SUB-STATIONS

1. CHITTAGONG CIRCLE

Sl. No	Name of Grid Sub-station	Transformer Capacity(MVA)	Maximum Demand (MW)	Remarks
a. PGCB				
b. BPDB				
c. Private				

2. DHAKA CIRCLE

Sl. No	Name of Grid Sub-station	Transformer Capacity(MVA)	Maximum Demand (MW)	Remarks
a. PGCB				
b. BPDB				
c. DESA				

Reviewed by (GMP&D):

Approved by (DT):

Quality Management System	POWER GRID COMPANY OF BANGLADESH LTD.					QUALITY FORMS			
	TITLE: LIST OF GRID SUB-STATIONS								
Document No.:	QF-SPL-01	Revision No.:	00	Effective Date:	15/02/07	Page:	2	of	2

3. COMILLA CIRCLE

Sl. No	Name of Grid Sub-Station	Transformer Capacity(MVA)	Maximum Demand (MW)	Remarks
a. PGCB				
b. BPDB				

4. KHULNA CIRCLE

Sl. No	Name of Grid Sub-Station	Transformer Capacity(MVA)	Maximum Demand (MW)	Remarks
a. PGCB				

5. BOGRA CIRCLE

Sl. No	Name of Grid Sub-Station	Transformer Capacity(MVA)	Maximum Demand (MW)	Remarks
a. PGCB				

C. 66/33 KV + 66/11 KV SUB-STATIONS

Sl. No	Name of Grid Sub-Station	Transformer Capacity(MVA)	Maximum Demand (MW)	Remarks
a. PGCB				

(.....)
 Manager
 System Planning, PGCB.

(.....)
 Deputy General Manager
 Planning, PGCB.

Reviewed by (GMP&D):



Approved by (DT):



Quality Management System	POWER GRID COMPANY OF BANGLADESH LTD.					QUALITY FORMS			
	TITLE: LIST OF TRANSMISSION LINES								
Document No.:	QF-SPL-02	Revision No.:	00	Effective Date:	15/02/07	Page:	1	of	1

**POWER GRID COMPANY OF BANGLADESH LTD.
System Planning**

**LIST OF TRANSMISSION LINES
(As on, 20...)**

A. 230 KV TRANSMISSION LINES.

Sl. No.	Name of Lines	Lenth in Route kilometers	Lenth in Ckt. kilometers	No. of Ckt.	Conductor	
					Name	Size
1	2	3	4	5	6	7
	Total :					

B. 132 KV TRANSMISSION LINES

Sl. No.	Name of Lines	Lenth in Route kilometers	Lenth in Ckt. kilometers	No. of Ckt.	Conductor	
					Name	Size
1	2	3	4	5	6	7
	Total :					

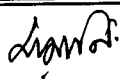
C. 66 KV Transmission Lines

Sl. No.	Name of Lines	Lenth in Route kilometers	Lenth in Ckt. kilometers	No. of Ckt.	Conductor	
					Name	Size
1	2	3	4	5	6	7
	Total :					

(.....)
Manager
System Planning, PGCB.

(.....)
Deputy General Manager
Planning, PGCB.

Reviewed by (GMP&D):



Approved by (DT):



Quality Management System	POWER GRID COMPANY OF BANGLADESH LTD.					QUALITY FORMS			
	TITLE: Capacitor Bank in Operation Connected to 33 kV Bus at 132/33 kV Substations								
Document No.:	QF-SPL-03	Revision No.:	00	Effective Date:	15/02/07	Page:	1	of	1

**POWER GRID COMPANY OF BANGLADESH LTD.
System Planning**

Capacitor Bank in Operation Connected to 33 kV Bus at 132/33 kV Substations (As on, 20....)

A. Eastern Grid

1. Dhaka Zone:

Name of Sub station	Installed (MVAR)	Operative (MVAR)

2. Chittagong Zone:

Name of Sub station	Installed (MVAR)	Operative (MVAR)

3. Central Zone:

Name of Sub station	Installed (MVAR)	Operative (MVAR)

Eastern Grid Total MVAR MVAR
---------------------------	------------	------------

B. Western Grid

1. Northern Zone:

Name of Sub station	Installed (MVAR)	Operative (MVAR)

2. Khulna Zone:

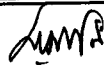
Name of Sub station	Installed (MVAR)	Operative (MVAR)

Western Grid Total MVAR MVAR
Grand Total MVAR MVAR

(.....)
Manager
System Planning, PGCB.

(.....)
Deputy General Manager
Planning, PGCB.

Reviewed by (GMP&D):



Approved by (DT):



Quality Management System	POWER GRID COMPANY OF BANGLADESH LTD.					QUALITY FORMS			
	TITLE: List Of Existing Power Stations								
Document No.:	QF-SPL-04	Revision No.:	00	Effective Date:	15/02/07	Page:	1	of	1

**POWER GRID COMPANY OF BANGLADESH LTD.
System Planning**

LIST OF EXISTING POWER STATIONS

Sl. No.	Name Of Power Station	Unit	Installed Capacity MW
1	2	3	4
Eastern Grid			
Eastern Grid Total :			
Western Grid			
Western Grid Total :			
National Total :			

(.....)
Manager
System Planning, PGCB.

(.....)
Deputy General Manager
Planning, PGCB.

Reviewed by (GMP&D):



Approved by (DT):



Quality Management System	POWER GRID COMPANY OF BANGLADESH LTD.					QUALITY FORMS			
	TITLE: Circle Wise Sub-Stations Capacity (MVA)								
Document No.:	QF-SPL-05	Revision No.:	00	Effective Date:	15/02/07	Page:	1	of	1

POWER GRID COMPANY OF BANGLADESH LTD.
System Planning

Circle Wise Sub-Stations Capacity (MVA)
(As on, 20....)

A. 230/132 kV Sub-stations

Name of Circle	PGCB		PDB		DESA	
	No. of Sub-Station	Total (MVA)	No. of Sub-Station	Total (MVA)	No. of Sub-Station	Total (MVA)
Chittagong						
Comilla						
Dhaka						
Khulna						
Bogra						
Total						
Grand Total (MVA)						

B. 132/33 kV Sub-stations

Name of Circle	PGCB		PDB		DESA & Others	
	No. of Sub-Station	Total (MVA)	No. of Sub-Station	Total (MVA)	No. of Sub-Station	Total (MVA)
Chittagong						
Comilla						
Dhaka						
Khulna						
Bogra						
Total						
Grand Total (MVA)						

(.....)
Manager
System Planning, PGCB.

(.....)
Deputy General Manager
Planning, PGCB.

Reviewed by (GMP&D):

[Signature]

Approved by (DT):

[Signature]

Quality Management System	POWER GRID COMPANY OF BANGLADESH LTD.					QUALITY FORMS			
	TITLE: In-House Study Report								
Document No.:	QF-SPL-06	Revision No.:	00	Effective Date:	15/02/07	Page:	1	of	2

**POWER GRID COMPANY OF BANGLADESH LTD.
System Planning**

IN-HOUSE STUDY REPORT

Report on :

Preamble :

Power Supply Position in :

At present,is getting supply from following 132/33 kV substations:

Sl No.	Name of Substation	Capacity (MVA)	Present Load (MW)
--------	--------------------	----------------	-------------------

Demand Forecast in:

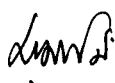
New Transmission Facility to be added in by 20.... :

New Generation addition in by 20 :


The probable generation addition upto 20.....are as follows :

Sl. No.	Name of Machine to be added	Capacity MW	Year Of Commissioning

Reviewed by (GMP&D):



Approved by (DT):



Quality Management System	POWER GRID COMPANY OF BANGLADESH LTD.					QUALITY FORMS			
	TITLE: In-House Study Report								
Document No.:	QF-SPL-06	Revision No.:	00	Effective Date:	15/02/07	Page:	2	of	2

Load Flow Study :

Findings from Load Flow :

Scope of Work :

Substations Configuration :

Space required :

Estimated Cost :

Estimated cost (material & installation) for the whole project will be aboutMTk. of whichMTk. from foreign and rest from local. The project cost break up (only material & installation) is as follows:

Sl. No.	Description of Works	Foreign MTk.	Local MTk.	Total MTk.
1	2	3	4	5
	Total			

Recommendations :

(.....)
 Manager
 System Planning, PGCB.

(.....)
 Deputy General Manager
 Planning, PGCB.

(.....)
 General Manager
 P&D, PGCB.

Reviewed by (GMP&D):



Approved by (DT):



Quality Management System	POWER GRID COMPANY OF BANGLADESH LTD.					QUALITY FORMS			
	TITLE: LIST OF GRID SUB-STATIONS IN TARGET AREA								
Document No.:	QF-SPL-07	Revision No.:	00	Effective Date:	15/02/07	Page:	1	of	1

POWER GRID COMPANY OF BANGLADESH LTD.
System Planning

LIST OF GRID SUB-STATIONS IN TARGET AREA

Target Area:

A. 230/132 KV SUB-STATIONS.

Sl. No	Name of Grid Sub-Station	Transformer Capacity (MVA)	Remarks
a. PGCB			
b. BPDB			

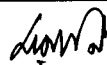
B. 132/33 KV SUB-STATIONS

Sl. No	Name of Grid Sub-station	Transformer Capacity (MVA)	Remarks
a. PGCB			
b. BPDB			
c. DESA			
d. Private			

(.....)
Manager
System Planning, PGCB.

(.....)
Deputy General Manager
Planning, PGCB.

Reviewed by (GMP&D):



Approved by (DT):



Quality Management System	POWER GRID COMPANY OF BANGLADESH LTD.					QUALITY FORMS			
	TITLE: Existing Transmission Lines in target area								
Document No.:	QF-SPL-08	Revision No.:	00	Effective Date:	15/02/07	Page:	1	of	1

**POWER GRID COMPANY OF BANGLADESH LTD.
System Planning**

Existing Transmission Lines in target area

Target Area:

A.) 230 KV Lines

Sl. No.	Name of Lines	Lenth in Route kilometers	Lenth in Ckt. kilometers	No. of Ckt.	Conductor	
					Name	Size
1	2	3	4	5	6	7
Total :						

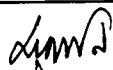
B.) 132 KV Lines

Sl. No.	Name of Lines	Lenth in Route kilometers	Lenth in Ckt. kilometers	No. of Ckt.	Conductor	
					Name	Size
1	2	3	4	5	6	7
Total :						

(.....)
Manager
System Planning, PGCB.

(.....)
Deputy General Manager
Planning, PGCB.

Reviewed by (GMP&D):



Approved by (DT):



Quality Management System	POWER GRID COMPANY OF BANGLADESH LTD.					QUALITY FORMS			
	TITLE: Sub-Station Status in Target Area								
Document No.:	QF-SPL-11	Revision No.:	00	Effective Date:	15/02/07	Page:	1	of	1

POWER GRID COMPANY OF BANGLADESH LTD.
System Planning

Sub-Station Status in target area

Target Area:

Status upto:

A. 230/132 kV Sub-Station

Name of Grid Sub-Station	Installed / Planned MVA Capacity in Fiscal Year						Remarks
	20....	20....	20....	20....	20....	20....	

B. 132/33 kV Sub-Station

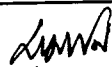
Name of Grid Sub-Station	Installed / Planned MVA Capacity in Fiscal Year						Remarks
	20....	20....	20....	20....	20....	20....	

Note:

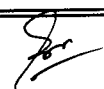
(.....)
Manager
System Planning, PGCB.

(.....)
Deputy General Manager
Planning, PGCB.

Reviewed by (GMP&D):



Approved by (DT):



Quality Management System	POWER GRID COMPANY OF BANGLADESH LTD.					QUALITY FORMS			
	TITLE: ENHANCEMENT STATEMENT OF GRID SUB-STATIONS								
Document No.:	QF-SPL-12	Revision No.:	00	Effective Date:	15/02/07	Page:	1	of	1

**POWER GRID COMPANY OF BANGLADESH LTD.
System Planning**

ENHANCEMENT STATEMENT OF GRID SUB-STATIONS

A. 230/132 KV SUB-STATIONS .

Sl. No	Name of Grid Sub-Station	Transformer Capacity as on (MVA)	Transformer Capacity as on (MVA)	Remarks
a. PGCB				
b. BPDB				

B. 132/33 KV SUB-STATIONS

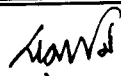
Sl. No	Name of Grid Sub-station	Transformer Capacity as on (MVA)	Transformer Capacity as on (MVA)	Remarks
a. PGCB				
b. BPDB				
c. DESA				
d. Private				

Note:

(.....)
Manager
System Planning, PGCB.

(.....)
Deputy General Manager
Planning, PGCB.

Reviewed by (GMP&D):



Approved by (DT):

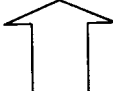


Quality Management System	POWER GRID COMPANY OF BANGLADESH LTD.					QUALITY FORMS			
	TITLE: Network of Target Area								
Document No.:	QF-SPL-14	Revision No.:	00	Effective Date:	15/02/07	Page:	1	of	1

POWER GRID COMPANY OF BANGLADESH LTD.
System Planning

Network Of Target Area

Target Area

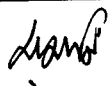


System Planning, PGCB.

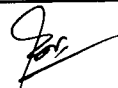
(.....)
Manager
System Planning, PGCB.

(.....)
Deputy General Manager
Planning, PGCB.

Reviewed by (GMP&D):

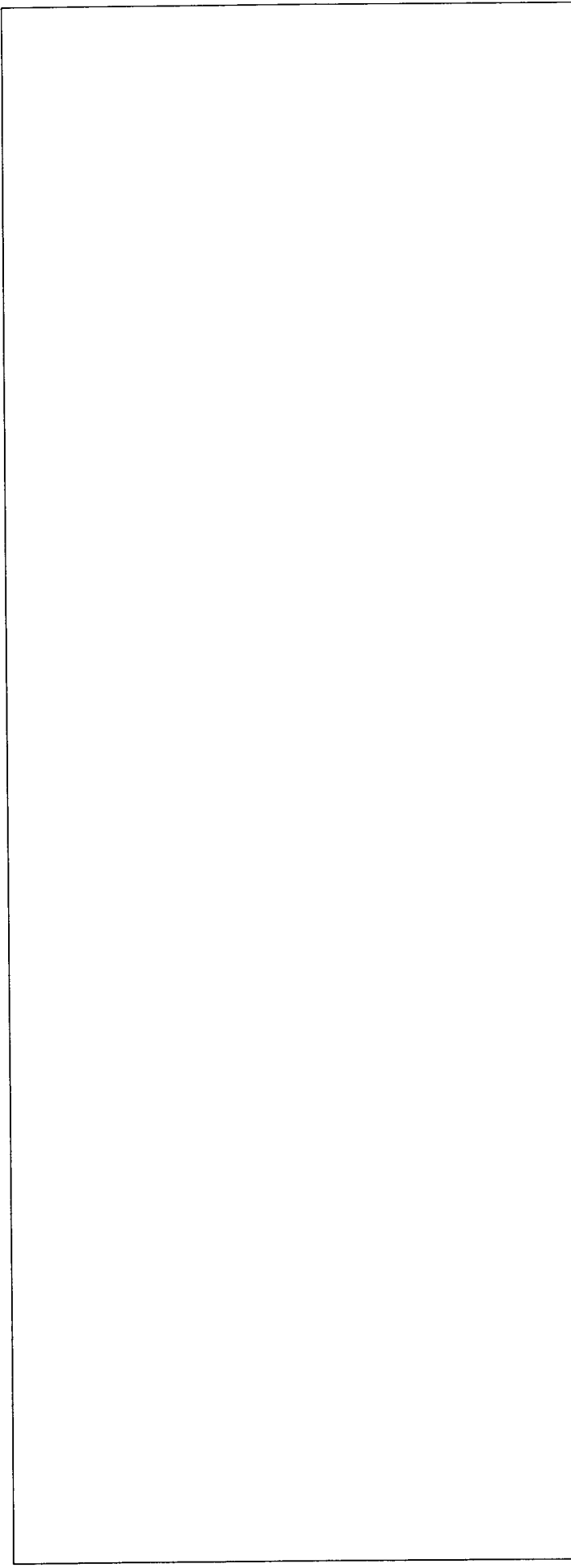


Approved by (DT):



Quality Management System	POWER GRID COMPANY OF BANGLADESH LTD.			QUALITY FORMS					
Document No.:	QF-SPL-15	Revision No.:	00	Effective Date:	15/02/07	Page:	1	of	1
TITLE: Load Flow Study Report									

POWER GRID COMPANY OF BANGLADESH LTD.
 System Planning
Load Flow Study Report



20... Case -	POWER GRID COMPANY OF BANGLADESH LTD.	LEGEND:	GENERATION: MW & MVAR
.....	Area -	STATIC LOAD: MW & MVAR
.....	LOSS: MW

Deputy Manager, System Planning, PGCB
 Date: _____

Manager, System Planning, PGCB
 Date: _____

Reviewed by (GMP&D): *[Signature]*

Approved by (DT): *[Signature]*

Quality Management System	POWER GRID COMPANY OF BANGLADESH LTD.			QUALITY FORMS	
	TITLE: Proposed Single Line Diagram of Target Area				
Document No.:	QF-SPL-16	Revision No.:	00	Effective Date:	15/02/07
				Page:	1 of 1

**POWER GRID COMPANY OF BANGLADESH LTD.
System Planning**


Proposed Single Line Diagram of Target Area


Target Area:

..... , 20.....	POWER GRID COMPANY OF BANGLADESH LTD. SYSTEM PLANNING	PROPOSED SINGLE LINE DIAGRAM OF
-----------------	--	--

Deputy Manager, System Planning, PGCB

Manager, System Planning, PGCB

Reviewed by (GMP&D): 

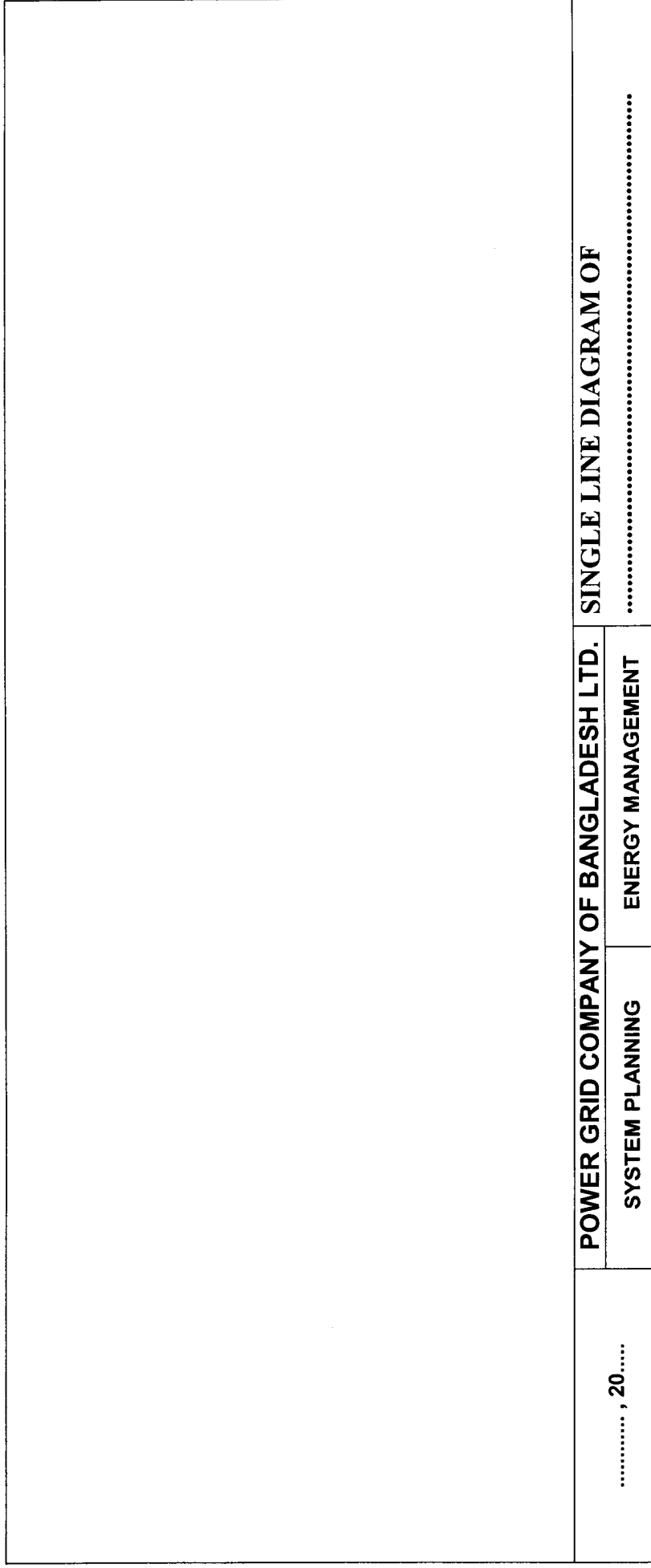
Approved by (DT): 

Quality Management System	POWER GRID COMPANY OF BANGLADESH LTD.			QUALITY FORMS	
	TITLE: SINGLE LINE DIAGRAM				
Document No.:	QF-SPL-17	Revision No.:	00	Effective Date:	15/02/07
		Page:	1	of	1

POWER GRID COMPANY OF BANGLADESH LTD.
System Planning

SINGLE LINE DIAGRAM

Target Area:



....., 20....	POWER GRID COMPANY OF BANGLADESH LTD.	SINGLE LINE DIAGRAM OF
	SYSTEM PLANNING	ENERGY MANAGEMENT
.....		

Deputy Manager, System Planning, PGCB
Date:

Manager, System Planning, PGCB
Date:

Reviewed by (GMP&D):

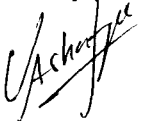
Approved by (DT):

Quality Management System	POWER GRID COMPANY OF BANGLADESH LTD.					QUALITY FORMS			
	TITLE: TRANSFORMER PROTECTION DATA								
Document No.:	QF-SPL-20	Revision No.:	00	Effective Date:	11/11/12	Page:	1	of	2

POWER GRID COMPANY OF BANGLADESH LTD.
TRANSFORMER PROTECTION DATA
System Planning

Name of The S/S:			HV		MV		LV	
	Voltage Level							
Name of Trafo:	CTR (Bushing CT)							
	CTR (Post CT)							
MVA rating	(MVA)							
% Imp. (+ve Seq.)								
% Imp. (Zero Seq)								
VectorGroup								
Full Load Current	(Amp.)							
Function	Fields	(Unit)	Relay Type	Settings	Relay Type	Settings	Relay Type	Settings
50	Ip	(Amp.)						
	Tdelay	(Sec.)						
51	Curve Type							
	Ip	(Amp.)						
	TMS	(Sec.)						
50N	Ip	(Amp.)						
	Tdelay	(Sec.)						
51N	Curve Type							
	Ip	(Amp.)						
	TMS	(Sec.)						
67	Angle	(Degree)						
	Curve Type							
	Ip	(Amp.)						
	TMS	(Sec.)						

Reviewed by (GMP&D):



Approved by (DirectorP&D):



Quality Management System	POWER GRID COMPANY OF BANGLADESH LTD.						QUALITY FORMS		
	TITLE: TRANSFORMER PROTECTION DATA								
Document No.:	QF-SPL-20	Revision No.:	00	Effective Date:	11/11/12	Page:	2	of	2

POWER GRID COMPANY OF BANGLADESH LTD.
TRANSFORMER PROTECTION DATA
System Planning

Function	Fields (Unit)	Relay Type	Settings	Relay Type	Settings	Relay Type	Settings
87T (1)	Ip (Amp.)						
	Slope1(M1)						
	Slope2(M2)						
87T (2)	Ip (Amp.)						
	Slope1(M1)						
	Slope2(M2)						
REF	Ip (Amp.)						
	Vp (Volt)						
Oil Temp	Alarm (°C)						
	Trip (°C)						
Winding Temp	Alarm (°C)						
	Trip (°C)						

Remarks:

Prepared By:

Designation:

Date:

Checked by:

Designation:

Date:

Reviewed by (GMP&D):



Approved by (DirectorP&D):



Quality Management System	POWER GRID COMPANY OF BANGLADESH LTD.					QUALITY FORMS			
	TITLE: BUSBAR PROTECTION DATA								
Document No.:	QF-SPL-21	Revision No.:	00	Effective Date:	11/11/12	Page:	1	of	1

**POWER GRID COMPANY OF BANGLADESH LTD.
BUSBAR PROTECTION DATA
System Planning**

Name of The S/S:

87B		Settings	Relay Type
Low Imp.	Ip (amp)		
	slope		
	Idiff alarm (amp)		
High Imp (Current Operated)	Idiff alarm delay (sec)		
	Ip main zone (amp)		
	Ip check zone (amp)		
High Imp (Voltage Operated)	Vp main zone (Volt)		
	Vp check zone (Volt)		

Additional Information About the Substation (if any)

Prepared By:
Designation:
Date:

Checked by:
Designation:
Date:

Reviewed by (GMP&D):



Approved by (DirectorP&D):



Quality Management System	POWER GRID COMPANY OF BANGLADESH LTD.					QUALITY FORMS			
	TITLE: TRANSMISSION LINE ROUTE SELECTION FORM								
Document No.:	QF-SPL-22	Revision No.:	00	Effective Date:	11/11/12	Page:	1	of	1

**POWER GRID COMPANY OF BANGLADESH LTD.
TRANSMISSION LINE ROUTE SELECTION FORM
System Planning**

Environmental and Social Details for Transmission Lines				
SN	Description	Route-1	Route-2	Route-3
1	Route Particulars:			
	i) Route Length			
	ii) Terrain			
2	Environmental Details:			
	i) Town in Alignment (Near By)			
	ii) House within ROW			
	iii) Forest in km			
	a) Type of forest			
	b) Density of forest			
	c) Type of plants & wildlife			
	d) Endangered species (if any)			
3	e) Historical /cultural monument			
	f) Any other relevant information			
	Compensation Cost			
	i) Crop			
	ii) Forest			
4	No. of Crossing			
	i) Railway			
	ii) Roads			
	iii) Transmission Line			
	iv) River Crossing			
5	Construction Problem			
6	O&M Problem			
7	Overall Remarks			
8	Reasons for selection of Final Route:			

Prepared By:
Designation:
Date:

Checked by:
Designation:
Date:

Reviewed by (GMP&D):



Approved by (DirectorP&D):



Quality Management System	POWER GRID COMPANY OF BANGLADESH LTD.					QUALITY FORMS			
	TITLE: SUBSTATION SITE ENVIRONMENTAL & SOCIAL DETAILS FORM								
Document No.:	QF-SPL-23	Revision No.:	01	Effective Date:	01/01/15	Page:	1	of	1

POWER GRID COMPANY OF BANGLADESH LTD.
SUBSTATION SITE ENVIRONMENTAL & SOCIAL DETAILS FORM

SN	Description	Option-1	Option-2	Option-3
1	Location			
2	Village/Area Name			
3	Size of Land			
4	Type of Land (Govt./Private/Others)			
5	General Geography of Land			
6	Agricultural /Cropping Pattern Main types of crops Irrigation Facility			
7	i) Socio economic condition of area: ii) Profession of existing population: (agricultural, self employment, merchants, manufacturer, transporters & handicrafts, wage earner etc.) iii) Natural resource base iv) Political influence			
8	No./Name of villages effected i. partly ii. Fully			
9	Total No. of families likely to be effected.			
10	No. of families whose part holdings likely to be acquired. Land + Home Land Only Home Only			
11	No. of families whose full holdings likely to be acquired. Land + Home Land Only Home Only			
12	Loss of structure: House/Shop along with the status of occupants (Owner/Tenant/Lease Holder/Squatter)			
13	Others: i) Common property resources like school, ponds, grazing ground, religious place, ii) Drainage facility			
14	Tree/Plantations/Orchards (Approx)			
15	Cost of Land			
16	Reason for selection			

Reviewed by (CE, P&D)



Approved by (Director, P&D)



Quality Management System	POWER GRID COMPANY OF BANGLADESH LTD.					QUALITY FORMS			
	TITLE: CIRCUIT BREAKER RATINGS								
Document No.:	QF-SPL-24	Revision No.:	00	Effective Date:	11/11/12	Page:	1	of	1

**POWER GRID COMPANY OF BANGLADESH LTD.
CIRCUIT BREAKER RATINGS
System Planning**

SN	Name of Substation	CB Number	Associated Feeder	Short Circuit Breaking Current

* Please attach a single line diagram of the associated substation

Prepared By:
Designation:
Date:

Checked by:
Designation:
Date:

Reviewed by (GMP&D):



Approved by (DirectorP&D):



Quality Management System	POWER GRID COMPANY OF BANGLADESH LTD.					QUALITY FORMS			
	TITLE: SUBSTATION SITE SELECTION FORM								
Document No.:	QF-SPL-25	Revision No.:	00	Effective Date:	01/01/15	Page:	1	of	1

POWER GRID COMPANY OF BANGLADESH LTD.

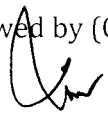
SUBSTATION SITE SELECTION FORM

System Planning

Name of the Proposed Substation:									
Size of Required Land (Acres):									
Site/Location		Site-1		Site-2		Site-3			
Location/ Mouza Name									
Available Land (Acres)									
Comparative Analysis									
SN	Item	Description	Points	Description	Points	Description	Points		
1	Availability of Required Land								
2	Availability of Right of Way (RoW)								
3	Length of Connecting T/L (km)								
4	Complexity Level of Acquiring								
5	Height of Required Land Filling (Meter)								
6	Connecting Road (Required/Not Required)								
7	Load Centre (Comparative position)								
8	Scope of Future Expansion								
9	Communication System (Road/Water/Train)								
10	Owner of Land (Govt./Private)								
11	Type of Land (Cultivated/Barren)								
12	Land Cost (Comparative)								
Total									

N.B.: In comparative analysis, each item has 10 points. Total point is 120 for twelve items.

Reviewed by (CE, P&D)



Approved by (Director, P&D)

