1. Scope: Applies to the whole of Power System Network of POWER GRID COMPANY OF BANGLADESH LTD.

2. Purpose: To facilitate natural gas allocation planning by PETRO BANGLA by means of providing information about natural gas requirement in different situations and time.

SL. No.	Activity (including check points)	Ref. Doc.	Responsibility	Freq./ Time	Output
1.0	Natural Gas Requirement Planning		DGMLDC MEMD	As required	
1.1	Reference Information:				
1.1.1	• Machine / power station wise maximum generation capacity in MW. • Estimated machine / power station wise maximum generation (for 24 hour) in MkWh, considering appropriate load factor. • Machine / power station wise natural gas consumption rate (i.e. quantity of natural gas required to produce 1 kWh of energy for a particular machine / power station). • Addition and/or retirement schedule of generators in the period concerned.	Activity Report of Chief Engineer, (Generation) PDB. & QF-LDC-21	DGMLDC MEMD	As required	
1.2	Long term requirement planning				
1.2.1	Planning of natural gas requirement for 60 (Sixty) months is made on the basis of the following criteria: • Consumption of natural gas if all machine/ power stations run simultaneously to its maximum capacity for one hour (As in the case of evening peak hour). • Consumption of natural gas with all machine/ power stations producing maximum energy for a day (As in the case of summer season).		DGMLDC MEMD	As required	
1.2.2	Following the above criteria probable natural gas requirement of individual machine/power station in the system is calculated /estimated satisfying hourly maximum MkWh demand with the formula described in clause 1.2.3	- do-	MEMD DMEMD	As required	QF-LDC-17
1.2.3	Formula for calculating the natural gas requirement for individual machine running to its maximum capacity for one hour: Natural gas required in MMCFT = (Maximum capacity in MW X 1 hour X Natural gas required by the machine to produce 1 kWh of energy in CFT/kWh.)/1000				

Reviewed by (GMSO):

Approved by (DT):

SL. No.	Activity (including check points)	Ref. Doc.	Responsibility	Freq./ Time	Output
1.2.4	Probable natural gas requirement of individual machine/power station in the system is calculated /estimated satisfying 24-hour maximum MkWh generation demand, with the formula described in clause 1.2.5	- do-	MEMD DMEMD	As required	QF-LDC-17
1.2.5	Formula for calculating the natural gas requirement for individual machine producing maximum energy in a day: Natural gas required in MMCFT = (Maximum energy produced in a day [24 hours] in MkWh X Natural gas required by the machine to produce 1 kWh of energy in CFT/kWh).		MEMD DMEMD	As required	
1.2.6	Generators are then grouped according to their probable gas supplier entity.		MEMD DMEMD	As required	
1.2.7	Probable total natural gas requirement from individual gas entity is then calculated, satisfying both hourly maximum MkWh and 24-hour maximum MkWh generation demand condition, by the following formula Natural gas requirement for machines for a gas supplier entity = Σ Natural gas requirement of individual machines under that gas supplier entity.		MEMD DMEMD	As required	
1.2.8	A report will be prepared and duly signed by DMEMD and MEMD		MEMD DMEMD	As required	
1.2.9	The report will be sent to "Petro Bangla" for further action.		MEMD DMEMD	As required	
1.3	Short term requirement planning				
1.3.1	Natural gas requirement planning prepared for 60(Sixty) months will be updated twice in a year (i.e. updated for every 06(Six) months)		DGMLDC MEMD	As required	
1.3.2	Before calculating natural gas requirements it is needed to update the following information. • Addition and/or retirement of generators (If any) • Machine / power station wise maximum generation capacity and efficiency (If changed) • The variation of system demand due to season change. (If applicable)		MEMD DMEMD	As required	

SL. No.	Activity (including check points)	Ref. Doc.	Responsibility	Freq./ Time	Output
1.3.3	Probable natural gas requirement of individual machine/power station in the system is calculated /estimated satisfying hourly maximum MkWh demand with the formula described in clause 1.2.3	- do-	MEMD DMEMD	As required	QF-LDC-17
1.3.4	Probable natural gas requirement of individual machine/power station in the system is calculated /estimated satisfying 24-hour maximum MkWh generation demand, with the formula described in clause 1.2.5	- do-	MEMD DMEMD	As required	QF-LDC-17
1.3.5	Generators are grouped according to their probable gas supplier entity.		MEMD DMEMD	As required	
1.2.7	Probable total natural gas requirement from individual gas entity is then calculated, satisfying both hourly maximum MkWh and 24-hour maximum MkWh generation demand condition, by the following formula Natural gas requirement for machines for a gas supplier entity = Σ Natural gas requirement of individual machines under that gas supplier entity.		MEMD DMEMD	As required	
1.3.7	A report updating the natural gas requirement will be prepared and duly signed by DMEMD and MEMD		MEMD DMEMD	As required	
1.3.8	The report will be sent to "Petro Bangla" for further action.		MEMD DMEMD	As required	
2.0	The effectiveness of the work instruction for Preparation of Generation Schedule will be evaluated and reviewed during internal audits.		Management Review Committee, MR.	During internal audit	Review of review system
3.0	The Management will take actions on the basis of the evaluation.		MD, DT, MR.	At least 1 time in a year	Improvement