

PETROLEUM AND NATURAL GAS REGULATORY BOARD**NOTIFICATION**

New Delhi, the 29th March, 2011

F. No. S-Admn./II/8/2010.—In exercise of the powers conferred by Section 61 of the Petroleum and Natural Gas Regulatory Board Act, 2006 (19 of 2006), the Petroleum and Natural Gas Regulatory Board hereby makes the following regulations, namely :—

1. Short title and commencement.

- (1) These regulations may be called the Petroleum and Natural Gas Regulatory Board (Access Code for City or Local Natural Gas Distribution Networks) Regulations, 2011.
- (2) These regulations shall come into force on the date of their publication in the Official Gazette.

2. Definitions.

(1) In these regulations, unless the context otherwise requires,—

- (a) **"access arrangement"** means a contract between the authorised entity and the shipper defining the terms and conditions for access to entry point capacity, exit point capacity and CNG exit point capacity on the city or local natural gas distribution network and placed on the website of authorised entity:

Provided that access arrangement shall be based on access arrangement guidelines issued by the Board:

Provided further that the capacity webhosted shall be the available capacity;

- (b) **"Act"** means the Petroleum and Natural Gas Regulatory Board Act, 2006;

- (c) **"allocated capacity"** means the scheduled maximum daily capacity in MMBTU at entry point agreed between the authorised

entity and the shipper for delivery at exit point.

- (d) **"appointed day"** means the date of October 1, 2007 when the Central Government notified the establishment of the Petroleum and Natural Gas Regulatory Board;
- (e) **"authorised entity"** means an entity that is authorised to lay, build, operate or expand a city or local natural gas distribution network in a geographical area under the Petroleum and Natural Gas Regulatory Board Act, 2006 and the relevant regulations made thereunder;
- (f) **"Board"** means the Petroleum and Natural Gas Regulatory Board established under the Petroleum and Natural Gas Regulatory Board Act, 2006;
- (g) **"CNG exit point"** means the point at which the CNG is off taken from a CNG compressor outlet point for delivery to the shipper with proper arrangement for metering at outlet of the CNG compressor by the authorised entity;

Provided that the CNG exit point shall terminate at tubing connection or union where compressor exit is connected to dispenser and at filling nozzle in case it is connected to CNG cascade of the shipper;

- (h) **"CNG exit point capacity"** means the maximum quantity of CNG, measured in kilograms (Kgs), which the authorised entity shall deliver to the shipper at the relevant CNG exit point in a day:

Provided that the CNG mass shall be converted into energy value by applying the conversion formula as specified in Schedule-I:

Provided further that a homogenous zone has to be defined by the authorised entity upfront from time to time and the same has to be informed to the shipper;

- (i) **"CNG exit point maximum daily quantity" ("CNG exit point MDQ")** means the maximum quantity of natural gas, measured in kilogram (kgs), which can be off-taken by the shipper at the relevant CNG exit point in a day;
- (j) **"compression charge for CNG"** means a charge (excluding statutory taxes and levies) in Rs./Kg for online compression of natural gas into compressed natural gas for subsequent dispensing

to customers in a CNG station, as determined and approved by the Board;

- (k) **"day"** means a period of twenty-four consecutive hours beginning at 0600 hours on a day, and ending before the start of 0600 hours on the following day;
- (l) **"designated exit point"** means the exit point for which gas delivery has been mutually agreed between the shipper and the authorised entity;
- (m) **"delivered quantity"** means the quantity of gas in MMBTU delivered by the authorised entity at designated exit point of the shipper;
- (n) **"dispute"** means any dispute or difference arising between the entity under or in connection with these regulations or the access arrangement;
- (o) **"distant connection"** means a connection to a shipper desirous of having a connectivity in any charge area of the geographic area beyond the provisions of regulation 9 of the Petroleum and Natural Gas Regulatory Board (Exclusivity for City or Local Natural Gas Distribution Network) Regulations, 2008;
- (p) **"entry point"** means the point at which the natural gas delivered by a shipper is injected into the city or local natural gas distribution network and the gas receipt for city or local natural gas distribution network should preferably be at the city gate station;

Provided that receipt at any other point on network shall be as mutually agreed between the authorised entity and the shipper in the access arrangement.

Provided further that the gas required for a new geographical area or for expansion of existing CGD networks shall preferably be from transmission or sub transmission pipeline and not from the existing geographical area.

- (q) **"entry point capacity"** means the maximum quantity of natural gas in MMBTU, at a specified Gross Calorific Value, which the authorised entity shall receive from shipper at the relevant entry point in a day so as to deliver at designated exit point;
- (r) **"entry point maximum daily quantity"** (**"entry point MDQ"**) means

the maximum quantity of natural gas in MMBTU at a specified gross calorific value for which capacity has been allocated to the shipper and the authorised entity shall receive from the shipper at the relevant entry point in a day as agreed in the access arrangement;

- (s) "**exclusivity period**" means the period allowed by the Board under the Petroleum and Natural Gas Regulatory Board (Exclusivity for City or Local Natural Gas Distribution Network) Regulations, 2008 from the purview of common carrier or contract carrier;
- (t) "**exit point**" means the point at which the natural gas is off taken from city or local natural gas distribution network by the shipper as agreed between the authorised entity and the shipper in the access arrangement and such exit point shall be at all the metering stations, CNG exit point and all such other points mutually agreed between the shipper and authorised entity in the access arrangement;

Provided that-

- (i) for domestic piped natural gas (PNG), the exit point shall be the concerned DPRS. This point shall be considered for aggregating the offtake for domestic use of gas;
- (ii) any new exit point shall be decided mutually on technical and safety ground.
- (u) "**exit point capacity**" means the maximum quantity of natural gas in MMBTU, at a specified Gross Calorific Value, which the authorised entity shall deliver to the shipper at the relevant exit point in a day;
- (v) "**exit point maximum daily quantity**" ("**exit point MDQ**") means the maximum quantity of natural gas in MMBTU, at a specified Gross Calorific Value, which can be off taken by the shipper at specific metering station and CNG exit point in a day;
- (w) "**imbalance quantity**" on a day means the positive imbalance quantity or the negative imbalance quantity on that day as specified in regulation 15;
- (x) "**line pack**" ("**LP**") means the volume of gas that must be maintained in the city or local natural gas distribution network at all times in order to maintain pressure and enable uninterrupted transportation and supply of natural gas through the network;

- (y) **"lost and unaccounted for gas" ("LUAG")** means the quantity of natural gas which is unaccounted for whatsoever reason including, but not limited to blow downs, venting or release during regular operation or maintenance of the city or local natural gas distribution network and mismatch of meter readings at the entry and exit point;
- (z) **"marketer"** means an entity dealing with marketing or trading for natural gas;
- (za) **"maximum daily quantity" ("MDQ")** means the maximum volume of natural gas contracted, booked, scheduled for delivery or delivered in a particular day within twenty four hours of the day;
- (zb) **"maximum delivery rate" ("MDR")** means the maximum rate, in MMBTU per hour, up to which rate of delivery, the authorised entity shall deliver natural gas to the shipper at the relevant exit point as specified in the access arrangement;
- (zc) **"maximum off-take rate" ("MOR")** means the maximum rate, in MMBTU per hour, at which the shipper shall off-take natural gas at the relevant exit point as specified in the access arrangement and MOR shall be the same in value as the MDR;
- (zd) **"maximum receipt rate" ("MRR")** means the maximum rate, in MMBTU per hour, at which the authorised entity shall receive natural gas at the relevant entry point as specified in the access arrangement;
- (ze) **"MMBTU"** means Million British Thermal Units and shall be the unit for energy content of gas based on gross calorific value as defined in ISO 6976-1:1983(E) and as amended or modified from time to time;
- (zf) **"network tariff"** means the unit rate of tariff (excluding statutory taxes and levies) in rupees per million British Thermal Units (Rs./MMBTU) for all the categories of customers of natural gas in a CGD network as determined and approved by the Board;
- (zg) **"nominated quantity"** means the quantity of natural gas in MMBTU, confirmed by the shipper to the authorised entity for delivery at the designated entry point with details of off takes at the relevant exit point on daily basis for distribution or for consumption;
- Provided that no nomination shall be required for MDQ less than 0.5 MMBTU;
- (zh) **"off-spec gas"** means the natural gas delivered by the shipper

at the entry point or delivered by the a authorised entity at the exit point which does not conform to the gas parameters referred to in sub-regulation (1) of regulation 7:

- (zi) **"operating pressure"** means the pressure corresponding to a particular flow rate at which the relevant section of the city or local natural gas distribution network is operated:

Provided that at no point of time the operating pressure for the network shall exceed design pressure or maximum allowable operating pressure(MAOP) as specified in relevant technical standards and specifications including safety standards regulations;

- (zj) **"scheduled quantity"** means the quantity of natural gas, in MMBTU, scheduled for the specific shipper by the authorised entity at the designated entry point or exit point for distribution or self-use based on the nominated capacity and in accordance with the provisions of the access arrangement;

- (zk) **"shipper"** means a consumer, a marketer or any authorised entity who intends to utilize the capacity in the CGD Network:

Provided that the shipper shall be -

- (i) an existing consumer in the network of the entity;
- (ii) a body corporate with the positive net worth and be in the business for at least one year with physical business set up within the geographical area having been assessed for income tax;
- (iii) a consumer registered with the entity or with a marketer;
- (iv) a new commercial or industrial consumer with physical presence in the business; or
- (v) an entity having plan to do the business with DFR financially appraised and approved by the bank.

NOTE: In case the existing shipper has defaulted on payments or any other contractual obligation with the authorised entity, the shipper shall take No Objection Certificate (NOC) from the authorised entity before being qualified as "shipper";

- (zl) **"Standard Cubic Metre" ("SCM")** means the volume of gas which occupies one cubic meter of space when such gas is at a temperature of 15.56 degrees centigrade (60° F) and at a pressure of 1013.25 milli Bar (14.696 psia);

- (zm) **"Standard Temperature and Pressure" ("STP")** means temperature

and pressure as defined by IUPAC (International Union of Pure and Applied Chemistry) as air at 0°C (273.15 K, 32 °F) and 10⁵ Pascal.

(zn) **"system use gas" ("SUG")** means the quantity of natural gas, in MMBTU, used by the authorised entity for operation and maintenance of the city or local natural gas distribution network including, but not limited to, general use of gas for compressor, prime movers, gas heaters and venting or flaring for safety requirements;

(zo) **"Unit of Measurement"** means unit for measurement of quantity of gas and shall be in million British Thermal Units (MMBTU) gross for all consumers and CNG exit point quantity shall be measured in kilograms but shall be converted to MMBTU for natural gas quantity reconciliation purpose;

(2) Words and expressions used and not defined in these regulations, but defined in the Act or in the rules or regulations made thereunder, shall have the meanings respectively assigned to them in the Act or in the rules or regulations, as the case may be.

3. Application.

(1) These regulations shall apply to an entity authorised to lay, build operate or expand a city or local natural gas distribution network in a geographic area under the Petroleum and Natural Gas Regulatory Board Act, 2006, immediately at the end of its exclusivity period, if any, allowed by the Board under the Petroleum and Natural Gas Regulatory Board (Exclusivity for City or Local Natural Gas Distribution Network) Regulations, 2008 from the purview of common carrier or contract carrier, and to any entity or shipper who wants access to entry point capacity, exit point capacity and delivery at CNG exit point capacity on such city or local natural gas distribution network for supply of natural gas to domestic, commercial or industrial consumers:

Provided that-

(a) the authorised entity shall allow access to shipper on non-discriminatory basis to a city or local natural gas distribution network in a geographic area subject to the threshold limits mentioned in regulation 5 at the end of the exclusivity period, if any, allowed by the Board;

(b) the development of the infrastructure shall be governed by the

Petroleum and Natural Gas Regulatory Board (Authorizing Entities to Lay, Build, Operate or Expand City or Local Natural Gas Distribution Networks) Regulations, 2008 and the shippers shall get their gas transported or delivered by the authorised entity-

- (i) up to the suraksha hose connecting to the burner of the domestic connections;
- (ii) up to the metering point in case of commercial and industrial connections;
- (iii) up to compressor exit point in case of CNG station.

Note: (i) The authorised entity shall maintain its entire asset upto suraksha hose for all times in conformity with the Petroleum and Natural Gas Regulatory Board (Technical Standards and Specifications Including Safety Standards for City or Local Natural Gas Distribution Networks) Regulations, 2008.

(ii) The metering point means the location where gas measurement is carried out which will include metering device, equipment and pressure reduction upto desired pressure at exit point.

(iii) Compressor exit point shall include the filling nozzle and CNG measurement facilities.

Provided further that-

(a) the charges for transportation for distant connections shall be as agreed between the authorised entity and the shipper in the access arrangement till the time when connection is covered under regulation 9 of the Petroleum and Natural Gas Regulatory Board (Exclusivity for City or Local Natural Gas Distribution Networks) Regulations, 2008;

(b) the authorised entity shall provide connectivity for distant connection for the shipper on his request subject to techno-safety considerations and cost on that account shall be borne by the authorised entity or shall be adjusted in the tariff in case the cost is borne by the shipper as mutually agreed between the shipper and the authorised entity;

(c) the authorised entity may refuse access to distant connections on techno-safety considerations and in such cases the authorised entity shall intimate the shipper and the Board the reasons for the same within thirty days of receiving such request from the shipper.

4. Capacity declaration.

(1) For the first time, the authorised entity shall declare 180 days before the end of its exclusivity period the entry point capacity, the exit point capacity and the CNG exit point capacity, for open access at all entry points and exit points on its city or local natural gas distribution network and web host the same in their website accordance with the provisions of these regulations and the authorised entity may declare or web host capacity at DPRS level for PNG and capacity at mother stations (Cascade filling capacity) for CNG:

Provided that -

- (a) the capacity in a CGD network for open access on cumulative basis at all entry points shall be twenty percent of the capacity of the CGD network or the quantity of gas flowing in the CGD network whichever is higher and when such extra capacity in a CGD network touches ten percent limit, then, the authorised entity shall raise this capacity to twenty percent. The Board may on a suo motu basis and after following the due process of public consultation may ask an authorised entity to build extra capacity on such time lines and other terms and conditions as may be specified by the Board.
 - (b) a consumer or shipper who is getting gas through the authorised entity during the exclusivity period shall have the right to reserve such capacity after the end of exclusivity period and in case the shipper is willing to relinquish the capacity, then, the shipper shall inform the authorised entity sixty days in advance.
- (2) The successive capacity declaration shall be done by the third week of every month.
- (3) The capacity of the CGD network system for entry or exit points on city or local natural gas distribution network shall be determined as per the relevant regulations.
- (4) The authorised entity can add or abandon any existing entry points or exit points on the CGD network on techno-economic considerations:

Provided that any existing customer on the network is not adversely affected by the decision of the authorised entity:

Provided further that the authorised entity shall give a notice of at least sixty days and seek comments of the shippers in case of abandoning any of the existing entry or exit points.

5. Capacity booking.

- (1) The authorised entity shall publish for public consultation an information memorandum, in the format specified in Schedule-II on its website as well as in a national daily and a vernacular daily newspaper, seeking capacity booking for the entry points and exit points capacity on its city or local natural gas distribution network while CGD network is opened for access to the shippers.
- (2) For the first time, public consultation shall commence at least 180 days prior to end of the exclusivity period of the authorised entity from the purview of common or contract carrier.
- (3) Interested shippers shall submit in format specified in Schedule-III their offers to the authorised entity for nominating the capacity booking within ninety days from the date of commencement of the public notice for capacity booking.
- (4) The sum of the requested entry points MDQ shall be greater than or equal to 10000 standard cubic meter per day (scmd), and the sum of cumulative off take at relevant exit point shall be greater than or equal to 100 scmd for domestic segment. The shipper can start gas sales after booking capacity in any of the domestic, industrial or commercial customers but second such supply shall be considered once they have achieved 100 scmd supplies to domestic consumers:

Provided that these units shall be achieved within the period as agreed between the shipper and the authorised entity in the access arrangement.
- (5) The capacity booking shall be decided by the authorised entity in a transparent manner based on the highness of the product of the sum of the entry points MDQ and the period of capacity booking. The scheduled quantity to each shipper shall be declared and webhosted by the authorised entity.
- (6) Capacity booking shall be finalized within thirty days of the end of the period as specified under sub-regulation 3 at all entry points and exit points and other relevant terms and conditions through an access arrangement.
- (7) The authorised entity shall publish information on the capacity booking at the entry points capacity, exit points capacity and CNG exit points capacity on the city or local natural gas distribution network in

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the format specified in Schedule-II, on its website by third week of each month on a continuous basis and schedule the capacity in such a manner that the capacity can be utilized effectively from the first working day of every month.

- (8) Capacity booking shall be finalized in terms of entry points MDQ and exit points MDQ and other relevant terms and conditions through an access arrangement.

6. Obligation of shippers and entity.

- (1) The authorised entity shall be responsible for compliance with all the applicable regulations for the system from gas receipt to delivery point.
- (2) Shipper shall be responsible for compliance with all the applicable regulations for the system before the gas receipt by the authorised entity and after gas is delivered to the shipper.
- (3) Both authorised entity and shipper shall comply with the Petroleum and Natural Gas Regulatory Board (Code of Practice for Quality of Service for City or Local Natural Gas Distribution Networks) Regulations, 2010.

7. Gas parameters.

- (1) The authorised entity shall define in the access arrangement the threshold limits for gas parameters on non-discriminatory basis at entry points such as the acceptable range of pressure and temperature, the acceptable CV band and the acceptable threshold limits for other elements in natural gas like CO₂, N₂, O₂ etc.:

Provided that the threshold limit for such elements shall be as specified in Schedule-IV. However, in case the CGD network has been established exclusively based on Coal Bed Methane (CBM) gas, Liquefied Natural gas (LNG) or Coal Mine Methane (CMM) from open cast mining, when the gas specifications do not conform to specification under Schedule-IV, a specific approval shall be obtained from the Board. Threshold limits for various parameters of natural gas shall be specified in the access arrangement.

- (2) If the natural gas delivered at the entry points by the shipper does not meet the requirements of natural gas in terms of gas parameters as specified in the access arrangement and as specified in these regulations, the authorised entity may:-

(a) refuse to accept it; or

(b) accept it; and charge a cost of service ("off-spec gas charges") from the shipper, as mutually agreed in the access arrangement, for any additional facilities or treatment for upgrading the natural gas to network requirements and capacity adjustment for transportation of such natural gas;

Provided that such off-spec gas does not adversely affect the quality specifications committed by the authorised entity at the exit points to the existing customers.

- (3) The authorised entity may deliver commingled gas at the exit points, and the quality of gas at the exit points shall be within the acceptable band agreed in the access arrangement.
- (4) The authorised entity shall odourise the entire gas as per the provisions of relevant standards notified by the Petroleum and Natural Gas Regulatory Board before delivering to any users.

8. Facilities at the entry points and exit points.

- (1) The shipper shall arrange to deliver metered natural gas at the entry points at his cost unless agreed otherwise between the shipper and the authorised entity.
- (2) The authorised entity shall provide facilities for transfer of custody and delivery of natural gas at the entry points at the cost of the shipper or as agreed in the access arrangement, including measuring equipment or any other system as agreed between the authorised entity and the shipper.

Provided that the authorised entity may install its check meter at the entry points at his own cost in case it desires so.

- (3) The shipper shall ensure that the authorised entity has ready access to the measuring equipment installed in his premise.
- (4) The shipper or its transporter upstream of its city gate station shall own, operate and maintain facilities upstream of the entry points at his own cost and risk unless the facilities are provided by the authorised entity under a separate contract.
- (5) Connectivity to the authorised entity from measuring points within shipper scope shall be provided and cost shall be borne by the one who

triggers such requirement.

- (6) The authorised entity shall provide facilities, including measuring equipment, pressure reduction and control facilities, odourisation facilities, gas chromatography or any other system as agreed between the authorised entity and the shipper, required for transfer of custody and delivery of natural gas to the shipper at the exit points at the cost of the authorised entity except for industrial and commercial consumers where the cost shall be borne by the shipper as agreed in the access arrangement. All domestic customers shall be connected through suitable meters.
- (7) The shipper shall ensure that the authorised entity has ready access at the relevant exit points to the measuring equipment or any other system as agreed between the authorised entity and the shipper.
- (8) At any time, if the entity intends to upgrade meters of its consumers and shippers, then, it can do so on non-discriminatory basis. In case, the shippers want to upgrade the meters of its consumers, it can do so and cost of up-gradation shall be borne by the shippers.
- (9) The maintenance of the facilities at the entry points and exit points shall be carried out as agreed in the access arrangement.

9. Nomination, scheduling, metering, allocation and billing.

- (1) The nomination, scheduling, metering, allocation and billing procedure shall be specified in the access arrangement and the
 - (a) shipper shall nominate the quantity for the following day and the week and inform the authorised entity twenty-four hours prior to commencement of the following day. The nomination and scheduling for the entry points and exit points shall be made for each hour of the following day on a best endeavor basis for system operation purpose;
 - (b) the shipper shall submit the re-nomination to the authorised entity within the time specified in the access arrangement.
- (2) In case the shipper do not have dedicated metering at the entry and exit points, natural gas quantities shall be allocated to the shippers on pro-rata basis to their respective delivered quantities based on the scheduled quantities.

- (3) The authorised entity shall regularly measure the quality of gas by the gas chromatograph unless otherwise agreed between the authorised entity and the shipper in the access arrangement.
- (4) Total error limit and accuracy of the measuring equipment shall be as agreed to between the authorised entity and the shipper subject to any mandatory specifications, if any, laid down by the Board through regulations.
- (5) The authorised entity shall carry out verification, calibration or proving of measuring equipment as per relevant codes and standards.

10. Gas accounting and reconciliation.

- (1) Gas accounting shall be done on a daily basis in energy terms, in MMBTU, and shall be based on Gross Calorific Value as defined in ISO 6976-1:1983(E) and as amended or modified from time to time:

Provided that -

- (a) the daily gas delivered at the relevant entry points shall be directly measured through system as agreed between the authorised entity and the shipper;
 - (b) for industrial and commercial customers, the daily off take at the relevant exit points shall be measured through system as agreed between the authorised entity and the shipper;
 - (c) for domestic customers, the daily off-take for gas accounting shall be assumed based on the average consumption of gas by the relevant domestic customers and reconciliation shall be done within seven days of the end of every billing cycle as per the methodology agreed in access arrangement;
 - (d) for CNG, the daily off take of gas shall be measured in kilogram (kg) on the meter at the outlet of the online compressor and shall be converted to MMBTU for gas accounting based on the average quality parameters of the gas in the network on the relevant day, measured at CGS in the event gas quality measurement are not available at CNG station. For this purpose, a homogenous zone has to be defined by the authorised entity upfront from time to time and the same has to be informed to the shipper.
- (2) The detailed measurement and gas accounting procedure shall be

specified in the access arrangement.

11. Charges.

(1) The shipper shall pay to the authorised entity the following charges for using its city or local natural gas distribution network as specified on the invoice generated by the authorised entity, namely: -

- (a) network tariff which includes gas transportation in CGD network, odourisation, gas metering, gas reconciliation and system use gas;
- (b) compression charges;
- (c) overrun charges, if applicable;
- (d) system imbalance charges, if applicable;
- (e) off-spec gas charges, as agreed in access arrangement;
- (f) applicable taxes;
- (g) any other charges mutually agreed in the access arrangement such as -

- (i) ship or pay;
- (ii) transport or pay;
- (iii) technical up gradation of system;
- (iv) R&D;
- (v) any other charges with the approval of the Board.

12. Network tariff and compression charges.

(1) The network tariff charges for each day shall be equal to the product of the network tariff and the sum of the relevant exit points delivered quantity:

Provided that this quantity does not attract any other charge in terms of the provisions contained in access code:

Provided further that the shippers delivery or pay provision shall be applied as per the contractual arrangement between the shippers and the authorised entity for consumer more than 0.5 MMBTU daily capacity.

(2) The compression charges for each day shall be equal to the product of the compression charge and the sum of the relevant CNG exit points delivered quantity:

Provided that this quantity does not attract any other charge in terms of the provisions contained in access code:

Provided further that the shippers deliver or pay provision shall be applied as per the contractual arrangement between the shippers and the authorised entity for consumer more than 0.5 MMBTU daily capacities.

13. Authorised entity's shortfall charges.

- (1) The authorised entity shall have an obligation to provide capacity up to the scheduled quantity unless there is a planned maintenance as specified in regulation 19 or there is a force majeure as specified in regulation 20 or there is an emergency as specified in regulation 21.
- (2) The authorised entity shall pay charges to the shipper, as agreed in the access arrangement, in case the authorised entity is unable to provide capacity up to the scheduled quantity unless there is a planned maintenance as specified in regulation 19 or there is a force majeure as specified in regulation 20 or there is an emergency as specified in regulation 21.

14. Overrun charges.

- (1) The methodology for calculation of the overrun quantity for a shipper at each entry point, in MMBTU, on a day shall be specified in the access arrangement on non-discriminatory manner.
- (2) The shippers shall not have to pay any overrun charges for overruns up to 5 % of the scheduled quantity. Overruns beyond 5 % of the scheduled quantity shall attract overrun charges.
- (3) The overrun charges for overruns greater than 5% of the scheduled quantity shall be reasonable, transparent and non-discriminatory and shall be specified in the access arrangement.
- (4) The overrun charges payable by the shipper for any particular entry point in respect of a day shall be equal to the product of the overrun quantity calculated as stipulated in sub-regulation (1) of this regulation and the overrun rate as specified in the access arrangement on non-discriminatory basis.
- (5) The overrun charges payable by the shipper in respect of a day shall be equal to the sum of the overrun charges payable in respect of each entry point on that day.

15. System imbalance charges.

- (1) Positive imbalance quantity on a day, in MMBTU, shall be the excess of the aggregate of the shipper's quantities delivered at the entry points over the aggregate of the shipper's quantities off taken at the exit points.
- (2) Negative imbalance quantity on a day, in MMBTU, shall be the excess of the aggregate of the shipper's off taken quantities at the exit points over the aggregate of the shipper's delivered quantities at the entry points.
- (3) The cumulative imbalance at the start of a day shall be equal to the cumulative imbalance at the end of the previous day. At the start of the first day when natural gas is delivered by the shipper, the cumulative imbalance shall be zero.
- (4) The cumulative imbalance at the end of a day shall be equal to the sum of the cumulative imbalance at the start of the day and the imbalance for the day.
- (5) The shipper shall not have to pay any imbalance charges upto a cumulative positive imbalance of 5% and cumulative negative imbalance of 3% of the sum of the relevant entry points MDQ. Authorised entity shall notify the imbalance quantity to shipper on daily basis so as to provide an opportunity to shipper to cure imbalances while submitting nominated quantity for subsequent period. In case the shipper is unable to cure such imbalances in a period of fifteen days, then, the authorised entity shall have the right to adjust daily nomination at the entry points and exit points to cure such imbalances to ensure safety and integrity of the city or local natural gas distribution network. Imbalance rates for cumulative positive imbalance and cumulative negative imbalance over and above these limits shall be reasonable, transparent and non-discriminatory.
- (6) The imbalance charges payable by the shipper for any particular day shall be equal to the product of the cumulative imbalance quantity calculated as stipulated in sub-regulation 4 of this regulation and the imbalance rates specified in the access arrangement.
- (7) The daily imbalance gas quantities shall be settled between the shipper and the authorised entity every fortnight considering actual daily metered amounts for industrial, commercial and CNG segments and assuming a mutually agreed daily consumption quantity of gas for domestic segment; the methodology for the

settlement shall be specified in the access arrangement. The reconciliation with actual metered quantity for the domestic segment shall be as agreed in the access arrangement between the shipper and the authorised entity.

- (8) There shall be established an escrow account to be maintained by the authorised entity which shall be credited with all charges received by the authorised entity on account of imbalances and overruns under these regulations and the authorised entity shall be eligible to withdraw from the escrow account the payment towards his contractual obligations with reference to supply or pay and extra efforts to compress gas in case of negative imbalance and for management of the CGD network due to such imbalances created by the shippers.
- (9) The authorised entity shall submit audited statement of the escrow account referred to in sub-regulation 8 on an annual basis to the Board.
- (10) The balance amount available in the escrow account, after the eligible withdrawal by the authorised entity, under sub regulation (8) may be utilized in such a manner and for such purposes as may be specified by the Board.

16. Hourly delivery, off take and receipt rates.

- (1) The MDR, MOR and the MRR, as well as the authorised deviations from the hourly scheduled rates for which the shipper shall not have to pay any charges, shall be specified in the access arrangement so as to ensure the safety and integrity of the city or local natural gas distribution network.

- (2) The charges for deviations in hourly delivery and off take rates that exceed these limits shall be specified in the access arrangement:

Provided that the shipper shall not be required to pay any charges for deviations in hourly delivery and off take rates that exceed the limits specified in the access arrangement for the first sixty days of commencement of its access to the entry and exit points capacity on the city or local natural gas distribution network if the shipper has booked capacity under regulation 5.

17. System Use Gas (SUG), Lost and Unaccounted for Gas (LUAG).

The authorised entity shall absorb SUG and LUAG, if any, and shall not

pass on liability on this account to any shipper:

Provided that the authorised entity shall be free to arrange this natural gas from any other source.

18. Line Pack (LP).

The authorised entity shall arrange for LP gas at all time and no charges shall be passed on to the shipper. For the purpose of tariff fixation, this shall form non-depreciable capex at original filling price.

19. Planned maintenance.

(1) The authorised entity shall intimate the shipper on non-discriminatory basis of its maintenance plan for a defined period well ahead of time, as agreed in the access arrangement, identifying those entry and exit points where natural gas flows may be restricted by maintenance works, the extent of the restrictions and the time of occurrence. The authorised entity shall plan such maintenance so as to minimize disruption to affected parties.

(2) The planned maintenance shut down period for any customer, in all the segments, except domestic, shall not exceed ten days in a year. For domestic customers, the service obligations specified in the Petroleum and Natural Gas Regulatory Board (Authorizing Entities to Lay, Build, Operate or Expand City or Local Natural Gas Distribution Networks) Regulations, 2008 and other relevant regulations shall prevail.

20. Force majeure.

(1) The affected party shall on occurrence of any *force majeure* -

(a) as soon as reasonably practicable notify each of the other parties of the occurrence and nature of the *force majeure*, the expected duration thereof insofar as the same can reasonably be assessed and the obligations of the affected party performance of which is affected thereby; and

(b) from time to time thereafter provide to each other party reasonable details of the following, namely: -

(i) developments in the matters notified under sub-regulation (a) of this regulation;

(ii) the steps being taken by the affected party to overcome the force majeure occurrence or its effects and to resume performance of its relevant obligations.

(2) The authorised entity and the shipper shall be relieved of their respective obligations arising out of and in the course of force majeure.

21. Operating procedures and emergencies.

(1) The operating procedures to be followed by the authorised entity and the shipper during regular operations as well as in the event of an emergency shall be included in the access arrangement.

(2) An emergency may exist -

(a) by reason of a leakage, or suspected leakage, of gas; or

(b) in following circumstances, namely: -

(i) the safety of the network is at risk;

(ii) the safe conveyance of gas through the network is at risk;

(iii) gas conveyed by the network is at such a pressure or of such a quality as to constitute, when supplied to the customer's premises, a danger to life or property; or

(iv) any other circumstances reasonably believed by the authorised entity to constitute an emergency (which, for the avoidance of doubt, may include circumstances upstream of an entry point), and, where the context requires, a reference to an emergency includes the event or circumstance which gives rise to such emergency.

(3) The authorised entity shall take steps to restore normal operation of the network as soon as reasonably possible after an emergency and the restoration of services to the various customer segments in case of emergencies or disruptions or interruptions in the city or local natural gas distribution network shall be carried out in the following order of priority, namely: -

(a) domestic PNG customers;

- (b) essential services (hospitals, clinics, milk supplies, etc);
- (c) CNG customers;
- (d) Others.

22. Confidentiality of information.

- (1) All documentation, information, data, submissions and comments disclosed or delivered whether in writing or otherwise by any entity to the authorised entity, shipper or to any other party either in connection with or in consequence of the requirements of these regulations shall be regarded and treated as confidential and shall not be disclosed either in full or part of any or all of the documentation, information, data, submissions and comments including the contents and copies thereof in any form except in connection with any proceedings in any court.

23. Miscellaneous.

- (1) The Board shall have power to issue clarifications with regard to these regulations and in case of any dispute, the clarification given by the Board shall be final and binding.
- (2) If any dispute arises with regards to the interpretation of any of the provisions of these regulations, the decision of the Board shall be final.

Schedule-I

(see regulation 2(T) (i))

Conversion formula for converting mass of CNG into energy value

$$\text{Natural Gas (MMBTU)} = \text{Mass of CNG (Kg)} \times \text{GCV} \times \frac{3.96828 \times 10^{-6}}{\rho}$$

Where,

1. ρ = Density of Natural Gas at STP (kg/Sm^3).
2. STP = Standard Temperature and Pressure – as defined by IUPAC (International Union of Pure and Applied Chemistry) as air at 0°C (273.15 K , 32°F) and 10^5 Pascal
 $(1\text{ Pa} = 10^{-6}\text{N}/\text{mm}^2 = 10^{-5}\text{ bar} = 0.1020\text{ kp}/\text{m}^2 = 1.02 \times 10^{-4}\text{ m H}_2\text{O} = 9.869 \times 10^{-6}\text{ atm} = 1.45 \times 10^{-4}\text{ psi (lbf}/\text{in}^2))$
3. GCV = Gross Calorific Value in (Kcal/Sm^3)
3. GCV and ρ shall be from homogenous zone to be defined by the authorised entity upfront from time to time.

Schedule - II

(see regulation 5(1) and 5(7))

Format for public consultation for capacity booking on city or local natural gas distribution network

1. Name of entity :
2. Name of City or Local Natural Gas Distribution Network:
3. Name of entry points and entry points capacity (in MMBTU at specified GCV) at each point:
4. Name of exit points, exit point capacity (in MMBTU at specified GCV) at each point and CNG exit point capacity (in kgs) at each point:
5. Required Gas parameters at entry points:
 - (a) acceptable range of pressure and temperature:
 - (b) acceptable range of the CV band:
 - (c) acceptable limits for other elements in natural gas like CO₂, N₂, O₂, etc.

Schedule - III

(see regulation 5(3))

Format for requesting capacity on city or local natural gas distribution network

1. Name of entity:
2. Name of City or Local Natural Gas Distribution Network:
3. Name of entry points and entry point capacity requirement (in MMBTU) at each point:
4. Name of exit points, exit point capacity requirement (in MMBTU) at each point and CNG exit point capacity requirement (in Kgs) at each point:
5. Gas parameters at entry points (to be specified separately for each entry point):
 - (a) range of pressure and temperature
 - (b) the CV band
 - (c) estimated limits for other elements in natural gas like CO₂, N₂, O₂ etc.

6. Required gas parameters at exit points (to be specified separately for each exit point):

- (a) acceptable range of pressure and temperature
- (b) acceptable range of the CV band
- (c) acceptable limits for other elements in natural gas like CO₂, N₂, O₂ etc.

7. Start date and tenure (in number of days) for which access to capacity is required:

Schedule - IV

(see regulation 7(1))

Threshold limit for gas parameters on City or Local Natural Gas Distribution Network

Parameters	Limit
Hydrocarbons dew pt (Degree Celsius, max.)	0
Water dew point (Degree Celsius, max)	0
Hydrogen Sulphide (ppm by wt. max.)	5
Total Sulphur (ppm by wt. max.)	10
Carbon dioxide (mole % max.)	6
Total inerts (mole %)	8
Temperature (Degree Celsius, max.)	55
Temperature (Degree Celsius, min.)	10-20
Oxygen(% mole vol. max.)	0.2
Wobbe Index (for domestic consumers)	39-53*

Note : * based on MJ/SCM

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[ADVT. III/4/188/10-Exty.]