

## NOTIFICATION – DRAFT – 28-09-2017

Islamabad, the ....., 2017

S.R.O. ....../2017. In exercise of the powers conferred by Section 41 of the Oil and Gas Regulatory Authority Ordinance, 2002 (XVII of 2002), the Oil and Gas Regulatory Authority, with the approval of the Federal Government, is pleased to make the following rules, namely:-

### 1. Short title, commencement and extent.-

- (1) These rules shall be called the OGRA Gas (Third Party Access) Rules, 2017.
- (2) They shall come into force at once.
- (3) These rules shall extend to the whole of Pakistan.

### 2. Definitions.-

- (1) In these rules, unless there is anything repugnant in the subject or context,-
  - (a) “access arrangement” means an agreement between transporter and shipper for transportation of gas, as approved by the Authority;
  - (b) "available capacity” means such capacity that is not contracted by or in the use of a transporter and is still available in the gas pipeline transportation system at the time of capacity declaration by the transporter;
  - (c) “capacity” means the maximum transportation capacity per day of an entry point or exit point on gas pipeline transportation system taking into account the system integrity, operational requirements, location and time of the year;
  - (d) “capacity allocation” means the maximum daily quantity in MMCF of gas allocated by a transporter to a shipper which can be received at a certain entry point and delivered at a certain exit point and, as and when necessary arrangements have been made by the transporter in this regard, the capacity allocation will be made in MMBTU terms;

- (e) “capacity hoarding” occurs when a shipper books entry or exit capacity but fails to use it effectively thereby preventing the use of such capacity by another shipper;
- (f) “connected system” means a gas transmission or distribution system or a natural gas production facility or an LNG terminal or a gas storage facility that is interconnected with a transporter’s gas pipeline transportation system;
- (g) “connected system operator” means the operator of a connected system;
- (h) “contracted capacity” means the capacity that a transporter has already committed at the time of capacity declaration;
- (i) "energy equivalence volume" means such volume that a transporter shall deliver to a shipper at the exit point in order to meet the energy equivalence of the volume input at the entry point;
- (j) “entry point” means the flange at downstream of the meter at which the gas delivered by a shipper or connected system operator is injected into the gas pipeline transportation system of the transporter or into the interconnection pipeline of the connected system operator, whichever is applicable;
- (k) “exit point” means the flange at downstream of the meter at which the gas is withdrawn from the gas pipeline transportation system of the transporter;
- (l) "firm service" means the transportation service provided on uninterruptible basis and as agreed in the access arrangement;

- (m) “gas” means natural gas and includes RLNG;
  
- (n) “gas pipeline transportation system” or “system” means transmission system, distribution system, pipelines, spur pipelines, equipment, compressors and associated facilities downstream of a gas producer's processing plant, shipper's delivery point or re-gasification terminal which are used for transportation of gas from one point to another, but shall not include the gas processing plant and re-gasification terminal pipeline within the battery limit of isolation valves of the plant or terminal;
  
- (o) "interconnection and operation arrangement” means the agreement entered into between one transporter and any other transporters or connected system operator for the purposes of interconnecting two systems and arranging the operational relations between such systems;
  
- (p) “interruptible service” means the transportation service provided as and when and where the capacity is available in the gas pipeline transportation system on reasonable endeavor basis and as agreed in the access arrangement;
  
- (q) "line pack” means the volume of gas in a segment of gas pipeline transportation system at a certain point of time at a measured gas specification, temperature and pressure;
  
- (r) “load management” means the implementation of prudent demand-side management initiatives and actions by the transporter to reduce peak load and/or improve system operating efficiency;
  
- (s) “Network Code” is the common set of standard conditions governing access arrangement between transporter and shipper under these rules which shall include processes such as capacity declaration, capacity allocation, capacity hoarding, nomination, balancing of gas pipeline transportation system, network planning,

metering, gas transportation tariff structure, invoicing and payment, force majeure, emergencies, load management and curtailment, communication, planned maintenance, operational planning and other operational matters, as approved by the Authority, and which shall bind the transporter not to discriminate as between similarly situated persons or classes of persons in the exercise of its rights or in the performance of its obligations;

- (t) “nomination” means notification process between a shipper and a transporter to schedule the shipper’s daily, weekly, monthly, half-yearly and yearly delivery and off-take quantities relating to each entry point and exit point, as agreed in the access arrangement;
- (u) “party” means a transporter, shipper or connected system operator who has entered into an access arrangement or interconnection and operation arrangement under these rules and includes any user of the gas pipeline transportation system;
- (v) “RLNG” means natural gas obtained after gasification of liquefied natural gas;
- (w) “shipper” means a person that has an access arrangement with a transporter to utilize the gas pipeline transportation system capacity;
- (x) “system integrity” means any situation in respect of a gas pipeline transportation system in which the pressure and the quality of natural gas remains within the minimum and maximum limits laid down by the transporter so that the transportation of gas is guaranteed in accordance with the applicable technical standards;
- (y) “system use gas (SUG)” means the quantity of gas used by the transporter for the operation of, and maintenance attributable to, the gas pipeline transportation system related to the access arrangement, as approved by the Authority;

- (z) “transportation loss” means the quantity of gas which is unaccounted for by a reasonable and prudent operator, including but not limited to measurement uncertainty, theft, ruptures, leakages, blow downs, venting or releases during regular operation and maintenance of the gas pipeline transportation system, as agreed in the access arrangement;
  
  - (aa) “transportation service” means taking delivery of gas made available by a shipper at an entry point on the gas pipeline transportation system and delivering an energy equivalence volume of gas, on firm or interruptible basis, subject to adjustment on account of line pack, system use gas and transportation loss at an exit point, as per the access arrangement;
  
  - (bb) “transportation tariff” means the charges payable by a shipper to the transporter for transportation of gas under the access arrangement and which shall be determined in accordance with the tariff methodology specified in Schedule-I;
  
  - (cc) “transporter” means a person holding a valid license issued by the Authority for transportation of gas through a gas pipeline transportation system; and
  
  - (dd) “unit of measurement” means unit of measurement of quantity of gas and shall be in Million British Thermal Units (MMBTU) when quantity is measured in energy terms and shall be in Mulley (thousand) Standard Cubic Feet (MSCF) when quantity is measured in terms of volume at 14.65 PSIA base pressure and 60 degree Fahrenheit base temperature.
- (2) The words and expressions used but not defined hereunder shall have the meanings as assigned to them in the Oil and Gas Regulatory Ordinance 2002 (Ordinance XVII of 2002), and the rules, regulations and Network Code framed there under, from time to time.

### **3. Approvals by the Authority.-**

- (1) No person shall operate as a transporter unless a license has been issued in its favour to undertake such activity by the Authority and which is in force.
- (2) No access arrangement or interconnection arrangement shall be undertaken by a transporter except upon approval of the Authority.
- (3) No transporter shall charge any amount, whether fixed or variable, which is not in accordance with the transportation tariff methodology prescribed in Schedule-I, provided that the transporter may charge for capacity overruns by a shipper, as per the access arrangement.
- (4) The Authority may, where it is expedient to do so in the public interest or in the interest of the gas market, prescribe, by notification in the official Gazette, general or special conditions, procedures and standards for transporters or any class of transporters for the purposes of enforcement of these rules, including development of access arrangements, non-discriminatory provision of transportation services and submission of periodic reports and other information relating to access arrangements.

#### **4. Transporter's role in access arrangement.-**

- (1) In relation to allocation of capacity, the transporter shall:
  - a) determine the capacity in an open and transparent manner using the technical methodology approved by the Authority;
  - b) publish the capacity on its website and report it to the Authority, in the format specified in Schedule-II, not later than ten days prior to the expiry of each calendar month;

- c) promptly update on its website the actual available capacity for any given entry or exit point where it varies significantly from the available capacity that the transporter has previously declared;
- d) offer and facilitate access to available capacity to shippers in accordance with these rules and the Network Code;
- e) respond to a request for capacity allocation in the manner laid down in the Network Code;
- f) allocate available capacity on first-come-first-served basis\* and report each capacity allocation within a period of seven days of the allocation to the Authority;
- g) remove obstacles to competition in providing transportation services;
- h) ensure that capacity hoarding by shippers is prevented by the development of commercial and contractual remedies within the access arrangements that financially penalize capacity hoarding through “use-it-or-lose-it” and other measures;
- i) facilitate the assignment or transfer of capacity subject to reasonable conditions;
- j) not deny access to capacity unless it compromises safety, reliability or the quality of transportation service;
- k) expand or extend the gas pipeline transportation system where it is economical or the potential shipper is willing to pay for its cost; and

- 1) cooperate with other network operators to facilitate access to shippers of interconnected systems.
- (2) The transporter shall place the following materials on its website:
- (a) transporter's license;
  - (b) standardized agreements for gas transportation services, whether on the transmission or distribution system;
  - (c) Network Code;
  - (d) annual maintenance schedules; and
  - (e) system expansion plan.

## **5. Nominations.-**

- (1) A shipper shall be responsible for,-
  - (a) timely and accurate nomination forecasts to the transporter for both gas deliveries at entry points and off-takes from exit points off the gas pipeline transportation system in accordance with the access arrangement;

- (b) nomination forecasts which may take place within a day or on daily, weekly, monthly and quarterly intervals;
  - (c) updating its nominations within the day (re-nominations) where additional information becomes available, as set out in the access arrangements.
- (2) An access arrangement shall contain measures to facilitate accurate and timely nomination forecasting by shippers and provide consequences for shipper's failure to furnish accurate and timely nominations within agreed tolerances.

## **6. Gas quality.-**

- (1) The transporter and shipper shall deliver gas in accordance with the gas quality and specifications specified in Schedule-III which may be revised by the Authority, from time to time, by notification in the official Gazette.
- (2) The transporter shall have the right to refuse to accept, or to accept with certain conditions, the delivery of gas at an entry point which does not conform to the quality and specifications given in Schedule-III.
- (3) The shipper shall have the right to refuse to accept, or to accept with certain conditions, the delivery of gas at an exit point which does not conform to the quality and specifications given in Schedule-III.

## **7. Title of Gas.-**

The title of gas delivered at the entry point shall remain vested in the shipper till the gas reaches the exit point.

## **8. System balancing.-**

- (1) The transporter shall be responsible for physical balance of its gas pipeline transportation system by maintaining the required pressure for all segments of the system. On the transmission system, the balancing actions shall be taken on a daily basis while, on the distribution system, the balancing actions shall initially be taken on a fortnightly basis and shall gradually be reduced to a weekly basis or a shorter period of time.
- (2) The shipper shall be responsible for balancing its daily deliveries at the entry points and daily off-takes from the exit points within the agreed tolerance set out in the access arrangement.
- (3) It shall be the responsibility of the shipper to cure imbalances caused by it in the transporter's gas pipeline transportation system on a day-to-day basis.
- (4) Where the shipper is unable to cure imbalances caused by it, the transporter shall have the right to adjust daily nomination to mitigate such imbalances to ensure safety and system integrity of gas pipeline transportation system keeping in view the operating parameters.
- (5) An access arrangement shall, inter alia, provide for the following measures:
  - (a) compensation in kind to the transporter or the shipper, as the case may be, for taking remedial action to help the overall system balance;
  - (b) accurate measurement, allocation and, where required, aggregation of gas deliveries at each entry point;

- (c) measurement of gas off-takes from the gas pipeline transportation system and, where daily metering is not possible, an estimation of the same;
  - (d) establishment of appropriate gas measurement and allocation protocols; and
  - (e) allocation agreement between all parties using the entry points and, in some cases, exit points.
- (6) The transporter shall ensure that it remains financially neutral and shall not unduly gain from its role in system balancing and application of charges for capacity overruns.
- (7) The transporter may deliver commingled gas of specified quality at one or more exit points.
- (8) The transporter shall account for energy equivalence volume of gas delivered at an exit point irrespective of volume and such energy equivalence volume shall be allowed as adjustment by treating it as deemed delivery or sale by the transporter for computing transporter's unaccounted for gas.

## **9. System maintenance.-**

The transporter shall produce an annual maintenance programme which shall be subject to consultation with those stakeholders with an interest in the timely maintenance of the system.

## **10. Load management and curtailment.-**

- (1) A transporter shall not subject the shipper's gas to any load management on the transmission system to the extent of volumes specified in the access arrangement.
- (2) Where any volume of the shipper's gas is not delivered by a transporter in a year on account of unavoidable load management on the distribution system, such volume shall either be accumulated for delivery in the succeeding year or the shipper shall be compensated for it, as agreed in access arrangement.
- (3) The access arrangement will establish the procedure, hierarchy of services and the circumstances under which transportation services to shippers may be curtailed at entry and exit points.
- (4) In the event of any unavoidable gas curtailment, the transporter shall adhere to the following principles:
  - (a) The transporter will declare the state of the gas pipeline transportation system including an emergency according to the information processed and received from shippers;
  - (b) The transporter will coordinate the curtailment process at entry and exit points with other transporters and shippers of the transportation system; and
  - (c) The curtailment will be carried out under the principles of equitability, transparency and nondiscrimination.
- (5) Where entry curtailment or exit curtailment or any other circumstances concerning operation of the system arise, and the transporter reasonably believes that as a result of those circumstances there is a danger to life or property, the transporter may declare the existence of emergency curtailment and may take any actions it deems necessary to alleviate the emergency curtailment, acting in accordance with any relevant legislation.

### **11. Network Code.-**

- (1) The transporters shall prepare the Network Code and submit it to the Authority for approval which may be granted by the Authority after necessary consultation with the interested parties.
- (2) The Network Code, as approved by the Authority, shall become an integral part of the access arrangements and shall be legally binding on the parties.
- (3) The transporters may carry out modification of the Network Code after necessary consultation with the interested parties and the same shall be effective on approval of the Authority.

### **12. Line Pack, System Use Gas and Transportation Losses.-**

- (1) Quantum of line pack, system use gas and transportation loss shall be calculated at the maximum allowable operating pressure of the pipeline and specified in the access arrangement.
- (2) A shipper shall provide gas for the line pack in proportion to its capacity allocation while the adjustment on account of system use gas and transportation loss shall be made, as agreed in the access arrangement and in accordance with the latest determination thereof by the Authority for the transporter.
- (3) In case of a dedicated pipeline, the shipper shall provide the required volume of gas for the line pack and which shall be recoverable by the shipper, in kind or monetary terms, as agreed in the access arrangement.

### **13. Capacity assignment and transfer.-**

- (1) No party shall assign or transfer any capacity to another person except with the approval of the Authority.
- (2) Any unutilized capacity may be assigned on a seasonal basis for a period not exceeding six months in a year, subject to the terms of the access arrangement.
- (3) No party shall collect or pay any premium or other fees, costs and charges of any kind exceeding the transportation tariff approved by the Authority.

#### **14. Unutilized capacity.-**

Where the capacity utilization in three successive years is below an average of seventy percent of the contracted capacity, the unutilized part of the contracted capacity will stand cancelled and revert back to the transporter, and the access arrangement shall accordingly be modified within three months of expiry of the period as aforesaid.

#### **15. Dispute resolution in relation to access arrangements.-**

- (1) An access arrangement shall contain appropriate mechanism for the resolution of disputes between the transporter and a shipper related to activities that fall within the remit of the access arrangement including capacity allocation and utilization, energy balancing, tariff and operational issues.
- (2) The access arrangement shall particularly provide the alternative options for the parties in dispute to engage with a technical expert, or employ the process of mediation or arbitration on a voluntary basis.
- (3) Any aggrieved party may, where necessary, file a complaint before the Authority against the other party to the access arrangement in accordance with the regulations prescribed by the Authority in this regard.

#### **16. Measurement.-**

- (1) There shall be measurement equipment at each entry point necessary to measure the quality and quantity of gas flow throughout the day in terms of pressure, temperature and calorific value in accordance with the Network Code.
- (2) Gas flows will additionally be measured at each exit point on the system and, where practicable, either the actual calorific value of the gas or the declared calorific value, if real time calorific value measurement is not available, will be measured.

- (3) The error limit or accuracy of the measurement equipment shall be as agreed between the parties in the access arrangement.
- (4) Verification and calibration shall be carried out according to the technical standards in the Network Code.
- (5) Either Party may install the check meters at requisite points with a precondition that the same shall not interfere with the measurement equipment installed by the other party for custody transfer purposes.

#### **17. Gas accounting and reconciliation.-**

- (1) The gas accounting at the entry point shall be carried out in energy terms on a daily basis by the shipper and the transporter.
- (2) Gas reconciliation, billing and other charges and their settlement shall be addressed in accordance with the access arrangement.

#### **18. Fees.-**

Any party interested to enter into an access arrangement, inter-connection arrangement or capacity assignment or transfer shall be liable to payment of the fees specified in Schedule-IV, which may be revised by the Authority, from time to time, by notification in the official Gazette.

#### **19. Conflict of rules and agreements.-**

In case of a conflict between these rules, an access arrangement and any other agreement under the provisions of these rules, the provisions of these rules shall prevail. Where any conflict arises between the provisions of the Network Code and access arrangement or any other agreement, the provisions of such arrangement or agreement shall prevail, provided the same has been approved by the Authority.

## **20. Repeal.-**

- (1) The OGRA Natural Gas (Regulated Third Party Access) Rules, 2012 are hereby repealed and the Cabinet Division's Notification No.410(I)/2012 dated 5 April 2012 is hereby rescinded.
- (2) Nothing in these rules, or any repeal effected thereby, shall affect or be deemed to affect anything done, action taken, agreement or other instrument executed, proceedings commenced, order, appointment or conveyance made, fee paid, resolution passed, direction given, in pursuance of the rules or notification repealed or rescinded by these rules; and any such thing, action, proceedings, order, appointment, conveyance, agreement, instrument, fee, resolution or direction, if in force at the coming into force of these rules and not inconsistent with any of the provisions of these rules, shall continue to be in force and have effect as if it were respectively done, taken, commenced, made, directed, passed, given, executed or issued under these rules.
- (3) Any document referring to the provisions of the repealed rules shall be construed as referring to the corresponding provisions of these rules.

## **21. Power to remove difficulties.-**

If any difficulty arises in giving effect to any of the provisions of these rules in a particular case, or class of cases, or it would be in the interest of gas market to do so, the Authority may, for reasons to be recorded in writing, relax the requirements of any of these rules subject to such conditions as it may deem fit.

## **SCHEDULE I**

**[See rules 2(1)(bb) and 4(3)]**

### **METHODOLOGY FOR DETERMINATION OF TRANSPORTATION CHARGES**

1. In order to encourage a level playing field and market development it is important that tariffs for access to and use of gas pipeline transportation systems should be as transparent and non-discriminatory.
2. Achieving cost reflectiveness requires separating and allocating correctly the cost element to different functions involved in transportation (accounting segregation of Transmission, Distribution, Sale etc), defining a calculation methodology and design of tariff. The key practical issues in tariff design are ; the income, the system owner will be allowed to collect from shippers and the way this is recovered from the shippers. Due consideration is to be given to the Operating Cost including return and depreciation to be charged by the shipper on the basis of total volume shipped during a financial year.
3. It is essential that the value of regulated assets (RAV) used for transportation is realistically ascertained through accounting segregation and verified through audit.
4. In order to recover the annual revenue requirement, the transportation tariff shall be an average rate /MMBTU, worked out on the basis of shippers total operating cost and total volume shipped during the financial year. The total operating coast for the respective activity or activities shall include Transmission and Distribution (T&D) cost, depreciation and prescribed return. In case the revenue of the transporter is determined by OGRA, the transportation tariff shall be taken on estimated basis which shall be actualized keeping in view the actual accounts for the financial year, in accordance with the revenue requirement process. The transporter shall fairly allocate the total operating cost on the basis of activities (transmission, distribution etc.) if required and the same shall be verified by the statutory auditors.
5. For return calculation purposes the depreciation charge is to be based on book value of fixed assets used for third party gas transportation under these rules, worked out on straight line basis depending upon economic useful lives of such assets as determined by the Authority from time to time.
6. Depreciation on dedicated network or spur lines which may become redundant after expiry of access arrangement will be based on the tenure of access arrangement.
7. 17% / 17.5% return on net average value of such fixed assets in operations, before taxes and financial charges, shall be allowed to SSGCL and SNGPL respectively, subject to changes in rate of return as determined by the Authority from time to time.

8. Transportation charges shall be for recovery of above costs and return as mentioned above, considering entry and exit point; the incremental cost, as the case may be, shall be recovered on full basis;

(a) Firm service access arrangement shall attract charges for contracted volume handled in MMSCF.

(c) A worked example of transportation tariff is made part of this Schedule.

9. Authorized and unauthorized over-run shall be charged at the rate as agreed under the access arrangement.

10. The transportation and authorized over-run charges shall be paid monthly by the shipper.

WORKED SAMPLE CALCULATION OF TRANSPORTATION TARIFF

	MMSCFD
Capacity of the segment for TPA.....	200
Shippers' Contracted Capacity.....	100
Transportation Tariff ..... (Total Operating Cost )/Total Volume Handled * Contracted Capacity	

## **SCHEDULE – II**

**[See Rule 4(1)]**

### FORM FOR DECLARING CAPACITY OF GAS PIPELINE TRANSPORTATION SYSTEM BY TRANSPORTER

- | S/N | Description   |
|-----|---|
| 1.  | Name of transporter:  |
| 2.  | Entry and Exit point(s) Location-wise Capacity in MMSCFD:<br>(a) Contracted<br>(b) Available  |
| 3.  | Technical parameters:<br>(a) Inlet pressure at entry point<br>(b) Calorific value band at entry point<br>(c) Temperature<br>(d) Gas Specifications  |
| 4.  | Status of extra capacity available or to be made available in the gas pipeline transportation system.   |
| 5.  | Details of capacity, along with volumes, period and date of allocation, being used by transporter itself or allocated to shippers<br>(a) Used by transporter,<br>(b) Allocated to each shipper. |
| 6.  | Any demand pending with the transporter for capacity allocation along with duration of such pendency.   |
| 7.  | For Distribution system, capacities to the extent of supply mains will be updated.  |



### SCHEDULE — III

[see Rule 6]

**Part A: RLNG quality for entry to transporter gas pipeline transportation system.**

Sr. No.	Components	Measuring Units	Parameter
1	Hydrocarbon dew point	Degree Fahrenheit, max	32*
2	Hydrogen Sulphide	Grains/100 SCF, max	0.24
3	Total Sulphur	Grains/100 SCF, max	3.5
4	Carbon Dioxide	mole % max	3
5	Nitrogen	mole % max	7**
6	Oxygen	mole % max	0.2
7	Total inerts	mole % max	10
8	Temperature	Degree, Fahrenheit, max	100-120**
9	Water Content	Lbs/MMSCF, max	7**
10	Pressure	PSIG	**
11	Calorific value	BTU/SCF	925/1150**
12	Wobbe Index	BTU/SCF	1290 +/- 5%
13	Purity: Be commercially free from foreign materials and dust or other solid matter or environmentally harmful substances, waxes, gums, and gum forming constituents which might cause interference with the proper operation of the pipelines and associated facilities.		

\* At all pressure.

\*\* Indicative values maybe negotiated between shippers and transporters in the access arrangement

**Part B: Natural Gas quality for entry to and exit from the transporter gas pipeline transportation system**

<b>Sr. No.</b>	<b>Components</b>	<b>Measuring Units</b>	<b>Parameter</b>
1	Sulfur (max)	Grains / 100scf	3.5
2	Hydrogen Sulfide (max)	Grains / 100scf	0.24
3	Carbon dioxide (max)	Mole %age	3
4	Nitrogen (max)	Mole %age	7
5	Calorific Value (min)	Btu / scf	900
6	Wobbe Index		1180*
7	Water Contents (max)	Lbs / MMscf	7
8	Hydrocarbon dew point	Degree Fahrenheit, max	32*
9	Oxygen	mole % max	0.2
10	Temperature	Degree, Fahrenheit, max	120**
11	Pressure	PSIG	**
12	Purity: Be commercially free from foreign materials and dust or other solid matter or environmentally harmful substances, waxes, gums, and gum forming constituents which might cause interference with the proper operation of the pipelines and associated facilities.		

**\* 5 % variation on account of specific gravity**

**SCHEDULE – IV**

**[See rules 18]**

**FEES**

<b>No.</b>	<b>Activity</b>	<b>Fee (Rupees per MMSCFD)</b>
1.	Approval of access arrangement	9,000
2.	Approval of interconnection arrangement	3,000
3.	Approval of capacity assignment or transfer	3,000