

THIRD PARTY ACCESS CODE



FOR MALAYSIAN TRANSMISSION PIPELINES

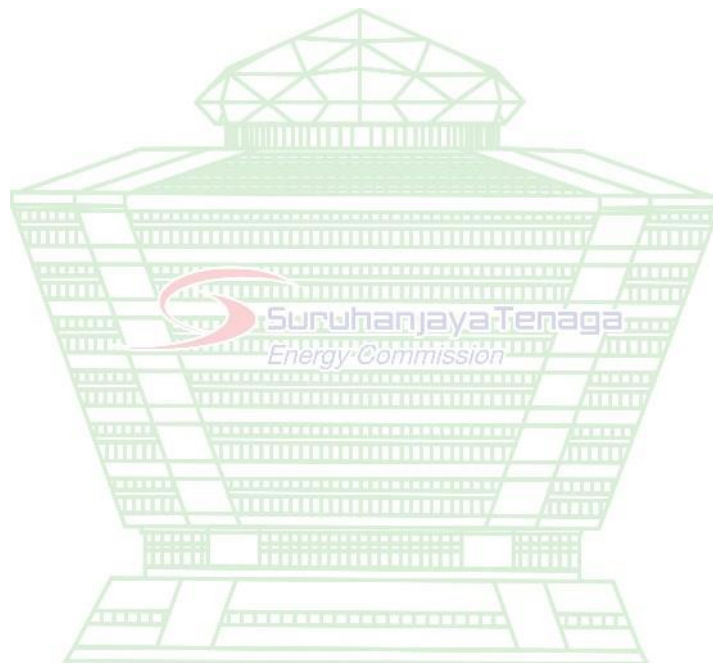
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1. Objective and Scope

- 1.1. As part of the 10th Malaysian Plan and the New Energy Policy, the Malaysian Government had planned to open up the country's gas market to third parties to promote importation of liquefied natural gas and the growth of the national gas industry. The overarching objective behind this decision is to secure and manage energy supplies for Malaysia's growing domestic demand and promote economic growth.
- 1.2. In furtherance of this objective, the Gas Supply Act (Amendment) 2016 (the "Amendment Act") was gazetted on 9 September 2016 to amend the then Gas Supply Act 1993 to include provisions in relation to the economic regulation of the import into regasification terminal, regasification, shipping, transportation and including safety and technical regulations in the case of distribution or the retail or use of gas through a piping system and related matters. More particularly, the Commission was given the task to regulate such matters.
- 1.3. The Gas Supply Regulations 1997 was also subsequently amended to cater for the new scope introduced by the Gas Supply Act 1993.
- 1.4. For the purposes of the following provisions of this Code, any reference to the "Gas Supply Act 1993" shall mean a reference to such Act, as amended, varied or modified by the Amendment Act and any reference to the "Gas Supply Regulations 1997" shall mean a reference to such Regulations, as similarly amended, varied or modified.
- 1.5. The relevant parties are also to note that there may be other authorities who have jurisdiction over technical and safety issues throughout the gas value chain, for example, the current jurisdiction of the Department of Occupational Safety and Health ("DOSH") on technical and safety issues relating to regasification terminals and transmission pipelines in Malaysia pursuant to the, Petroleum (Safety Measures) Act 1984 and

Factories and Machinery Act 1967. Such matters are not covered under the Gas Supply Act 1993 and as such the relevant parties are required to independently liaise with these authorities, if necessary. It shall be the sole responsibility of the relevant parties to identify and ascertain such matters.

1.6. Within its expanded regulatory scope, the Commission pursuant to section 37B and section 37C of the Gas Supply Act 1993 has the power to develop and publish certain codes, guidelines and directions.

1.7. Pursuant thereto, this Code was developed with the objective of establishing a framework for third party access to the transmission pipelines so as to:

1.7.1. promote the development of a competitive gas market by establishing uniform principles to be applicable to the relevant parties;

1.7.2. ensure transparency, fair and non-discriminatory practices in all transactions concerning the use of the transmission pipelines;

1.7.3. prevent abuse of dominance and any potential anti-competitive conduct; and

1.7.4. ensure the safe and reliable supply of gas.

1.8. This Code applies to the following parties:

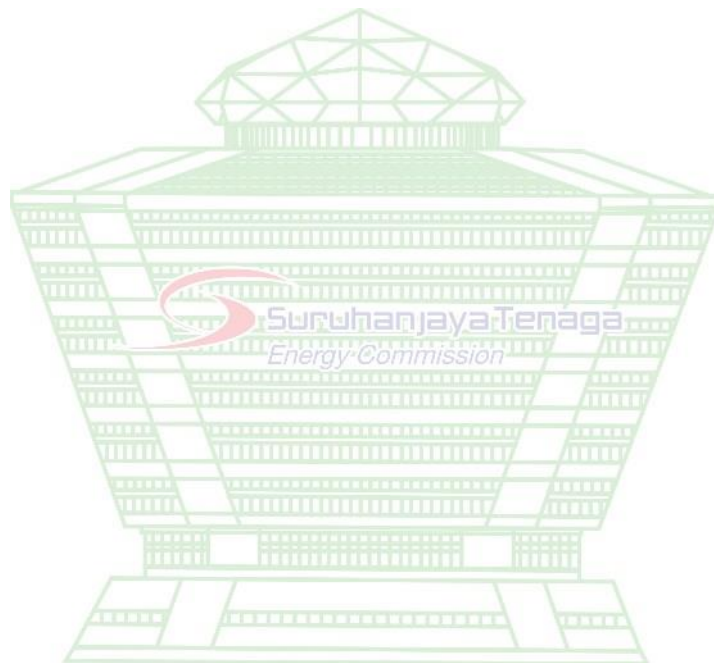
1.8.1. transportation licensees;

1.8.2. shipping licensees; and

1.8.3. a connected party.

- 1.9. This Code is not a substitute for the Gas Supply Act 1993 nor for any Regulations made thereunder. Anyone in doubt about how they may be affected by the Gas Supply Act 1993 should obtain independent legal advice in respect thereof.

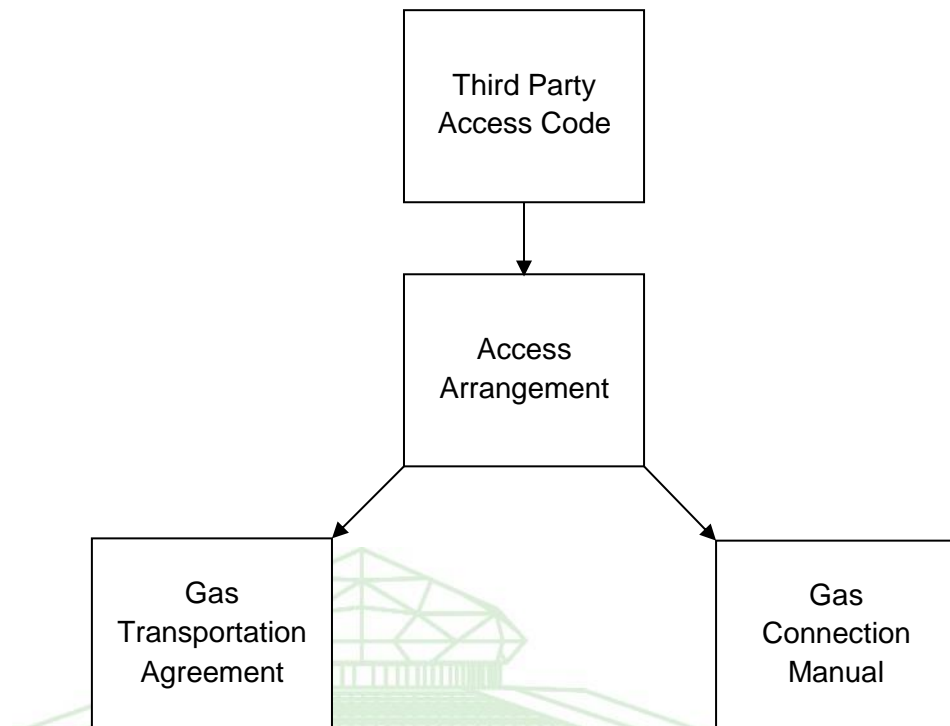
END OF SECTION



2. Documentation Structure

2.1. Introduction

- 2.1.1. Pursuant to the provisions of this Code, the following documents will be established by and/or between the parties identified in paragraph 1.8 of this Code.
- 2.1.2. Access Arrangement (“AA”): This will be the document established by a transportation licensee and approved by the Commission containing the standard principles of arrangement between such transportation licensee and the parties who wish to access the relevant transmission pipeline. Further details on the AA are as contained in paragraph 2.2 of this Code.
- 2.1.3. Gas Transportation Agreement (“GTA”): This will be the agreement entered into between a transportation licensee and a shipping licensee pursuant to the Code. Further details on the GTA are as contained in paragraph 2.3 of this Code.
- 2.1.4. Gas Connection Manual (“GCM”): This will be the manual containing certain technical provisions and physical arrangements between a transportation licensee and parties whose facilities are physically connected to relevant transmission pipeline. Further details on the GCM are as contained in paragraph 2.4 of this Code.
- 2.1.5. A pictorial representation of the documentation structure in the third party access for transmission pipelines under this Code is as follows:



2.2. Access Arrangement

2.2.1. Each transportation licensee shall develop, obtain approval of the Commission and publish on its website an AA which will provide such information as to enable the relevant parties to:

- (a) understand the background to the AA; and
- (b) understand the basis and derivations of various elements of the AA, wherever necessary, and their individual GTAs.

2.2.2. The relevant AA shall be published before a transportation licensee starts to provide any transportation services and once so published shall not be amended, varied or modified without the written approval of the Commission.

2.2.3. If, in the Commission's opinion, information submitted in any AA is deficient in its comprehensiveness or in any other respect, the Commission may require the relevant transportation licensee to:

- (a) make the necessary revisions to correct the deficiency and to re-submit the AA; or
- (b) submit further AA information as an addendum to the information already submitted.

2.2.4. All AAs must be developed in accordance with the provisions and principles laid down in this Code.

2.2.5. The Commission reserves the right to instruct a transportation licensee to amend the provisions of an AA in the interests of the gas market.

2.2.6. An AA shall as a minimum:

- (a) identify the transmission pipeline to which the AA relates and include a reference to a website at which a description of the transmission pipeline can be studied;
- (b) describe the services which, in accordance with this Code, the transportation licensee offers to provide by means of the transmission pipeline;
- (c) specify any auxiliary services which the transportation licensee provides;
- (d) set out details of the Capacity Allocation procedure for the services provided (for example, details of how the first-come-first-serve mechanism shall be implemented);

- (e) set out details of the congestion management procedures (for example, illustrations on how the use-it-or-lose-it provisions shall be applied, detailed open season procedures and forms to be used);
- (f) provide gas specifications in order to allow suitable alignment with parties whose facilities are physically connected to relevant transmission pipelines while taking into account the need to accommodate regional and operational differences that may exist;
- (g) set out protocols, procedures and technical details/requirements related to the measurement of gas quantity, quality, pressure for the purposes of metering and billing and the operational and safety requirements of the relevant transmission pipeline;
- (h) set out the rules which need to be observed by all relevant parties in order to prevent any threats to the Linepack of the transmission pipeline;
- (i) set out provisions related to the liabilities and remedies of the parties in accordance with the principles set out in this Code;
- (j) set out the details of the standard process to check credit worthiness of a shipping licensee and the required credit limits and guarantees by a shipping licensee to avail itself of the services of the transportation licensee;

- (k) set out the terms for the provision of the basic services and of the auxiliary services by the transportation licensee (for example, invoicing and payment terms);
- (l) detail the individual components of the tariff, and any other charges which can be imposed by the transportation licensee as more particularly described in section 10;
- (m) describe the invoicing procedure of the transportation licensee and the corresponding settlement procedure;
- (n) give effect to the gas connection related provisions contained in paragraph 2.4 and the GTA contained in paragraph 2.3;
- (o) describe the cases of Force Majeure, suspension or termination which will be contained in the relevant GTAs, as well as the procedures for handling and settling disputes;
- (p) contain communication and confidentiality-related provisions as more particularly detailed in section 11;
- (q) contain the procedure for the modification of the terms of a GTA in the event of a change in the relevant regulatory framework;
- (r) contain any other requirements which are deemed necessary by the Commission during the review and approval process of the AA.

2.3. Gas Transportation Agreement

2.3.1 The GTA will be entered into between each transportation licensee and a shipping licensee.

2.3.2 The GTA will contain all the terms and conditions related to the transportation services agreed upon between the transportation licensee and the shipping licensee and will incorporate by reference the terms of the AA. The GTA shall contain at least the following:

- (a) the Transportation Path and the respective Entry Point(s) and the Exit Point(s) agreed between the shipping licensee and the transportation licensee;
- (b) the services provided by the transportation licensee including the Reserved Firm Capacity, the Reserved Interruptible Capacity and the Daily Quantity, and the reservation period for the Transportation Path;
- (c) the specific auxiliary services provided by the transportation licensee (which may be any such auxiliary services as are described in the AA);
- (d) the specific tariffs and charges payable by the shipping licensee to avail itself of the services of the transportation licensee (in each case calculated on the basis set out in the AA); and
- (e) the security required to be deposited by the shipping licensee and/or the relevant credit limit stipulations, in each case in accordance with the standard process developed in accordance with paragraph 3.2.4 of this Code.

2.3.3 The GTA shall provide the right to its signatories to initiate relevant legal action for any breach of the terms of the GTA, in compliance with the provisions of this Code and in accordance with the AA.

2.3.4 Before the formal execution of the GTA between the transportation licensee and the shipping licensee, the draft GTA shall be submitted to the Commission for approval and the Commission may require any changes to the GTA subject always that such changes shall not be contrary to the principles of this Code.

2.3.5 Termination of GTA:

(a) if a party to a GTA:

(i) is declared bankrupt or is declared to have a similar legal status affecting the rights of creditors generally; or

(ii) has committed any material breach of the GTA,

the other party shall be entitled, without judicial intervention to terminate the GTA or suspend the GTA for a period not exceeding 60 Days to permit the party in default to remedy such default, failing which the GTA shall immediately be terminated.

(b) if the other party is a shipping licensee and:

(i) it fails to fulfil its payment obligations;

- (ii) its licence or any other necessary approvals have been revoked; or
- (iii) its credit rating is no longer in compliance with the acceptable standards set out as per provisions of paragraph 3.2.4,

the transportation licensee may issue to the shipping licensee a notice of intention to terminate, and suspend the provision of services under the GTA. The shipping licensee shall be given a period of 15 Days to remedy the default, failing which the transportation licensee may terminate the GTA.

- (c) a party shall notify the other party if that party exercises its right to terminate the GTA in accordance with the procedure set out in the AA.
- (d) in the event a GTA is terminated or suspended, each shipping licensee shall cooperate with the transportation licensee and vice versa insofar as reasonably practicable to ensure the continuity of supply to customers of the shipping licensee whose GTA has been terminated.
- (e) the shipping licensee shall have the right to appeal to the Commission regarding the transportation licensee's decision on termination of the GTA.

2.4. Gas Connection Manual

2.4.1. For the purpose of this Code, a GCM is a manual established between a transportation licensee and a connected party.

2.4.2. The objective of the GCM is to:

- (a) ensure technical compatibility of the aforementioned connected facilities for the safe and reliable operation of the transmission pipeline;
- (b) define the roles and responsibilities of the transportation licensee and the connected parties; and
- (c) ensure fair, transparent and non-discriminatory connection arrangements between the transportation licensee and the connected parties.

2.4.3. The GCM to be established between the transportation licensee and each connected party will contain provisions regarding the physical connection, measurement, operational safety and arrangements with regard to the connecting facilities aligned to the aforementioned objectives and will incorporate by reference the terms of the AA.

2.4.4. The connected parties for a transportation licensee will include:

- (a) gas producers;
- (b) gas processing plant operator;
- (c) regasification licensees;
- (d) distribution licensees;
- (e) other transportation licensees;

- (f) End-consumers located within the geographical boundaries of Malaysia; and
- (g) parties located outside geographical boundaries of Malaysia.

2.4.5. In their decision-making and cooperation, the parties shall be under an obligation to each other to take into account the importance of operational compatibility, safety and economics of infrastructural measures. In so doing, the parties shall take into account the need to install connecting facilities to the transmission pipeline.

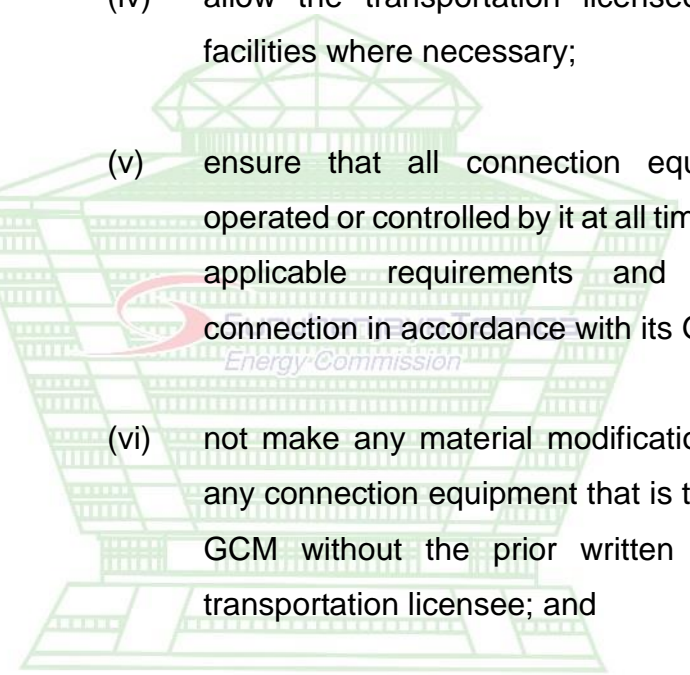
2.4.6. The transportation licensee will make every effort to keep the terms and conditions standardized across all the GCMs with its connected parties.

2.4.7. When injecting gas at an Entry Point and receiving gas at an Exit Point, shipping licensees shall take into consideration the contents of the GCMs relating to the relevant Entry and Exit Points. The transportation licensee must inform shipping licensees of the contents of the said GCM and provide to them any other necessary information.

2.4.8. The GCM does not release the relevant licensees from their obligations under or pursuant to this Code, the relevant AA or any other agreements and/or arrangements.

2.4.9. Obligations of the parties:

- (a) each connected party shall:

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- (i) acknowledge the GCM prepared by the transportation licensee;
 - (ii) ensure the compliance of its facilities with all applicable standards, laws and regulations and the relevant GCM;
 - (iii) ensure that every GCM to which it is a party complies with the provisions of this Code;
 - (iv) allow the transportation licensee to inspect its facilities where necessary;
 - (v) ensure that all connection equipment owned, operated or controlled by it at all times complies with applicable requirements and conditions for connection in accordance with its GCM;
 - (vi) not make any material modification or addition to any connection equipment that is the subject of the GCM without the prior written consent of the transportation licensee; and
 - (vii) provide access at any time for the transportation licensee to inspect the gas facilities located within the connected party's premises where necessary.
- (b) the transportation licensee shall:
- (i) prepare a GCM to be acknowledged by the connected party;

- (ii) ensure the compliance of its facilities with all applicable standards, laws and regulations and the relevant GCM;
- (iii) ensure that every GCM to which it is a party complies with the provisions of this Code;
- (iv) allow the connected party to inspect the facilities where necessary;
- (v) ensure that all connection equipment owned, operated or controlled by it at all times complies with applicable requirements and conditions for connection in accordance with the relevant GCM;
- (vi) not make any material modifications to any connection equipment that is the subject of the GCM without sufficient prior notification to the relevant connected party; and
- (vii) use all reasonable endeavours to comply with all reasonable requests of a person who applies to be a connected party relating to its connection requirements.

END OF SECTION

3. Access to Transmission Pipelines

3.1. Services and Obligations

3.1.1. A transportation licensee shall provide at minimum the following services:

- (a) receiving of gas at the Entry Points;
- (b) transportation of gas from Entry Points to Exit Points;
- (c) delivery of gas at Exit Points; and
- (d) other auxiliary services as may be agreed between the transportation licensee and the shipping licensee.

3.1.2. A transportation licensee shall perform the following activities as part of its obligations as a transportation licensee:

- (a) measurement of gas quantity, gas quality and pressure for the purposes of metering and billing and for the purposes of the operational and safety requirements of the transmission pipeline;
- (b) maintenance of the transmission pipeline;
- (c) management of the shipping licensee's gas Inventory in the transmission pipeline;
- (d) planning of investments in the transmission pipeline;
- (e) management of Capacity Allocation between shipping licensees in the transmission pipeline;

(f) development, operation and maintenance of the Gas Management System (GMS).

3.1.3. For the avoidance of doubt, except otherwise stated herein, services of a transportation licensee shall not include the production, processing or sale of gas for commercial purposes.

3.1.4. If a party (including the transportation licensee) does not comply with its obligations under this Code, the Commission may impose fines on that party and/or revoke the licence of that party in accordance with the terms of that party's licence and any other applicable laws of Malaysia.

3.1.5. If the relevant party whose facility is physically connected to relevant transmission pipeline is of the opinion that the transportation licensee is in breach of this Code, it has the right to lodge a complaint to the Commission and the Commission shall, if it is of the opinion that the complaint is merited, address the complaint accordingly.

3.2. Registration for Services

3.2.1. A prospective shipping licensee must apply for a shipping licence in accordance with the Gas Supply Act 1993. Upon issuance of the licence, the shipping licensee shall have the right to access the transmission pipeline, subject always to the provisions of this Code.

3.2.2. A shipping licensee that intends to utilize a transmission pipeline must submit a written application of the same to the transportation licensee and submit a copy of the written application to the Commission. Upon receiving the said written application, the

transportation licensee shall provide access of the transmission pipeline to the relevant shipping licensee unless:

- (a) entering into a GTA with the shipping licensee would prevent the transportation licensee from fulfilling its obligations under this Code;
- (b) the shipping licensee is unable to meet the determined necessary security or credit limit stipulations specified in paragraph 3.2.4; or
- (c) the transmission pipeline does not have sufficient capacity to meet the requirements of the shipping licensee.

3.2.3. Where the transportation licensee and the shipping licensee cannot agree on the terms of the GTA, the shipping licensee has the right to appeal to the Commission for a decision on the terms which shall be incorporated into the GTA.

3.2.4. Before entering into a GTA with the shipping licensee, the transportation licensee shall have the right to conduct a credit worthiness check of the shipping licensee. Towards this objective, the transportation licensee shall develop and get approved from the Commission, a standard process to determine such credit worthiness and determine the required security or applicable credit limit stipulations. A shipping licensee shall have the right to appeal to the Commission regarding the transportation licensee's decision on its credit worthiness, security requirements and/or credit limit stipulations.

3.3. Capacity Allocation Mechanism

3.3.1. The maximum capacity at all Entry Points and Exit Points shall be made available to the shipping licensees, taking into account system integrity and efficient network operation. The transportation licensee shall implement and publish non-discriminatory and transparent Capacity Allocation mechanisms, which shall:

- (a) provide appropriate economic signals for efficient and maximum use of Technical Capacity and facilitate investment in new infrastructure;
- (b) be flexible and capable of adapting to evolving market circumstances.

3.3.2. The transportation licensee shall provide both firm and interruptible capacities. A shipping licensee that intend to utilize the transmission pipeline shall apply to reserve the Available Firm Capacity and/or Available Interruptible Capacity, expressed in GJ, while entering into a GTA with the transportation licensee prior to injecting gas into the system.

3.3.3. The transportation licensee must endeavour to provide as much as possible of the Available Firm Capacity to the shipping licensee in accordance with the shipping licensee's request. The transportation licensee will offer unused capacity on an interruptible basis once all the Available Firm Capacity is reserved.

3.3.4. The transportation licensee shall process the request for services based on first-come-first-serve basis.

3.3.5. The transportation licensee shall approve or reject a request for services depending upon the level of congestion at that point of time. A shipping licensee whose request has been rejected, however, has the right to appeal to the Commission upon rejection of a request for services.

Reserved Firm Capacity

3.3.6. A shipping licensee that intends to use the transmission pipeline may apply to the transportation licensee for Available Firm Capacity.

3.3.7. The shipping licensee shall be entitled to submit an application in respect of any quantity for the Available Firm Capacity in respect of a Transportation Path on the Day to which the application relates.

3.3.8. An application for Reserved Firm Capacity shall specify:

- (a) the Daily Quantity applied for each Transportation Path;
- (b) the reservation period with a minimum of 12 Months or any shorter period as may be agreed between the transportation licensee and the shipping licensee and approved by the Commission;
- (c) whether or not the shipping licensee will accept a reservation of Reserved Firm Capacity of less than what the shipping licensee has applied for;
- (d) the Transportation Path in respect of which the Reserved Firm Capacity is applied for; and

- (e) any other information that the transportation licensee may reasonably require from the shipping licensee.

3.3.9. The Commission may issue directions to alter the minimum reservation period in respect of Reserved Firm Capacity offered by the transportation licensee, if the Commission deems it necessary for fostering competition, depending upon evolving dynamics of the gas market in Malaysia. Such directions, at the time of their issuance, will have retrospective effect on the minimum reservation periods on the existing GTAs only if:

- (a) such retrospective effect is agreed mutually between the transportation licensee and the shipping licensee(s); or
- (b) the Commission is of the view that such retrospective effect is required.

3.3.10. The cumulative gas injected by a shipping licensee during a Day at an Entry Point and cumulative gas received by a shipping licensee during a Day at an Exit Point for each Transportation Path shall not exceed the Daily Quantity, subject to the tolerances specified in this Code or otherwise approved by the Commission .

3.3.11. For each Transportation Path, the transportation licensee is obliged to receive at an Entry Point and deliver at an Exit Point a quantity of gas equal to or lower than the Daily Quantity.

3.3.12. The transportation licensee shall monitor the utilization of the Reserved Firm Capacities of the shipping licensees and shall offer any unutilized Reserved Firm Capacity to any other shipping licensee as Available Interruptible Capacity.

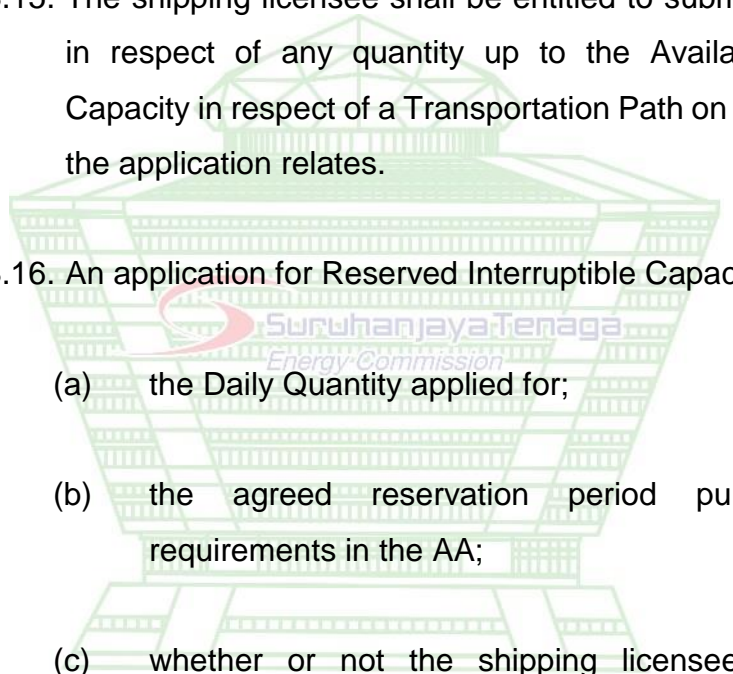
3.3.13. However, each shipping licensee shall have the right to utilize its Reserved Firm Capacity at any time subject to section 3.5.

Reserved Interruptible Capacity

3.3.14. The shipping licensee may apply to the transportation licensee for Available Interruptible Capacity. The transportation licensee will offer Available Interruptible Capacity to shipping licensees after the Available Firm Capacity has been fully reserved.

3.3.15. The shipping licensee shall be entitled to submit an application in respect of any quantity up to the Available Interruptible Capacity in respect of a Transportation Path on the Day to which the application relates.

3.3.16. An application for Reserved Interruptible Capacity shall specify:

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- (a) the Daily Quantity applied for;
 - (b) the agreed reservation period pursuant to the requirements in the AA;
 - (c) whether or not the shipping licensee will accept a reservation of Reserved Interruptible Capacity of less than what it has applied for;
 - (d) the Transportation Path in respect of which the capacity is applied for; and
 - (e) any other information that the transportation licensee may reasonably require from the shipping licensee in respect of the Transportation Path.

3.3.17. The Commission may issue directions to introduce shorter reservation periods in respect of Reserved Interruptible Capacity offered by the transportation licensee as mentioned in the AAs, if the Commission deems it necessary for fostering competition, depending upon evolving dynamics of the gas market in Malaysia. Such directions, at the time of their issuance, will have retrospective effect on the reservation periods included in the existing GTAs only if:

- (a) such retrospective effect is agreed mutually between the transportation licensee and the shipping licensee(s); or
- (b) the Commission is of the view that such retrospective effect is required.

3.4. Use-It-Or-Lose-It

3.4.1. The transportation licensee must have adequate mechanisms to monitor unused capacity of the shipping licensees and to re-allocate the unused capacity in case of requests for capacity by other shipping licensees.

3.4.2. The transportation licensee shall include details of such use-it-or-lose-it provisions in the AA.

3.4.3. The Commission shall have the right to review the application of the use-it-or-lose-it provisions and the stipulations therein and may issue directions to modify those provisions in case the Commission discovers any anti-competitive conduct, inadequate utilization of the facilities and/or inadequate levels of competition in the relevant market.

3.5. Transfer of Reserved Firm Capacity

3.5.1. A shipping licensee can transfer all or part of its Reserved Firm Capacity to another shipping licensee. In the event of such a transfer, the shipping licensee intending to make such a transfer shall first seek the consent of the transportation licensee. The transfer shall be in relation to a specified Transportation Path.

3.5.2. The capacity transfer procedure will be detailed down in the AA.

3.5.3. The capacity transfer shall be subject to the potential transferee having meeting the credit worthiness check of the transportation licensee (in accordance with paragraph 3.2.4) and on the basis that the transferee will be subject to the terms and conditions of the GTA between the transportation licensee and the licensee making the transfer.

3.6. Sub-Letting

Save as permitted pursuant to paragraph 3.5, a shipping licensee shall not enter into any agreement or arrangement pursuant to which any third party has the right to utilize (whether in whole or part) that shipping licensee's Reserved Firm Capacity or Reserved Interruptible Capacity.

3.7. Open Season

3.7.1. Open season is carried out to assess market demand by evaluating the need for new capacity and the possibility of expansion of a transmission pipeline.

3.7.2. Where:

- (a) a shipping licensee approaches the Commission because the shipping licensee's request for Reserved Firm Capacity has been rejected by the transportation licensee due to the fact that the capacity demand has exceeded the Technical Capacity of the transmission pipeline (physical congestion);
- (b) the transportation licensee or the Commission foresees a potential physical congestion in the transmission pipeline; or
- (c) if neither (a) nor (b) occurs in any consecutive period of 5 Years

the transportation licensee will conduct an Open Season.

3.7.3. The transportation licensee will invite all shipping licensees and prospective shipping licensees to submit applications for new Reserved Firm Capacity and the transportation licensee shall provide adequate publicity in respect of such invitation. The transportation licensee will also invite existing shipping licensees to release their Reserved Firm Capacities for re-allocation to other shipping licensees. If there is no other shipping licensee to take up the offered capacity by existing shipping licensee, the capacity will remain with the existing shipping licensee.

3.7.4. Upon the analysis of the new Reserved Firm Capacity applications, if the transportation licensee finds that the new Reserved Firm Capacity can be met by the existing transmission pipeline, then the transportation licensee will prepare a plan to allocate the capacities to the respective shipping licensees through a transparent and non-discriminatory Capacity Allocation mechanism as approved by the Commission.

3.7.5. If the transportation licensee finds that the new Reserved Firm Capacity cannot be met by the existing transmission pipeline, then the transportation licensee shall develop a detailed plan for meeting that unmet Reserved Firm Capacity demand. The plan shall include:

- (a) the steps the transportation licensee is considering taking to enhance the transmission pipeline in order to provide additional Reserved Firm Capacity to the shipping licensees (which may include expansion plans);
- (b) the earliest date by which, in the opinion of the transportation licensee, the additional Reserved Firm Capacity will be made available;
- (c) any conditions, approvals, consents or permits which the transportation licensee requires in order to make available the additional Reserved Firm Capacity to the shipping licensees;
- (d) an estimate in reasonable detail of the cost of the plan with an estimate of the potential increase of tariffs (if any) that would apply in respect of creating the additional Available Firm Capacity;
- (e) any additional material obligations which the shipping licensees would need to assume in connection with the creation of additional Available Firm Capacity (including, in particular, any increase in the length of reservation periods); and

- (f) any other details which the transportation licensee or the Commission deems necessary to be provided in the plan.

3.7.6. The detailed plan will be submitted to the Commission for approval. If the Commission requires modifications to the plan, such modifications shall be duly incorporated by the transportation licensee.

3.7.7. Upon finalization of the detailed plan to meet demand for additional Reserved Firm Capacity, the transportation licensee will notify the plan to the relevant shipping licensees. If the shipping licensees agree to the plan and if they are required to register for the proposed additional Reserved Firm Capacity per the proposed plan, those shipping licensees will enter into a binding agreement with the transportation licensee. The terms and conditions of the binding agreement would need to be approved by the Commission. The terms and conditions of the binding agreement will include provisions for commitment from the shipping licensees and the transportation licensee. Thereafter, the transportation licensee shall execute the plan and make available the additional Available Firm Capacity to shipping licensees. Upon execution of the plan, shipping licensees will enter into a GTA whose terms and conditions shall be pursuant to the Code and the AA.

3.8. Request for Minor Expansion from Shipping Licensee

A shipping licensee may submit a request to the transportation licensee for a minor expansion of transmission pipeline. If in the opinion of the transportation licensee, the expansion will not require substantial investment, the transportation licensee shall determine the estimated cost of the expansion, and how it intends to recover such cost in respect

of the said expansion. The method of cost recovery, if any, in respect of the said expansion is subject to approval by the Commission.

3.9. Option to Shipping Licensee to Construct New Interconnection/ Expansion Facilities

3.9.1. Upon the transportation licensee's consent, the shipping licensee has the option to construct New Facilities at its costs subject to the following qualifications:

- (a) the new infrastructure meets the published technical standards;
- (b) there is no overriding operational reason why the new infrastructure should not be attached to the transmission pipeline. For example, issues related to duplication of equipment, pressure losses in the systems, etc. should be taken into consideration before taking a final decision.

3.9.2. The ownership of such New Facilities will be transferred to the transportation licensee.

3.9.3. The shipping licensee has the right to appeal to the Commission in case the transportation licensee does not give its consent to the construction of the New Facilities.

END OF SECTION

4. Metering

4.1. Metering Philosophy and Metering Equipment

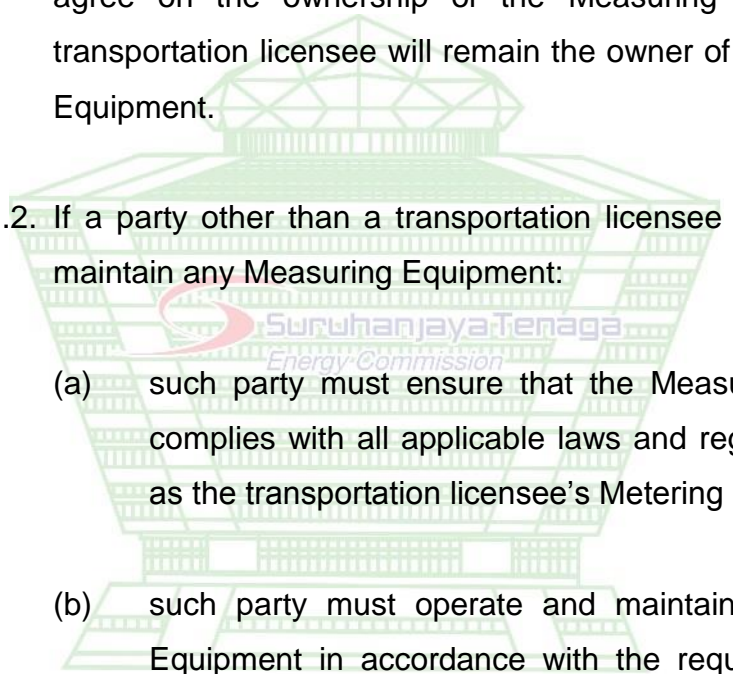
- 4.1.1. All rights, interests, covenants, and obligations of the parties in respect of the measurement and analysis of gas transported in transmission pipeline by a transportation licensee shall be as set out in the said transportation licensee's Metering Philosophy. A transportation licensee must ensure the compatibility of its Metering Philosophy with the Metering Philosophy of each and every party whose facilities are connected to the relevant transmission pipeline.
- 4.1.2. The measurement and determination of the quantities of gas at each Entry Point and Exit Point shall be carried out by a Measuring Equipment.
- 4.1.3. The transportation licensee shall measure the quantity of gas at each Entry Point and Exit Point of the transmission pipeline.
- 4.1.4. The transportation licensee shall measure the gas quality at each Entry Point. The transportation licensee does not have to measure the quality of gas at each and every Exit Point but may assume that the quality of gas delivered at one Exit Point is the same as the quality of gas delivered at another Exit Point on the transmission pipeline if it is reasonable to do so.
- 4.1.5. The Commission may direct the transportation licensee to measure the gas quality at a particular Exit Point if the Commission considers it necessary or desirable.

4.1.6. The design of each Measuring Equipment shall comply with all applicable laws and regulations as well as with the relevant Metering Philosophy.

4.2. Ownership of Measuring Equipment

4.2.1. The transportation licensee will determine whether it owns, maintains and operates all Measuring Equipment within the transmission pipeline or whether it wants to make alternative arrangements with the connected parties. If the parties do not agree on the ownership of the Measuring Equipment, the transportation licensee will remain the owner of such Measuring Equipment.

4.2.2. If a party other than a transportation licensee own, operate or maintain any Measuring Equipment:

- 
- (a) such party must ensure that the Measuring Equipment complies with all applicable laws and regulations as well as the transportation licensee's Metering Philosophy;
 - (b) such party must operate and maintain the Measuring Equipment in accordance with the requirements of the relevant AA;
 - (c) such party must provide the transportation licensee with access to data taken at the Measuring Equipment for the purpose of billing and monitoring purposes; and
 - (d) such party shall provide the transportation licensee with the right to inspect records and require validation and/or calibration, as the case may be, of the Measuring Equipment owned, operated or maintained by the party.

4.3. Validation and/or Calibration

4.3.1. The relevant party shall have the right to challenge a measurement taken by a Metering Equipment and request for a validation and/or calibration of the Metering Equipment. Once challenged, the transportation licensee must take all steps to validate and/or calibrate the Measuring Equipment.

4.3.2. The process and procedure for the validation and/or calibration of a Measuring Equipment shall be set out in the relevant Metering Philosophy.

4.3.3. The party responsible for the operation and maintenance of Measuring Equipment shall, at its own expense:

- (a) validate said Measuring Equipment; and
- (b) calibrate said Measuring Equipment

as and when deemed necessary and as may be prescribed in transportation licensee's Metering Philosophy.

4.3.4. The transportation licensee may, where necessary, undertake additional checks on the Measuring Equipment owned by connected parties.

4.3.5. When carrying out validation and/or calibration of a Measuring Equipment, the transportation licensee shall invite the relevant shipping licensees, relevant connected parties and/or the transportation licensee, as the case may be, to witness the validation and/or calibration process on a nominated Day. Thereafter, the transportation licensee shall carry out the validation and/or calibration process on such nominated Day

whether the persons invited to witness the process are present or otherwise.

4.3.6. In the event that there is a dispute in relation to the results of the validation and/or calibration of the Measuring Equipment, the disputing party shall notify the transportation licensee within a reasonable period of time or within the period specified in the relevant AA or GTA after the validation and/or the calibration. The transportation licensee shall instruct an independent expert acceptable to the disputing party to verify the validation and/or calibration. If the independent expert finds the validation to be accurate, then the disputing party shall bear the costs of the said validation and/or calibration and the costs of the independent expert. If the independent expert finds the validation and/or calibration to be inaccurate then the transportation licensee shall bear the costs of the said validation and the costs of the independent expert.

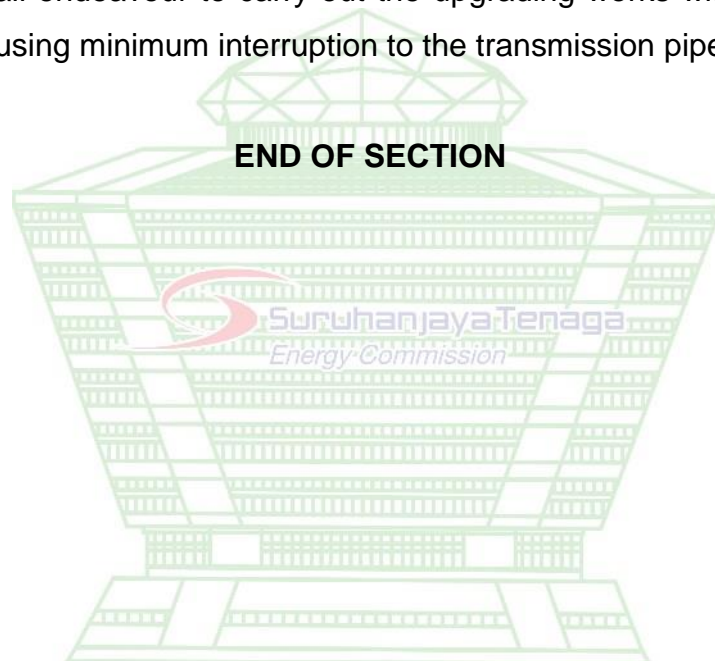
4.4. Operation and Maintenance of the Measuring Equipment

4.4.1. Unless otherwise stated, the transportation licensee shall be responsible for the operation and maintenance of the transportation licensee's Measuring Equipment in accordance with the transportation licensee's Metering Philosophy.

4.4.2. Connected parties who own Measuring Equipment shall be responsible for the operation and maintenance of such Measuring Equipment, in accordance with the transportation licensee's Metering Philosophy.

4.5. Upgrading of Measuring Equipment

In the event that there is a need to upgrade a Measuring Equipment, the transportation licensee (or the party owning, maintaining or operating the Metering Equipment pursuant to paragraph 4.2.1, as the case may be) will, within a reasonable time-frame in advance of the upgrading works, inform all of the parties who may be affected by the upgrade or upgrading works of the same. In carrying out the upgrading works, the transportation licensee (or the party owning, maintaining or operating the Metering Equipment pursuant to paragraph 4.2.1, as the case may be) shall endeavour to carry out the upgrading works with the objective of causing minimum interruption to the transmission pipeline.



5. Gas Quality

5.1. Gas Specification and Pressure

- 5.1.1. All gas injected or to be injected by the shipping licensee at an Entry Point for transportation through the transmission pipeline by the transportation licensee shall conform to the gas specifications set forth in the AA.
- 5.1.2. The gas quality standards shall set out the details of various components and may include operating pressure ranges of the transmission pipeline, gross heating value, specific gravity, hydrocarbon dew point, water dew point, H₂S content, total sulphur content, Wobbe index and inert gas content.
- 5.1.3. The transportation licensee shall specify the specifications for gas, or ranges thereof, in the AA.
- 5.1.4. The transportation licensee shall ensure that the specifications for gas are such that they are compatible across the requirements of each system connected to the transmission pipeline, such as the relevant distribution pipeline(s), and takes into account the regional and operational differences which exist in the said system(s).

5.2. Off-Specification Gas

- 5.2.1. In the event that gas to be injected, being injected or injected at any Entry Point does not comply with the gas specifications set out in the AA (“off-specification gas”), the shipping licensee shall inform the transportation licensee promptly of the same. Any such notification must include all information available to the shipping licensee in respect of the off-specification gas, including each

aspect of each specification with which it fails to comply, the degree of its failure to comply and the likely time the shipping licensee will be able to resume delivery of gas in accordance with the gas specifications.

5.2.2. The transportation licensee shall have the right to refuse off-specification gas at an Entry Point, but otherwise may accept such off-specification gas.

5.2.3. If gas received at an Entry Point is off-specification gas, the transportation licensee shall have the right to suspend (completely or partially) receipt of gas from the relevant shipping licensee with immediate effect, until the transportation licensee is satisfied that gas which the shipping licensee is able to inject into the transmission pipeline meets the gas specifications.

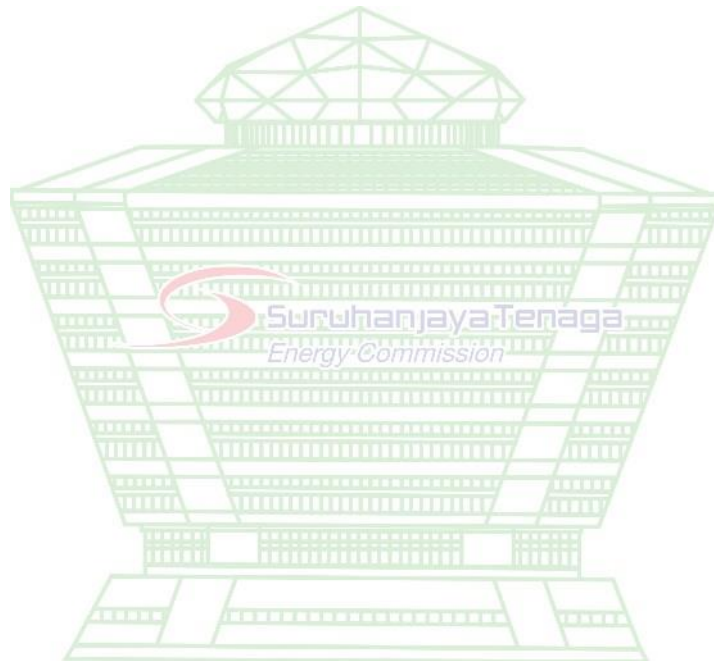
5.2.4. In the event that off-specification gas has entered the transmission pipeline, the transportation licensee must inform the relevant shipping licensees and connected parties of the situation and make inquiries of the shipping licensee as to whether the shipping licensee or its End-consumers are willing to accept the off-specification gas. Additionally, the transportation licensee acting as a Reasonable and Prudent Operator shall try to commingle the off-specification gas with other gas so that gas transferred from the transmission pipeline will, notwithstanding acceptance of that off-specification gas, comply with the standard gas quality specifications set out in the AAs.

5.2.5. Shipping licensees and connected parties shall use reasonable endeavours to accept, but otherwise may refuse to take delivery of off-specification gas at an Exit Point.

5.2.6. The transportation licensee may, in its discretion, dispose of off-specification gas that has entered into transmission pipeline, in a manner deemed fit by the transportation licensee, and in accordance with the laws and regulations of Malaysia, in order to protect transmission pipeline and/or the connected parties' facilities.

5.2.7. The AA shall contain principles and remedies related to off-specification gas entering into a party's system.

END OF SECTION



6. Balancing Mechanisms

6.1. Linepack Management and Physical Balancing

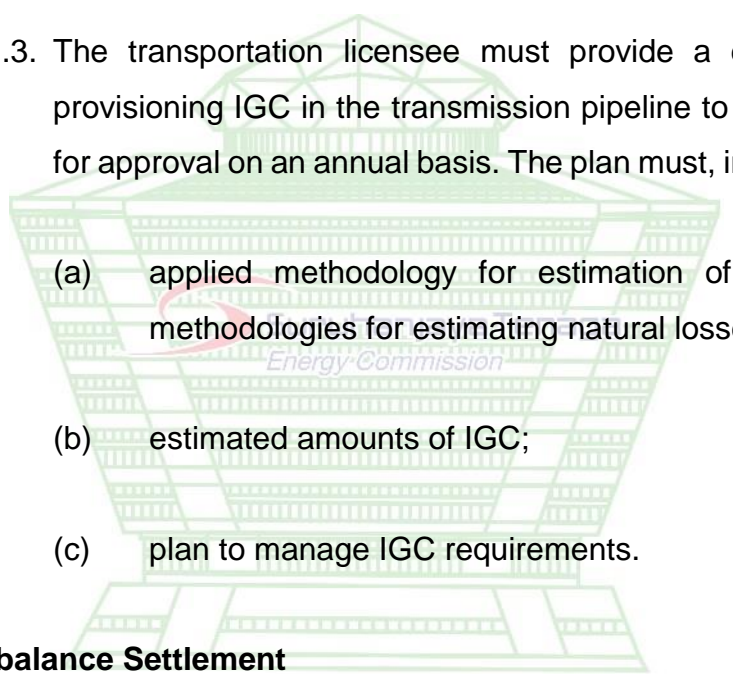
- 6.1.1. The Linepack shall be owned by the transportation licensee. It is the responsibility of the transportation licensee to manage and balance the Linepack in the transmission pipeline to ensure safety and reliability of gas supplies.
- 6.1.2. The transportation licensee shall have the right to capitalise the cost of procurement of initial minimum Linepack as part of the cost of the transmission pipeline and accordingly charge the cost in its tariff.
- 6.1.3. The transportation licensee shall buy and sell gas in order to maintain the physical balance of the transmission pipeline by entering into agreements with shipping licensees. These agreements shall be based on methodologies, pricing structure and Balancing Gas Price as directed or approved by the Commission.
- 6.1.4. If the physical balance of the transmission pipeline on any Day cannot be achieved by the purchase and sale of gas as envisaged by paragraph 6.1.3, the transportation licensee shall have the right to achieve such balancing by adjusting the Nominations of the shipping licensee, provided that the transportation licensee shall use its best endeavours to act equitably as between all shipping licensees and shall provide suitable notice to the shipping licensees. The procedure for adjustment of Nominations shall be as detailed in the AA.

6.2. Internal Gas Consumption (IGC)

6.2.1. The transportation licensee shall own and manage IGC to ensure safe and reliable gas supplies. The transportation licensee shall make every effort to minimize the IGC requirements of the transmission pipeline. The transportation licensee shall buy gas for IGC at the Balancing Gas Price.

6.2.2. The transportation licensee shall consider the costs of IGC management while calculating the tariff of its services.

6.2.3. The transportation licensee must provide a detailed plan of provisioning IGC in the transmission pipeline to the Commission for approval on an annual basis. The plan must, inter alia, include:

- 
- (a) applied methodology for estimation of IGC (including methodologies for estimating natural losses);
 - (b) estimated amounts of IGC;
 - (c) plan to manage IGC requirements.

6.3. Imbalance Settlement

6.3.1. It is the shipping licensee's responsibility to balance its gas quantities at its Entry Points and Exit Points. The transportation licensee shall impose charges in order to maintain discipline amongst the shipping licensees for a safe and reliable supply of gas. The quantum of such charges shall be such that it will allow the transportation licensee to recover costs incurred as a result of pipeline indiscipline and acts as a deterrent to shipping licensees against creating any pipeline indiscipline.

6.3.2. Subject to paragraph 6.3.3 to 6.3.10, each Month the transportation licensee shall calculate the total Positive or Negative Imbalance amount on individual shipping licensee's account. The transportation licensee shall settle this amount with the shipping licensee as per the invoicing procedures mentioned in the AA.

Negative Imbalance

6.3.3. If a shipping licensee off-takes more quantity of gas than what it injects in the transmission pipeline during a Day, then the shipping licensee is creating a Negative Imbalance in the system at the end of that Day. The shipping licensee will be allowed to operate within a Negative Imbalance Tolerance Level (NITL), to be defined by the transportation licensee in the AA, as a % of the total Daily Quantity for a Day for the account of the related shipping licensee:

$$NITL = x\% \times \Sigma \text{ Daily Quantity}$$

6.3.4. The Negative Imbalance rate is calculated based on the following formula:

$$\text{Negative Imbalance Rate} = (\text{Negative Imbalance Premium}) \times \text{Balancing Gas Price}$$

where the Negative Imbalance premium, as a %, will be determined by the transportation licensee and included in the AA.

6.3.5. The Negative Imbalance charge, payable by the shipping licensee to the transportation licensee, if the Negative Imbalance quantity is above the NITL, is calculated based on the following formula:

$$\text{Negative Imbalance Charge} = (\text{Negative Imbalance Quantity} - \text{NITL}) \times \text{Negative Imbalance Rate}$$

Positive Imbalance

6.3.6. If a shipping licensee off-takes less quantity of gas than what it injects in the transmission pipeline during a Day, then the shipping licensee is creating a Positive Imbalance in the system at the end of that Day. The shipping licensee will be allowed to operate within a Positive Imbalance Tolerance Level (PITL), to be defined by the transportation licensee in the AA, as a % of the total Daily Quantity for a Day for the account of the related shipping licensee:

$$\text{PITL} = y\% \times \Sigma \text{ Daily Quantity}$$

6.3.7. The Positive Imbalance rate is calculated based on the following formula:

$$\text{Positive Imbalance Rate} = (\text{Positive Imbalance Discount}) \times \text{Balancing Gas Price}$$

where the Positive Imbalance discount, as a %, will be determined by the transportation licensee and included in the AA.

6.3.8. The Positive Imbalance charge, payable by the transportation licensee to the shipping licensee, if the Positive Imbalance is below the PITL, is calculated based on the following formula:

$$\text{Positive Imbalance Charge} = (\text{PITL} - \text{Positive Imbalance Quantity}) \times \text{Positive Imbalance Rate}$$

6.3.9. While determining the Positive Imbalance discount and the Negative Imbalance premium, the transportation licensee shall take into account the cost of balancing the system and a deterrence charge applied on the shipping licensee to promote system balancing discipline.

6.3.10. Computations related to PITL, NITL, Positive Imbalance discount and Negative Imbalance premium shall be approved by the Commission.

Variance Charge

6.3.11. A Variance charge is applicable to a particular Transportation Path when the quantity of gas:

- (a) received is different from the Entry Point Nomination; and/or
- (b) delivered is different from the Exit Point Nomination.

by more than the Variance Tolerance Level (VTL) where,

$$VTL = z\% \times \text{Shipper's Nominated Quantity}$$

the VTL will be determined by the transportation licensee, approved by the Commission and included in the AA.

6.3.12. The transportation licensee will not impose a Variance charge for a Variance quantity within the VTL.

6.3.13. Variance rate is calculated based on the following formula:

$$\text{Variance Rate} = (\text{Variance Penalty Factor}) \times \text{Tariff}$$

where, the Variance Penalty Factor will be determined by the transportation licensee, approved by the Commission and included in the AA.

6.3.14. Variance charge is calculated based on the following formula:

$$\text{Variance Charge} = (\text{Variance Quantity} - \text{VTL}) \times \text{Variance Rate}$$

Overrun Charge

6.3.15. The shipping licensee must ensure that for each of its Transportation Path the quantities of gas injected at Entry Point and off-taken at Exit Point during a particular hour do not exceed the Maximum Hourly Quantity at such Entry Point and Exit Point.

6.3.16. An Overrun charge is applicable when in the case of Reserved Capacity, in an hour,

- (a) A shipping licensee injects into or off-takes from the transmission pipeline a quantity of gas that exceeds the Maximum Hourly Quantity for that Transportation Path by the Overrun Tolerance Level (OTL); or
- (b) A shipping licensee injects into or off-takes from the transmission pipeline a quantity of gas that exceeds the quantity specified in an Operational Flow Order (OFO) for that Transportation Path by the OTL.

6.3.17. The OTL will be calculated as:

$$\text{OTL} = a\% \times (\text{Maximum Hourly Quantity or Quantity specified in OFO})$$

where, the OTL will be determined by the transportation licensee, approved by the Commission and included in the AA.

6.3.18. If the quantity of gas injected or off-taken from the transmission pipeline for a Transportation Path is less than the Maximum Hourly Quantity or the quantity specified in the OFO, no overrun charges will be applicable for that particular Transportation Path.

6.3.19. Overrun rate is calculated based on the following formula:

$$\text{Overrun Rate} = \text{Overrun Penalty Factor} \times \text{Tariff}$$

the Overrun Penalty Factor will be determined by the transportation licensee, approved by the Commission and included in the AA.

6.3.20. Overrun charge is calculated based on the following formula:

$$\text{Overrun Charge} = (\text{Overrun Quantity} - \text{OTL}) \times \text{Overrun Rate}$$

6.3.21. The shipping licensee may apply for, by way of submitting an application to the transportation licensee, and hold, in respect of an Entry Point and an Exit Point, the ability to inject or off-take a quantity of gas in excess of such shipping licensee's Maximum Hourly Quantity ("Authorized Overrun");

6.3.22. The shipping licensee will request for an Authorized Overrun by submitting an application to the transportation licensee specifying:

- (a) the amount of gas in excess of the Maximum Hourly Quantity derived from the Reserved Capacity;

- (b) the Transportation Path that the Authorized Overrun is requested to flow along.

6.3.23. The transportation licensee will assess flowability of the transmission pipeline and is not obliged to provide the Authorized Overrun, in respect of quantities or at a rate requested by shipping licensee, where:

- (a) the transportation of the requested quantities would disrupt the gas transmission of other shipping licensees;
- (b) the transportation licensee had already scheduled for gas transmission for the relevant Day.

6.3.24. In the case of the transportation licensee permitting Authorized Overruns, it shall do so by charging the required Authorized Overrun Tariff as has been pre-determined by the transportation licensee, approved by the Commission pursuant to the Gas Supply Act 1993 and included in the AA.

6.4. Imbalance Settlement Fund

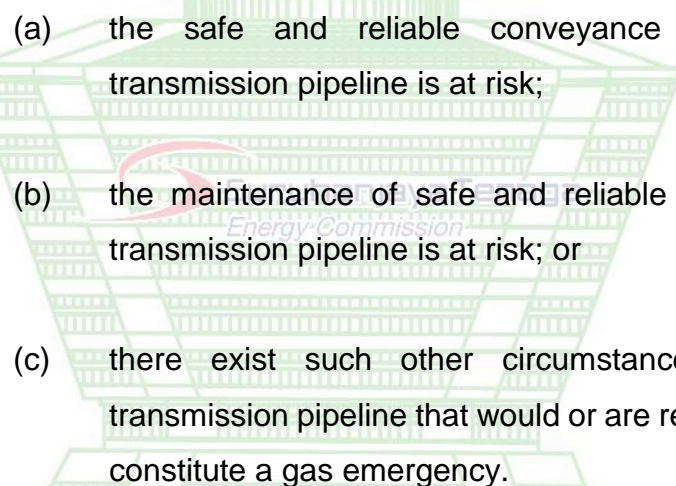
6.4.1. A transportation licensee shall establish an Imbalance Settlement Fund into which the Positive Imbalance, Negative Imbalance, Variance and Overrun charges received by the transportation licensee under this Code shall be placed.

6.4.2. Any withdrawal from this fund must be approved or shall be as directed by the Commission, taking into consideration the purposes of such charges as mentioned in paragraph 6.3.1.

6.5. Operational Flow Orders (OFO)

6.5.1. A transportation licensee shall monitor the imbalances which may adversely impact on the stability of the transmission pipeline. In adverse circumstances, the transportation licensee has the right, in its discretion, to control the shipping licensees' gas flow in order to safeguard the reliability, safety and integrity of the transmission pipeline by imposing an OFO (which may include suspension of Nominations from shipping licensees) which shipping licensees are required to follow.

6.5.2. A transportation licensee will issue an OFO, when:

- 
- (a) the safe and reliable conveyance of gas in the transmission pipeline is at risk;
 - (b) the maintenance of safe and reliable pressures in the transmission pipeline is at risk; or
 - (c) there exist such other circumstances affecting the transmission pipeline that would or are reasonably likely to constitute a gas emergency.

6.5.3. When the transportation licensee wishes to raise an OFO, it must raise an OFO notice, which shall specify:

- (a) the time at which the OFO commences;
- (b) the estimated number of Days affected by the OFO; and
- (c) reasonable details of the event or of the existence of circumstances which have resulted in the OFO.

- 6.5.4. The transportation licensee will notify the Commission of the OFO notice.
- 6.5.5. During the entire period of the OFO, the transportation licensee will keep the parties reasonably informed about the progress of elimination of the adverse conditions.
- 6.5.6. At the end of the OFO period, the transportation licensee must determine the system restoration costs, including:
- (a) capacity usage charges;
 - (b) implementation costs of OFO processes;
 - (c) replacement and repair costs of transmission pipeline assets;
 - (d) other costs.
- 6.5.7. If the occurrence of an OFO was the fault of the shipping licensee(s), the transportation licensee is entitled to recover the costs from the shipping licensee(s).
- 6.5.8. If the occurrence of an OFO was the fault of the transportation licensee, the transportation licensee is not entitled to recover the costs from the shipping licensees.
- 6.5.9. If the occurrence of an OFO was neither the shipping licensees' nor the transportation licensees' fault, the transportation licensee shall bear the costs and recover such costs through the tariffs.
- 6.5.10. The transportation licensee must appoint an independent expert to conduct an investigation to find the circumstances and reason

for such an OFO situation. The Commission may review the outcome of such investigations.

6.5.11. The transportation licensee must publish an OFO Handling Procedure which will be communicated to each shipping licensee at the time of signing the GTA. The OFO Handling Procedure shall detail:

- (a) communication and notification protocols during an OFO;
- (b) mechanisms established to pre-empt and minimize occurrences of an OFO;
- (c) capacity curtailment principles and methodologies during an OFO;
- (d) system restoration cost calculation methodology after an OFO; and
- (e) system restoration cost allocation mechanism.

END OF SECTION

7. Maintenance

7.1. Scheduled Maintenance

7.1.1. The transportation licensee is required to draw up and publish a scheduled maintenance plan for a defined period identifying those Entry Points and Exit Points where gas flow may be restricted by maintenance works, the extent of the restrictions and when they will occur. The transportation licensee must construct the plan so as to minimize disruption to affected parties and should coordinate and coincide as much as possible the maintenance with the operation and maintenance of connected parties. The scheduled maintenance plan should be communicated each Year for the maintenance during the next Year.

7.1.2. The scheduled maintenance plan should specify:

- (a) the dates for the maintenance Days in the next Year;
- (b) the time-schedule and milestones of each maintenance related project;
- (c) the extent to which the plan affects the normal operations of the transmission pipeline including the expected reduction in the Reserved Capacity for those Days;
- (d) the Entry Point and Exit Point in respect of which the injection of, conveyance through, and off-take of gas from, will be affected by the scheduled maintenance; and
- (e) such other information as may be reasonable for the transportation licensee to include.

7.1.3. The transportation licensee shall coincide the actual maintenance dates with the scheduled maintenance plan. Any changes in the scheduled maintenance plan shall be first agreed upon between the transportation licensee and the Commission and then be communicated to the affected parties within a reasonable period of time before the actual maintenance period. The reasonable time and the method of communication will be detailed in the AA.

7.2. Unscheduled Maintenance

7.2.1. The transportation licensee can decide on and execute unscheduled maintenance works, whenever, as per its justified discretion, such maintenance is essential for safety and reliability or in the event of an emergency.

7.2.2. Before the implementation of unscheduled maintenance, the transportation licensee shall inform the affected parties using any expedient means and within a reasonable time frame, with regards to the type, the extent and the provisioned duration of such works. The reasonable time and the method of communication will be detailed in the AA.

7.2.3. For the determination of the time of performance of the unscheduled maintenance, the transportation licensee shall take into consideration, to the extent possible, the opinion of the affected parties provided that there are no risks to the secure and reliable operation of the transmission pipeline.

END OF SECTION

8. Gas Day

8.1. Planning for Gas Transportation

8.1.1. The shipping licensee shall notify the transportation licensee of the quantities of gas which the shipping licensee intends to deliver at each Entry Point and receive at each Exit Point from the transmission pipeline on a Day (“Nomination”).

8.1.2. The shipping licensee may re-submit a Nomination on the Day, should there be any changes to the shipping licensee’s gas delivery requirements (“Intra-Day Nomination”). Details of the Intra-Day Nomination procedure shall be provided in the AA.

8.1.3. The shipping licensee shall comply with detailed Nomination procedure which is provided for in the AA.

8.1.4. A Nomination shall:

- (a) specify the Day or Days to which it relates;
- (b) specify the nominated quantity;
- (c) identify the End-consumer which shall off-take the corresponding quantity of gas from transmission pipeline;
and
- (d) specify the Entry Point and Exit Point.

8.2. Actual Gas Transportation Day

8.2.1. Shipping licensees shall, during the actual Day adhere to the following:

(a) Nominations:

A shipping licensee shall maintain the actual daily receipt and delivery quantities for each contracted Transportation Path in the transmission pipeline in accordance with its Nominations.

(b) Reserved Capacity:

A shipping licensee shall ensure that the actual daily flow rate of receipt and delivery of gas is within the Reserved Capacity for each Transportation Path in the transmission pipeline.

8.2.2. A transportation licensee shall have the right to adjust Nominations of the shipping licensee to ensure physical balancing of the transmission pipeline on any Day in the circumstances envisaged in paragraph 6.1.4, subject to the requirements of that paragraph.

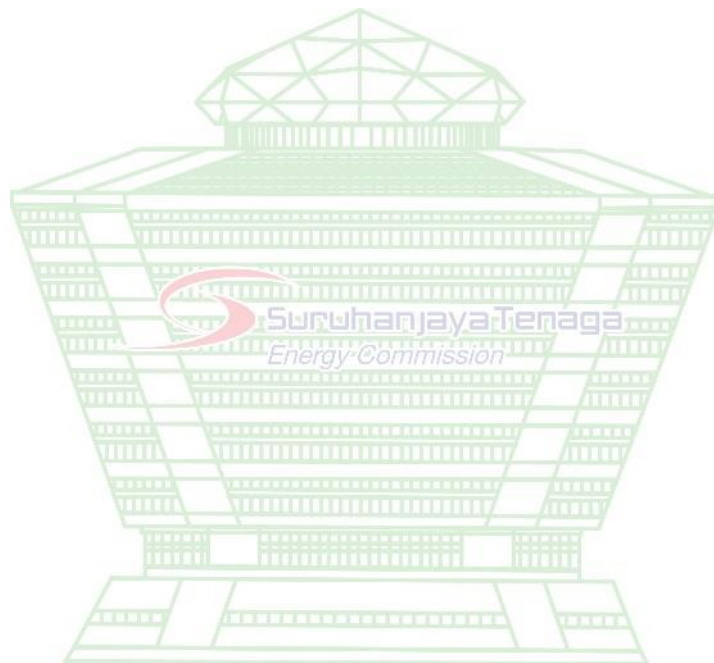
8.3. After Actual Gas Transportation Day

8.3.1. The transportation licensee shall record the shipping licensee's Inventory at the end of the Day by measuring the actual receipt and delivery quantities for each Day. Measurement of the quantity of gas shall comply with transportation licensee's Metering Philosophy.

8.3.2. The transportation licensee shall apply the Gas Quantity Allocation rules to determine the shipping licensee's actual daily receipt and delivery quantities in accordance with this Code.

8.3.3. Measurement of the actual receipt and delivery quantities as well as the Inventory shall be the basis for invoicing of charges.

END OF SECTION



9. Gas Quantity Allocation

9.1. Gas Quantity Allocation Process

- 9.1.1. The transportation licensee shall allocate to each shipping licensee in a single commingled stream or single stream, the proper share of the quantity of gas measured from the relevant Entry Point or Exit Point through a Gas Quantity Allocation process.
- 9.1.2. The Gas Quantity Allocation process will be based upon a pre-determined methodology subject to paragraph 9.2.
- 9.1.3. The transportation licensee will allocate Entry Quantity and Exit Quantity among the shipping licensees after actual gas transportation Day.
- 9.1.4. The shipping licensee acknowledges that receipt of gas at an Entry Point or delivery of gas at an Exit Point may not exactly match the Nomination or Intra-Day Nomination made in respect of it and consequently under deliveries and over deliveries of gas may occur.
- 9.1.5. All of the Entry Quantity at each Entry Point and the Exit Quantity at each Exit Point shall be allocated to shipping licensees regardless of the reason for any such under deliveries or over deliveries.
- 9.1.6. The transportation licensee shall make available the allocated data to relevant shipping licensees on a daily basis.

9.2. Gas Quantity Allocation Methodology

9.2.1. Allocated gas quantity to individual shipping licensee(s) may be calculated by transportation licensee in accordance to the methodology as set out below:

$$S = Q \times \left(\frac{N}{A}\right)$$

where,

S = Allocated quantity of gas to a shipping licensee on the Day at an Entry Point or an Exit Point;

Q = Aggregate quantity of gas delivered at an Entry Point or an Exit Point on the Day;

N = Shipping licensee's nominated quantity on the Day at an Entry Point or an Exit Point;

A = Aggregate of all shipping licensee's Nomination(s) on the Day at an Entry Point or an Exit Point.

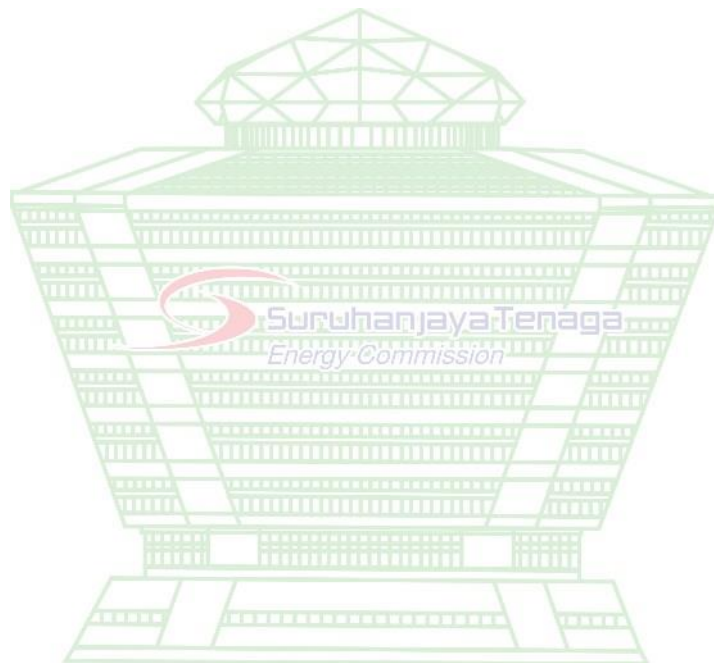
9.2.2. An alternative Gas Quantity Allocation methodology can be determined by the transportation licensee through mutual consent with shipping licensees for specific Exit Points or Entry Points in case the Gas Quantity Allocation methodology mentioned in paragraph 9.2.1 is not applicable. This pre-determined Gas Quantity Allocation methodology shall be approved by the Commission.

END OF SECTION

10. Tariffs for Transportation

Please refer to the document detailing the tariff structure.

END OF SECTION



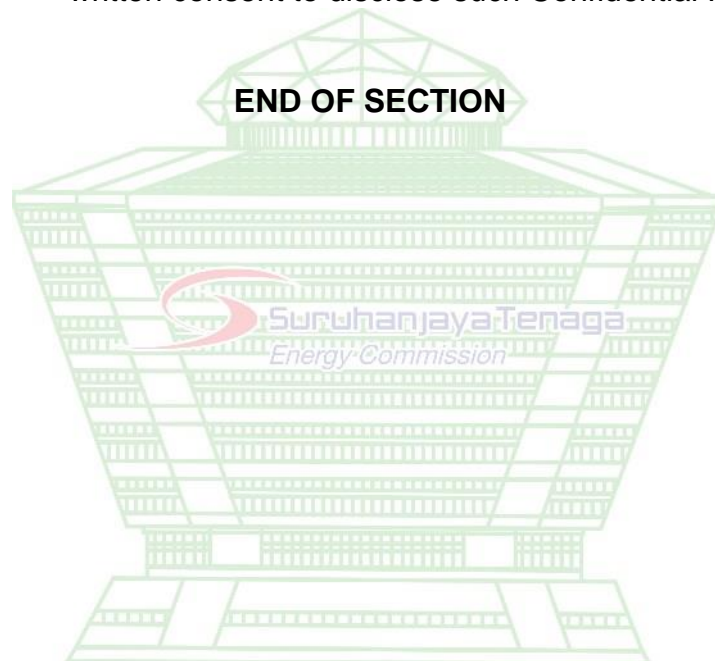
11. Communication and Confidentiality

- 11.1. The transportation licensee shall develop, for inclusion in the AA, information systems and electronic communication methods and protocols so as to ensure the prompt and efficient flow of adequate information as between the transportation licensee and other parties during both normal and emergency situations and so as to simplify insofar as possible transactions between the transportation licensee and such other parties.
- 11.2. It shall be an obligation of the transportation licensee and the shipping licensee to comply with the communication methods and protocols set out in the AA.
- 11.3. Subject to paragraph 11.4, all Confidential Information disclosed or delivered whether in writing or otherwise by any party (the “Disclosing Party”) to any other party (the “Receiving Party”) either in connection with or in consequence of the requirements of this Code shall be regarded and treated as confidential; and shall not be disclosed in any form, either in full or part.
- 11.4. Paragraph 11.3 shall not apply to any Confidential Information:
- 11.4.1. which at or after the time of disclosure to the Receiving Party becomes part of the public domain (other than by reason of a breach of this Code by the Receiving Party);
 - 11.4.2. which is known by the Receiving Party at the time it obtains the Confidential Information and the Receiving Party was not under any obligation of confidence in relation to such Confidential Information;

11.4.3. which is lawfully acquired by the Receiving Party from a third party otherwise than in breach of an obligation of confidentiality;

11.4.4. which the Receiving Party is required to disclose in order to comply with the requirements of a court or government body having jurisdiction over the Receiving Party, or which is disclosed to a court in the context of litigation to which the Receiving Party is a party; or

11.4.5. insofar as the Disclosing Party has given the Receiving Party written consent to disclose such Confidential Information.



12. Liabilities and Remedies

12.1. Relevant provisions on the liabilities and remedies of the parties will be detailed in the AA, the GTA and the GCM (as applicable) and approved by the Commission but in any event shall reflect the principles set out in paragraphs 12.2 and 12.3 below. The liability of the transportation licensee shall be capped in all circumstances by an amount to be specified in the AA, if such amount is specified.

12.2. The transportation licensee shall indemnify, defend and hold harmless each other party from and against any and all liabilities and other losses of that party in respect of:

12.2.1. injury to or sickness, disease or death of any person employed by or engaged on behalf of the transportation licensee; or

12.2.2. damage to or loss of property of the transportation licensee,

howsoever arising (including out of such party's breach of the GTA or the GCM (as applicable), or such party's breach of statutory duty or from the negligence of such party), save to the extent that any such liabilities or other losses arise from wilful misconduct of that party and subject to any express provisions of this Code or the GTA or the GCM (as applicable) which provide to the contrary in any specific case.

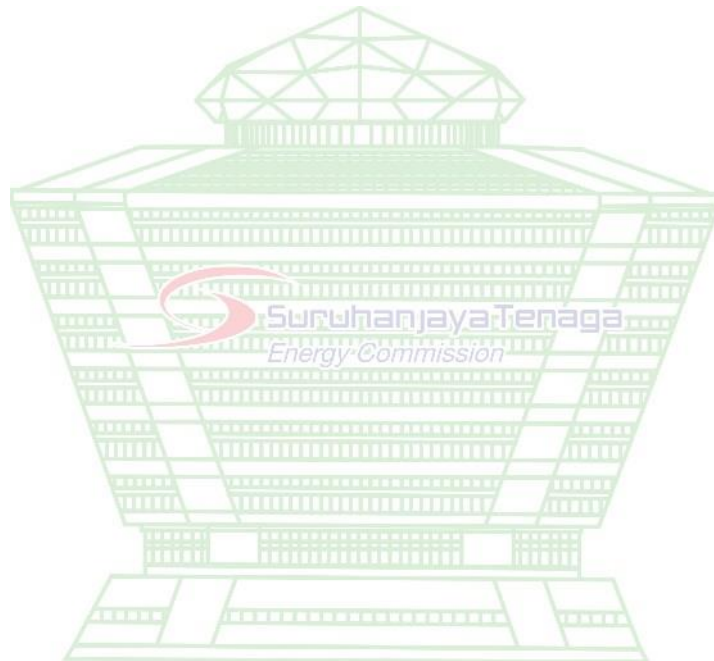
12.3. Each party (other than the transportation licensee) shall indemnify, defend and hold harmless the transportation licensee from and against any and all liabilities and other losses of the transportation licensee, in respect of:

12.3.1. injury to or sickness, disease or death of any person employed by or engaged on behalf of such party; or

12.3.2. damage to or loss of property of such party,

howsoever arising (including out of the transportation licensee's breach of the GTA or the GCM (as applicable), or the transportation licensee's breach of statutory duty or from the negligence of transportation licensee) save to the extent that any such liability or other loss arises from the wilful misconduct of transportation licensee and subject to any express provisions of this Code or the GTA or the GCM (as applicable) which provide to the contrary in any specific case.

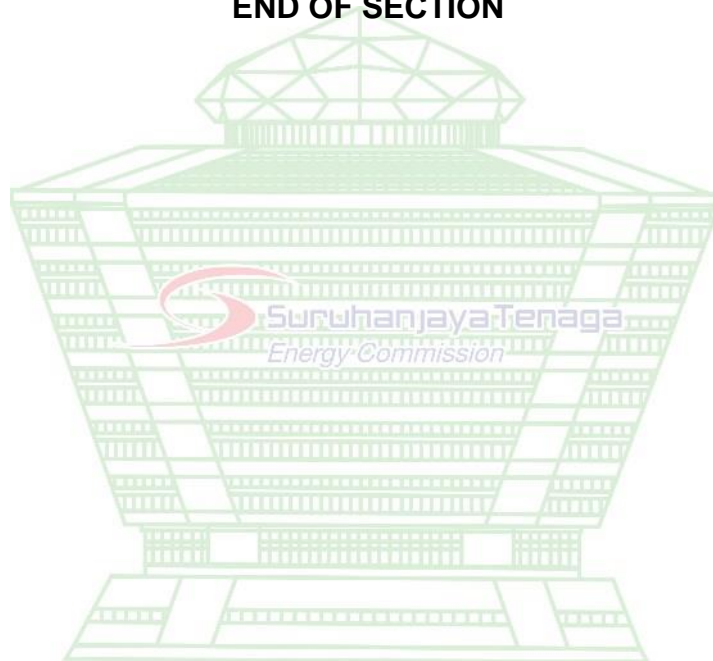
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13. Governing Law and Dispute Resolution

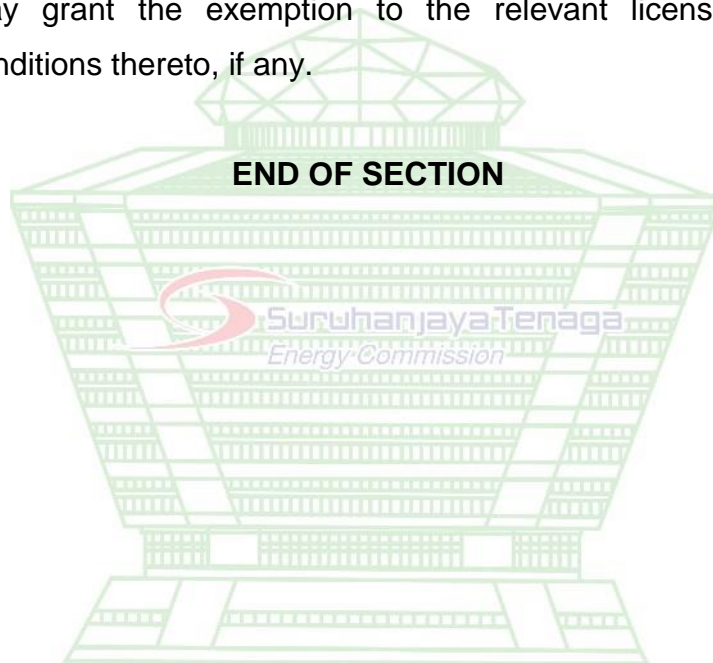
- 13.1. This Code will be governed by and construed in accordance with the laws of Malaysia.
- 13.2. Any disputes arising out of or in connection with this Code may, unless the mode of resolution for such dispute has already been specified in the Gas Supply Act 1993, the relevant AA, GTA and/or GCM, be referred to the Commission for resolution.

END OF SECTION



14. Exemption

- 14.1. A licensee whose facilities have already been in existence prior to the implementation of this Code may, if the design and build of its facilities are such that would not allow such licensee to comply with certain provisions of this Code, apply in writing to the Commission for an exemption from the same together with detailed justification as to why they should be granted such an exemption.
- 14.2. If the Commission is of the view that such an exemption is justified, it may grant the exemption to the relevant licensee together with conditions thereto, if any.



15. Definitions and Interpretations

15.1. Unless expressly indicated to the contrary or unless the context otherwise requires, terms adopted and used in this Code shall bear the same meaning as they are defined in the Gas Supply Act 1993.

15.2. In this Code, the following words shall have the following meanings ascribed to them:

“Available Firm Capacity” means the capacity of transmission pipeline which the transportation licensee in its discretion, determines from time to time, is available for the purposes of Reserved Firm Capacity based upon the following:

- (a) the capacity of transmission pipeline; and
- (b) the capacity at the relevant Entry Point and/or Exit Point;

“Available Interruptible Capacity” means capacity made available by the transportation licensee after Available Firm Capacity has been fully reserved;

“Balancing Gas Price” means the price of the gas for the purposes of balancing of the transmission pipeline;

“Balancing Mechanism” means the mechanism by the transportation licensee to facilitate the shipping licensees to balance its gas flow to ensure the system’s Linepack is within the limits set by the transportation licensee;

“Capacity Allocation” means the allocation of transmission capacity to the shipping licensees by a mechanism set by the transportation licensee and approved by the Commission pursuant to paragraph 3.3;

“Confidential Information” means

- (a) information that is by its nature confidential relating to each of the parties or its affiliates including but not limited to commercial, financial and/or technical information (the operations, plans, proposals, intentions, know-how, trade secrets, copyright and other intellectual property rights, software, technology or operational measures, market opportunities, strategies, customers and potential customers, customer data, brokers, suppliers, competitors and potential competitors, financing sources, bank and trust contracts, business and/or financial affairs of each of the parties or its affiliates), whether written, oral or otherwise recorded received by one party from the disclosing party;
- (b) information that is known by the transportation licensee to be confidential and includes:
 - (i) any information relating to the financial position of a shipping licensee or prospective shipping licensee or a connected party and, in particular, includes information relating to the assets or liabilities of the shipping licensee or prospective shipping licensee or connected party and any other matter that affects or may affect the financial position or reputation of the shipping licensee or prospective shipping licensee or connected party;
 - (ii) information relating to the internal management and structure of the shipping licensee or prospective shipping licensee or connected party or the personnel, policies and strategies of a shipping licensee or prospective shipping licensee or connected party;

- (iii) information of a shipping licensee or prospective shipping licensee or connected party to which the transportation licensee has access, other than information referred to in paragraphs (a) and (b), that has any actual or potential commercial value to the shipping licensee or prospective shipping licensee or connected party or the person or corporation which supplied that information; and
- (iv) any information in the transportation licensee's possession relating to the shipping licensee's or prospective shipping licensee's or connected party's customers or suppliers and like information.

"connected party" means any party whose facilities are physically connected to a licensee's facilities and shall, where applicable, include the relevant licensees, and "connected parties" shall be construed accordingly;

"Daily Quantity" means the fixed quantity of gas, expressed in GJ, which the transportation licensee is obliged to receive at an Entry Point and deliver at an Exit Point (exclusive of IGC) for the account of a shipping licensee on each Day under this Code, as specified in GTA;

"Day" means a period of 24 consecutive hours beginning at 0600 hours Malaysian standard time;

"End-consumers" means the recipients of gas or whose premises are connected to the transmission pipeline for the purpose of supply of gas by the shipping licensee;

“Entry Point” means a point at which gas is received into the transmission pipeline as specified in the GTA from or on account of the shipping licensee;

“Entry Quantity” means the actual quantity of gas delivered to the transportation licensee by the shipping licensee at an Entry Point, expressed in GJ;

“Exit Point” means a point at which gas is delivered from the transmission pipeline to the End-consumers as specified in GTA;

“Exit Quantity” means the actual quantity of gas delivered to the shipping licensee by the transportation licensee at Exit Point, expressed in GJ;

“Force Majeure” means any occurrence or circumstance beyond the control of the party claiming to be excused from its obligations by virtue of such occurrence or circumstance and resulting in or causing a failure by such party in the fulfilment of any of its obligations to another party and which by the exercise of due diligence such party is unable to prevent or overcome and without prejudice to the generality of the foregoing includes:

- (a) lockouts, blockades, insurrections, riots, epidemic;
- (b) hurricanes, typhoons, tsunami, natural catastrophes;
- (c) arrests and restraints of governments and people, civil disturbances;
- (d) explosions, breakages, breakdown or failure of pipelines or facilities,

- (e) equipment or machinery for production, transmission, processing or storage, hydrate obstructions of lines of pipe;
- (f) inability of the transportation licensee to accept delivery of gas due to the inability of any of shipping licensee's customers to take gas if such customer's inability is occasioned by an event or occurrence of the character described or envisaged in this provision as constituting Force Majeure partial or entire;
- (g) failure of wells, well blowouts, craterings, platform loss;
- (h) the binding order of any government or governmental authority;
or

any other causes whether of the kind herein enumerated or otherwise and whether caused or occasioned by or happening on account of the act or omission of the one of the parties hereto which affects receipt or delivery of the gas at an Entry Point and/or an Exit Point.

“Gas Connection Manual” means a manual prepared by the transportation licensee and acknowledged by a connected party with regards to the connection between the connected party's facilities and the transmission pipeline;

“Gas Quantity Allocation” means the allocation of the proper share of the quantity of gas of the shipping licensees measured from the relevant Entry Point or Exit Point through a gas quantity allocation process set by the transportation licensee and approved by the Commission pursuant to section 9;

“IGC” means Internal Gas Consumption for a time period is defined as the quantity of gas that is calculated as the sum of the gas consumed during the operation of the transmission pipeline within a particular

period (Own Consumption of gas) and the gas that is lost in a natural way during the operation of the transmission pipeline over that particular period (natural losses of gas).

“Inventory” means the designated account of shipping licensee that records the quantity of gas from time to time held in the transmission pipeline by the transportation licensee for the account of shipping licensee. It shall be maintained within Imbalance Tolerance determined by the transportation licensee.

“J” means one Joule at 101.325kPa (abs) and 15 degrees Celsius;

“Linepack” means the quantity of gas in the transmission pipeline which is required to meet the aggregate Exit Point demand of all shipping licensees without increasing the input of gas at an Entry Point or changing the pressure of the transmission pipeline. It refers to the quantity of gas in the transmission pipeline which is used for operational purposes of transportation of gas;

“Maximum Hourly Quantity”, for any given hour in a day, means a fraction of the Daily Quantity allocated for such particular hour, as approved by the Commission;

“Measuring Equipment” means measuring equipment and other ancillary facilities supporting the measuring equipment, supplied, installed, operated and maintained to measure the quantity and quality of gas;

“Metering Philosophy” means the metering philosophy developed in accordance with all relevant laws, regulations and standards in Malaysia including but not limited to the Gas Supply Act 1993 by the owner of the Metering Equipment which sets out, in relation to each Measuring Equipment, all of its technical requirements, its validation, calibration and accuracy verification procedures, its recalibration limits, its billing

correction limits and, in the case of a faulty Measuring Equipment, the procedures for correction of readings from the same;

“MJ” means megajoule of gas;

“Month” means a period extending from the beginning of the first Day in a calendar month to the beginning of the first Day in the next calendar Month;

“Negative Imbalance” means the occurrence of the event where the shipping licensee off-takes more quantity of gas than what is injected in the transmission pipeline during a Day;

“New Facilities” mean metering facilities and/or pipeline and other equipment/appliances that is an extension from the transmission pipeline;

“Nomination” means the notification by a shipping licensee to the transportation licensee of the quantities of gas which the shipping licensee intends to deliver at each Entry Point and receive at each Exit Point from the transmission pipeline on a Day;

“off-specification gas” means gas that does not comply with the gas quality standards as published in the AA;

“Operational Flow Order” means an order issued by the transportation licensee to a shipping licensee, to alter gas receipt and delivery, if in the transportation licensee’s opinion, such gas may cause imbalance or adverse operating conditions of the transmission pipeline;

“other shipping licensee” means any person other than a shipping licensee that, at the relevant time, is delivering gas into the transmission

pipeline and/or, as the context requires, receiving gas from the transmission pipeline pursuant to a GTA.

“party” includes transportation licensee, shipping licensee or a connected party, as the case may be;

“Positive Imbalance” means the occurrence of the event where the shipping licensee off-takes less quantity of gas than what is injected in the transmission pipeline during a Day;

“prospective shipping licensee” means a party who wishes to act as a shipping licensee;

“Reasonable and Prudent Operator” means a person acting in good faith with the intention of performing its obligations under all relevant contracts and this Code and who, in so doing and in the general conduct of its undertaking, exercises that degree of diligence, prudence and foresight which would reasonably and ordinarily be exercised by a skilled and experienced person complying with applicable laws and engaged in the same type of undertaking and under the same or similar circumstances and conditions;

“Reserved Capacity” means, in respect of a Day during the transportation period, the capacity in the transmission pipeline that the transportation licensee shall reserve, make available and provide to a shipping licensee, on either a Reserved Firm Capacity basis or a Reserved Interruptible Capacity basis;

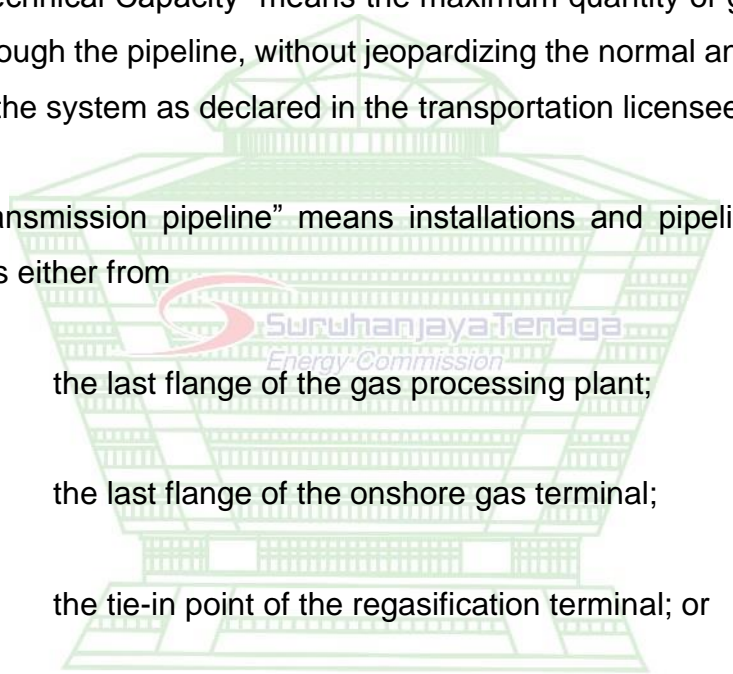
“Reserved Firm Capacity” means, in respect of a Day, the capacity in the transmission pipeline, comprising the Daily Quantity, that is reserved to a shipping licensee and which the transportation licensee shall reserve, make available and provide to the shipping licensee, in respect of a Transportation Path, and the shipping licensee’s entitlement to flow gas

through the transmission pipeline at a constant rate in GJ/day on an hourly basis;

“Reserved Interruptible Capacity” means, the provision of capacity in the transmission pipeline, comprising the Daily Quantity, that is reserved to a shipping licensee which is subject to interruption, and may be temporarily reduced (including reduced to zero), when the transportation licensee determines that capacity is not available in the transmission pipeline for any reason whatsoever;

“Technical Capacity” means the maximum quantity of gas that can flow through the pipeline, without jeopardizing the normal and safe operation of the system as declared in the transportation licensee’s AA;

“transmission pipeline” means installations and pipelines transporting gas either from

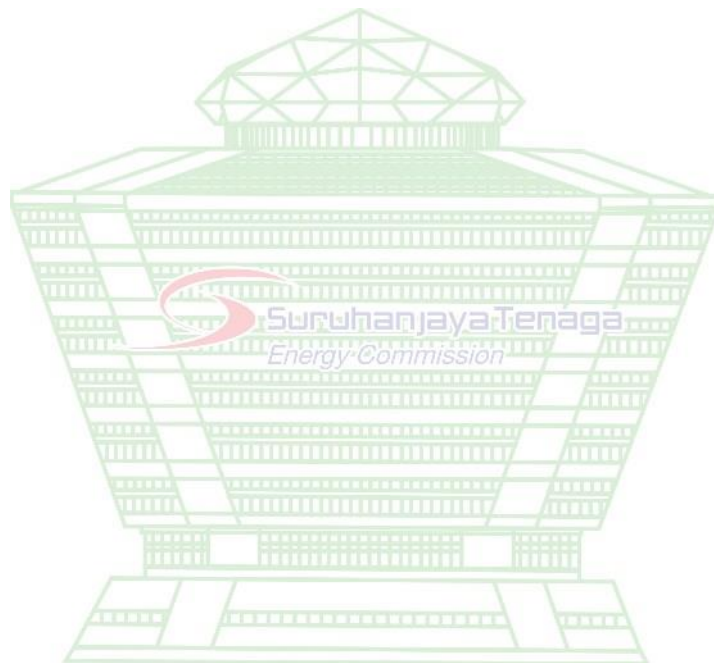
- 
- (a) the last flange of the gas processing plant;
 - (b) the last flange of the onshore gas terminal;
 - (c) the tie-in point of the regasification terminal; or
 - (d) the international border

to the last flange of the city gate station or the last flange of a regulating or metering station;

“Transportation Path” means the sections of the transmission pipeline, along which gas transported for a shipping licensee, actually or nominally flows between an Entry Point and an Exit Point;

“Variance” means the occurrence of an event when the quantity of gas received at an Entry Point differs from its Entry Point Nomination or when the quantity of gas delivered at an Exit Point differs from its Exit Point Nomination; and

“Year” means the period of time beginning at 0600 hours from 1 January in any calendar year to 0600 hours on 1 January in the following calendar year.



Interpretations

Unless the context otherwise requires, any reference in this Code to:

- (a) a statute, by-law, regulation, delegated legislation or order is to the same as amended, modified or replaced from time to time and to any by-law, regulation, delegated legislation or order made thereunder;
- (b) any agreement or instrument is to the same as amended, novated, modified, supplemented or replaced from time to time;
- (c) "including" shall mean including but not limited to;
- (d) a person shall be construed as a reference to any person, firm, company, corporation, government or agency of a state or any association or partnership (whether or not having separate legal personality) or two or more of the foregoing;
- (e) time shall be construed by reference to whatever time may from time to time be in effect in Malaysia;
- (f) the singular shall include the plural and vice versa;
- (g) where a word or expression is defined in this Code, cognate words and expressions shall be construed accordingly;
- (h) headings in this Code are for ease of reference only and shall not affect its construction;
- (i) references to "this Code" shall mean the provisions of the Third Party Access Code for Malaysian Transmission Pipelines, as

amended, modified and/or varied from time to time, and which shall be read as one document; and

- (j) references in this Code to paragraphs and sections are to paragraphs and sections of this Code.

END OF SECTION

Dated: 16 January 2017



DATUK IR. AHMAD FAUZI BIN HASAN

Chief Executive Officer
for Energy Commission