Petroleum Federation of India

Guidelines for framing Oil Regulations in India – Industry views and International Practices

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A study by PetroFed in association with Member Company and Knowledge Partner

PRICEWATERHOUSECOOPERS

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1 Executive Summary

1.1 Background

1.1.1 The Government of India enacted the Petroleum and Natural Gas Regulatory Board Act, 2006 (PNGRB Act 2006 or the Act) in March 2006. This cleared path towards establishment of a downstream oil & gas industry regulator in the country. In pursuance of section 61 of the Act, Petroleum & Natural Gas Regulatory Board (PNGRB or the Board) may, by notification, make regulations (the Oil and Gas Regulations) to carry out provisions of the Act.

1.1.2 Petroleum Federation of India (PetroFed), being an industry association representing the interests of the oil & gas industry, organised a roundtable on April 28, 2006 on Challen--ges of Developing Gas Infrastrucutre in India & thereafter submitted to MoP&NG on June 16, 2006 a paper on key regulatory issues for the gas sector incorporating learni--ngs from 17 countries. It was decided thereafter to develop a similar paper on industry views on the "Guidelines" for framing oil regulations to be put in place by the Board.

1.1.3 PetroFed sought assistance of PricewaterhouseCoopers Pvt Ltd, a member company and knowledge partner, in preparing this Paper in association with the Oil & Gas industry and specially to collate and summarise existing regulations pertaining to the selected subjects and conduct a survey of international practices so as to provide perspective to industry for suggesting guidelines. This Paper deals with selected key subjects from clause 61 (2) of the Act pertaining to petroleum products.

1.2 Methodology

1.2.1 The methodology followed for developing this paper was as follows:

a) Through a survey and research of secondary sources, the regulatory policies and practices followed internationally were brought out, with respect to selected key subjects from clause 61 (2) of the Act pertaining to petroleum products.

b) A draft Paper was prepared based on existing regulations and international experience.

c) The draft Paper was discussed in a meeting with Industry held on November 27, 2006, and;

d) After incorporating their suggestions made in the meeting the revised draft Paper was circulated by PetroFed on December 6, 2006 for comments;

e) After due analysis of the received comments from industry by PetroFed and revising the suggested guidelines against each of the above five issues the draft Paper was again circulated to industry on January 12, 2007 for any further comments.

f) Comments received were incorporated and the circulated draft Paper was finalised.

1.3 Manner of selection of entity

1.3.1 Chapter 2 deals with manner of selection of entity in an objective and transparent manner for laying, building, operating and expanding a common carrier or contract carrier (pipelines for transportation of petroleum & petroleum products) under section 19(2) of the PNGRB Act 2006.. Based on review of existing regulations in India, regulatory policies and practices followed in Indonesia, USA, UK, South Africa and comments received from companies, industry views on guidelines for framing regulations are prepared. (Refer Para 2.3 on page no 8).

1.4 Storage capacity

1.4.1 Chapter 3 deals with the capacity of storage facilities for petroleum, petroleum products requiring registration under sub-clause (iii) of clause (b) of section 11 of the PNGRB Act 2006. Based on review of existing regulations in India, regulatory policies and practices followed in Canada, South Africa, Australia, USA, Nigeria and comments received from companies, industry views on guidelines for framing regulations are prepared. (Refer Para 3.3 on page no 21).

1.5 Principles for declaring, laying, building etc. of common carrier or contract carrier

1.5.1 Chapter 4 deals with the principles to be followed for meeting the objectives of promoting competition among entities, avoiding in-fructuous investment, maintaining or increasing supplies or for securing equitable distribution or ensuring adequate availability of petroleum & petroleum products throughout the country. Based on review of existing regulations in India, regulatory policies and practices followed in Brazil, Canada, USA and comments received from companies, industry views on guidelines for framing regulations are prepared. (Refer Para 4.3 on page no 27).

1.6 Retail & Marketing Service obligations

1.6.1 Chapter 5 deals with marketing service obligations for entities and retail service obligations for retail outlets under Section 11(f) (v) of PNGRB Act 2006. Based on review of existing regulations in India, regulatory policies and practices followed in USA, South Africa and comments received from companies, industry views on guidelines for framing regulations are prepared. (Refer Para 5.3 on page no 34).

1.7 Transportation tariffs

1.7.1 Chapter 6 deals with Transportation tariffs for common carriers and contract carriers and the manner of determining such tariffs under section 22 (1) of PNGRB Act 2006. Based on review of existing regulations in India, regulatory policies and practices followed in South Africa, Canada, USA and comments received from companies, industry views on guidelines for framing regulations are prepared. (Refer Para 6.3 on page no 40).

2 Issue No. 1: Manner of selection of an entity

Issue No. 1: Manner of selection of an entity under section 19 (2)

2.1 Provisions under PNGRB Act 2006

2.1.1 Section 16, 17, 18 & 19 of PNGRB Act 2006 deals with Authorisation, process for Application for authorisation, manner of publicity of applications and grant of authorisation to an entity to lay, build or expand any pipeline as a common carrier or contract carrier. These sections have been reproduced below:

THE PETROLEUM AND NATURAL GAS REGULATORY BOARD ACT, 2006

SECTION 16: Authorisation

No entity shall –

(a) lay, build, operate or expand any pipeline as a common carrier or contract carrier,

(b) lay, build, operate or expand any city or local natural gas distribution network, without obtaining authorization under this Act;

Provided that an entity-

(i) laying, building, operating or expanding any pipeline as a common carrier or contract carrier, or

(ii) laying, building, operating or expanding any city or local natural gas distribution network,

immediately before the appointed day shall be deemed to have such authorisations subject to the provisions of this Chapter but any change in the purpose or usage shall require separate authorisation granted by the Board.

SECTION 17: Application for authorisation

(1) An entity which is laying, building, operating or expanding, or which proposes to lay, build, operate, or expand, a pipeline as a common carrier or contract carrier shall apply in writing to the Board for obtaining authorisation under this Act:

Provided that an entity laying, building, operating or expanding any pipeline as common carrier or contract carrier authorised by the Central Government at any time before the appointed day shall furnish the particulars of such activities to the Board within six months from the appointed day.

(2) An entity which is laying, building, operating or expanding, or which proposes to lay, build, operate or expand, a city or local natural gas distribution network shall apply in writing for obtaining an authorisation under this Act.

Provided that an entity laying, building, operating or expanding any city or local natural gas distribution network authorized by the Central Government at any time before the appointed day shall furnish the particulars of such activities to the Board within six

months from the appointed day.

(3) Every application under sub-sections (1), sub-section (2) shall be made in such form and in such manner and shall be accompanied with such fee as the Board may provide by regulations, specify.

(4) Subject to the provisions of this Act and consistent with the norms and policy guidelines laid down by the Central Government, the Board may either reject or accept an application made to it, subject to such amendments or conditions, if any, as it may think fit.

(6) In the case of refusal or conditional acceptance of an application, the Board shall record in writing the grounds for such rejection or conditional acceptance, as the case may be.

SECTION 18: Publicity of applications

When an application for authorisation for marketing notified petroleum, petroleum products and natural gas, or for establishing and operating a liquefied natural gas terminal, or for establishing storage facilities for petroleum, petroleum products or natural gas exceeding such capacity as may be specified by the regulations, is accepted whether absolutely or subject to conditions or limitations, the Board shall, as soon as may be, cause such acceptance to be known to the public in such form and manner as may be provided by the regulations.

SECTION 19: Grant of Authorisation

(1) When either on the basis of an application for authorisation for building, laying, operating or expanding a common carrier or contract carrier or for laying, building, operating or expanding a city or local natural gas distribution network is received or on suo moto basis, the Board forms an opinion that it is necessary to expedient or lay, build, operate or expand a common carrier or contract carrier between two specified points, or to lay, build, operate or expand a city or local natural gas distribution networks in a specified geographic area, the Board may give wide publicity of its intention to do so and may invite applications from interested parties to lay, build, operate or expand such pipelines or city or local natural gas distribution network.

(2) The Board may select an entity in an objective and transparent manner as specified by regulations for such activities.

2.2 Existing Regulatory framework

2.2.1 Government of India had issued Guidelines for Laying Petroleum Products Pipelines vide notification no F.No.P-20012/5/99-PP dated November 20, 2002. Specific clause of this Guidelines related with manner of selection of an entity is reproduced below:

Guidelines for Laying Petroleum Products Pipelines

Notification no F.No.P-20012/5/99-PP

November 20, 2002

Categorization of Pipelines

1. The petroleum product pipelines would be categorized as follows :-

(i) Pipelines originating from refineries, whether coastal or inland, upto a distance of around 300 kilometers from the refinery;

(ii) Pipelines dedicated for supplying product to particular consumer, originating either from a refinery or from oil company's terminal; and

(iii) Pipelines originating from refineries exceeding 300 Km in length and pipelines originating from ports, other than those specified in (i) & (ii) above.

Ownership and access

2. Right of user (RoU) in land for laying pipelines under the Petroleum Pipelines (Acquisition of Right of User in Land) Act 1962 for the pipelines falling under category specified in sub-clauses (i) & (ii) of clause 1, will be granted in favour of applicant company treating such pipelines as captive pipelines i.e. for exclusive use by the proposer company.

3. For grant of RoU in land for laying pipelines under the Petroleum Pipelines (Acquisition of Right of User in Land) Act 1962 for the pipelines falling under the category specified in sub-clause (iii) of clause 1, the following procedure will be followed :

3.1 A proposal for laying common usage product pipeline could originate from any single interested party or a joint-venture (herein after referred to as proposer).

3.2 The Ministry of Petroleum and Natural Gas shall publicize, in such manner as the Ministry may decide, the proposal inviting expression of interest, within a period of three months from anyone interested in the proposal. In case any company is interested in taking any capacity in the pipeline, it could express its interest and enter into "take or pay" or any other mutually agreeable contract with the proposer. The pipeline size and design would be finalized by the proposer after taking into consideration all such requests.

3.3 In case, no expression of interest is received from any industry player within a period of three months of publicizing the proposal, the proposer would be at liberty to go ahead with the project.

3.4 The designed pipeline capacity would be at least 25% more than the capacity requirement of the proposer and of those who take capacity under clause 3.2, as may be decided by the Ministry of Petroleum and Natural Gas.

3.5 The ownership of the pipeline would be that of the proposer or as may be decided by the proposer, irrespective of whether the other industry player(s) take pipeline capacity or not.

2.2.2 It may be learnt from that no approval is required to lay captive petroleum products pipelines as defined above.

2.2.3 Further, any single interested party or a joint-venture person can apply for laying common usage petroleum product pipeline.

2.3 Industry views on Guidelines for framing regulations

2.3.1 It is an established practice in well regulated markets for the government or the authorised agency to set out requirements that must be met by companies desirous of taking part in certain petroleum activities. The purpose, broadly speaking, is to ensure that the intending participant is qualified to carry out the activity. “Qualification” may relate to financial or technical capability, or both, and may also required to demonstrate experience and success in the similar activity elsewhere.

2.3.2 A balance clearly needs to be struck between, on the one hand, the desirability of having qualified operators and, on the other hand, of having many companies active in the various fields of activity to derive the benefits of competitive markets.

2.3.3 Also, qualification should be based on identifiable, objective criteria to base evaluation by the Regulator. The government or its agency should have little or no discretion to decide whether a bidder meets those criteria.

2.3.4 The qualifying criteria is recommended to include the following:

- Only incorporated entity/JV should be eligible. Additionally, applicant need to strengthen his case with letter of intent from prospective users for capacity utilisation, entity’s own projected capacity requirement, qualification and experience of promoters etc. Such parameter may attract specified maximum score. e.g. 40 percentile.

- Financial capability: Applicant financial strength should be assessed and applicant needs to furnish documents to demonstrate specified net worth. Details on equity commitment and creditors in principle approval may be submitted for evaluating financing of proposed project. Such parameter may attract specified maximum score. e.g. 30 percentile.

- Technical capability: Past experience of entity or its JV partner’s in petroleum product pipeline project execution/operation or its credentials in similar other projects to be assessed. Further, technical strength of project management company and/or construction contractor may also be considered for qualification. Such parameter may attract specified maximum score. e.g. 30 percentile.

- Any refiner needs pipeline as means of evacuation and access to markets. Accordingly, refiners should be considered eligible and should not be subject to above qualification criteria.

2.3.5 Prior to evaluation of any new application or need, existing pipeline owners in the respective corridors need to be given an opportunity to meet new requirements, in order to optimize over all investment.

2.3.6 The entity approaching the Board for authorisation to lay a petroleum product pipeline on a common carrier basis or contract carrier basis, may be having a tie-up with consultant for the project and credentials of such consultant may be taken into consideration by Board. For this purpose the Board may have a list of consultants on its panel.

2.3.7 Application contemplated in Section 17 (3) of PNGRB may specify-

(a) the name, company and principal place of business of the applicant;

(b) particulars of the owners or promoters of the applicant; the identity and particulars of the individual who will be responsible for the control, management and operation of the pipeline or facility in question;

(c) documents demonstrating the administrative, financial and technical abilities of the applicant;

(d) a description of the proposed pipeline, loading facility or storage facility to be constructed or operated, including diagrams and route map showing the route of the pipe-line, on a scale of not less than 1/10,000. The maps must also show (where known) the location of other pipe-lines crossing, distance from nearest pipeline to the proposed route and should indicate any recent housing estates, industrial development, new roads etc,

(e) a description of the tariff policies to be applied

(f) the plans and the ability of the applicant to comply with applicable labour, health, safety, security and environmental legislation;

2.3.8 The applicant may request confidential treatment of commercially sensitive information contained in an application and, subject to the concurrence of the Board, such information may be withheld from publicly available copies of the application.

2.4 Country examples

2.4.1 We have elaborated practices followed by select countries for manner of selection of entity for laying petroleum product pipelines. It may be noted that practices vary from country to country. Most of the countries require pre-approval from Government/Regulator before laying petroleum product pipelines. Detailed application process is prescribed under Act & Regulations.

Indonesia

2.4.2 The oil and gas downstream activities, as provided under the New Oil and Gas Law, are ruled under the Government Regulation No. 36 of 2004. Downstream activities consist of processing; transporting, storing and trading. Such activities can only be conducted by legal entities established under the laws of Indonesia and domiciled in Indonesia, after obtaining a Business License from the government. Foreign legal entities can establish a joint venture (PMA Company) to conduct downstream activities and obtain the required Business License. The Business License is issued separately for each activity, and one legal entity can be given more than one Business License.

2.4.3 As per Article 2: Downstream Business shall be operated by a Corporate Body which has obtained Business License issued by the Minister based on a fair, healthy, and transparent competition.

2.4.4 As per Article 26: Corporate Body which will operate business of Transportation of Oil, Gas, Oil Fuel, Gas Fuel, and/or Processing Output must have a Transportation Business License from the Minister.

2.4.5 As per Article 15: (1) To obtain the Business Licenses, a Corporate Body must submit an application to the Minister by enclosing administrative and technical requirements, which, at least, contain:

- Name of operator;
- Line of business proposed;
- Obligation to comply with operational procedure;
- Information regarding plan and technical requirements relating to the business.

2.4.6 The Minister will further stipulate terms and guidelines for the implementation of the Business Licenses.

Source: Extracts from OIL AND GAS DOWNSTREAM BUSINESS (Government Regulation No.36/2004 dated October 14, 2004)

USA

2.4.7 The US regulates only gas and oil pipelines tariffs. It does not regulate entry & exit in laying pipelines. Objective of US pipeline regulator is to curb monopoly and protect consumers in free market. The US pipeline regulatory regime has evolved over the past century and is now led by a federal agency, the Federal Energy Regulatory Commission (FERC). The commission's responsibilities include certifying natural gas pipelines, regulating the rates of pipelines transporting natural gas, crude oil and oil products, licensing non-federal hydroelectric facilities and regulating the rates and other aspects of electric utility activities

2.4.8 Liquid petroleum pipelines fall under a wide array of local, state and federal regulations and ordinances. These laws, regulations and ordinances govern all phases of a pipeline’s existence including economic and terms of service regulation, routing, design, construction, operations, maintenance, and termination of operations.

2.4.9 When a pipeline company proposes a new pipeline, the general corridor of the new route is driven by market demand and supply needs. The specific pipeline route is proposed based on a number of factors including environmental, land use, construction, access and economic. The opportunity to follow an existing pipeline or utility easement is another important factor weighed when proposing a new pipeline route. State regulations for route review or approval vary. Some State has legislation or a regulatory process for certifying that the pipeline is in the public's interest in the event the pipeline company has to exercise the right of eminent domain for acquiring a portion of the route. Whatever the state's process of route and project approval, each pipeline must also follow specific local, state and federal permitting requirements including (but not limited to). Federal environmental permitting such as U.S. Army Corps Engineers, U.S. Fish and Wildlife, Bureau of Land Management, U.S. Forest Service and others.

2.4.10 The number of agencies and specific permits required will vary depending on the

- Route.
- Type of Land crossed
- Ecological resource impacted.

2.4.11 . State environmental permits are required by such agencies as

- Department of Natural Resources.
- Pollution Control Agencies.(when separate from DNR),
- State Historical Preservation Office.
- Agricultural Departments and other agencies.
- Some states have centralized or lead agency processes for major pipeline (or other utility) projects and other states approach the permitting process in a decentralized manner.

2.4.12 Other permits are required for new pipeline projects so long as the state and local ordinance does not affect the federal pre-emption for design, operation and maintenance of an interstate transmission pipeline.

2.4.13 Regulatory Oversight of Pipeline Design, Operation and Maintenance: The design, construction, operation and maintenance of interstate liquid petroleum transmission pipelines are regulated by the U.S. Department of Transportation, Office of Pipeline Safety (OPS) under the Pipeline Safety Act. OPS has issued regulations under 49 CFR Parts 194, 195 and 199. If the transmission pipeline is an *intrastate* pipeline and the state has established an office overseeing pipeline safety, there may be additional state regulatory requirements. In some cases, states have received approval from the federal OPS to inspect interstate pipelines for compliance with federal pipeline safety regulations, although enforcement authority remains under the jurisdiction of the federal OPS to assure continuity in interstate commerce.

2.4.14 While federal and state OPS hold pipeline companies accountable for compliance with regulations, they have made relevant information available to the public on their websites (or under the Freedom of Information Act requests) to broaden the accountability of pipeline companies to the general public.

2.4.15 Pipeline safety regulations govern the entire life of pipeline operations, including design, construction, inspection, record-keeping, worker qualification, and emergency preparedness.

Source: Extracts from American Petroleum Institute

United Kingdom

2.4.16 A1. The statutory procedure for making and dealing with an application for a pipe-line construction authorisation is set down in Schedule 1 to the UK Pipelines Act. All applications should be addressed to the Secretary of State for Trade and Industry.

2.4.17 A2. Each application must contain the following information:

a) A covering letter

b) A completed PL2

c) Three sets of maps showing the route of the pipe-line, on a scale of not less than 1/10,000. It is normally convenient for the route information to be presented in the form of "strip maps" based on reproductions of Ordnance Survey sheets, scale 1/10,000. The maps must indicate the proposed route, the limits of deviation requested and land ownership and occupancy boundaries with reference numbers. The best method of presentation is a continuous red line. The maps must also show (where known) the location of other pipe-lines, electrical transmission lines, British Telecom cables, etc. crossing or close to the proposed route and should indicate any recent housing estates, industrial development, new roads etc, not shown on the Ordnance Survey.

   In addition to the statutorily required three sets of maps, a further 25 copies of the maps must be supplied with the application. These will be circulated to Government Departments, relevant local planning authorities and other interested bodies by the Department prior to the public notice period, and any comments passed to the applicant.

d) Rights of access must be presented in the form of a "Schedule of Owners and Occupiers" (otherwise known as the "Book of Reference") setting out in tabular form the name of each property along the route, a reference number by which the property may be identified on the route maps, the name and address of each owner and/or occupier and indicating whether the landowner has raised any particular objection that is unlikely to be resolved by way of undertakings or compensation by the applicant. Three copies of this document should accompany the application. In addition, it should be stated whether or not the grant of any rights or the giving of any street or river works consents is requisite to enable the pipe-line to be constructed.

e) Three copies of an Environmental Statement must also accompany the application, where applicable. Guidance on the preparation of such a statement is contained in the publication "Guidelines for the Environmental Assessment of Cross-country Pipe-lines" available from the Stationery Office.

2.4.18 A3. It is perfectly in order for the application to be made by another body in the name of the pipe-line owner and the Department would ordinarily be willing to change the name of the applicant when notified where the pipeline operator changes for whatever reason. However, the pipe-line construction authorisation can only be issued to the pipe-line owner in order to ensure that the conditions in the schedule to the pipe-line construction authorisation are imposed on the right body.

2.4.19 A4. When an application has been received, the consultation procedure mentioned in paragraph A2(c) will be followed. The Secretary of State may refuse authorisation outright or allow the application to proceed, without prejudice to his right to give a subsequent refusal. This initial stage gives the Secretary of State the opportunity to influence the shape of the proposals from the outset and avoids the need for interested parties to make representations about a scheme if it is in any case unacceptable to the Secretary of State. The fact that the Secretary of State allows an application to proceed does not amount to approval and the Secretary of State remains free to refuse it later.

2.4.20 A5. If the application is allowed to proceed, the second stage is public advertisement of the proposals and the consideration of objections if any arise. The Department will write to the applicant with suggested forms of notices to be published and to be served together with lists both of those gazettes and newspapers where notices are to be published and of those persons or organisations on which notices are to be served. The notices will include references to the limits of deviation. If a local planning authority objects when the scheme is advertised and the objection is not subsequently withdrawn, the Secretary of State must either order a public inquiry or consider the objection by the written representations procedure before considering the granting of a pipe-line construction authorisation; for other objections he must either arrange an inquiry, afford the person making the objection an opportunity to be heard or consider the objection by the written representations procedure. The Act gives the Secretary of State powers to hold a public inquiry even if no objections are received.

2.4.21 A6. All objections should be reasonable and relevant to the development and "duly" made, that is, within the relevant public notice period of at least 28 days. However, the Department is likely to ask that an applicant considers an objection which, for acceptable reasons, is made after the expiry of the public notice period and which raises an important new issue. Other objections received outside the public notice period need only be taken into account by the Secretary of State - applicants will not be asked to resolve them. Objections will not be taken into account if they are clearly malevolent or irrelevant. Objections made solely on terms of payment or compensation offered would normally be referred to the Lands Tribunal and not to a public inquiry or hearing.

2.4.22 A7. Once all objections have been resolved, it is open to the Secretary of State to grant the application or refuse it. If he grants it, he may authorise construction on the route originally applied for or on a modified route. The Secretary of State may also specify limits of deviation within which the line should be laid. A pipe-line construction authorisation containing the conditions normally included together with a note detailing the obligations placed upon pipe-line owners by the Act. Copies of all pipe-line construction authorisations issued will be sent in their entirety to the relevant local

planning authorities and other bodies if applicable. The Department will probably ask applicants for further copies of the maps for use with the pipe-line construction authorisation.

2.4.23 A8. The Secretary of State may direct, in accordance with powers under section 5 of the Act, that planning permission shall be deemed to have been granted for the construction of any pipe-line which he authorises. It is open to him to make such authorisation subject to any conditions which may properly be attached to planning permission. Such planning permission only covers the pipe-line itself and the apparatus and works associated with it. Associated apparatus and works are defined in section 65(2) and "pipe-line works" are defined in section 66 of the Act. For example, the planning permission does not cover any building to house a compressor nor the landscaping associated with that building. Consequently, planning permission would need to be obtained from the local planning authority in the normal way. If there is any doubt as to whether planning permission is required, early discussion with the Department and/or local planning authority is strongly recommended.

2.4.24 A9. The Secretary of State is required, in the exercise of his powers under the Act, to pay special attention to amenity (e.g. preserving natural beauty wherever it occurs, conserving flora and fauna etc.) (Section 43) and the protection of water against pollution (section 44).

2.4.25 A 10. It is emphasised that the powers of the Secretary of State, when granting an authorisation, are limited to approving the route, specifying limits of deviation and attaching conditions to deemed planning permission. He is not empowered to make his authorisation conditional on other matters, for example, consultation with water authorities about methods of construction or the taking of specified safety precautions.

2.4.26 A 11. If construction has not been substantially started (e.g. erection of the fence either side of the working width; removal of any obstacles (trees, shrubs etc.)) within 12 months from the date of the authorisation being granted, the authorisation is invalid unless the Secretary of State has allowed an extension of time, having first satisfied himself that that owners and occupiers have had adequate opportunity to object to an extension of time. This will require those to whom a pipe-line construction authorisation has been issued writing to all owners and occupiers asking them to write to the Department (usually within 28 days of receipt of the letters) if they have any objections to the pipe-line construction authorisation being extended, usually by a further year. All such letters should be copied to the Department. If no objections are received, then a notice will usually be issued granting the extension

Source: UK DTI

South Africa

2.4.27 Petroleum Pipelines Act 2003 of South Africa establishes regulatory framework for petroleum Pipelines. Chapter 3 of Petroleum Pipelines Act 2003 deals with licensing provisions.

2.4.28 As per Section 15, Activities requiring licence are:

15. (1) A person may not, without a licence issued by the Authority -

(a) construct a petroleum pipeline, a loading facility or a storage facility; or

(b) operate a petroleum pipeline, a loading facility or a storage facility.

(2) The Authority may -

(a) determine whether any person is engaged in any of the activities requiring a licence;

(b) direct any person engaged in any of the activities requiring a licence in terms of subsection (1) who is not in possession of the necessary licence to cease such activity.

(3) (a) Nothing in this Act precludes any potential licensee from discussing the contemplated construction or operation of petroleum pipelines, loading facilities or storage facilities with the Authority prior to filing a licence application.

(b) The Authority must furnish an applicant contemplated in paragraph (a) with all information that is necessary to facilitate the filing of an application in terms of this Act.

(4) A request for further information, notification or discussions referred to in subsection (3) may not be construed as conferring any right or expectation upon an applicant.

2.4.29 Section 16 deals with Application for licence

16. (1) Any person who has to apply for a licence in terms of section 15 must be the owner of the pipeline or facility in question and must do so in the form and in accordance with the procedure prescribed by rule, and an application must be accompanied by the application fee prescribed by rule.

(2) Any application contemplated in subsection (1) must include -

(a) the name, company number of any) and principal place of business of the applicant;

(b) particulars of the owners or shareholders of the applicant if the applicant is not a natural person;

(c) documents demonstrating the administrative, financial and technical abilities of the applicant;

(d) a description of the proposed pipeline, loading facility or storage facility to be constructed or operated, including maps and diagrams where appropriate,

(e) a description of the tariff policies to be applied:

(f) the plans and the ability of the applicant to comply with applicable labour, health, safety, security and environmental legislation;

(g) the identity and particulars of the individual who will be responsible for the control, management and operation of the pipeline or facility in question; and

(h) such other particulars as may be prescribed by rule.

(3) The applicant may request confidential treatment of commercially sensitive information contained in an application and, subject to the concurrence of the Authority, such information may be withheld from publicly available copies of the application.

2.4.30 Section 17 provides Advertising of application for licence

17. (1) When an application is made for a licence as contemplated in section 16, the applicant must publish a notice of the application in at least two newspapers circulating in the area of the proposed activity in any two official languages.

(2) The advertisement must state -

(a) the name of the applicant;

(b) the object of the application;

(c) the place where the application will be available for inspection by any member of the public;

(d) the period within which any objections to the issue of the licence may be lodged with the Authority;

(e) the address of the Authority where any objections may be lodged; and

(f) that objections must be substantiated by way of an affidavit or solemn declaration.

(3) The advertisement contemplated in subsection (1) must be published for such period or in such number of issues of a newspaper as may be prescribed by rule.

2.4.31 Section 18 provides Particular information to be supplied by applicant

18. Before considering an application for a licence in terms of this Act, the Authority -

(a) if it is of the view that the proposed construction of a petroleum pipeline, loading facility or storage facility should be altered to provide access to third parties, must inform the applicant of that view and request the applicant to supply reasons as to why the application should not be considered subject to the imposition of such condition;

(b) may direct the applicant to alter the plans for the proposed construction of petroleum facilities in order to comply with applicable health, safety, security and environmental legislation;

(c) must furnish the applicant with all substantiated objections contemplated in section 17(2) (f) in order to allow the applicant to respond thereto; and

(d) may request such additional information as may be necessary to consider the application properly.

2.4.32 Section 19 deals with Finalisation of application

19. (1) The Authority must decide on an application within 60 days after -

(a) the expiration of the period contemplated in section 17(2)(d), if no objections have been received; or

(b) receiving the response of the applicant as contemplated in section 18(c).

(2) The Authority must provide the applicant with a copy of its decision as well as a list of the factors on which the decision was based.

(3) The Authority may issue separate or combined licences for -

(a) the construction of petroleum pipelines or pipeline systems, loading facilities and storage facilities; and

(b) the operation of petroleum pipelines or pipeline systems, loading facilities and storage facilities.

2.4.33 Section 20 prescribes Conditions of licence

20. (1) The Authority may impose licence conditions within the following framework of requirements and limitations:

(a) A licensee must carry out the construction or operations activities for which the licence is granted;

(b) to promote historically disadvantaged South Africans, in the manner prescribed;

(c) to provide for an appropriate supply of petroleum products to meet market requirements;

(d) licensees must provide the prescribed information to the Authority on the commercial arrangements regarding the participation of historically disadvantaged South Africans in the licensees' activities;

(e) the petroleum loading, pipeline and storage activities of vertically integrated companies may be required to be managed separately with separate accounts and data and with no cross-subsidisation;

(f) a petroleum pipeline may be licensed for either crude oil or petroleum products, or both, as long as sufficient pipeline capacity is available for crude oil to enable the uninterrupted operation of the crude oil refinery located at Sasolburg, to operate at its normal operating capacity at the commencement of this Act and for so long as that refinery continues as a going concern;

(g) shippers of petroleum must have access to petroleum pipelines and a pipeline's capacity must be shared among all users and prospective users thereof in proportion to their needs and within the commercially reasonable and operational constraints of the pipeline, subject to paragraph (f) and an appropriate payment to reserve the required capacity as a condition of service;

(h) interested parties must be allowed to negotiate changes with pipeline licensees in the routing, size and capacity of proposed petroleum pipelines;

(i) pipeline licensees are not obliged to incur any additional expenditure to provide the changes referred to in paragraph (h) and the total cost for the pipeline must be shared equitably between the pipeline licensee and the parties requesting the change;

(j) licensees must allow interconnections with the facilities of other licensees, as long as the interconnection is technically feasible and the person requesting the interconnection bears the increased costs occasioned thereby;

(k) third parties must have access to loading facilities with the capacity being shared among all users and prospective users in proportion to their needs, subject to an appropriate payment to reserve the required capacity as a condition of service;

(l) interested parties may negotiate with loading facility licensees for changes in the capacity of loading facilities;

(m) loading facility licensees are not obliged to incur any additional expenditure to provide the changes contemplated in paragraph (1) and the total cost for the loading facility must be shared equitably between the loading facility licensee and the party requesting the change;

(n) third parties must in the manner prescribed by regulation have access on commercially reasonable terms to uncommitted capacity in storage facilities:

Provided that an applicant for a storage facility licence or an amendment of such licence may elect to give users access to the facility on the basis that the capacity is shared among all users in proportion to their needs;

(o) interested parties may negotiate with storage licensees for changes in the capacity of storage facilities;

(p) storage licensees are not obliged to incur any additional expenditure to provide the changes contemplated in paragraph (o) and the total cost for the storage facility must be shared equitably between the storage licensee and the party requesting the change;

(q) tariffs set by the Authority for petroleum pipelines;

(r) tariffs approved by Authority for loading facilities and storage facilities;

(s) licensees must maintain their licensed loading facilities, petroleum pipelines or storage facilities in a fully operational condition;

(t) the time period within which petroleum pipelines, loading facilities or storage facilities must become operational must be fixed;

(u) licensees must provide information necessary for the Authority to perform its functions;

(v) standards of construction and operation approved by the Authority, including incorporating by reference any existing standard in terms of other legislation;

(w) health, safety, and environmental standards required by the Authority, including incorporating by reference any existing standard in terms of other legislation;

(x) licensees must -

(i) submit to the Authority annually an emergency plan for implementation in the event of system failures, accidents and other emergencies;

(ii) train the appropriate operating and maintenance employees with regard to the applicable portions of the plan; and

(iii) establish liaison with the appropriate emergency response officials with respect to the plan;

(y) petroleum pipeline licensees must have a plan for reviewing changes in conditions affecting the integrity and safety of their pipelines, including periodic patrolling and reporting of construction activities and such changes of conditions;

(z) licensees must establish and maintain liaison with local authorities that issue permissions for excavations by third parties that could damage the licensees pipelines;

(aa) licence conditions may be temporarily changed by the Authority in an emergency and, where possible, in consultation with the licensee; and

(bb) strategic security standards required by the Authority, including incorporating by reference any existing standard in terms of other legislation.

(2) (a) Any person aggrieved by a condition imposed by the Authority in terms of subsection (1) may in the prescribed manner apply to the Authority to amend or delete the condition.

(b) If the aggrieved person is not the licensee the Authority must inform the licensee of the application.

(c) Whenever there is an application in terms of paragraph (a), the Authority must conduct an investigation and may, for that purpose, summon witnesses to appear before it.

(d) At the conclusion of the investigation the authority must grant or refuse the application and furnish reasons for its decision.

2.4.34 Section 21 provides for Non-discrimination

21. Licensees may not discriminate between customers or classes of customers regarding access, tariffs, conditions or service except for objectively justifiable and identifiable grounds approved by the Authority.

Source: Petroleum Pipelines Act 2003, South Africa

3 Issue No. 2: Storage capacity

Issue No. 2: The capacity of storage facilities for petroleum, petroleum products requiring registration under sub-clause (iii) of clause (b) of section 11

3.1 Provisions under PNGRB Act 2006

3.1.1 Section 11 (b) (iii) and 15 of PNGRB Act 2006 deals with functions of Board and Registration of entities to establish storage facilities for petroleum and petroleum products exceeding such capacity as may be specified by regulations. These section have been reproduced below:

THE PETROLEUM AND NATURAL GAS REGULATORY BOARD ACT, 2006

SECTION 11(b) (iii): Functions of Board

The Board shall register entities to establish storage facilities for petroleum, petroleum products or natural gas exceeding such capacity as may be specified by regulations.

Section 15: Registration of entities

(1) (c) Every entity desirous of establishing storage facilities for petroleum, petroleum products or natural gas exceeding such capacity as may be specified by regulations, and fulfilling the eligibility conditions as may be prescribed shall make an application to the Board for its registration under this Act

Provided that no registration under this Act shall be required for any entity carrying on above activity immediately before the appointed day but shall inform the Board about such activity within six months from the appointed day.

3.2 Existing Regulatory framework

3.2.1 The Petroleum Act, 1934 provides for the import, transport, storage, production, refining and blending of petroleum. Specific provisions dealing with storage of petroleum products are reproduced below:

Petroleum Act 1934

Section 2: Definitions

(b) "Petroleum Class A" means petroleum having a flash-point below Twenty-three degrees centigrade;

(bb) "Petroleum Class B" means petroleum having a flash point of twenty- Three degrees centigrade and above but below sixty-five degrees Centigrade;

(bbb) "Petroleum Class C" means petroleum-having flash point of sixty- Five degrees

(c) ["flash-point"] of any petroleum means the lowest temperature at which it yields a vapour which will give a momentary flash when ignited, determined in accordance with the provisions of Chapter II and the rules made thereunder;

Section 7: Control over Petroleum

No licence needed for transport or storage of limited quantities of petroleum Class B or petroleum Class C. A person need not obtain a licence for the transport or storage of-

(i) petroleum Class B if the total quantity in his possession at any one place does not exceed two thousand and five hundred litres and none of it is contained in a receptacle exceeding one thousand litres in capacity; or

(ii) petroleum Class C if the total quantity in his possession at any one place does not exceed forty-five thousand litres and such petroleum is transported or stored in accordance with the rules made under Sec. 4.

Section 8

No licence needed for import, transport or storage of small quantities of petroleum Class A-

(1) Notwithstanding anything contained in this chapter, a person need not obtain a licence for import, transport or storage of petroleum Class A not intended for sale if the total quantity in his possession does not exceed thirty litres.

(2) Petroleum Class A possessed without a licence under this section shall be kept in securely stoppered receptacles of glass, stoneware or metal which shall not, in the case of receptacles of glass or stoneware, exceed one litre in capacity or, in the case of receptacles of metal exceed twenty-five litres in capacity.

3.3 Industry views on Guidelines for framing regulations

3.3.1 Storages for petroleum products become crucial in times of war and natural disasters. Purely from this point of view, entities other than refinery and entities registered under Section 11 (b) (i) of PNGRB having storages capacity of more than 10,000 KL should be registered. Board should be empowered to requisition such storages during national crisis. Licensing requirements from safety angle is independent as it is driven by other considerations and statutory requirements.

3.4 Country examples

3.4.1 Typically, international practice is to regulate petroleum storage facilities through Environment laws.

Canada

3.4.2 All underground storage tanks for petroleum products with a capacity of more than 230 litres, as well as aboveground storage tanks with a capacity of more than 2,500 litres are regulated and therefore must be registered with CSC National Headquarters (NHQ), which serves as the "appropriate federal department" (AFD). To this effect, an official CSC form must be completed, signed, and dated for each registered tank.

3.4.3 The custodian of a petroleum storage tank must register it within 60 days after the installation is completed, or within 60 days of the tank being filled for the first time, whichever comes first. For compliance purposes, NHQ must be advised of all changes that pertain to the information requested in the registration form, and be notified within 60 days of a tank replacement, modification, or withdrawal from service.

Source: Correctional services of Canada

South Africa

3.4.4 As per Petroleum Pipelines Act 2003 of South Africa, "storage facility" means any bulk storage facility and its auxiliary equipment that is or is intended to be used for the storage of petroleum and excludes storage facilities-

(a) on the premises at which petroleum products are manufactured and where such storage facilities are integral to the process of manufacture;

(b) for own final use;

(c) used for the retailing of petroleum products to the public;

(d) used by an agricultural cooperative exclusively for its members; and

(e) used to transport petroleum by road, rail, sea and air;

3.4.5 As per Petroleum Pipelines Act 2003 of South Africa, Activities requiring licence are:

15. (1) A person may not, without a licence issued by the Authority -

(a) construct a petroleum pipeline, a loading facility or a storage facility; or

(b) operate a petroleum pipeline, a loading facility or a storage facility.

Source: Petroleum Pipelines Act, 2003 South Africa

Australia – State of Queensland

3.4.6 Storing crude oil or a petroleum product in tanks or containers having a combined total storage capacity of:

- 10 000 litres or more but less than 500 000 litres; or
- 500 000 litres or more

is defined as ERA 11 under Schedule 1 of the Environmental Protection Regulation 1998.

3.4.7 Depending on the above capacities, crude oil or petroleum product storage is either a level 1 or level 2 ERA and needs a development permit and a registration certificate.

Source: Environment Protection agency, State of Queensland, Australia

United States of America

3.4.8 An underground storage tank system (UST) is a tank and any underground piping connected to the tank that has at least 10 percent of its combined volume underground. The federal UST regulations apply only to underground tanks and piping storing either petroleum or certain hazardous substances.

3.4.9 The following USTs do not need to meet federal requirements for USTs:

- Farm and residential tanks of 1,100 gallons or less capacity holding motor fuel used for non-commercial purposes;
- Tanks storing heating oil used on the premises where it is stored;
- Tanks on or above the floor of underground areas, such as basements or tunnels;
- Septic tanks and systems for collecting storm water and wastewater;
- Flow-through process tanks;
- Tanks of 110 gallons or less capacity; and
- Emergency spill and overfill tanks. "

Some state/local regulatory authorities, however, may include these tank types--be sure you check with these authorities.

Source: Environmental Protection Agency, USA

Nigeria

3.4.10 As per Petroleum Act of Nigeria, any person storing petroleum products is required to obtain license from Minister. However, no such license is required for storage of not more than 500 litres of kerosene and such other categories of petroleum products as may be exempted from the application by the Minister and storage of petroleum products undertaken

Source: Petroleum Act of Nigeria

4 Issue No 3: Principles for declaring, laying, building, etc. of common carrier or contract carrier

Issue No 3: Principles to be followed for meeting the objectives of promoting competition among entities, avoiding in-fructuous investment, maintaining or increasing supplies or for securing equitable distribution or ensuring adequate availability of petroleum & petroleum products throughout the country

4.1 Provisions under PNGRB

4.1.1 Section 2, 11 and 20 of PNGRB states definitions, functions of the Board and deals with declaring, laying, building etc., of common carrier or contract carrier and city or local natural gas distribution network. These section are reproduced below:

THE PETROLEUM AND NATURAL GAS REGULATORY BOARD ACT, 2006

SECTION 2: Definitions

(i) "common carrier" means such pipelines for transportation of petroleum, petroleum and natural gas by more than one entity as the Board may declare or authorise from time to time on a non-discriminatory open access basis under sub-section (3) of section 20, but does not include pipelines laid to supply-

(i) petroleum products or natural gas to a specific consumer; or

(ii) crude oil;

Explanation - For the purposes of this clause, a contract carrier shall be treated as a common carrier, if –

(i) such contract carrier has surplus capacity over and above the firm contracts entered into; or

(ii) the firm contract period has expired.

Section 11: Functions of the Board

(e) regulate, by regulations,–

(i) access to common carrier or contract carrier so as to ensure fair trade and competition amongst entities and for that purpose specify pipeline access code;

(ii) transportation rates for common carrier or contract carrier;

(iii) access to city/local natural gas distribution network so as to ensure fair trade and competition amongst entities as per pipeline access code;

Section 20: Declaring, laying, building etc., of common carrier or contract carrier and city or local natural gas distribution network

(1) If the Board is of the opinion that it is necessary or expedient, to declare a pipeline for transportation of petroleum, petroleum products and natural gas or an existing city or local natural gas distribution network, as a common carrier or contract carrier, or to regulate or allow access to such pipeline or network, it may give wide publicity of its intention to do so and invite objections and suggestions within a specified time from all persons and entities likely to be affected by such decision.

(2) For the purposes of sub-section (1), the Board shall provide the entity owning, the pipeline or network an opportunity of being heard and fix the terms and conditions subject to which the pipeline or network may be declared as a common carrier or contract carrier and pass such orders as it deems fir having regard to the public interest, competitive transportation rates and right of first use.

(3) The Board may, after following the procedure as specified by the regulations under section 19 and sub-sections (1) and (2), by notification -

(a) declare a pipeline or city or local natural gas distribution network as common carrier or contract carrier; or

(b) authorise an entity to lay, build, operate or expand a pipeline as a common carrier or contract carrier; or

(c) allow access to common carrier or contract carrier, city or local natural gas distribution network; or

(d) …..…….(Not specified as not applicable to petroleum products pipeline).

(4) …… (Not specified as not applicable to petroleum products pipeline)

(5) For the purposes of this section, the Board shall be guided by the objectives of promoting competition in marketing among entities, avoiding infructuous investment, maintaining or increasing supplies or for securing equitable distribution and availability of petroleum, petroleum products and natural gas throughout the country and follow such principles as the Board may by regulations, determine in carrying out its functions under this section

4.2 Existing Regulatory framework

4.2.1 As per guidelines for laying petroleum products pipelines in India issued vide notification no F.No.P-20012/5/99-PP dated November 20, 2002 by Government of India, any single interested party or Joint Venture could propose for laying common usage product pipeline.

Guidelines for Laying Petroleum Products Pipelines

Notification no F.No.P-20012/5/99-PP

November 20, 2002

Clause detailing Categorization of Pipelines, Ownership and access is reproduced in para 2.2.1 above.

3.2 The Ministry of Petroleum and Natural Gas shall publicize, in such manner as the Ministry may decide, the proposal inviting expression of interest, within a period of three months from anyone interested in the proposal. In case any company is interested in taking any capacity in the pipeline, it could express its interest and enter into "take or pay" or any other mutually agreeable contract with the proposer. The pipeline size and design would be finalized by the proposer after taking into consideration all such requests.

3.3 In case, no expression of interest is received from any industry player within a period of three months of publicizing the proposal, the proposer would be at liberty to go ahead with the project.

3.4 The designed pipeline capacity would be at least 25% more than the capacity requirement of the proposer and of those who take capacity under clause 3.2, as may be decided by the Ministry of Petroleum and Natural Gas.

3.5 The ownership of the pipeline would be that of the proposer or as may be decided by the proposer, irrespective of whether the other industry player(s) take pipeline capacity or not.

3.6 The excess capacity, as mentioned in clause 3.4, would be available for use by anyone, other than the owner and those taking capacity under clause 3.2, at the approved tariff, as per the provisions under clause 4, on "common carrier" basis i.e. capacity would be made available to anyone interested and offering to pay the tariff. In case such demand exceeds this excess capacity, the allocation of the excess capacity would be pro-rated amongst the interested users other than the owner and those taking capacity under clause 3.2

4.3 Industry views on Guidelines for framing regulations

4.3.1 A contract carrier shall be treated as a common carrier, if such contract carrier has surplus capacity over and above the firm contracts entered into or the firm contract period has expired. The spare capacity would be decided after meeting the Entity's own requirement. Entity's own requirement may be decided on the basis of the planned throughput for the current year or average actual throughput on entity's own account during the previous 36 months which ever, is higher and future additional requirements, if any, and should exclude emergency requirements.

4.3.2 In case of New contract carrier, the spare capacity may be decided by the entities (owner /shippers) involved and for period agreed upon by them. New pipeline should also keep provision for emergency requirements. This should be reviewed periodically by Board and accordingly capacity not utilised in contract carrier will be made available to others. Such capacity will be allocated to all the applicants in the ratio of their demand. Allotted capacity will be on 'pay or use' basis, with forfeiture if lapses occur in two consecutive years.

4.3.3 It may not be made mandatory to construct pipeline with 25% spare capacity at initial stage.

4.4 International Experience

4.4.1 Countries usually treat oil and gas pipelines differently in terms of regulatory regimes and overall approach. Since pipelines are the only method of transporting gas on land, countries use relatively stringent regulations to control the monopoly. On the other hand, oil pipelines face significant competition from other modes of transport (rail, road and sea/river), making it possible to use a somewhat less stringent regulatory approach.

4.4.2 For oil, regimes vary across countries and depend on the nation's objectives, starting point and philosophy. There are some points of similarity across nations: most allow long-term contracts, ensure universal coverage for pipelines and allow interconnects through negotiation. Long-term contracts are allowed so that financiers secure receivables, which then spur investment. Universal coverage for pipelines is necessary to ensure fairness and simplicity. To minimise litigation, interconnectivity is based on negotiations in most countries. Furthermore, in case of oil, countries are less likely to intervene in the market since there are other modes of transport available.

4.4.3 Countries like Spain and the UK allocate pipeline capacity to new entrants on a non-discriminatory basis only if available, i.e., contract carrier. Thailand, on the other hand, makes prorated allocations to newcomers.

4.4.4 Typically, owner of the pipeline will have first right of use. Once right of use has been determined, the remaining capacity needs to be allocated on a non-discriminatory, pro-rated basis. This ensures that all the players looking for capacity can receive a share if they pay the prescribed tariff. Once all the capacity has been allocated, no new entrant can demand an allocation until a current user frees capacity. Such a principle balances the needs of the pipeline owner and that of new entrants, with new entrants being allowed to use the capacity when the pipeline owner does not need it. Internationally, countries use one of two regimes to regulate their pipelines:

- Common carrier: In this regime, capacity is initially allocated on a non-discriminatory, non-preferential basis by auction and bidding process. Once capacity is fully allocated, subsequent requests for capacity are still allowed. If a pipeline is already full, the capacity is re-allocated proportional to the volumes requested. In a common carriage pipeline there are no contracts and shippers have no right to a constant, predetermined, amount of space. In addition to a variable charge, users of the system pay a fixed charge for transportation service that is related to the costs of providing the transportation. Pipelines offering common carriage construct new capacity on the basis of anticipated demand for service. Indeed they frequently have a statutory obligation to operate in this way. In addition, it is often difficult to quantify the capacity that is used by a system user. This is a key element of any contract.

- Contract carrier: This regime is a variation of the common carrier regime. Capacity is initially allocated on a non-discriminatory, non-preferential basis by auction and bidding process. Subsequent allocation is allowed only if there is free capacity on the pipeline. Initial participants never loose their capacity (unless they do not use it) In a contract carriage pipeline, users contract to purchase an amount of space for a specific period ("firm capacity") and to pay for that space whether or not they use it. In return they are guaranteed access to the contracted space. If all the space in the pipeline is contracted, a new potential customer for firm capacity will have to wait in line either until an existing user gives up its space, until the pipeline expands, or until someone builds a new pipeline. Facilities constructed under contract carriage are built to order— construction occurs only when users ("shippers") are willing to sign contracts obligating them to pay for the new capacity.

4.4.5 Third Party Access (TPA) or Open Access is the right of a third party (either a producer, a consumer, a shipper or a trader) to access/make use of the transportation and/or distribution related services of a pipeline company for a charge (tariff) to move products owned by the third party. In 1992, the European Commission defined it as "a regime providing for an obligation, to the extent that there is capacity available, on companies to offer terms for the use of their pipelines, in return for payment". It evokes a right for any third party to buy the transportation service of a pipeline company and an obligation for the latter to offer such services, although the extent of such right and obligation may be limited by relevant legislation. It therefore differs significantly from voluntary access, which can take place freely without public intervention. In practice, essentially two kinds of TPA exist: a regulated regime and a negotiated one.

4.4.6 In a Regulated TPA, the public authorities set the rules and access conditions, on the basis of published tariffs and/or other terms and obligations for the use of the system. Negotiated TPA requires the pipeline company to publish its basic conditions for access and related services, but leaves the parties concerned the freedom to define access terms and conditions.

4.4.7 Regardless of whether TPA is regulated or negotiated, there are certain conditions for the application of such a regime:

- There should be a sufficiently well developed market with excess pipeline capacity;

- There should be a sufficiently large number of suppliers or consumers who seek to have access to the spare capacity rather than building their own pipelines; and

- Physical links exist or are feasible with the existing pipelines.

4.4.8 In addition, to ensure access to all network users (or a defined class of customers, known as “eligible” customers), be they customers or companies, on equal conditions, impartiality and neutrality, a number of other issues have to be considered before the introduction of TPA in a country. They include:

- Eligibility for participation: it has to be decided which category of companies should be able to benefit from TPA and, for instance, whether they should be of a certain minimum size (if consumers) or have to meet technical and financial standards (if shippers).
- Definition of the services that may be involved apart from the transportation: e.g. metering, quality management, storage, back-up and stand-by services.
- Determination of the extent to which the pipeline company is obliged to provide these services separately; i.e. to what degree these services should be unbundled, which also raises the question of whether the pipeline company has to split its activities into separate companies.
- Definition of available capacity and the procedures to be followed when capacity is not sufficient (queuing procedures, requirements to build capacity).
- How to calculate the tariffs for transportation and related services.
- How much information the pipeline company will be required to disclose regarding availability of, and calculation of charges for, services.
- The relationship (degree of discrimination) between the pipeline company’s own customers and third parties requesting access.
- Mechanisms to avoid abuse of dominant positions.
- The obligation to unbundle accounts.
- Technical rules to ensure inter-operability between petroleum products of different quality.

Source: IEA, PwC analysis.

4.5 Country Examples

4.5.1 Different countries have different practices depending upon the market characteristics and political system. Examples from select countries are provided below:

Brazil

4.5.2 Preference given to pipeline owner for access. ANP has established rules for capacity allocation on the basis of optimal operating conditions and not economic principles (bidding) or other allocation principles (prorating capacity). Capacity allocation is based following principles:

- Monthly volumes being transported in last 3 years
- Operational need of integrating pipeline to refineries or terminals
- Seasonalities experienced by the carrier
- ANP evaluates conditions every 5 years
- General allocation process
- Carrier makes public request of third party participation (Internet and country's official newspaper)
- Carrier establishes a program with new capacity allocated based on optimal operating conditions

Source: ANP, PwC Analysis

Canada

4.5.3 The transportation of hydrocarbons by pipeline is an essential public service. Since pipelines may exhibit the characteristics of a monopoly, pipeline owners may not typically be exposed to the discipline of the marketplace.

4.5.4 Under the national Energy Board Act an oil pipeline (i.e. a pipeline which carries oil, natural gas liquids and petroleum products) is a common carrier while a natural gas pipeline is a contract carrier.

4.5.5 As a common carrier, an oil pipeline must accept all oil offered to it for transportation on an equal basis to all shippers. When there is insufficient capacity for the volumes tendered, the pipeline company apportions its available capacity to accommodate all shippers requesting capacity. The Board ensures that access and apportionment occur on an equitable basis.

4.5.6 This tariff may also include terms and conditions which describe how a prospective shipper may have access to the pipeline and the rights and responsibilities of both the pipeline and shipper once service commences.

Source: National Energy Board, Canada – Traffic, Tolls and Tariffs

USA

4.5.7 Generally, oil pipelines provide transportation, temporary storage and logistics services; they do not own the product they transport. Most oil pipelines are "common carriers" under the Interstate Commerce Act. Shippers – refiners, marketers and others who own oil they want to move –contract for space on an oil pipeline. If the requests for space on the pipeline exceed the line's capacity, the space is allocated among shippers in a non-discriminatory manner, usually on a *pro rata* basis. It is not provided based on the highest bid, nor on a first-come, first-serve basis. Pipelines must allocate space to all shippers who meet their conditions of service. These conditions of service are publicly posted and must not be unduly discriminatory.

Source: Allegro Energy Group

5 Issue No 4: Retail & Marketing Service Obligations

Issue No 4: Provide marketing service obligations for entities and retail service obligations for retail outlets under Section 11(f) (v)

5.1 Provisions under PNGRB Act 2006

5.1.1 Section 11 (f) and 2 of PNGRB states functions of the Board and definitions for marketing and retail service obligations. These are reproduced below:

THE PETROLEUM AND NATURAL GAS REGULATORY BOARD ACT, 2006

SECTION 11: Functions of Board

(f) (v), In respect of notified petroleum, petroleum products and natural gas provide, by regulations, and enforce, retail service obligations for retail outlets and marketing service obligations for entities.

SECTION 2: Definitions

(w) "marketing service obligations" means obligations –

(i) to set up marketing infrastructure and retail outlets in remote areas in respect of notified petroleum and petroleum products

(ii) to maintain minimum stock of notified petroleum and petroleum products

(iii) of a local distribution entity to supply natural gas to the consumers; and

(iv) such other obligations as may be provided by regulations;

(zk) "retail service obligations" means obligations of dealers and distributors for maintaining supplies to consumers throughout the specified working hours and of specified quality, quantity and display of maximum retail price of notified petroleum, petroleum products and natural gas and such other obligations, as may be provided by regulations;

5.2 Existing Regulatory framework

5.2.1 Presently marketing of petroleum products in India is carried out predominantly by National Oil Companies in the Public Sector, namely, Indian Oil Corporation Limited (IndianOil), Hindustan Petroleum Corporation Limited (HPC), Bharat Petroleum Corporation Limited (BPC) and IBP Company Limited (IBP). Marketing of transportation fuels in limited quantities by private players viz. Reliance, Essar and Shell also takes place through their retail outlets. These companies market the full range of petroleum products for consumption in various sectors viz. Transport, household, industrial, agricultural, road constructions, defence etc. Some of the stand-alone refineries in the public sector such as Chennai Petroleum Corporation Ltd. (CPCL), formerly known as Madras Refineries Limited (MRL), Kochi Refineries Limited (KRL), formerly known as Cochin Refineries Ltd. (CRL), Bongoingoan Refinery and Petrochemicals Limited

(BRPL), a joint sector refinery M/s Mangalore Refinery and Petrochemicals Limited (MRPL), GAIL (India) Limited and a private sector refinery M/s Reliance Petroleum Ltd. (RPL) also directly market some deregulated products.

5.2.2 In accordance with the policy of the Government of India, steps were initiated by the Ministry of Petroleum and Natural Gas for dismantling of the Administered Pricing Mechanism (APM) in a phased manner. Commencing from 1993, Government have allowed parallel marketing of Kerosene (SKO) and Liquefied Petroleum Gas (LPG) by the Private Sector at non-subsidised market determined prices and also de-regulated marketing of lubricants totally. Further, petro-chemical units have been permitted Naphtha imports without a licence, subject to the condition that the importer may use the return stream as an industrial feed stock for his own captive consumption and, the balance, if any, shall be sold to crude oil refineries only. Import of Naphtha is also permitted as fuel for power sector against Actual User Licence. Import of Furnace Oil, LSHS, Bitumen, and other specially petroleum products like Hexane, Solvents etc., have also been permitted under 'free' category.

5.2.3 Effective April 1, 1998, the Government have deregulated all petroleum products except Motor Spirit, High Speed Diesel, Aviation Turbine Fuel, LPG (Domestic – marketed by PSUs) and Kerosene for Public Distribution.

5.2.4 As per MoPNG resolution No P-20029/22/2001-PP dated March 28, 2002, the new entrants including private sector, were allowed to market transportation fuels namely motor spirit, high speed diesel and aviation turbine fuel as per the guidelines contained in the MoPNG resolution No 23015/1/2001 – Mkt dated march 8, 2002. Authorization to grant marketing rights were issued by the Ministry till a regulator for the downstream petroleum sector is set up. So far, only Public Sector Oil Marketing Companies were having the authorisation to market transportation fuels in the country.

5.2.5 For those new dealerships/distributorships for which advertisements have been issued in the newspapers upto March 2002, selection process was to be completed through the Dealer Selection Boards. Thereafter, oil companies were to be set up their own selection mechanism.

5.2.6 The Government of India decided to grant authorisation to market transportation fuels, namely MS, HSD and ATF to the new entrants including the private sector, after taking into account the recommendations of the Report "Indian Hydrocarbon Vision – 2025" vide Notification No P-23015/1/2001 – Mkt dated March 8, 2002. The Guidelines, inter-alia, provide for the following –

i. the companies investing or proposing to invest Rs. 2,000 crore in exploration and production, refining, pipelines or terminals may be granted authorisation to market transportation fuels, namely MS, HSD and ATF;

ii. the eligible investment would be in setting up new refineries, expansion of the existing refineries, exploration and production of hydrocarbons including coal bed methane and associated facilities like crude oil/natural gas pipelines and processing plants, terminals for crude oil/LNG, common carrier natural gas/petroleum products/LPG pipelines and investments in these activities for setting up additional assets for improvement of product quality to meet environmentally related norms;

iii. the investment should be in the form of equity, equity like instruments or debt with recourse to the company and should result in the additionality to the existing assets and/or creation of new assets in the eligible activities;

iv. in case of companies proposing to invest, a bank guarantee of Rs. 500 crore will be obtained to ensure that they fulfill their commitment. Further, the time frame for making investment in the eligible activities would be 10 years including the period of 5 years earmarked for financial closure;

v. every eligible company would get only one authorisation and it will not be transferable without permission of the Government. The applicant will be required to submit a scheme for marketing to the Government or the Regulatory Board and while granting authorisation, the latter may impose conditions in public interest including the obligation to set up retail outlets in remote areas and low service areas and that the eligible company will not encroach upon the retail networks of existing marketing companies;

vi. the companies who have already made in full the investment of Rs. 2,000 crore in the eligible activities would be granted authorisation during APM itself while the companies proposing to invest would be granted authorization only after the APM is dismantled

5.2.7 The above are subject to conditions specified in Resolution.

5.3 Industry views on Guidelines for framing regulations

5.3.1 There should not be any marketing and retail service obligations if Government interferes with market-determined prices or does not compensates all marketers equally and transparently. Accordingly in decontrolled pricing mechanism, the current practice of selective subsidy should be done away with.

5.3.2 Marketing service obligations and retail service obligations are necessary for MS / HSD, ATF, blended fuels, lubricants, base stocks, etc to protect interests of the end customers and to ensure proper development of the Indian market ensuring equitable distribution across areas and fair competition among the entities

Marketing Service Obligations

5.3.3 Marketing service obligations should cover:

- Setting up marketing infrastructure and retail outlets in remote areas in respect of notified petroleum and petroleum products
- Maintaining minimum stock of notified petroleum and petroleum products at marketing infrastructure to ensure adequate availability and uninterrupted supply to retail outlets.
- Ensuring that all statutory including technical and HSE clearances have been obtained from the respective authorities and necessary compliance done from time to time

Retail Service Obligations

5.3.4 Retail service obligations for dealers and distributors

- Maintaining supplies of notified petroleum and petroleum products to consumers throughout the specified working hours and of specified quality and quantity.
- Displaying Retail Selling Price/ Maximum retail price of notified petroleum and petroleum products
- Ensuring and displaying information about the statutory licenses / clearances for creating / operating/maintaining the facilities including technical and HSE and safety clearance and their validity
- Selling the notified petroleum and petroleum products and auto LPG at a price not exceeding the retail selling price fixed by entity
- Ensuring that quality of notified petroleum and petroleum products delivered to the consumers at the retail outlet conforms to the applicable Bureau of Indian Standard specifications and/or the requirements notified by the Central Government or the Board from time to time.
- Providing and maintaining facilities and services such as toilet, portable water and air for consumers at retail outlets as directed by the entity or Board or Central Government, from time to time.
- Displaying the stock level of various petroleum and petroleum products at the retail outlet
- Displaying prominently the names, contact numbers and other relevant information of various concerned officials of the entity at the retail outlet
- Ensuring maintenance, for specific time period, of records of transactions, stocks, quality and making the same available for inspection /investigation by entity / Board/GoI or authorised representative of Board/GoI
- Allow Inspection/ drawal of sample by authorised auditor/ inspector as per guidelines from entity/GoI
- Drawal of sample and retention of the same for specified time period as per specific guidelines from Board/ GoI.
- Shall not indulge in any form of malpractices including adulteration.

5.4 Country examples

5.4.1 Different countries provide for different types of market and retail service obligations depending upon maturity of market in their countries. Examples in select countries are discussed below:

USA

5.4.2 Retail obligations for petroleum are noted in the code Title 15 on “petroleum marketing practices Act”. These regulations are divided in to three subchapters namely

a) Franchise Protection.

b) Octane discloser.

c) Subsidization of motor fuel marketing.

5.4.3 Retailer is defined as the person who purchases the product to the end-user. Parallel authorities are given to centre of federal regulation. Which within its authorities regulates issues such as Certification. Limitation, Definition, Pre-emption, Automotive fuel rating etc.

5.4.4 Automotive fuel rating posting.

(a) If you are a retailer, you must post the automotive fuel rating of all automotive fuel you sell to consumers. You must do this by putting at least one label on each face of each dispenser through which you sell automotive fuel. If you are selling two or more kinds of automotive fuel with different automotive fuel ratings from a single dispenser, you must put separate labels for each kind of automotive fuel on each face of the dispenser.

(b)(1) The label, or labels, must be placed conspicuously on the dispenser so as to be in full view of consumers and as near as reasonably practical to the price per unit of the automotive fuel.

(2) You may petition for an exemption from the placement requirements by writing the Secretary of the Federal Trade Commission, Washington, DC 20580. You must state the reasons that you want the exemption.

(c) In the case of gasoline, if you do not blend the gasoline with other gasoline, you must post the octane rating of the gasoline consistent with the octane rating certified to you. If you blend the gasoline with other gasoline, you must post consistent with your determination of the average, weighted by volume, of the octane ratings certified to you for each gasoline in the blend, or consistent with the lowest octane rating certified to you for any gasoline in the blend. Whether you blend gasoline or not, you may choose to post the octane rating of the gasoline consistent with your determination of the octane rating according to the method in §306.5. In cases involving gasoline, the octane rating must be shown as a whole or half number equal to or less than the number certified to you or determined by you.

(d) If you do not blend alternative liquid automotive fuels, you must post consistent with the automotive fuel rating certified to you. If you blend alternative liquid automotive fuels,

you must possess a reasonable basis, consisting of competent and reliable evidence, for the automotive fuel rating that you post for the blend.

(e)(1) You must maintain and replace labels as needed to make sure consumers can easily see and read them.

(2) If the labels you have are destroyed or are unusable or unreadable for some unexpected reason, you can satisfy the law by posting a temporary label as much like the required label as possible. You must still get and post the required label without delay.

(f) The following examples of automotive fuel rating disclosures for some presently available alternative liquid automotive fuels are meant to serve as illustrations of compliance with this part, but do not limit the Rule's coverage to only the mentioned fuels:

(1) “Methanol/Minimum ___% Methanol”

(2) “Ethanol/Minimum ___% Ethanol”

(3) “M–85/Minimum ___% Methanol”

(4) “E–85/Minimum ___% Ethanol”

(5) “LPG/Minimum ___% Propane” or

“LPG/Minimum ___% Propane and ___% Butane”

(6) “LNG/Minimum ___% Methane”

(g) When you receive automotive fuel from a common carrier, you also must receive from the common carrier a certification of the automotive fuel rating of the automotive fuel, either by letter or on the delivery ticket or other paper.

5.4.5 Recordkeeping.

You must keep for one year any delivery tickets or letters of certification on which you base your posting of automotive fuel ratings. You also must keep for one year records of any automotive fuel rating determinations you made according to §306.5. These records may be kept at the retail outlet or at another, reasonably close location. They must be available for inspection by Federal Trade Commission and Environmental Protection Agency staff members or by persons authorized by FTC or EPA.

Source: Electronic Code of Federal Regulations

South Africa

5.4.6 The Minister of Minerals and Energy of South Africa has under the Petroleum Products Act, 1977 made the regulations regarding petroleum products site and retail licences. As per the regulations:

5.4.7 "site licence" means a licence issued to any person who holds or has permission from the owner of the land to develop a site for the purpose of retailing prescribed petroleum products;

"prescribed petroleum products" means, in this Regulation, petrol, diesel and liquefied petroleum gas used for the propulsion of vehicles on public roads;

31 A licensed retailer may only retail from the site specified on their retail

32 A retail licence may not be transferred to another person.

33 A retail licensee must pay the annual licence fee determined in Annexure C before the anniversary date of issue of the licence each year.

34 The payment contemplated in Regulation 33 above must be accompanied by a fully completed, retail licence annual submission form determined in Annexure A.

35 A licensed wholesaler contracted to supply prescribed petroleum products to a licensed retailer and/or the rightful owner of the site licence may apply in writing to the Controller to declare the licensed retail activity concerned, no longer a going concern.

(1) An submission contemplated in Regulation 35 above must be accompanied by a report from an independent auditor, appointed by the wholesaler or the rightful owner of the site licence, setting out the recorded petroleum product stock levels and meter readings of sales on the petroleum product dispensing equipment concerned, that demonstrate that the licensed retail activity is not a going concern, provided that the licensed retailer and the licensed wholesaler concerned may agree, in writing, to another procedure; licence.

(2) A retail licensee must allow an auditor appointed in accordance with Sub regulation 35(1) above, access to the relevant site for the purposes of conducting the measurements contemplated in that Regulation.

36 A retail licence or a certified copy thereof, must be prominently displayed at the place of business, where any person entering the site may read it;

Source: Government Gazette of South Africa

6 Issue No 5: Transportation tariffs

Issue No 5: Transportation tariffs for common carriers and contract carriers or city or local natural gas distribution network and the manner of determining such tariffs under section 22 (1).

6.1 Provisions under PNGRB Act 2006

6.1.1 Section 11 (f) and 2 of PNGRB states functions of the Board and definitions for marketing and retail service obligations. These are reproduced below:

THE PETROLEUM AND NATURAL GAS REGULATORY BOARD ACT, 2006

SECTION 22: Transportation tariff

(1) Subject to the provisions of this Act, the Board shall lay down, by regulations, the transportation tariffs for common carriers or contract carriers or city or local natural gas distribution networks and the manner of determining such tariffs.

(2) for the purposes of sub-section (1), the board shall be guided by the following, namely:-

(a) the factors which may encourage competition, efficiency, economic use of the resources, good performance and optimum investments;

(b) safeguard the consumer interest and at the same time recovery of cost of transportation in a reasonable manner;

(c) the principles rewarding efficiency in performance;

(d) the connected infrastructure such as compressors, pumps, metering units, storage and the like connected to the common carriers or contract carriers;

(e) benchmarking against a reference tariff based on cost of service, internal rate of return, net present value or alternate mode of transport;

(f) policy of the Central Government applicable to common carrier, contract carrier and city or local distribution natural gas network.

6.2 Existing Regulatory framework

6.2.1 On the subject of Tariffs for Petroleum Pipelines, in India, the following regulations exist:

Guidelines for Laying Petroleum Products Pipelines

Notification no F.No.P-20012/5/99-PP

November 20, 2002

Clause 1 :

(i) Pipelines originating from refineries, whether coastal or inland, upto a distance of around 300 kilometers from the refinery;

(ii) Pipelines dedicated for supplying product to particular consumer, originating either from a refinery or from oil company's terminal; and

(iii) Pipelines originating from refineries exceeding 300 Km in length and pipelines originating from ports, other than those specified in (i) & (ii) above."

Clause 4:

Tariff for the pipelines commissioned after the date of publication of this notification in the Official Gazette and falling in the category specified in sub-clause (iii) of clause 1, will be subject to the control orders or the regulations that may be issued by the Government or the statutory authority in this behalf under any law for the time being in force.

It may be noted that tariffs on category of pipelines specified in (i) & (ii) are not regulated.

6.3 Industry views on Guidelines for framing regulations

6.3.1 Broad objective should be of protecting the consumer and to ensure a dynamic industry structure and economic viability of pipelines. The objective can be further benchmarked as :

- Productive efficiency i.e lowest possible cost with desired level of service.
- Allocative efficiency i.e Cost of providing transportation service, equal to the value of service to the shipper.
- Revenue Sufficiency i.e Sufficient revenue to be earned to achieve permitted rate of return.

6.3.2 As liquid pipelines are not natural monopolies, tariff fixation should be left to the service providers on commercial considerations i.e at a market-determined rate linked to the most competitive alternative mode of transport.

6.3.3 As prevalent in different segments of transportation sector, there should be no differentiation in the tariff due to the age of the facilities; besides, older pipelines require substantial expenditure on repair and maintenance and major replacement/ renewals/ up-gradation due to ageing

6.3.4 Tariff fixation by the Entity is to be viewed in totality keeping in mind the extent of service network where the Entity undertakes the challenges of logistics for moving the product in far flung areas at a considerable cost of under recovery/financial strain as otherwise balance of advantage may tilt in favor of those companies with limited presence in selected parts of the country with scale and technological advantage.

6.3.5 Tariff should be competitive and should be defined as the transportation rate for common carrier that will form a part of product settlement agreement inclusive of transportation arrangement in the said pipeline over a fixed period of time and for a committed volume of product. The owning Entity may work out the tariff for transportation @ Rs/KL/KM. at the time of finalization of the settlement agreement amongst the parties on commercial terms.

6.3.6 Each pipeline system must have segregated accounting .The transportation tariff may be linked to the ceiling of the next best economic and feasible alternative mode of transportation and should be subject to periodic review.

6.3.7 The tariffs should be aligned with the market for the first full five years of operation. It should be between 75% and 90% of the tariff for the second cheapest mode, for the length of the pipeline. Where alternative transportation mode are not available, tariffs may be decided as per prevailing industry practice of 75% of rail freight for pipeline distance subject to this principle rendering investment viable for a minimum 15% IRR and a payback period of 7 years. Any downward tariff offered by Entity including quantity discounts etc. need to be allowed subject to those getting offered on non-discriminatory basis

6.3.8 After the first five years, the tariff should be based on post tax return on investment. This may be banded between 9% and 12% per annum. If the return during any year falls outside the band, necessary adjustments to the tariff can be made. The accounts should be open to the Regulator, for verification if there are protests against the adjustment.

6.3.9 In case of common carrier, the spare capacity may be on cost to the user basis, but the proposing entity should have final say on capacity based on the economics of project and viability of operations, as the issue involves return on the capital employed by the entity. The terms sharing of spare capacity should be on commercial basis as decided amongst the users in a non-discriminatory way within the operating constraints.

6.3.10 The transporter should be compensated suitably for extra expenditure, if any, made on account of moving this emergency requirement in the national interest.

6.3.11 Tariff index on all India basis to be maintained by the Board and to be published periodically with due updation through National and Regional Dailies as a reference to guide the industry and to maintain fair play among the entities.

6.4 International Experience & Country examples

6.4.1 World Bank in a study has stated objectives for tariff design, tariff structure, tariff regulation options, tariff setting principles and spectrum of regulatory approaches. These are reproduced below:

6.4.2 *The Tasks of Economic Regulation: Setting Tariffs:* Regulation of pipelines is necessary because, being monopolies, they have market power. Among other things this means

that, if unregulated, they could charge prices (tariffs) which would be higher than required to cover their capital and operating costs including a normal rate of profit (In a competitive market, in which there are a number of sellers and buyers, the price would tend to be equal to the average cost (including a normal rate of profit) of the highest cost supplier. The amount of the service produced would be higher and its price lower than in the case of a monopoly supplier). Because their tariffs, if unregulated, would be higher than costs, less pipeline space would be used than is economically efficient.

6.4.3 Society will be better off if tariffs are regulated so that they approximate the average cost (including an appropriate rate of profit) of providing pipeline services. Thus the basic principle for setting tariffs is that they be equal to the average cost of providing pipeline service.

Objectives

6.4.4 There are a number of objectives

1) Productive efficiency means that transportation service is produced at the lowest possible cost consistent with the desired quality of service. It is a critical objective in setting transportation tariffs. To achieve this objective transmission tariffs should:

- ensure that the pipeline system is used to the greatest possible extent, because the cost associated with incremental use of the existing system is very low (most costs are sunk; they relate to capital equipment in place and must be paid whether or not the system is used);
- provide incentives to the transmission service provider to operate and maintain the pipeline system at low cost consistent with the desired level of service;
- provide incentives for the system to be expanded only when the incremental benefits of expansions exceed the costs of the expansions.

2) Allocative efficiency means that the tariff paid by a shipper should reflect the costs of providing the service. If this is the case the costs of providing transportation service will be equal to the value of that service to the shipper. If the tariff is greater/lower than costs, transportation use will be discouraged/encouraged and a smaller/larger amount of transportation will be used than is justified by the economics of providing it.

3) Revenue sufficiency is paramount for transportation service providers. They must be able to earn sufficient revenue to achieve their permitted rate of return. It is important to note that the achievement of the economic efficiency objectives will also ensure the achievement of this objective, but an emphasis on revenue sufficiency may lead to tariffs that are not economically efficient.

6.4.5 The objectives of productive and allocative efficiency are critically important. Tariffs designed to achieve such economic efficiency convey clear signals to all participants in the supply chain which, when acted upon, will allow them to maximize their profits and/or some other element of economic well-being.

Tariff Structure

6.4.6 Transmission and distribution pipelines are capital intensive and the cost of transporting is high relative to the cost of the commodity being transported. Because pipelines are so capital intensive, a very high proportion of their costs are fixed and the bulk of the tariff consists of a contribution to fixed costs; it is paid whether or not the shipper/user transports in any time period. The tariff will have a second part – called a "commodity charge" – which is paid according to the amount of quantity shipped or taken.

Tariff Regulation Options: Regulated Rate of Return

6.4.7 For many years in North America the principle of linking pipeline tariffs directly to costs including a regulated rate of profit was followed – the so-called "regulated rate of return" approach to tariff setting. It is still used to some extent. While this has an economic logic, it does not have the virtues of the dynamic price-setting process that exists in competitive markets.

6.4.8 In competitive markets, price will tend to be driven to equal the average cost, but, unlike companies that are regulated by the regulated rate of return method, individual companies in competitive industries do not have the ability to charge a price equal to their costs. They must accept whatever price prevails, and producers with relatively high costs will be unable to compete in the long run. So there is a strong incentive for producers in competitive markets to be as efficient as possible: it increases their profit margin and, at a minimum, allows them to survive. The incentive to be productively efficient is much weaker under regulation where revenues and profits are more or less guaranteed.

6.4.9 Further, using the method of setting tariffs involves the regulator on a more or less continuous basis as an arbitrator. Tariffs are set and changed on the basis of applications to the regulator. In turn, regulatory decisions are made after public hearings, which are frequently protracted and adversarial.

6.4.10 Thus neither productive efficiency in the pipelines nor efficiency in the regulatory process is achieved with the regulated rate of return method of setting tariffs.

Tariff Regulation Options: Performance-based Regulation

6.4.11 Dissatisfaction with a tariff mechanism that links prices directly to costs and with a costly and adversarial process for adjusting tariffs led to the development of methods of performance based regulation.

6.4.12 For example, a comprehensive performance based system was introduced in the UK. In that system the regulator determines a base tariff taking into account the need for expansion and replacement of capital equipment. The base tariff is indexed annually for a number of years, typically five. The annual index factor is an economy-wide price index (the Retail Price Index – RPI) reduced by an amount – "X" – which represents the regulator's assessment of the potential for efficiency – or productivity – gains by the company in each year over the period. The mechanism is known by the shorthand term "RPI – X". At the end of each five-year period the regulator reassesses the base tariff and sets a new value for X that will apply for the subsequent multi-year period.

6.4.13 The concept of performance based regulation is attractive. It promotes efficiency in both operating and capital expenditures and represents relatively efficient regulation, pushing the decision-making back on the regulated company where it should be.

Tariff-setting Principles

6.4.14 Whether cost of service or some method of performance based regulation is used to determine the average level of the tariff, there are a number of principles which should be used in designing the structure of tariffs, i.e. the tariff charged to specific customers for specific services.

6.4.15 Transportation capacity will be most efficiently allocated among system users if tariffs incorporate the costs associated with providing particular services – if they are cost-based. Costs are importantly affected by the size of pipeline capacity. Costs also rise with the distance over which product is transported. Thus, other things being equal, the tariff paid by a user of a pipeline will be higher the greater is the diameter of the pipeline (and the pressure rating) and the farther the product is shipped.

6.4.16 The principle of cost-based tariffs implies that there should be no cross-subsidization of one group of shippers/users by another, i.e. tariffs should be structured so that shippers/users bear all the costs associated with the provision of the service they are using.

6.4.17 Discrimination among shippers for the same transportation service with the same costs should not be permitted. This is frequently described as unjustifiable or undue discrimination. However, it is perfectly legitimate to discriminate among shippers on the basis of the costs they cause to be incurred.

6.4.18 Typically, the primary objectives are of protecting the consumer and ensuring a dynamic industry structure and economic viability of pipelines, tariffs should be based on a cost plus reasonable rate of return. The tariff should be applied as a cap, to enable lower negotiated rates based on market forces.

6.4.19 "Competitive Tariff" means the transportation rate for common carrier that will form a part of product settlement agreement inclusive of transportation arrangement in the said pipeline over a fixed period of time and for a committed volume of product. The Owning Entity will work out the tariff for transportation @ Rs/KL/KM. at the time of finalization of the settlement agreement amongst the parties on commercial terms**.**

6.4.20 There is an increasing emphasis (largely deriving from experience in the United Kingdom) on the control of the level of tariffs for a specified period into the future combined with an incentive mechanism to generate increased efficiency. This is commonly referred to as the “price cap” or “RPI-X” approach.

6.4.21 Regulation, however, involves a trade-off between eliminating excess profits earned by the monopolist while simultaneously providing incentives to efficiency. There is a spectrum of regulatory approaches that reflects a different balancing of this trade-off. At the two extremes are rate-of-return regulation and permanent price caps.

The Spectrum of Regulatory Approaches

6.4.22 Rate-of-return regulation is the preferred approach of regulatory commissions in the United States. It aims to eliminate excess profits by equating revenue with actual costs. The regulated business is allowed to charge tariffs that will cover its operating costs and give it a reasonable rate of return on the value of the capital employed in the business. When tariffs move out of line with costs, the business (or customers, when costs fall) makes an application for a new set of tariffs. Rate-of-return regulation thus eliminates all prospects of excess profit. This has the advantage of keeping the cost of capital low, but it does not give the regulated business a strong incentive to reduce costs. Under certain conditions, rate-of-return regulation can also encourage unnecessary and inefficient investment, because the business is generally assured of being able to recover the costs of that investment and earn a given rate of return.

6.4.23 In an attempt to encourage efficiency, some regulatory commissions in the United States have now adopted the practice of prudential reviews. These reviews are designed to assess whether past investment was necessary. If the regulatory commission decides that such investment is not "used and useful," it will not be added to the asset base. Although this approach looks attractive in principle, it could result in a regulatory commission "micromanaging" the business by controlling individual investment and operating decisions.

6.4.24 Permanent price caps were the starting point of the development of so-called incentive regulation. Permanent price caps involve a one-time setting of tariffs, beyond which all efficiency gains are retained by the business. They mimic the desirable incentives for cost minimization found in competitive markets, where prices are generally set without reference to the costs of individual producers, but by reference, in principle, to conditions in the market as a whole. The regulated business has a strong incentive to reduce costs, but the regulatory commission must define comprehensive output standards (to counteract incentives to economize by cutting the quality of service) and may have to tolerate permanently higher-than-expected profits.

6.4.25 Permanent price cap regulation is not a credible or sustainable mechanism, since prices will sooner or later diverge from costs (in one direction or another). Demands for renegotiation of the cap— either from customers or the regulated businesses—will be impossible to resist. Between these extremes is a range of regulatory approaches that combine incentives for efficiency with some form of profit control. They are all profit control regimes designed to reset prices periodically so that they are equal to costs. E.g. Banded rate of returns, Sliding scale regulation, price caps with periodic reviews, permanent price caps and total revenue caps etc.

a) Profit Controls— Banded Rates of Return: Typically, profit-sharing rules are invoked if a business' rate of return or its costs fall outside a set of specified limits, often referred to as a "dead band." Banded rate-of-return regulation is an improvement over straight rate-of-return regulation, since it provides businesses with some incentive to cut costs. However, although the problem is not as severe as in pure rate-of-return regulation, there is still an incentive to over-invest.

b) Profit controls— Sliding-Scale Regulation: Sliding-scale regulation works by setting limits on the prices charged by the business, above which a mechanism is triggered that shares out with customers, in a specified proportion, the business' cost savings. The way in which the savings are measured depends on the particular scheme:

examples are dividends ("dividend sharing") and profits ("price-related profits levy"). The key to the schemes is that there is some sharing of profits between the business and the customer, but that the business is free to determine the level of sharing by its choice of price behaviour.

- Dividend Sharing: Under dividend sharing, the regulatory commission allows a company's dividends to rise above a predetermined level as long as prices remain below a predetermined level. If prices rise above that level, the company is required to reduce its dividends. Companies can therefore affect their dividends through their choice of prices. The scheme effectively shares out between customers and shareholders the benefits (losses) from a reduction (increase) in costs. The regulatory commission's task is to determine the standard price, the standard dividend, and the rate of dividend share that is invoked at different price levels.

- Dividend sharing offers incentives for businesses to reduce prices by reducing costs, and does not suffer from the inefficient allocation of resources associated with rate-of-return regulation. It requires, however, that all additional equity capital be raised through the auctioning of new shares to prevent dividends to shareholders effectively being made through discounts on the price of new shares. This restricts the company's options for financing.

- The main problem for the regulatory commission is guarding against businesses trying to disguise dividend payments to shareholders by buying back shares or by making distributions to shareholders in other ways

- Price-Related Profits Levy: Under a price-related profits levy, the regulatory commission sets a benchmark level of prices. If this benchmark price is exceeded, a proportion of the excess profits earned by the company is returned to the customer, for example, as an immediate rebate or as a tariff reduction for the following year. The regulatory commission's task is to set the benchmark price, the standard profit, and the rate of profit sharing at each price level.

- Price-related profit levies provide strong incentives to efficiency and encourage regulated businesses to select an efficient combination of inputs. Businesses may, however, manipulate profits by changing accounting rules on non-cash items (for example, depreciation and bad debts). This puts a considerable burden on regulatory commission accounting procedures.

Price Caps with Periodic Reviews

6.4.26 The approach to regulatory mechanisms of price caps with periodic reviews— or so-called CPI-X regulation (where CPI is the consumer price index). Price capping with periodic reviews is a form of incentive regulation with profit sharing.

6.4.27 Under this form of regulation, the regulated business is required to keep the increase in its prices to less than (or equal to) the increase in a specified general price index (for example, the CPI), less x percent. If x is positive, this means that prices will fall by x percent in real terms. The level of the cap on prices reflects the anticipated levels of future operating costs and investment that might be incurred by the business and are set to provide a reasonable rate of return on assets, consistent with efficient performance. The price cap is therefore set at a cost-reflective level.

6.4.28 The distinguishing feature of this form of regulation is that the price cap applies for a predetermined period. Hence, the regulated business keeps all the profits associated with unanticipated cost reductions in the period between regulatory reviews. Customers, however, benefit in the subsequent regulatory period when the regulatory commission reduces prices to capture those cost savings. The shorter the interval between reviews, the more there is a tendency for price cap regulation to approximate rate-of-return regulation, with frequent assessments of the asset base and the appropriate rate of return on investment.

6.4.29 The CPI-X mechanism provides incentives to efficiency on the part of the regulated business, while providing an assurance to customers that the benefits of efficiency gains will be reflected in lower prices in the longer term. This combination of qualities may explain why CPI-X regulation has become popular with governments and regulatory commissions, as well as with regulated businesses and their customers.

6.4.30 This forward-looking control of the level of transmission tariffs is combined with the exercise of a measure of discretion by the transmission business in determining the structure of tariffs. The regulatory commission, however, continues to monitor the structure of tariffs and is empowered to issue direction, where necessary.

Source : The World Bank

6.4.31 Following discussion is reproduced from World bank study on different types of tariff setting methods.

6.4.32 Decisions on how to regulate distribution tariffs is between cost-of-service regulation and price caps to regulate price level, and between tariff basket and average revenue to regulate price structure. The main features of these types of regulation are shown below.

Cost of Service

6.4.33 Main features

a) Price equal to average cost.

b) Price setting is the result of equating total revenues to total costs.

c) It imposes a restriction on the rate of return on capital.

d) Prices remain fixed until one of the parties involved asks for a modification of prices.

e) Each set of tariffs must be established according to a prediction of revenues and costs consistent the regulated level of the rate of return.

6.4.34 Pros

a) Provides investors with certainty.

b) Makes the long run commitment of the governing authority credible.

c) Since investors face lower risk, may reduce cost of capital.

d) May stimulate system expansion.

e) Regulator can monitor and constrain cross subsidies.

f) Opportunity for manipulation is likely to be small in practice.

6.4.35 Cons

a) Weak incentives for investors to reduce costs and operate efficiently.

b) Perverse incentives to over invest in capital.

c) Cross subsidization is a common practice.

d) Determination of a "fair" rate of return is inherently subjective.

e) Rate of return usually exceeds cost of capital.

f) Company produces more than an unregulated monopoly but with inefficient input combinations

g) Ad-hoc mechanism, lacking a theoretical framework.

h) Administratively demanding; huge data requirements.

Price Cap

6.4.36 Main features

a) Authority sets ceiling prices.

b) Usually combined with cost of service exercises at the end of pre-determined periods.

c) Usually incorporates adjustments for inflation and efficiency.

d) Rate of return on capital can take any value as long as the price cap is met.

e) When combined with cost-of service regulation, revisions are carried out at the end of pre-determined periods (usually 4 or 5 years).

6.4.37 Pros

a) Incentives for cost minimization and efficient operation.

b) Benefits due to productivity improvements higher than anticipated can be kept by firms.

c) More forward-looking philosophy than cost of service regulation.

6.4.38 Cons

a) Too low a cap could elicit a disincentive for firms to participate.

b) Too high a cap could permit a monopolist to enjoy excessive profits at the consumers' expense.

c) Investors face greater risks under this system which could increase costs of capital.

d) It may not stimulate system expansion.

Tariff Basket

6.4.39 Main features

a) The price cap is set over the weighted sum of the prices of different products or services offered by the monopolist.

b) Weights are usually set according to previous period's output composition.

6.4.40 Pros

a) Under stable cost and demand conditions: The firm chooses a price vector that will converge to Ramsey prices and It has a positive effect on welfare.

b) Productive efficiency is enhanced. There is very small opportunity for manipulation.

c) Simple to define and monitor.

d) It does not require a correction factor.

6.4.41 Cons

a) Tariff rebalancing is less flexible than in average-revenue regulation.

b) Under cost and demand uncertainty, prices set do not converge to the Ramsey structure.

c) Cross subsidies have to be prevented through additional regulation.

d) Inclusion of a cost pass-through term is difficult.

e) Must define full list of tariffs for implementation.

Average Revenue

6.4.42 Main features

a) Cap set on the firm's revenue per unit output.

b) It is more appropriate for firms whose costs depend on total output.

6.4.43 Pros

a) Less demanding in terms of information.

b) Greater flexibility in adjusting relative prices than in tariff-basket.

c) Represents a more lax constraint for the firm.

d) Simple to include cost pass-through terms in cap.

6.4.44 Cons

a) When the products are not substitutes, pricing under will be inconsistent with Ramsey pricing.

b) Separate regulation required to constrain cross-subsidies.

c) Correction factor required.

d) Needs homogeneous output measures.

6.4.45 Pure cost-of-service is generally not chosen to regulate the price level. Even though this regime is attractive to investors—it provides certainty and makes the long-run commitment of the governing authority credible—it does not give operators strong incentives to be more efficient, cut costs, innovate, and take appropriate risks. Additionally, this kind of regulation is usually quite burdensome to implement. Thus the international trend has been to substitute incentive mechanisms for cost-of-service regulation. This is the case even in countries like the United States and Canada that have a long tradition of cost-of-service regulation.

6.4.46 Countries may choose a combination of price cap and cost-of-service regulation. At the beginning of every five-year period a price cap is determined on a cost-of-service basis. This initial value remains fixed and is adjusted during the period for inflation, efficiency, and other correction factors.

6.4.47 The two usual methods of regulating price structure rely on weights (tariff basket regulation) or average revenue. Since the average revenue methodology does not fix weights for prices of distinct services, it grants more flexibility in tariff rebalancing than the tariff basket method. It is thus a looser constraint and provides the Company with the needed flexibility to set tariffs in a risky environment.

6.4.48 In Mexico, average revenue regulation is used in the first five-year regulatory period because most projects are greenfield and thus characterized by greater cost shocks—or unexpected changes in market conditions—at the beginning than in later phases of build-out and operation of the distribution network. After the first five years—when cost and

demand conditions stabilize—tariff basket regulation might be used because it induces companies to set prices that imply redistribution of social surplus, which permits the company to recover its long-run fixed costs while facilitating intertemporal maximization of consumer surplus. Mexico's average revenue plan allows the company to choose its relative prices at the beginning of each year based on forecasts of the volume that will be demanded at the end of the year.

Source: The World Bank, WPS 2537

6.5 Country examples

6.5.1 Tariff determination methodology in select countries are discussed below:

South Africa

6.5.2 Petroleum Pipelines Act 2003 of South Africa establishes regulatory framework for petroleum Pipelines. Section 28 of Chapter 3 of Petroleum Pipelines Act 2003 deals with Setting and approval of tariffs.

28. (1) The Authority must set as a condition of a license the tariffs to be charged by a licensee in the operation of a petroleum pipeline and approve the tariffs for storage facilities and loading facilities.

(2) A tariff charged in terms of subsection (1)-

(a) must be-

(i) based on a systematic methodology applicable on a consistent and comparable basis;

(ii) fair;

(iii) non-discriminatory;

(iv) simple and transparent;

(v) predictable and stable;

(vi) such as to promote access to affordable petroleum products;

(b) becomes effective from the date set out in the licence;

(c) must be reviewed by the Authority within the period set out in the licence; and

(d) may be adjusted by the Authority on review.

(3) The tariffs set or approved by the Authority must enable the licensee to -

(a) recover the investment;

(b) operate and maintain the system; an d

(c) make a profit commensurate with the risk.

(4) The Authority must monitor the application of tariffs and take appropriate action when necessary to ensure that they are applied in a non-discriminatory manner and licensees must provide the information required by the Authority in this regard.

(5) A licensee may request the Authority to review its tariff from time to time and may submit a proposal to the Authority in this regard, and-

(a) such proposed tariff, if set or approved, comes into effect from the date determined by the Authority;

(b) the existing tariff remains in force until a new tariff takes effect.

(6) A licensee may not charge a tariff for the licensed activity in question other than that set or approved by the Authority.

Source: Petroleum Pipelines Act 2003, South Africa

Canada

6.5.3 The transportation of hydrocarbons by pipeline is an essential public service. Since pipelines may exhibit the characteristics of a monopoly, pipeline owners may not typically be exposed to the discipline of the marketplace. Regulation seeks to protect the public interest by ensuring that tolls charged for transportation services are just and reasonable, there is fair access to pipeline services, and that there is no unjust discrimination in either the charges or the provision of pipeline transportation services.

6.5.4 Pipeline tolls are included in a tariff filed with the Board. This tariff may also include terms and conditions which describe how a prospective shipper may have access to the pipeline and the rights and responsibilities of both the pipeline and shipper once service commences.

Overview of Toll Regulation

6.5.5 Toll regulation aims to strike a balance between the interests of pipeline users and investors. Until 1995, cost of service regulation applied to all major pipelines. Under this approach, companies litigated before the Board, often annually, to determine the amount of revenue the pipeline was allowed to recover through tolls. Proceedings to determine the cost of service and tolls are generally adversarial and time-consuming, requiring legal counsel and expert witnesses.

6.5.6 Traditional cost of service regulation focuses on cost control. For some time, the Board has been concerned with reducing the cost of regulation and in developing alternatives to the cost of service model. Since 1988, when the Board released its Guidelines for Negotiated Settlements of Traffic, Tolls and Tariffs (updated in 1994), it has been a leader in developing alternatives to the traditional cost of service approach. In the process, the Board has facilitated and supported consensus building between pipeline companies and their shippers.

6.5.7 Beginning in 1995, the Board approved a succession of multi-year negotiated settlements. These agreements generally include incentives to reduce costs, and

provisions to share savings between the pipeline and its shippers. In the future, the Board anticipates that litigation to determine tolls will be used more selectively.

Negotiated Settlements

6.5.8 The Guidelines for Negotiated Settlements of Traffic, Tolls and Tariffs clarify the Board's role and establish acceptable criteria for the settlement process. Generally, the Board seeks to ensure that all interested parties have a fair opportunity to participate in the settlement process and that there is a general acceptance of the outcome. The guidelines have facilitated the resolution of specific toll matters and also the development of incentive regulation.

6.5.9 The Board does not participate in negotiations between parties since it must rule on the final proposal. However, the existence of an agreement does not limit the authority of the Board. In considering whether to approve an agreement, the Board takes into account the views of all interested parties as well as broader public interest concerns, including potential impacts upon public safety and protection of the environment. The Board either accepts or rejects a settlement package in its entirety. A settlement which is unopposed may allow the Board to determine that the resulting tolls will be just and reasonable.

Incentive Regulation

6.5.10 Incentive regulation has developed mainly through multiyear toll agreements negotiated between pipelines and interested parties. Such agreements provide for a sharing of the benefits that may result from improved performance by the pipeline. Typically, parties agree to a baseline level for costs which may be lower than what the pipeline applied for under cost of service regulation. Some protection is afforded to the pipeline for uncontrollable cost escalation along with a share of the rewards for keeping costs below the target level. Similar incentives can apply to efforts by the pipeline to increase throughput and revenue.

6.5.11 Once approved by the Board, multi-year agreements allow for a more relaxed form of regulation. Each year of the agreement, the pipeline makes a tariff filing containing new tolls based upon the agreement. After parties have had an opportunity to provide comments on the filing, new tolls come into effect, unless there is cause to examine them further.

Cost of Service Regulation

6.5.12 Until recently, the Board used the cost of service approach almost exclusively for setting tolls. A toll adjustment requires that a company file a toll application with the supporting documentation specified in Part X of the Board's Guidelines for Filing Requirements. The Board then establishes a proceeding to allow input from interested parties. Afterwards, the Board issues a decision approving final tolls.

6.5.13 Under this regime, a pipeline's tolls are set to provide users with the required service at a reasonable cost, and investors with the opportunity to recover costs and earn a reasonable return on their investment in the pipeline. To set tolls, the cost of service and throughput are forecast for a test year. The cost of service is made up of operating expenses, depreciation, taxes and return on capital. The Board allows, but does not guarantee, a pipeline the opportunity to earn an approved rate of return. This provides an incentive to keep costs within accepted limits.

6.5.14 A company may not recover costs from a previous year without prior approval. As a rule, the Board only allows a company to defer the recovery of costs to another year when they are beyond a company's ability to control or estimate accurately, such as an amount in dispute before the courts. Deferred costs are then subject to scrutiny before being included in another year's cost of service.

6.5.15 The return to be allowed on the rate base can be a contentious matter. Since the rate base is financed with both debt and equity, appropriate proportions for each, as well as their cost rates, must be determined. As interest is tax deductible, debt tends to be a lower cost source of financing than equity. On the other hand, equity investors must be fairly compensated for the risk they assume as owners of the pipeline. If a company's actual capital structure is found to be inappropriate, the Board may deem another one to derive the allowed return.

6.5.16 In 1995, the Board held a generic cost of capital hearing. The Board determined appropriate equity ratios for several companies based upon their business risks. The Board then approved a uniform rate of return on common equity, based upon the forecast interest rate for long-term Government of Canada bonds, plus a risk premium. Finally, the Board established a procedure for annual adjustment of the rate of return on equity. This initiative was in response to a desire to move away from adversarial proceedings and to avoid the repetition of cost of capital evidence.

Complaint-based Regulation

6.5.17 In 1985, the Board concluded that smaller pipelines under its jurisdiction should be subject to a lighter degree of regulation. The Board divided pipeline companies into two groups: ten companies with extensive systems are identified as Group 1, while the remaining companies are classified as Group 2. There are approximately 60 Group 2 companies which operate smaller pipelines.

6.5.18 The Board uses a complaint approach for the financial regulation of Group 2 companies. This method of regulation is described in each company's tariff. The pipeline company is responsible for providing shippers and other interested parties with sufficient information to enable them to ascertain whether the tolls are reasonable. Tariffs containing new tolls, once filed with the Board, automatically become effective.

6.5.19 Under the complaint approach, the Board does not normally examine a tariff filing. If a complaint is filed, the Board may establish a procedure to examine tolls. In the absence of a complaint, the Board may presume that the filed tolls are just and reasonable. Overall, this approach has resulted in few complaints.

6.5.20 In addition, the Board now uses a complaint approach for tariff filings by certain Group 1 companies with the general support of their stakeholders.

Toll Design

6.5.21 Toll design is the process of deriving tolls from the cost of service or revenue requirement and throughput. Tolls should generate sufficient revenue to recover approved costs, and at the same time fairly allocate charges to users in relation to the costs and benefits of different services.

6.5.22 The basic principle is user pay. Toll design divides costs between the various functions performed by the pipeline system, such as transmission and metering, and then determines costs and usage of those functions. Some costs are common to every unit of throughput. Other costs may depend upon variables such as the distance shipped, and still other costs may be unique to a particular type or class of shipper. Finally, some costs may be more appropriately allocated within a geographic zone. Generally, the Board has allocated costs on a straight fixed variable basis; none of the pipeline's fixed costs are allocated to the variable portion of the toll.

6.5.23 For a new pipeline, the method of tolling can be crucial to its economic viability. The large costs and high risks associated with the construction of a new pipeline have resulted in novel approaches to the setting of tolls. Such approaches seek to keep tolls as low as possible in a pipeline's early years to attract throughput. More recently, the Board has approved the construction of new pipelines which will compete with established pipelines. This has occurred when the project sponsors have indicated they are willing to bear the risk of underutilization and offer available capacity at market-based tolls. In some cases, shippers have negotiated discounts which increase according to the duration of their shipping commitments and this then assists the sponsors of the pipeline in underpinning their financing. Generally, the Board has approved innovative approaches where these are supported by arm's-length agreements negotiated between the pipeline's sponsors and shippers following an open season. In the Board's view, non-discriminatory access requires that service be offered on the same basis, at the same time, to all potential shippers.

6.5.24 With additions to an existing pipeline, there may be toll issues concerning whether costs should be pooled and charged to all users or kept separate and charged only to particular users. Does the project increase capacity or extend pipeline service? In deciding such matters, the Board considers whether this is a new distinct service or an expansion of an existing service and what the relative costs and benefits are to the parties. Rolling-in all costs has the advantage of lower tolls through the spreading of costs among many users; however, this may result in inequitable cost-sharing.

Tolls on an Interim Basis

6.5.25 The Board can only consider toll adjustments on a forward or prospective basis. A company may apply to have its tolls adjusted during a year as long as it uses estimates for an entire calendar year to calculate new tolls. This restricts its ability to recover extra costs incurred earlier in the year.

6.5.26 In situations where the desired effective date for new tolls will have passed before a decision on final tolls can be made, the Board may issue an order allowing the company to charge tolls on an interim basis until the final toll order is issued. The tolls contained in the final order can then be made effective from the date of the interim order. Refunds or charges which result from the final toll order usually include interest charges.

Surveillance Reporting

6.5.27 Unless specifically exempted, a Group 1 pipeline company is required to file a surveillance report at the end of each quarter pursuant to the Toll Information Regulations. Part XI of the Guidelines for Filing Requirements outlines the information and the format of surveillance reports. These reports provide details of financial performance and explain any significant variations from approved amounts. Through

these reports the Board is able to determine whether changes in tolls are likely to be needed and to test the reliability of estimates used to establish tolls.

6.5.28 The Board recognizes that an incentive agreement reduces the need for ongoing surveillance. Accordingly, some Group 1 companies operating under approved incentive agreements have been exempted from the requirement to file quarterly surveillance reports. For some time, the Board has required all Group 2 companies to file audited financial statements each year. In recent years, many Group 2 companies, primarily those operating pipelines serving only their owners, have been exempted from this filing requirement.

Accounting

6.5.29 The Board's Gas Pipeline Uniform Accounting Regulations and Oil Pipeline Uniform Accounting Regulations establish a uniform system of accounts for Group 1 companies. This provides for the recording of costs in a consistent manner. Group 2 companies are required to keep their accounts in accordance with generally-accepted accounting principles. The Board can audit a pipeline company's records to ensure the accuracy of filed documents and compliance with the Board's decisions, regulations and other directives.

Conclusion

6.5.30 Since 1985, deregulation of the energy commodities market has encouraged the development of a continental market for energy. At the same time, the construction of new pipelines and the expansion of existing ones have greatly increased alternatives and competition in pipeline transportation. These factors have brought about a dramatic change in the way the Board regulates the traffic, tolls and tariffs of pipelines. The Board will continue to facilitate the development of streamlined and easily-understood regulatory processes and innovative and effective methods of regulation.

Source: National Energy Board, Canada – Traffic, Tolls and Tariffs

USA

6.5.31 The Federal Energy Regulatory Commission (FERC) regulates the rates that an interstate pipeline can charge for its services. (Pipelines are also regulated as to safety, environmental protection and other aspects of operations by other federal and state agencies. States generally also regulate rates for intrastate pipelines.)

6.5.32 Prior to FERC rate regulation, the Interstate Commerce Commission determined an oil pipeline's tariff rates to be "just and reasonable" based on an allowed rate of return on the "valuation" of the pipeline's common carrier assets. When the FERC assumed jurisdiction, it explored a number of different methods for determining "just and reasonable" rates.

6.5.33 Under a regulatory system established in 1995, an interstate oil pipeline carrier may use a variety of methods to justify new tariff rates. These include a percentage change in accordance with a government-set economic index, application of market based rates, application of the former cost of service standard and negotiated rates for service that have been agreed to between the oil pipeline carrier, and relevant shippers. The vast

majority of oil pipeline industry tariff rates now in effect were set under the economic index method.

6.5.34 The second most used method of tariff rate justification is agreement on negotiated rates between the pipeline and its shippers.

6.5.35 The regulatory system under which oil pipelines operate precludes pipeline rates from fluctuating with oil prices, even in the case of market-based rates.

Source: Allegro Energy Group