

Draft National Gas Amendment (Use of Total Factor Productivity for the Regulation of Prices and Revenues) Rule 2011

1 Title of Rule

This Rule is the *Draft National Gas Amendment (Use of Total Factor Productivity for the Regulation of Prices and Revenues) Rule 2011*.

2 Commencement

The commencement date of the rule will be specified in the procedure for the making of a Rule by the Commission under the National Gas Law.

3 Amendment of the National Gas Rules

The National Gas Rules are amended as set out in Schedule 1.

4 Savings and Transitional Amendments to the National Gas Rules

The National Gas Rules are amended as set out in Schedule 2.

Schedule 1 Amendments of the National Gas Rules

(Clause 3)

[1] New Rule 99A Total Factor Productivity

After rule 99, insert:

Part 9A Use of Total Factor Productivity for the Regulation of Prices and Revenues

Rule 99A Total Factor Productivity

This Part applies only in respect of a *full regulation pipeline*.

Rule 99B Principles of calculating Total Factor Productivity

- (1) The following constitutes the principles of calculating Total Factor Productivity for *full regulation pipeline* service providers:
 - (a) an index number method is to be used;
 - (b) bias in the Total Factor Productivity growth rate is to be avoided;
 - (c) for output quantities, quantities that accurately reflect pipeline services supplied by *full regulation pipeline* service providers are to be used;
 - (d) for input capital costs:
 - (i) costs that are set exogenously are to be used; and
 - (ii) costs that are consistent with the regulatory asset base of the provider are to be used; and
 - (iii) costs that are consistent with the concept of financial capital maintenance are to be used; and

Note

Financial capital maintenance means that a regulated provider is compensated for efficient expenditure and efficient investments such that its real financial capital is at least maintained in present value terms.

- (iv) for input capital quantities, quantities that accurately reflect the physical service potential of assets employed in the provision of pipeline services supplied by *full regulation pipeline* service providers are to be used.

Rule 99C Pipeline Regulatory Disclosure Data Report

- (1) There must be Pipeline Regulatory Disclosure Data Report Guidelines in force at all times after the first such guidelines are published by the AER.
- (2) The Pipeline Regulatory Disclosure Data Report Guidelines must include, provide guidance on, and provide worked examples as to:

- (a) definitions for terms referred to in each item set out in Schedule 4;
- (b) acceptable methodologies for the measurement or valuation of each item set out in Schedule 4;
- (c) identification of items set out in Schedule 4 that are subject to financial audit requirements; and
- (d) identification and management of confidential information.

Rule 99D Submission of Regulatory Disclosure Data Report to the AER

- (1) By no later than 1 November each year, each *full regulation pipeline* service provider must submit to the AER, a Pipeline Regulatory Disclosure Data Report that:
 - (a) provides a true and fair statement of the financial, asset and operational data for each item set out in Schedule 4;
 - (b) is certified by the pipeline's:
 - (i) Chief Executive Officer; and
 - (ii) Company Secretary or a Director; and
 - (c) otherwise complies with the requirements of these Rules and the Pipeline Regulatory Disclosure Data Report Guidelines.
- (2) In addition to the Pipeline Regulatory Disclosure Data Report, the AER may require a *full regulation pipeline* service provider to submit, by a date and in the form and manner specified by the AER, any additional information the AER reasonably requires for a purpose set out in subrule (3).
- (3) The Pipeline Regulatory Disclosure Data Report submitted to the AER under subrule (1) may only be used by the AER for the following purposes:
 - (a) to monitor, report on and enforce the compliance of the *full regulation pipeline* service provider of any requirements imposed on the provider under Part 9 of these Rules; and
 - (b) as an input regarding the financial, asset and operational performance of the provider, to inform the AER in regards to its assessment of the Total Productivity Factor approach for the regulation of prices and revenues under this Part of these Rules.
- (4) The AER may request, or arrange to undertake, verification or independent audit of any information sought by it, or submitted to it, under this Part of these Rules.

Rule 99E Publication of Pipeline Regulatory Disclosure Data Reports by the AER

- (1) As soon as practicable after the AER has received a Pipeline Regulatory Disclosure Data Report from a *full regulation pipeline* service provider, subject to subrule (2), it must publish that report.
- (2) The AER must not publish:
 - (a) confidential information; or
 - (b) information identified by the relevant *full regulation pipeline* service provider in a Pipeline Regulatory Disclosure Data Report as confidential and only where the AER, exercising its discretion with a view that all information reported in a Pipeline Regulatory Disclosure Data Report should be made publicly available, considers confidential or is commercially sensitive.

Rule 99F Publication of an Annual TFP Report by the AER and alterations to data contained in Pipeline Regulatory Disclosure Data Reports

- (1) Not later than 1 March each year, in publishing an Annual TFP Report, the AER must:
 - (a) comply with the principles of calculating Total Factor Productivity set out in rule 99B;
 - (b) consider data contained in Pipeline Regulatory Disclosure Data Reports submitted to it, and only alter that data in accordance with subrule (3);
 - (c) provide an assessment of the factors for consideration to test the possible use of Total Factor Productivity for the regulation of prices and revenues set out in subrule (2), that assessment can either be for *full regulation pipeline* service providers as a whole, relevant groups of pipelines as identified by the AER, or individual pipelines;
 - (d) comply with the contents of an *Annual TFP Report* set out in Schedule 3;
 - (e) provide Total Factor Productivity index results for *full regulation pipeline* service providers as a whole, relevant groups of pipelines as identified by the AER and individual pipelines based upon operating environment conditions and using a common specification of outputs and inputs; and
 - (f) publish all data used in calculating the Total Factor Productivity index results.
- (2) In publishing an Annual TFP Report, the AER may use historical data only if that data is consistent with the definitions for terms in the Pipeline Regulatory Disclosure Data Report Guidelines.

- (3) In preparing an Annual TFP Report, the AER may only make alterations to data contained in a Pipeline Regulatory Disclosure Data Report:
 - (a) to alter for structural differences to improve the consistency of data; and
 - (b) to alter for exceptional circumstances.

Example

For example, the AER may only make alterations to data contained in a Pipeline Regulatory Disclosure Data Report to align relevant Total Factor Productivity datasets to reflect different classification of pipeline services between different *full regulation pipelines*.

- (4) In the event that the AER makes an alteration to data contained in a Pipeline Regulatory Disclosure Data Report, it:
 - (a) must explain how the alteration to that data was performed;
 - (b) must give reasons for the alteration to that data; and
 - (c) must present Total Factor Productivity index results with and without alteration to that data,in its Annual TFP Report.

Rule 99G Consideration of the use of Total Factor Productivity for the Regulation of Prices and Revenues

- (1) The following constitutes assessment factors to test the use of Total Factor Productivity for the regulation of prices and revenues for *full regulation pipeline* service providers:
 - (a) a Total Factor Productivity dataset of sufficient length to establish reliable trends that is available, robust and consistent both through time and across service providers;
 - (b) calculation of Total Factor Productivity indexes that represent an accurate measure of productivity growth for *full regulation pipeline* service providers as a whole, relevant groups of pipelines as identified by the AER and individual pipelines;
 - (c) sufficient service providers are included in each group such as to allow for calculation of Total Factor Productivity indexes for price and revenue regulation so that the Total Factor Productivity index cannot be manipulated by an individual pipeline or a collective of related pipelines with common ownership; and
 - (d) calculation of Total Factor Productivity index growth rates using historic data that represents a fair and reasonable estimate of future productivity growth for *full regulation pipeline* service providers in the relevant grouping.

[2] New Schedule 3 Contents of Annual TFP Reports

After Schedule 2, insert:

Schedule 3 Contents of Annual TFP Reports

1 Annual TFP Report

An Annual TFP Report published by the AER relating to *full regulation pipeline* service providers must include, but is not limited to, the following:

- (a) a summary on:
 - (i) the possible use of the Total Factor Productivity approach for the regulation of prices and revenues of *full regulation pipeline* service providers in accordance with the assessment factors set out in rule 99G;
 - (ii) related research used to calculate indexes for *full regulation pipeline* service providers as a whole, relevant groups of pipelines as identified by the AER and individual pipelines;
- (b) an assessment of Total Factor Productivity data and methodological matters, including:
 - (i) identification of the sources of Total Factor Productivity data;
 - (ii) identification of appropriate industry groups;
 - (iii) approach and construction of the specifications for input and outputs variables used to calculate Total Factor Productivity indexes;
- (c) an assessment of Total Factor Productivity research conducted by the AER; and
- (d) Total Factor Productivity index results for each *full regulation pipeline* service provider, as a whole, and for relevant groups of service providers as identified by the AER based upon operating environment conditions and using a common specification of outputs and inputs.

Schedule 4 Pipeline Regulatory Disclosure Data Reports

Part 1 Items for Full Regulation Pipelines

The following tables set out the output and input items required to be submitted by distribution and transmission *full regulation pipeline* service providers to the AER in a Pipeline Regulatory Disclosure Report.

- (a) Definition of terms referred to in each item set out in the first column of Tables S4.1.1 and S4.1.2 (for distribution *full regulation pipeline* service providers), and Tables S4.1.3 and S.4.1.4 (for transmission *full regulation pipeline* service providers) are given in the Pipeline Regulatory Disclosure Data Report Guidelines, in accordance with rule 99C(2)(a).
- (b) Each item requiring the submission of a \$m figure in the second column of Tables S4.1.1, S4.1.2, S4.1.3 and S4.1.4 are subject to

financial audit requirements set out in the Pipeline Regulatory Disclosure Data Report Guidelines, in accordance with rule 99C(2)(c).

Table S4.1.1: Output items for Pipeline Regulatory Disclosure Data Reports from Gas Distribution Pipelines

Items	Units
<i>Gas delivered</i>	
Total	
Energy	TJ per annum
Maximum per day	TJ per day
Maximum per hour	TJ per hour
Distribution revenue	
- Revenue from fixed charges	\$m
- Revenue from variable charges	\$m
- Total revenue	\$m
Number of customers	No
Domestic volume based tariffs	
Energy	TJ per annum
Maximum per day	TJ per day
Maximum per hour	TJ per hour
Distribution revenue	\$m
- Revenue from fixed charges	\$m
- Revenue from variable charges	\$m
- Total revenue	\$m
Number of customers	No.
Non-domestic volume based tariffs	
Energy	TJ per annum

Items	Units
Maximum per day	TJ per day
Maximum per hour	TJ per hour
Distribution revenue	
- Revenue from fixed charges	\$m
- Revenue from variable charges	\$m
- Total revenue	\$m
Capacity Based Tariffs	
Energy	TJ per annum
Maximum per day	TJ per day
Maximum per hour	TJ per hour
Distribution revenue	
- Revenue from fixed charges	\$m
- Revenue from variable energy charges	\$m
- Revenue from variable capacity charges	\$m
- Total revenue	\$m
Number of customers	No.
Contracted / reserved / take or pay tariffs	
Energy	TJ per annum
Contracted energy	TJ per annum
Measured energy	TJ per annum
Contracted maximum per day	TJ per day
Measured maximum per day	TJ per day
Contracted maximum per hour	TJ per hour
Measured maximum per hour	TJ per hour
Distribution Revenue	

Items	Units
- Revenue from fixed charges	\$m
- Revenue from contracted energy	\$m
- Revenue from measured energy	\$m
- Revenue from contracted maximum per day	\$m
- Revenue from measured maximum per day	\$m
- Revenue from contracted maximum per hour	\$m
- Revenue from measured maximum per hour	\$m
Number of customers	No.
Tariff elements based on other output items (if any)	
Quantity of each output	
Distribution revenue	\$m
- Revenue from each output	\$m
Number of customers	No.
<i>Revenue/penalties from incentive schemes (eg S factor)</i>	\$m
System Performance	
SAIDI	
SAIFI	
Number of interruptions affecting 5 customers or fewer	
Number of interruptions affecting more than 5 customers	
<i>Unaccounted for Gas</i>	%

Table S4.1.2: Input items for Pipeline Regulatory Disclosure Data Reports from Gas Distribution Pipelines

Items	Units
<i>Opex</i>	
<i>Total distribution opex (excluding depreciation and all capital costs)</i>	\$m
<i>Shared allocation of opex overheads to distribution activities (eg head office) included in above</i>	\$m
<i>Operating expenses disaggregated</i>	
Network operations	\$m
Customer connections	\$m
Meter reading services	\$m
Billing and revenue collection	\$m
Advertising and marketing	\$m
Regulatory costs	\$m
Change in provisions	\$m
Other operating costs (excluding those below)	\$m
<i>Subtotal of above</i>	\$m
<i>Maintenance expenses disaggregated</i>	
City gate stations	\$m
Transmission mains	\$m
Distribution mains	\$m
Services	\$m
Cathodic protection	\$m
Supply regulators	\$m
Meters	\$m
SCADA and remote control	\$m
Other	\$m

Items	Units
<i>Subtotal of above</i>	\$m
<i>Direct employees</i> Number of full-time equivalent employees in operating and maintenance activities (including shared overhead allocation). Employee time spent on capital construction projects is to be excluded.	No.
<i>Direct labour cost</i> Labour cost (including on-costs) of employees in operating and maintenance activities (including shared overhead allocation). Cost of time spent on capital construction projects is to be excluded.	\$m
<i>Distribution system capital quantities and capacities</i>	
Transmission mains – over 1050 kPa g	
Weighted average of max sustainable pressure	kPa g
Weighted average of pipe diameter	mm
Pipeline length	km
Medium pressure distribution mains – 20 to 210 kPa g	
Weighted average of max sustainable pressure	kPa g
Weighted average of pipe diameter	mm
Pipeline length	km
Low pressure distribution mains – to 7 kPa g	
Weighted average of max sustainable pressure	kPa g
Weighted average of pipe diameter	mm
Pipeline length	km
Pipeline length by material	
Polyethylene	km
PVC	km

Items	Units
Protected Steel	km
Unprotected Steel	km
Cast Iron	km
Other	km
Service Connections (from mains to customer)	
Number	No.
Length	km
City gate stations	No.
Field regulators	No.
District regulators	No.
Meter regulator installations	No.
Meters over 10 cubic metres/hour	No.
Meters up to 10 cubic metres/hour	No.
<i>Regulatory asset base values</i>	
City gate stations	\$m
Transmission mains	\$m
High pressure distribution	\$m
Medium pressure distribution	\$m
Low pressure distribution	\$m
Cathodic protection	\$m
Services	\$m
Supply regulators / valve stations	\$m
Meters	\$m
SCADA and other remote control	\$m
Other - IT	\$m

Items	Units
Other - non IT	\$m
<i>Total</i>	\$m
<i>RAB Reconciliation</i>	
Opening value	\$m
Inflation addition	\$m
Regulatory depreciation	\$m
Actual additions (recognised in RAB)	\$m
Retirements	\$m
Resulting summation for asset value	\$m
<i>Actual Capital Expenditure</i>	
City gate stations	\$m
Transmission mains	\$m
High pressure distribution	\$m
Medium pressure distribution	\$m
Low pressure distribution	\$m
Cathodic protection	\$m
Services	\$m
Supply regulators / valve stations	\$m
Meters	\$m
SCADA and other remote control	\$m
Other - IT	\$m

Items	Units
Other - non IT	\$m
Total	\$m
<i>Asset Lives – estimated total and residual</i>	Years
City gate stations	Years
Transmission mains	Years
High pressure distribution	Years
Medium pressure distribution	Years
Low pressure distribution	Years
Cathodic protection	Years
Services	Years
Supply regulators / value stations	Years
Meters	Years
SCADA and other remote control	Years
Other - IT	Years
Other - non IT	Years
<i>Value of capital contributions or contributed assets</i>	\$m
<i>Price index for labour inputs</i>	
<i>Price index for O&M expenditure</i>	
<i>Price index for network assets</i>	

Table S4.1.3: Output items for Pipeline Regulatory Disclosure Data Reports from Gas Transmission Pipelines

Items	Units
<i>Revenue</i>	
From contracted / reserved / take or pay	\$m

Items	Units
capacity charges	
From measured capacity charges	\$m
From contracted / reserved / take or pay throughput charges	\$m
From measured throughput charges	\$m
From other charges (if any)	\$m
<i>Total</i>	\$m
<i>Revenue/penalties from incentive schemes (eg S factor)</i>	\$m
<i>Number of gas input locations</i>	
Listing of inputs	
<i>Number of off-take locations</i>	
Listing of off-takes	
<i>Gas throughput</i>	
Contracted / reserved/ take or pay annual total delivery	TJ per annum
Measured annual total delivery	TJ per annum
Contracted / reserved / take or pay maximum daily quantity	TJ per day
Measured maximum daily quantity	TJ per day
Contracted / reserved/ take or pay maximum hourly quantity	TJ per hour
Measured maximum hourly quantity	TJ per hour
Delivered to connected distribution systems	TJ
Delivered to other connected transmission systems	TJ
Delivered to directly connected end-users	TJ
Delivered to other	TJ

Items	Units
<i>Gas maximum throughput capacity</i>	
Annual total delivery	TJ
Maximum daily quantity	TJ
Maximum hourly quantity	TJ
<i>Reliability</i> Gas transmission reliability indicators are not well developed and need to be discussed with stakeholders	
Unaccounted for Gas	%

Table S4.1.4: Input items for Pipeline Regulatory Disclosure Data Reports from Gas Transmission Pipelines

Items	Units
<i>Opex</i>	
<i>Total transmission opex (excluding depreciation and all capital costs)</i>	\$m
<i>Shared allocation of opex overheads to transmission activities (eg head office) included in above</i>	\$m
<i>Operating expenses</i>	\$m
<i>Maintenance expenses disaggregated as follows</i>	\$m
Compressor stations	\$m
City gate stations	\$m
Transmission mains	\$m
Other	\$m
<i>Direct employees</i> Number of full-time equivalent employees in	No.

Items	Units
operating and maintenance activities (including shared overhead allocation). Employee time spent on capital construction projects is to be excluded.	
<i>Direct labour cost</i> Labour cost (including on-costs) of employees in operating and maintenance activities (including shared overhead allocation). Cost of time spent on capital construction projects is to be excluded.	\$m
<i>Transmission System Capital Quantities and Capacities</i>	
Transmission mains – over 1050 kPa g	
Weighted average of max sustainable pressure	kPa g
Weighted average of pipe diameter	mm
Pipeline length	km
Other mains – less than 1050 kPa g	
Weighted average of max sustainable pressure	kPA g
Weighted average of pipe diameter	mm
Pipeline length	km
Compressor stations	No
City gate stations	No
<i>Regulatory asset base values</i>	
Transmission mains	\$m
Other mains	\$m
Compressor stations	\$m
City gate stations	\$m
SCADA and other remote control	\$m
Other – IT	\$m
Other - non IT	\$m

Items	Units
<i>Total</i>	\$m
<i>RAB Reconciliation</i>	
Opening value	\$m
Inflation addition	\$m
Regulatory depreciation	\$m
Actual additions (recognised in RAB)	\$m
Retirements	\$m
Resulting summation for asset value	\$m
<i>Actual Capital Expenditure</i>	
Transmission mains	\$m
Other mains	\$m
Compressor stations	\$m
City gate stations	\$m
SCADA and other remote control	\$m
Other - IT	\$m
Other - non IT	\$m
<i>Asset Lives – estimated total and residual</i>	
Transmission mains	Years
Other mains	Years
Compressor stations	Years
City gate stations	Years

Items	Units
SCADA and other remote control	Years
Other - IT	Years
Other - non IT	Years
<i>Value of Capital Contributions or Contributed Assets</i>	\$m
<i>Price Index for Labour Inputs</i>	
<i>Price Index for O&M Expenditure</i>	
<i>Price Index for Network Assets</i>	

Schedule 2 Savings and Transitional Amendments to the National Gas Rules

(4)

[1] New Part 4 Schedule 1 Transitional provisions consequent on the Use of Total Factor Productivity for the Regulation of Prices and Revenues

After rule [xx] in Schedule 1, insert:

Part 4 Transitional provisions consequent on the Use of Total Factor Productivity for the Regulation of Prices and Revenues

[xx] Definitions

(1) In this Part:

Amending Rules means the National Gas Amendment (Use of Total Factor Productivity for the Regulation of Prices and Revenues) Rule [Year].

Pipeline Regulatory Disclosure Data Report Working Group means the working group established by the AER and constituted in accordance with rule [xx].

[xx] Pipeline Regulatory Disclosure Data Report Working Group and the initial Pipeline Regulatory Disclosure Data Report Guidelines and Templates

(1) Not later than [Date], the AER must establish a Pipeline Regulatory Disclosure Data Report Working Group.

(2) Members of the Pipeline Regulatory Disclosure Data Report Working Group must consist of:

- (a) an employee of the AER, to act as chairperson;
- (b) other persons appointed at the sole discretion of the AER, acting reasonably, comprising of:
 - (i) persons representing *full regulation pipeline* service providers; and
 - (ii) at least 1 person representing the interests of end use customers for gas.

(3) Not later than [Date], the Pipeline Regulatory Disclosure Data Report Working Group:

- (a) must develop the initial Pipeline Regulatory Disclosure Data Guidelines that determine the manner and form in which Pipeline

Regulatory Disclosure Data Reports are required to be submitted to the AER; and

- (b) if considered necessary by the working group, must develop the initial Pipeline Regulatory Disclosure Data Report templates.
- (4) In its development of the initial Pipeline Regulatory Disclosure Data Guidelines and, if considered necessary, the initial Pipeline Regulatory Disclosure Data Report templates under subrule (3), the Pipeline Regulatory Disclosure Data Report Working Group:
 - (a) must have regard to the principles of calculating Total Factor Productivity set out in rule 99B; and
 - (b) must have regard to matters set out in rule 99C(2).

[xx] Administration, conduct and decisions of the working group

- (1) At any time, the AER, acting reasonably, may remove any member of the Pipeline Regulatory Disclosure Data Report Working Group.
- (2) A decision of the Pipeline Regulatory Disclosure Data Report Working Group on any matter may be made by the majority of the members of that working group. Where the members of that relevant working group are equally divided on any matter, the chairperson has the casting vote.
- (3) The Pipeline Regulatory Disclosure Data Report Working Group must meet to carry out its functions set out in rule [xx], and is to regulate and conduct its meetings in accordance with these rules.
- (4) A person may resign from the Pipeline Regulatory Disclosure Data Report Working Group by giving notice in writing to that effect to the AER.

[xx] Publication of the Pipeline Regulatory Disclosure Data Guidelines

- (1) Within 2 business days of the decision of the Pipeline Regulatory Disclosure Data Report Working Group in agreeing to the relevant initial guidelines and, if considered necessary and agreeing to the relevant initial templates, the AER must publish those initial guidelines and templates.
- (2) If the relevant working group failed to agree upon the relevant initial guidelines by the relevant date referred to in rule [xx], then the AER:
 - (a) must, acting reasonably in considering any development of the initial guidelines or templates by the Pipeline Regulatory Disclosure Data Report Working Group, within 10 business days from the relevant dates referred to in rule [xx], determine the initial Pipeline Regulatory Disclosure Data Guidelines; and
 - (b) by no later than 2 business days after the date referred to in subrule (2)(a), publish that guideline as determined under subrule (2)(a).

