



Public Consultation Document

(Ref: No PNGRB/ M(C)/85-Vol-III dated 17.10.2017)

Subject: **Final initial unit natural gas pipeline tariff under the provisions of the Petroleum and Natural Gas Regulatory Board (Determination of Natural Gas Pipeline Tariff) Regulations, 2008.**

Name of Entity: **Assam Gas Company Limited (AGCL)**

Name of Pipeline: **Assam Natural Gas Pipeline (ANGPL)**

1. Regulatory Framework

- 1.1. In terms of Section 22 of the PNGRB Act, 2006, the Board is entrusted with the responsibility of determining the natural gas pipeline tariff to be charged by the entities laying, building, operating or expanding a natural gas pipeline before the appointed day.
- 1.2. The methodology for determination of pipeline tariff has been specified in the relevant provisions of the Petroleum and Natural Gas Regulatory Board (Determination of Natural Gas Pipeline Tariff) Regulations, 2008 (hereinafter referred to as “Tariff Regulations”) notified on 20.11.2008. Under the provisions of these regulations, PNGRB is to determine the initial unit natural gas pipeline tariff on a provisional basis first and then finalize the same considering the actual costs and data at the end of the financial year on the basis of audited accounts. The transportation tariff is determined using Discounted Cash Flow (DCF) method using actual and projected pipeline capex and opex costs (in line with provisions of Tariff Regulations) over the entire economic life (The economic life of the natural gas pipeline shall be as specified in the Petroleum and Natural Gas Regulatory Board (Authorizing Entities to Lay, Build, Operate or Expand Natural Gas Pipeline) Regulations, 2008) of the pipeline thus arriving at a single levelized transportation tariff. If the length of pipeline is more than 300 kms the recovery of transportation tariff is apportioned across such zones of 300 kms each resulting in zonal tariff where the zonal tariff of a later zone is higher than of an earlier zone.
- 1.3. On 20.12.2013, PNGRB issued the provisional terms and conditions for acceptance of Central Government authorization for laying, building, operating or expanding the Assam Natural Gas Pipeline Network of Assam Gas Company Limited (AGCL) as common carrier pipeline network under regulation 17 (1) of the Petroleum and Natural Gas

Regulatory Board (Authorizing Entities to Lay, Build, Operate or Expand Natural Gas Pipelines) Regulations, 2008 (hereinafter referred to as “Authorization Regulations”). As per the authorization, the Assam Natural Gas Pipeline Network is of length of 104.73 kms, and provisional capacity of 2.482 MMSCMD (including common carrier capacity of 0.607 MMSCMD). AGCL’s Assam Natural Gas pipeline Network was commissioned from year 1986 to year 2004 the economic life of which has ended in year 2011. Considering the submission made by AGCL, the economic life of Assam Natural Gas Pipeline Network has been extended by the Board by a block of 10 years up to year 2021.

2. Provisional Transportation Tariff Order

2.1 AGCL vide letter dated 19.05.2011 and 25.11.2013 filed its submission for determination of transportation tariff for ANGPL. However, the submission was incomplete in many respects. In absence of a comprehensive tariff proposal with computation of tariff from AGCL and further to its submission of a CA certificate mentioning that it is unable to compile and submit the relevant data, PNGRB has proceeded to determine the transportation tariff on the best judgment basis considering the information available on record. Subsequently, PNGRB issued a provisional tariff order no. TO/03/2014 dated 30.05.2014 determining the provisional initial unit natural gas pipeline tariff under the provisions of Determination of Natural Gas Pipeline Tariff Regulations 2008 for ANGPL (available on PNGRB’s website). The provisional initial unit tariff determined by PNGRB was Rs. 4.05 /MMBTU on Gross Calorific Value basis.

3. Orders of Appellate Tribunal for Electricity (APTEL)

PNGRB had issued a provisional tariff order no. TO/03/2014 dated 30.05.2014 determining the provisional initial unit tariff for ANGPL. AGCL has also filed a review petition on tariff of ANGPL which was dismissed by the PNGRB vide its order dated 29.04.2015. AGCL in its Appeal no. 305 of 2016 has challenged both the provisional tariff order dated 30.05.2014 and order dated 29.04.2015 (which dismisses the review petition filed by AGCL) passed by PNGRB.

4. Tariff Filing submitted by AGCL

4.1 PNGRB, vide letters dated 26.02.2015, 07.04.2015, 11.05.2015, 01.06.2017, 06.07.2017 and 30.08.2017 had asked AGCL to submit tariff filing for finalization of unit natural gas pipeline tariff of Assam Natural Gas Pipeline Network. AGCL, vide letters dated 24.04.2015, 17.06.2015, 24.09.2015, 22.12.2016, 31.07.2017 and 23.09.2017 filed its tariff submission based on actual data upto FY 16-17 for determination of transportation tariff for the Assam Natural Gas Pipeline Network.

4.2 AGCL in its updated tariff submission vide letter dated 23.09.2017 submitted proposed tariff of Rs.7.90/mmbtu which is Rs.0.282/scm, at 9000 kcal/scm for FY 09. Year wise tariff submitted by AGCL considering 3% annual escalation are as follows:-

Final Tariff submitted by AGCL	Rs. SCM
FY 09	0.282
FY 10	0.290
FY 11	0.299
FY 12	0.308

FY 13	0.317
FY 14	0.327
FY 15	0.337
FY 16	0.347
FY 17	0.357
FY 18	0.368
FY 19	0.379
FY 20	0.390
FY 21	0.402

5. **Details of tariff filing submitted by AGCL**

AGCL in its tariff submission distributed its Capex and Opex into CGD assets, dedicated pipeline and common carrier assets (ANGPL). The various aspects of final tariff filing submitted by AGCL are as follows:

5.1 **Capital Expenditure (Capex)**

AGCL in its tariff calculation for ANGPL has claimed capex of Rs.267.20 Cr for entire economic life. The capex related to ANGPL as given by AGCL is discussed below under three heads namely, net block (Rs.18.13 Cr), actual capex outgo from FY 2009-10 to 2016-17 (Rs.5.76 Cr) and future capex projections from FY 2017-18 till end of life in 2020-21 (Rs.243.31Cr).

AGCL has bifurcated its fixed assets under three heads viz. CGD assets, dedicated pipeline and common carrier assets (ANGPL). However, basis of allocation of fixed assets into three heads has not been provided.

5.1.1 Net Block (NB)/Net Fixed Assets (NFA)

In the tariff filing AGCL has claimed NB of Rs. 18.13 Cr (NFA 18.13 Cr and CWIP Rs. NIL) as on 30.09.2008. Assets as on 30.09.2008 for ANGPL (Common Carrier) as per the CA certificate is Rs.18.08 Cr.

5.1.2 Actual Capex Outgo from 2009-10 to 2016-17

In the tariff filing, AGCL has claimed actual capex outgo of Rs.5.76 Cr. from FY 2009-10 to 2016-17. In support of the actual capex outgo AGCL has submitted CA Certificate for addition to fixed assets.

Year wise details of actual capex as per tariff filing and CA certificate are tabulated below:

(Rs. in Cr)

Year	Tariff Filing	CA Certificate
2009-10	0.06	0.06
2010-11	0.19	0.19
2011-12	0.45	0.45
2012-13	1.14	1.14
2013-14	1.49	1.49
2014-15	0.54	0.54
2015-16	1.67	1.67
2016-17	0.23	0.23
TOTAL	5.77	5.77

5.1.3 Future Capex Outgo (2017-18 to 2020-21):

AGCL in its tariff filing has claimed total future capex outgo of Rs.243.31 Cr (Rs. 9.38 Cr in FY 2017-18 and Rs. 233.93 in FY 2018-19). While estimating the future cost of capex in FY 2017-18 and FY 2018-19, AGCL has added 6% p.a. in current cost of future projections. AGCL has not submitted any Board approval for the future capex. However, it

has submitted action taken report stating “With regard to the Replacement Plan of the Company’s old pipelines etc. the Board noted the present status and advised to carry out the remaining works on a priority basis and submit a status in its next meeting.” Expected expenditure under head “Pipeline Replacement Plan” on common carrier pipeline of Rs. 219.5 Cr has been attached to the Action taken report.

5.2 **Operating Expenditure (Opex)**

5.2.1 AGCL in its tariff submission vide letter dated 23.09.2017 has claimed total opex of Rs.164.13 Cr. (Actual Rs.88.05 Cr. upto FY 2016-17 and Rs.76.08 Cr from FY 2017-18 to 2020-21) for the entire economic life of the pipeline.

5.2.2 Actual Opex outgo upto FY 16-17

In its tariff submission AGCL has claimed opex of Rs.88.05 Cr. from 20.11.2008 upto FY 2016-17.

Actual opex as claimed by AGCL comprises:

- (a) Power & Fuel
- (b) Salaries
- (c) General Administration &
- (d) Repairs and Maintenance

AGCL has submitted CA Certificate of bifurcation of total opex in CGD, Dedicated and Common Carrier pipeline. AGCL has also submitted the basis of allocation of the expenditure in various pipelines (CGD, Dedicated and Common carrier) as follows:

Expenditure	Basis
Salaries and Wages	Manpower
Power-25%	Direct
Power-75%	Manpower
Repairs	Direct
Compressor Fuel	Volume Compressed
Travelling-Emp.	Direct
Travelling-Others	Manpower
Vehicle Running	Manpower
Vehicle Hire Charges	Manpower
Other Op. Exp.	Manpower
Interest	Direct
Compressors	Direct
Pipelines	Direct
Instrumentation	Direct
Vehicles	Direct
EDP system	Direct-30%
EDP system	Manpower-70%
Civil	Manpower
Other repairs	Manpower

Year-wise breakup of opex claimed in tariff filing and that certified in CA certificates submitted by AGCL are as follows:

Financial Year	Tariff Filing	CA Certificates
2008-09	5.25	5.25*
2009-10	5.12	5.12

2010-11	6.63	6.63
2011-12	9.75	9.75
2012-13	9.97	9.97
2013-14	9.92	9.92
2014-15	13.42	13.42
2015-16	14.73	14.73
2016-17	13.27	13.27

*CA Certificate for opex is for the FY 2008-09.

AGCL in its tariff submission has not considered 'Miscellaneous income'.

5.2.3 **Future opex projections from FY 2017-18 to 2020-21**

In its tariff submission, AGCL has claimed future opex of Rs.76.08 Cr. The future opex submitted by AGCL assuming 16% annual inflation on opex for FY 2016-17 (other than on Gas loss in Transit i.e. unaccounted gas loss).

5.3 **Unaccounted Gas Loss /Line Loss/Loss in Transit**

AGCL has claimed "Gas loss in transit" included in Opex as submitted by AGCL in CA Certified opex for FY 2014-15, 2015-16. This is in addition to System Used Gas (SUG) that is claimed as fuel included in opex. However, CA certificate provided that total opex for the period from 20.11.2008 to 31.03.2014 does not include any gas loss amount.

Gas loss in transit allocated and claimed by AGCL for its Common Carrier pipeline for the year 2014-15 is Rs.0.92 Cr, for 2015-16 is Rs. 1.68 Cr and for 16-17 Rs.1.00 Cr. AGCL in its future opex has claimed Rs.1.00 Cr each year of gas loss in transit from 2017-18 to 2020-21.

5.4 **Volume Divisor**

The provisional capacity as per the provisional acceptance of Central Government authorization issued on 20.12.2013 by PNGRB is 2.428

MMSCMD (including common carrier capacity of 0.607 MMSCMD).
Year wise volume divisor considered by AGCL in its tariff filing is in MMSCM which are as follows:

CONSUMER CATEGORY	Existing (2009-10 to 2016-17)			Future (F.Y. 2017-18 onwards)		
	MMSCMD	No. of days	Yearly (MMSCM)	MMSCMD	No. of days	Yearly (MMSCM)
ASEB (NTPS)	0.80	350	280.00	0.80	350	280.00
ASEB (LTPS)	0.50	350	175.00	0.50	350	175.00
APL	0.15	350	52.50	0.15	350	52.50
JRT-GHT (CGD)	0.09	300	27.00	0.09	300	27.00
SONARI (CGD)	0.06	300	18.00	0.06	300	18.00
TOTAL	1.60		552.50	1.60		552.50

For year 2008-09 i.e. from 20.11.08 to 31.03.2009 AGCL has considered 199.81 MMSCM ($552.50 \times 132/365$) as volume divisor.

5.5 Weighted Average Heat Value

As per Clause 6 of Schedule A of Tariff Regulations, the volume of natural gas determined as per the regulations shall be converted into its energy equivalence in MMBTU terms for the purpose of determination of final initial unit natural gas pipeline tariff by considering the weighted average heat value of natural gas delivered to customers during the initial unit natural gas pipeline tariff period. AGCL, in its tariff submission has considered 9000 weighted average heat value for tariff calculation. AGCL in its tariff submission has submitted month wise Gross Calorific Value (GCV). Weighted average GCV from Nov' 08 to March 16 submitted by AGCL is 9312 and for FY 2016-17 is 9036.

5.6 Working Capital

As per the Tariff Regulations, Working Capital is calculated as sum of 30 days of opex (excluding depreciation) and 18 days of revenue (tariff receivable). AGCL in its tariff submission, has considered total working

capital of Rs.2.24 Cr (Rs.1.41 Cr for opex and 0.83 Cr for Tariff Receivable)

5.7 No. of Working Days

AGCL has considered working days as 350 days and 300 days for different customers mentioned as under:-

CONSUMER CATEGORY	Proportionate no of days for 20.11.08 to 31.03.09	No. of days from 09-10 to 16-17	No. of days from F.Y. 17-18 onwards
ASEB (NTPS)	126.58	350	350
ASEB (LTPS)	126.58	350	350
APL	126.58	350	350
JRT-GHT (CGD)	108.50	300	300
SONARI (CGD)	108.50	300	300

5.8 Line Pack

Line pack is the value of gas which always remains in the pipeline and as per regulations it is to be considered as cash outflow in the initial year and to be considered as cash inflow in the last year of the economic life of the pipeline. AGCL in its tariff submission has considered line pack of Rs. 0.26 Cr. in 2008-09.

5.9 Terminal Value

Terminal Value is the sum of residual value of the NFA at the end of the economic life, working capital and line pack. The terminal value submitted by AGCL in its tariff submission is Rs.241.46 Cr as on 31.03.2021 (Rs. Nil for working capital, Rs.0.26 Cr for line pack, and Rs.241.20 Cr for net value of fixed assets).

5.10 Return on capital employed

Clause 2 of Schedule A of the Tariff Regulations mandate that natural gas pipeline tariff shall be calculated based on DCF methodology after considering the reasonable rate of return (i.e. “ twelve percent post tax”

as per clause 3 to Schedule A) to be the projects internal rate of return. AGCL in its tariff submission has considered the annual rate of return @18.18% considering 12% post tax returns based on corporate income tax as 33.99% for the entire life of pipeline.

5.11 **Zonal Apportionment**

Since the length of the ANGPL of AGCL does not exceed 300 kms, the apportionment of the levelized tariffs is not required to be undertaken.

6. **Views of stakeholders sought**

Determination of Final initial unit natural gas pipeline tariff is a time bound exercise. PNGRB solicits the views in writing of stakeholders on AGCL's tariff filing for the Assam Natural Gas Pipeline Network within 15 days of the issue of this document at the following address:

*Secretary,
Petroleum and Natural Gas Regulatory Board,
1st Floor, World Trade Centre,
Babar Road, New Delhi 110001.*

(Vandana Sharma)
Secretary
For and on behalf of the Board