



Government of India

Ministry of Petroleum and Natural Gas

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Ref.No.L-12018/23/2011-GP-II

Dated the 23rd December, 2011

To

1. Chairman & Managing Director,
Oil & Natural Gas Corporation Ltd.,
New Delhi.
2. Chairman,
Indian Oil Corporation Ltd., New Delhi.
3. Chairman & Managing Director,
GAIL (India) Limited, New Delhi.

Subject : Guidelines for pricing and commercial utilization of non-APM Gas produced by National Oil Companies (NOCs) from their nominated blocks.

Sir,

In continuation of this Ministry's letter No.L-12015/5/10-GP dated the 28th June, 2010 on the subject mentioned above, it is further clarified that Para 7.7 and Para 7.8 of the Guidelines would be implemented in the following manner to ensure allocation of non-APM gas, as per sectoral priority, from different regional sources:

- (a) Demand should be arranged region wise, in the priority as per Para 7.7 of the Guidelines and within the priority, in two categories, namely APM shortfall and New Demand (in that order), as illustrated below:

Source of gas	Fertiliser		LPG		Power	
	APM Shortfall	New Demand	APM Shortfall	New Demand	APM Shortfall	New Demand
West/North						
South-KG Basin						

(in the illustration it is assumed that gas is available from West/North and South/KG Basin and demand is limited till power sector)

- (b) For each source, the gas would be allocated within a region in the order of sectoral priority, first to meet APM shortfall and then for new demand, until gas is fully allocated. Once any one source of gas stands fully allocated, all the balance demand, in both regions, if any, must be done following the priority of sectors, as in Para 7.7 of the Guidelines and within the priority, gas should be first allocated to APM shortfall. This is illustrated in a hypothetical case below:

Source of gas	Fertiliser APM Shortfall	Fertiliser New Demand	LPG APM Shortfall	LPG New	Power APM Shortfall	Power New Demand
West/North ----->	√ ----->	√ ----->	√ ----->	√ ----->	√ ----->	●
South-KG Basin ----->	√ ----->	√ ----->	√ ----->	√ ----->	√ ----->	

(Tick mark √ indicates that demand has been fully met and ● shows it has been partially met, dashed line -----> is for gas flow from West/North zone and full line -----> is for gas flow from South Zone)

Even if there is only one source of gas, the same process would hold (assuming that the other source of gas was exhausted).

Yours faithfully,

[Signature]

[A. Goswami]

Under Secretary to the Govt. of India

Tel.No.23384518

Copy to:

1. Joint Secretary(Exploration)
2. Joint Secretary(Marketing)
3. Director(GP)

No.L-12015/5/10-GP
Government of India
Ministry of Petroleum & Natural Gas

Shastri Bhawan, New Delhi
Date: June 28, 2010

To

- (i) ONGC
- (ii) OIL
- (iii) GAIL

Subject : Pricing and commercial utilization of non-APM gas produced by NOCs from their nominated blocks

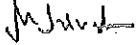
Sir,

Please refer Ministry's letter No.L-12015/8/10-GP dated May 31, 2010, which has been issued on the basis of decision taken in the Cabinet on 19.5.2010. The said letter states inter alia that ONGC & OIL would have the freedom to sell any production from new fields in their nominated blocks at non-APM rate decided by the Government. It has further been clarified in the said letter that as regards existing producing fields, the production of ONGC & OIL from these, including any additional production, would be considered as APM gas and sold at APM rate.

2. The above mentioned letter also states that sale of non-APM gas thus produced from nominated blocks would be in accordance with Government's decisions regarding commercial utilization of gas.

3. The Government has approved the "Guidelines for pricing and commercial utilization of non-APM gas produced by NOCs from their nominated blocks", which are being enclosed. It is directed that proposals regarding pricing and commercial utilization of non-APM gas produced by NOCs from their nominated blocks should be prepared on the basis of the same and subsequently submitted to the Ministry for approval.

Yours faithfully,


(Manu Srivastava)
Director
Tele: 23381029

Enclosed : Guidelines as above
Copy to :

JS (E)

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Guidelines for Pricing and commercial utilization of non-APM gas
produced by NOCs from their nominated blocks

1.0 Background

- 1.1 The gas produced from nominated blocks of National Oil Companies (NOCs) has been fully controlled by the Government since 1987. Since then, the price at which gas is sold has been fixed by the Government. As regards utilization of APM gas, the Government would decide the allocation of gas to various units in the priority sectors through the erstwhile Gas Linkage Committee comprising of the Secretaries of all user ministries and chaired by Secretary (P&NG). The Minister of Petroleum & Natural Gas granted the approval for the allocation of APM gas.
- 1.2 The principles of pricing and commercial utilization of natural gas produced by National Oil Companies (NOCs) from NELP blocks & from pre-NELP blocks are governed by the provisions of the respective Production Sharing Contracts (PSCs), as for any other Contractor. However, as regards the production of natural gas by NOCs from the blocks awarded to them on nomination basis by the Government, the pricing and commercial utilization continues to be determined by the Government.
- 1.3 The pricing of APM gas did not keep pace with the price of alternate fuels or the gas available domestically from blocks awarded to private producers as also from imported Liquefied Natural Gas (LNG). More than 80% of the APM gas was allotted to power, fertilizers and court-mandated customers.
- 1.4 At APM prices, the NOCs were not finding it viable to invest in the nominated blocks to develop new fields as also to develop marginal fields or fields having problems in connectivity to the grid. From the country's and the customers' perspective, it is imperative that domestic gas sources are optimally exploited to make available larger quantity of gas for domestic use. To make production of gas from such fields viable for the NOCs, a provision for gas produced from new discoveries, which could be sold at non-APM price, was made in the Gas Pricing Order of July 2005. The Gas Pricing Order stated that:-

"Subject to determination of producer price, based on recommendation of Tariff Commission, any additional gas as well as future production of gas from new fields to be developed in future by ONGC/OIL will be sold at market related prices in the context of NELP provisions".

1.5 The Cabinet in its meeting held on 19.5.10 has decided that:

- a) ONGC and OIL be given the freedom to sell any production from new fields in their nominated blocks at non-APM rate approved by the Government. As regards existing producing fields, the production of ONGC and OIL from these, including any additional production, would be sold at APM rate. The sale of APM and non-APM gas thus produced from nominated blocks would be in accordance with Government's decisions regarding commercial utilization of gas.
- b) In case of reduction in availability of APM gas in future, the supplies to APM customers would be reduced on a pro rata basis. To meet the deficit in supply of gas to these customers, GAIL and other Oil Marketing Companies (OMCs) marketing non-APM natural gas would supply non-APM gas, subject to availability, to these customers on priority, provided they are willing to pay higher non-APM price.

These decisions make it clear that the NOCs have to seek approval for the non-APM rate from the Government and non-APM gas would be given to APM customers on priority where reduction in supplies of APM gas has taken place.

1.6 The Committee has been constituted to evolve guidelines for pricing and distribution of non-APM gas produced from the nominated blocks by the NOCs.

2.0 Views of ONGC, OIL & GAIL

2.1 ONGC made a presentation before the Committee, wherein it was submitted that nominated blocks of ONGC are unlikely to yield any new major/large discoveries and the cost of gas production from smaller fields is very high. Further, cost of offshore production is higher by an order of magnitude compared to onland fields. It was also pointed out that, as gas is priced at landfall point, it should cover transportation cost to the landfall point. ONGC pointed out that some marginal fields could become viable only at market price.

2.2 OIL has informed that it has suffered under-recoveries of over Rs. 800 crore in the past 5 years as supplying gas at APM prices is not viable. Ideally gas prices should move in tandem with price of alternate fuel like naphtha and furnace oil. Additional gas production at APM price is not viable and gas price should be at least equal to US\$4.2/mmbtu.

2.3 GAIL informed that its GSA dated 6.7.2006 with ONGC provided sale and purchase of additional/new gas at differential pricing. Gas thus available from ONGC at market price is being supplied to various customers in accordance with their requirements.

3.0 Evolution of Gas Pricing in India

The snapshot of the evolution of gas prices in the country is given below:

Pre-1987: Prices determined by ONGC/OIL on the basis of negotiations with consumers

1987-91:

- Prices fixed by Government on cost plus basis
- Uniform gas prices for all consumer segments
- Price concessions allowed to customers in North East region
- Producer Price at landfall point : Rs. 1400/mscm(thousand standard cubic meters)
- Consumer price: Rs. 1250/mscm (Rs. 1000/mscm for North East)

1992-97:

- Prices revised based on Kelkar Committee recommendations
- Producer price at landfall point to be Rs. 1500/mscm
- Consumer price @ Rs 1550/mscm which was increased in phases to Rs 1850/mscm till 1997
- Gas price for consumers in North East to continue at Rs. 1000/mscm

Shankar Committee-1997:

Shankar Committee was established by Government in January 1995 to recommend changes in and principle for gas pricing.

The Committee considered price revision necessary - (i) to bring price of natural gas in line with alternate fuels like fuel oil, naphtha, etc., and (ii) to account for rising cost of production and transportation.

YEAR	Percentage of basket of Fuel Oil (Rest of India)	Percentage of basket of Fuel Oil (North East)
Oct 97-Mar 98	55%	30%
Apr 98-Mar 99	65%	40%
Apr99-Mar 2000	75%	45%
Floor prices for landfall point	Rs.2150/mscm	Rs.1200/mscm
Ceiling prices for landfall point	Rs.2850/mscm	Rs. 1700/mscm

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Shankar Committee recommended changes in gas prices on the principles of (i) Facilitating shift in pricing mechanism from cost-plus to market determined price, and (ii) phased build-up of consumer prices based on linking to the price of a basket of international FOs. It recommended that the parity with FOs be increased as follows:

Prices were to be reviewed at the end of three years (1999-2000) with a view to achieve 100% fuel oil parity over the 4th (2000-01) and 5th year (2001-02)

The prices were fixed and notified every quarter by GAIL with the approval of Ministry.

Consumer price has remained at Rs. 2850 /mscm since October 1999 till 2005.

Gas Pricing Order -2005:

- APM price was increased on an ad hoc basis to Rs 3200/mscm
- APM gas to be supplied only to customers in power & fertilizers sectors, small customers (up to 50,000 scmd) and court-mandated customers.
- For priority sectors of power & fertilizer in the North East, the APM price was kept at Rs 1920/mscm, while the difference was provided to OIL through Government budget as subsidy.
- Gas price for transport sector & small scale consumers (allocation less than 50,000 scmd) to be progressively increased to reflect market price over the next 3 to 5 years. The price was increased to Rs 3840/mscm in June 2006.

4.0 Present Pricing of non-APM gas

The present Government decision regarding the price of non-APM natural gas is that it would be equal to the producer price being paid to the dominant non-APM gas available in the region. On the basis of the situation then prevalent, the non-APM price was decided in 2006 as follows:

- ✓ KG Basin & Cauvery --- \$3.50/mmbtu (equal to producer price of Ravva JV field)
- ✓ Rest of country --- \$4.75/mmbtu (equal to the then PMT price)

This decision continues to apply. ONGC is selling gas produced from isolated fields in Gujarat at \$4.75/mmbtu.

5.0 Guidelines to determine pricing for non-APM gas produced by NOCs

- 5.1 The pricing of gas in the market normally does not follow cost plus principles. Producers may have widely different cost of production depending on the field being onshore or offshore, the geology of the field, gas being associated or non-associated the quantum of reserves etc. Further, the connectivity of the field to the existing gas pipeline network or the proximity to customers also has a bearing on the development of a gas field. However, in India, APM gas is being sold on long term contracts at prices decided by the Government as mentioned in para 2, while gas from pre-NELP & NELP Production Sharing Contracts (PSCs) is sold on pricing formulae laid out in the PSCs. It may always be possible that cost of production of gas from a certain field may be such that it is not viable to produce the gas and bring it to the customer at the prevalent price. In such cases the gas is not produced as the commerciality of production is not achieved and accordingly the development of the field is deferred till a more suitable pricing regime is available.
- 5.2 The price available to a producer from a field he wants to develop should depend on the price of gas sold in the regional market. This would necessarily apply to marginal fields as the production would not be such as to substantially affect the local market. As the production is sufficiently small, say less than about 3 mmscmd, it may not be necessary to undertake price discovery as envisaged in the NELP Production Sharing Contract, which has been mentioned in the Gas Pricing Order of July 2005, since independent price discovery for small quantity of gas may lead to distortionary result. It is necessary to arrive at a balance between the gas price expected by NOC to exploit new fields and to make available gas production from new fields to customers at prices conforming to local market prices which means identifying the dominant gas in each local market.
- 5.3 For the purpose of identifying the dominant gas it is relevant to consider that the non-APM indigenous production of natural gas in the country consists of pre-NELP production and production under NELP. The total pre-NELP production, viz., production from PMT, Ravva, Ravva Satellite and Laxmi fields, is around 21.7 mmscmd and is at varying prices depending upon the respective Production Sharing Contracts. The weighted average price of this gas in 2008-09 was US\$ 5.28/ mmbtu which comes to Rs. 9431/mscm (at Rs. 45 = US\$). The NELP production from KG D6 field is presently around 60 mmscmd with the production being ramped up very fast and expected to reach 80 mmscmd in some time. As is evident from the above, the non-APM indigenous

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production of natural gas in the country would increasingly consist of production from KG D6. Further, KG D6 gas is being supplied through EWPL and, subsequently, DUPL/DPPL and HVJ/DVPL/GREP to customers in Andhra Pradesh, Maharashtra, Gujarat, Rajasthan, M.P., U.P, Haryana & Delhi. The quantum of KG D6 production, compared to the earlier production in the country, is so large that KG D6 is the dominant non-APM supply of gas to customers in all these areas. This includes all existing gas-based customers in the country, excluding those in Cauvery basin and North-East. Therefore, it is appropriate to consider KG D6 gas as the dominant/benchmark gas for various zones in the country.

- 5.4 EGoM, which was constituted to discuss issues relating to pricing and commercial utilization of gas under NELP, has approved the applicable producer price for KGD6 gas as \$4.205/mmbtu, for Crude Price greater or equal to US \$ 60/barrel.
- 5.5 The dominant gas price available in a particular region may include a significant element of transportation cost. The price of this gas as delivered should form the upper bound for local gas discovered in the same region. The gas price for the local producer will be higher than the price obtained by the producer of the dominant gas due to the transportation component. This, by itself, should act as an adequate incentive for the producers of gas from small/marginal fields. If a higher gas price is allowed, then it would act as locational disadvantage for the region, even when local resources are available, and may meet with resistance, apart from increasing the cost of resource for consumers, who will also have to pay local transport charges over and above the base price.
- 5.6 The lower bound for the gas price should be the producer price approved for the dominant gas in the country. If the producer of gas from a small/marginal field is allowed only this gas price, then production may not become viable. However, in the local areas where the dominant gas is being produced, consumers may not accept a small quantum of gas at a much higher price, as would happen in KG basin. Further, there may be areas, where apart from the so called dominant gas which is made available after transport, there may be substantial production of gas from other local sources, the prices of which are lower than the delivered price of dominant gas. Such an example would be in the Uran region or Gujarat region, where ONGC and PMT gas are also available. Further, one needs to consider cases like Rajasthan where some local gas production is available and it is possible that substantial reserves may be discovered in near future. The delivered price of dominant KG gas is very high due to multiple transport systems and will not be acceptable locally. The North-East is another area where there is no gas grid connectivity from other parts of the country; however, there is scope for new gas

discoveries. In such areas, a price closer to the producer price of dominant gas may be the right choice.

- 5.7 A caveat needs to be added. The accepted principle for pricing of non-APM gas produced by NOCs is independent price discovery. However, for small and marginal discoveries with production of say less than 5 mmscmd, it may not be practically feasible to independently discover prices. A further caveat is that this non-APM gas should preferably be sold in the same local area as further transport through trunk network would only add to cost, probably making it costlier than the delivered price of the dominant gas.
- 5.8 Another important facet of gas supply is tenure. The gas price needs to be revised periodically to reflect its linkage with alternative liquid fuels as also imported LNG which is linked to crude prices. The price formula discovered for the dominant NELP gas produced from KG-D6 is applicable for 5 years from date of first production. Thus the discovered price of \$4.205/mmbtu will remain in force till 31st March, 2014. The price of PMT gas, which is the other major production by a private player, is not liable to further revision and will remain at the same level during the duration of the contract. Since the price of non-APM gas produced by NOCs is proposed to be linked to the dominant KG-D6 gas, it would be appropriate to link the tenure of gas price to KG-D6, irrespective of date of production. Thus any non-APM gas produced till 2013-14 would have price stability till 31st March, 2014 and, thereafter, for a period of 5 years or as decided at that time.
- 5.9 After detailed discussions, the Committee came to the conclusion that the determination of producer price for non-APM gas at landfall/wellhead point has to be governed by the principle that the delivered prices for indigenously produced non-APM gas in a region have to converge within a reasonable band/range, keeping in view acceptability of the price by the customers. For this purpose, the dominant gas supplies in the region will play a pivotal role.
- 5.10 It was decided that the methodology for determination of producer price of non-APM gas produced by NOCs would encompass the following steps:
- (i) identifying gas supply zones based on the commonality with regard to expected gas sources and pipeline network being used to transport gas
 - (ii) identifying the dominant non-APM gas in the said zone (in terms of volume) and its price at landfall/wellhead point
 - (iii) identifying the transmission network (existing or envisaged, as the case may be) and the transportation charge for

transport of the dominant non-APM gas to the gas supply zone. The transportation charge should not include the charge for the last-mile connectivity to customers, but only the charge for carrying the dominant non-APM gas from its wellhead/landfall point to the gas supply zone.

- (iv) determining the average delivered price of the dominant non-APM gas price to the gas supply zone. This would essentially include the gas price of the dominant non-APM gas at landfall/wellhead point & applicable transportation charge from landfall/wellhead point to the gas supply zone, and exclude marketing margin & taxes(ii + iii).
- (v) identifying the transmission network and the transportation charges for transport of the NOC's non-APM gas to that gas supply zone.
- (vi) Net backing transportation charge for NOC's non-APM gas from the average delivered price for the dominant non-APM gas for that gas supply zone(iv - v).

5.11 In the context of investments made/required to be made for the development of new fields from the nominated blocks, the prices should ensure reasonable returns of investments and also encourage the NOCs to increase production of natural gas, even from more difficult geological formations. Considering the progressively higher investments required in development of and production from offshore as compared to onshore fields, a premium in the price of gas from offshore fields would be in order. Accordingly, a premium of \$ 0.25/mmbtu for production of non-APM gas by NOCs from their offshore fields would further encourage NOCs to undertake production in new offshore fields.

5.12 It is possible that the price of non-APM gas arrived at by the above mechanism is not remunerative enough for the NOCs to undertake production from a particular new field. However, it is important that the NOCs should take up even such fields to augment the national gas production, else the country would import more expensive RLNG & liquid fuels instead of this gas production. The modality to take care of such an eventuality would be that, if the NOC feels that the price arrived at by the above method does not make it commercially viable to start production from a particular field, the NOC would compute the price on cost plus basis (ie., cost of production + reasonable return thereon (say 12%)), submit the same to DGH for verification and subsequently the Ministry would examine the proposal to approve a higher price.

5.13 Further, the prices so arrived at shall be fixed for a tenure as mentioned in para 5.8.

6.0 Conclusion Guidelines for Pricing of non-APM gas

- 6.1 NOCs would charge non-APM price for gas produced from new fields in nominated blocks. Directorate General of Hydrocarbons (DGH) would be entrusted with the task of certifying a new field in case of any doubt regarding a discovery being new or an old field. As regard existing producing fields, the production of ONGC and OIL from these, including any additional production therein, would be sold at APM rate.
- 6.2 The price of non-APM gas would be worked out on the methodology indicated in para 5.10. Indicative prices for non-APM gas produced by NOCs from new fields in nominated blocks with production upto about 3 mmcmd is given in Annexure. For production of non-APM gas above about 3 mmcmd, the NOCs may follow NELP provisions and seek approval of the Government for the pricing formula.
- 6.3 Further, a premium of \$ 0.25/mmmbtu would be allowed for production of natural gas from new fields, which are offshore.
- 6.4 If the NOC feels that the price arrived at by the above method does not make it commercially viable to start production from a particular field, the NOC would compute the price on cost plus basis (ie., cost of production + reasonable return thereon (say 12%)), submit the same to DGH for verification and subsequently the Ministry would examine the proposal to approve a higher price.
- 6.5 This price would be fixed for the present till 31st March, 2014 and, thereafter, for a period of five years or as decided at that time.

7.0 Distribution of natural gas

- 7.1 The distribution of gas produced by the NOCs from nominated fields has always been controlled by the Government. The gas was allotted to customers in priority sectors through the erstwhile Gas Linkage Committee. The Gas Linkage Committee was chaired by Secretary (P&NG) and Secretaries of the user ministries were members of this Committee. The allocation was made with the approval of the Minister (P&NG). The Gas Linkage Committee made a total allocation of about 120 mmcmd gas, of which almost 90 mmcmd was allocated to power & fertilizer sectors. The supply of APM gas is on the decline and, as of now, it amounts to about 55 mmcmd. As APM gas was not available even for the existing allottees of APM gas, the Gas Linkage Committee was abolished in 2005 and no further allocation of APM gas has been made since then.

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7.2 The concept of non-APM gas produced by NOCs was introduced from 2006. This gas is to be marketed by NOCs at market determined price. The NOCs have been indicating the availability of non-APM gas to the Government and Government has been making the allocation.

7.3 In pre-NELP PSCs, there is a provision for Government to appoint a nominee for purchasing the gas from the producers and marketing it. GAIL has been the Government nominee in PMT fields and Ravva fields. GAIL has marketed the gas from these fields as per allotments decided by the Government. Under NELP contracts, freedom has been given to the Contractor to market the gas subject to the Gas Utilization Policy of the Government. The Government constituted an Empowered Group of Minister (EGoM) to take a decision on utilization of gas produced under NELP contract from KG-D6 fields. The EGoM has allotted about 62 mmscmd gas produced from the KG-D6 fields on firm basis and 30 mmscmd on fallback basis based on Government's priority.

7.4 The EGoM has decided the following principles for allotment of natural gas:-

i) As a matter of general policy, natural gas produced/imported in the country should be stripped of its higher fractions, subject to availability, to ensure maximum value addition before supply to consumers.

ii) The following guidelines for sale of natural gas by NELP contractors are approved:-

a) Contractors would sell gas from NELP to consumer in accordance with the marketing priorities determined by the Government. The sale would be on the basis of formula for determining the price as approved by the Government.

b) Consumers belonging to any of the priority sectors should be in a position to actually consume gas as and when it becomes available. So the marketing priority does not entail any 'reservation' of gas. It implies that in case consumers in a particular sector, which is higher in priority, are not in a position to take gas when it becomes available, it would go to the sector which is next in order of priority.

c) In case of default by a consumer under a particular priority sector and further in the event of alternative consumers not being available in the same sector, the gas will be offered by Contractor to other consumers in the next order of priority.

d) The priority for supply of gas from a particular source would be applicable only amongst those customers

who are connected to existing and available pipeline network connected to the source. So if there is a marginal or small field that is not connected to a big pipeline network, then the Contractor would be allowed to sell the gas to consumers who are connected or can be connected to the field in a relatively short period (of say three to six months).

7.5 a. The EGoM decided to allot gas in the following order of priority:-

- i) Existing gas-based urea plants
 - ii) Existing gas-based LPG plants
 - iii) Existing grid-connected and gas-based power plants
 - iv) City Gas Distribution (CGD) network for domestic & transport sectors
- b. Subsequently in view of the increased availability of gas, the EGoM also took a decision to supply gas to steel, petrochemicals & refineries for feedstock purposes, CGD networks for industrial & commercial customers, other gas-based fertilizers plants and to captive power plants.

7.6 For the present, adequate quantity of gas is being made available to most of the priority sectors. The production of non-APM gas from nominated fields is not expected in large quantities. The principles on pricing of non APM gas are also restricted to production up to 5 mmscmd. As the pricing principles have been based on the delivered price of dominant gas, the non-APM gas produced by the NOCs should ideally be marketed in the same gas supply zone, as additional transport costs through a trunk pipeline would raise its cost above the dominant gas.

7.7 It is accordingly suggested that the NOCs producing non-APM gas should approach customers in the following order of priority:-

- i) Gas-based fertilizers plants
- ii) LPG plants
- iii) Power plants supplying to the grid
- iv) City Gas Distribution systems for domestic & transport sectors
- v) Steel, refineries & petrochemicals plants for feedstock purposes
- vi) City Gas Distribution systems for industrial & commercial customers
- vii) Any other customers for captive & merchant power, feedstock or fuel purposes.

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If the non-APM gas being produced has higher components, the same should be suitably extracted before supplying to the customers in various priority sectors. Further within the priority non-APM gas would be first supplied to customers to make up for reduction in supply of APM gas against the allocation.

7.8 In case no customer from the above categories is available in the same gas supply zone, only then the gas should be sold to customers in other gas supply zones, which would involve transportation through trunk pipeline.

7.9 The NOCs should inform the Gas Division of MoPNG about the quantity, location, timeframe and other conditions of expected availability of non-APM natural gas at the time of taking the investment decision for production of such gas. The information should be suitably updated. This would enable the Gas Division to inform the other administrative Ministries, particularly Department of Fertilizers and Ministry of Power, regarding the expected availability of natural gas in various regions, so that the relevant investment decisions in various sectors can be made.

7.10 In case of new fields from which gas production can immediately start, the NOCs should straightaway indicate the likely availability of non-APM gas. Subsequently, the likely customers would be identified and the list submitted to Government for approval to ensure that priorities, as mentioned in para 7.7, have been followed. Further, the principles as laid down by EGoM for NELP gas, as mentioned in para 7.4, shall inter alia apply to production of non-APM gas by NOCs also.

The report on "Pricing and commercial utilization of non-APM gas produced by NOCs from their nominated blocks" is submitted.

26.05.10
(Sudhir Bhargava)
Additional Secretary
Chairman

Subba Rao 26/5/2010
(V.L.V.S.S. Subba Rao)
Joint Adviser (F)
Member

Apurva Chandra 26/5/10
(Apurva Chandra)
Joint Secretary (M)
Member

ANNEXURE

An indicative working of gas prices in different zones on the basis of principles given in para 5.10 is as under

1. Gas Supply Zones

Looking at the expected sources of non-APM natural gas to be produced by NOCs and the pipeline network configuration, the following zones/zone-clusters may be identified:

- (i) Western & Northern Zone (covering Maharashtra, Gujarat and other states covered by HVJ /DVPL, viz., Rajasthan, M.P., U.P, Haryana & Delhi)
- (ii) Southern Zone- KG Basin
- (iii) Southern Zone- Cauvery basin
- (iv) North-East

2. Identifying the Transmission Network and the Transportation Charges for Transport of the Dominant Non-APM Gas to the Gas Supply Zone

2.1 Western & Northern Zone

EWPL supplies gas in Maharashtra at Mahskal and in Gujarat both to GAIL's & GSPC's networks. The tariff for EWPL as approved by PNGRB is Rs.57.70/mmbtu. This works out to US\$ 1.28/mmbtu considering 1 US\$ = Rs.45.

2.2 Southern Zone- KG Basin

Supply of KG D6 gas to customers in Andhra Pradesh is through Zone 1 of EWPL. The present tariff for Zone 1 of EWPL as approved by PNGRB is Rs 14.01/mmbtu. This works out to US\$ 0.31/mmbtu considering 1 US\$ = Rs.45.

2.3 Southern Zone -Cauvery Basin

Cauvery Basin does not have any substantial availability of non-APM gas. Presently KG D6 gas cannot be supplied in Cauvery basin market due to lack of inter-state pipeline connectivity. However, Government has authorized RGTIL to construct the pipeline to Chennai, and further to Nellore & to Bangalore-Mangalore. The pipeline connecting KG Basin with Cauvery Basin, i.e., Kakinada to Chennai, would have a length of approximately 600 km, which is close to the pipeline length of DUPL. Accordingly, the DUPL tariff (with approximate length of about 580 km), viz., \$ 0.58/mmbtu, may be taken as the representative tariff for the envisaged pipeline from Kakinada to Chennai.

2.4 North East

North East does not have any substantial availability of non-APM gas. Presently KG D6 gas cannot be supplied in North East due to lack of inter-state pipeline connectivity. No such pipeline is envisaged either.

3. Determination of average delivered price of the dominant non-APM gas price to the gas supply zone

Adding up the gas price of the dominant non-APM gas at landfall/wellhead point, viz., KG D6 gas, (mentioned in para 7.2 above) and the applicable transportation charge from landfall/wellhead point to the gas supply zone, (mentioned in para 8 above) gives the average delivered price of the dominant non-APM gas to the gas supply zones as follows:

Western & Northern Zone:	\$ 5.48/mmbtu
Southern Zone- KG Basin:	\$ 4.51/mmbtu
Southern Zone- Cauvery Basin:	\$ 4.78/mmbtu

The above prices are above the present non-APM price decided by the Government and mentioned in para 4 of the main report.

4. Identifying the Transmission Network and the Transportation Charges for Transport of NOC's Non-APM Gas to that Gas Supply Zone

4.1 Western & Northern Zone

The gas sources of NOCs for supply to Western & Northern Zone are expected to be in Bombay High region or in Gujarat region. The transmission network for transport of NOC's gas to the Western & Northern gas supply zones is either HVJ/DVPL or DUPL. Hence, the average of HVJ/DVPL transportation tariff and DUPL transportation tariff may be considered as an approximation for the transportation tariff for the Western & Northern zone. The average of the tariffs for HVJ/DVPL and DUPL works out to Rs. 25.8/MMBTU equivalent to US\$ 0.57/MMBTU considering 1 US\$ = Rs.45.

4.2 Southern Zone- KG Basin

The gas sources of NOCs in the KG basin are expected to be ONGC's assets in the area. Hence, the non-APM gas from NOCs would be locally available in the KG basin gas supply zone and would be distributed to the customers using GAIL's network, similar to KG D6 gas.

4.3 Southern Zone- Cauvery Basin

Similarly, the gas sources of NOCs in the Cauvery basin are expected to be ONGC's assets in the area. Hence, the non-APM

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gas from NOCs would be locally available in the Cauvery basin gas supply zone and would be distributed to the customers using GAIL's network.

5. Determination of non-APM Price

- 5.1 Netbacking the transportation charge for NOC's non-APM gas(mentioned in para 4 above) from the average delivered price for the dominant non-APM gas for that gas supply zone(mentioned in para 3 above) gives the price for non-APM gas produced by NOCs as follows:

Western & Northern Zone:	\$4.91/mmbtu say \$ 5.0/mmbtu
Southern Zone- KG Basin:	\$ 4.51/mmbtu say \$ 4.5/mmbtu
Cauvery Basin:	\$4.78/mmbtu say \$ 4.75/mmbtu

- 5.2 The above formulation does not give the price of non-APM gas in the North East. The producer price of non-APM gas in the North East cannot be any lower than \$ 4.2/mmbtu. However, it is appreciated that the non-APM customers in the North East might not be able to pay a price higher than that price. Looking at the situation in the North East, we need to have the twin objectives of encouraging the NOCs to produce natural gas by giving a producer price, which is, at least, at par with that in other parts of the country, and of providing natural gas to the customers at a lesser price. In view of the above, the producer price for NOCs for non-APM gas should be \$ 4.2/mmbtu.