

Sources of data considered for determination of domestic natural gas price as per the New Domestic Natural Gas Pricing Guidelines, 2014

MoP&NG has issued the New Domestic Natural Gas Pricing Guidelines, 2014 for determination of domestic natural gas price on half yearly basis. Para 1 of the Guidelines specifies the formula for the Domestic Natural Gas Price calculation which is as follows:

$$P = \frac{(V_{HH} P_{HH} + V_{AC} P_{AC} + V_{NBP} P_{NBP} + V_R P_R)}{(V_{HH} + V_{AC} + V_{NBP} + V_R)}$$

Where,

- (i) V_{HH} = Total annual volume of natural gas consumed in USA & Mexico.
- (ii) V_{AC} = Total annual volume of natural gas consumed in Canada.
- (iii) V_{NBP} = Total annual volume of natural gas consumed in European Union (EU) and Former Soviet Union (FSU) countries, excluding Russia.
- (iv) V_R = Total annual volume of natural gas consumed in Russia.
- (v) P_{HH} and P_{NBP} are the annual average of daily prices at Henry Hub (HH) and National Balancing Point (NBP) respectively, less US\$ 0.50/MMBTU towards transportation and treatment charges.
- (vi) P_{AC} and P_R are the annual average of monthly prices at Alberta Hub and Russia (as published by Federal Tariff of the Russian Government or equivalent source) respectively, less US\$ 0.50/MMBTU towards transportation and treatment charges.

The sources from which data was obtained for the purpose of calculation of the price of domestic natural gas are summarized below:-

A. V_{HH}

- i) Monthly consumption data of United States has been considered based on the information available at the website of Energy Information Administration (EIA). For converting consumption volume in MMcf to MMcm, standard conversion factor of 35.3147 has been considered.
- ii) Consumption volume of Mexico has been considered based on the data available at the website of the International Energy Agency (IEA).

B. P_{HH}

- i) Daily Henry hub prices (\$/MMBTU) have been considered based on information available at the website of EIA.

C. V_{AC}

- i) Consumption volume of Canada has been considered based on information available at the website of IEA.

D. P_{AC}

- i) The Alberta Gas Reference Price (in Canadian Dollar [CAD] per Giga Joule [GJ]) has been considered based on the information available at the website of Alberta Energy.
- ii) For conversion of price from CAD/GJ to CAD/Mmbtu, conversion factor of 0.94708628903179 has been considered as per information given in the public domain.
- iii) For conversion of price into US Dollar, average exchange rate of Canadian Dollar/US Dollar represented by daily mid-point rate has been obtained from sources in the public domain.

E. V_{NBP}

- i) Consumption volume of Austria, Belgium, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Luxembourg, Netherlands, Poland, Portugal, Slovak Republic, Slovenia, Spain, Sweden, and UK has been considered as per information available at the website of IEA.
- ii) Consumption volume of Bulgaria, Croatia, Cyprus, Latvia, Lithuania, Malta and Romania has been obtained from M/s Platts.
- iii) Consumption volume of Azerbaijan, Belarus, Kazakhstan, Turkmenistan, Uzbekistan, Armenia, Georgia, Kyrgyzstan, Moldavia and Tajikistan has been obtained from M/s Platts.
- iv) Consumption volume of Ukraine has been considered from the website of the Government of Ukraine.

F. P_{NBP}

- i) Daily NBP prices have been obtained from M/s Argus Media Limited, London/Singapore.

G. V_R

- i) The consumption volume of Russia has been obtained from the website of the Govt. of Russian Federation.

H. P_R

- i) The Russian gas price to industrial consumers as published in Rouble/thousand m³ has been taken from the Govt. website (Federal Tariff Service of Russia). The average exchange rate of Rouble /US Dollar based on daily rate has been taken from the website of The Central Bank of Russian Federation to convert price in US Dollar from Rouble. Conversion factor of 1 MMBTU=25.2 SCM on GCV basis as published in the public domain has been considered.
- I. P_{HH} , P_{AC} , P_{NBP} and P_R have been calculated after deducting US\$ 0.50/MMBTU towards transportation and treatment charges.
