

# Penyusunan Pedoman Teknis Verifikasi Volume Gas Bumi Dalam Rangka Pengawasan Kegiatan Usaha Pengangkutan Dan Niaga Gas Bumi Melalui Pipa = Preparation of Technical Guidelines for Verification of Natural Gas Volume in the Framework for Supervision of Natural Gas Transportation and Trading Business Activities through the pipeline

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## Abstrak

Salah satu tugas BPH Migas (Badan Pengatur Hilir Minyak dan Gas Bumi) meliputi pengaturan, penetapan dan pengawasan perusahaan transmisi dan distribusi Gas Bumi melalui pipa. Dalam melakukan pengawasan kegiatan usaha pengangkutan dan niaga gas bumi, BPH Migas melakukan pengawasan on desk melalui verifikasi volume atas kesesuaian data dukung, dan pengawasan on site (lapangan) dengan melakukan pengecekan lapangan berdasarkan data dukung yang dilaporkan oleh Badan Usaha.

Permasalahan yang terjadi di lapangan diantaranya terdapat temuan di mana selisih pada Neraca Gas Badan Usaha yang disebabkan oleh beberapa perbedaan seperti jenis alat ukur gas bumi, atau losses. Studi ini bertujuan untuk mendapatkan pedoman teknis pengukuran volume gas bumi, Mendapatkan metode untuk menentukan kandungan energi gas bumi yang terdapat di dalam pipa gas, dan mendapatkan pedoman teknis verifikasi volume gas bumi. Hasil studi telah berhasil mendapatkan Pedoman teknis pengukuran volume gas bumi di titik terima dan di titik serah dan dapat digunakan untuk verifikasi penyaluran gas bumi di lapangan. Selain itu telah juga dibuat kalkulator untuk perhitungan energi linepack dapat digunakan dilapangan dan telah divalidasi oleh simulator proses kimia dengan perbedaan hanya sekitar 1,1%.

.....One of the tasks of BPH Migas (Oil and Gas Downstream Regulatory Agency) includes regulating, determining, and supervising natural gas transmission and distribution operations through pipelines. In handling natural gas transportation and trading business activities, BPH Migas conducts on-desk supervision through volume verification of the suitability of the supporting data and on-site (field) supervision by conducting field checks based on the supporting data reported by the Business Entity. Problems in the field include findings where several factors, such as the type of natural gas measuring instrument or losses, cause the difference in the Gas Balance of Business Entities. This study aims to obtain technical guidelines for measuring the volume of natural gas, obtaining methods for determining the energy content of natural gas contained in gas pipes, and obtaining technical procedures for verifying natural gas volume. The results of the study have succeeded in getting technical guidelines for measuring the volume of natural gas at the receiving point and the delivery point and can be used to verify the distribution of natural gas in the field. Apart from that, a calculator for linepack energy calculations has also been made, which can be used in the field and has been validated by a chemical process simulator with a difference of only about 1.1%.