

# Penerapan Imbalance Charge Pada Pengoperasian Pipa Transmisi Gas Untuk Meningkatkan Nilai Investasi Perusahaan XYZ = Implementation of imbalance charge on the operation of Gas Pipeline Transmission to Increase the value of XYZ Company Investment

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## Abstrak

Dalam pengoperasian jaringan pipa transmisi gas, selain menyediakan jasa pengangkutan gas bumi, sesungguhnya transporter juga menyediakan jasa penyimpanan gas bumi milik para shippers. Pada kenyataannya saat ini belum ada penerapan biaya penyimpanan gas (imbalance charge) untuk pengoperasian pipa gas. Perhitungan keekonomian pembangunan pipa transmisi gas biaya yang diperhitungkan saat ini hanya biaya jasa pengangkutan gas bumi dalam bentuk toll fee sedangkan untuk biaya jasa penyimpanan gas (imbalance charge) belum diperhitungkan sehingga kompensasi terhadap faktor resiko kegagalan pipa akibat proses penyimpanan gas belum dipertimbangkan. Oleh karena itu, penelitian ini bertujuan untuk menganalisa dan mengembangkan apakah penerapan imbalance charge dapat menjadi nilai tambahan dalam pengembalian investasi pada perusahaan transporter.

Proses penelitian dimulai dari studi literatur fenomena linepack yang menyebabkan adanya keadaan imbalance gas, penerapan imbalance charge di negara Eropa yang kemudian dilanjutkan dengan pengumpulan data di lapangan untuk mendapatkan volume berlebih di dalam jaringan pipa EJGP, nilai imbalance charge dan metode imbalance charge yang cocok diterapkan di Indonesia berdasarkan pengoperasian shipper dominan. Penelitian ini menyimpulkan bahwa terdapat volume berlebih sebesar 27.46 MMscf pada 3 bulan operasi, besaran nilai imbalance charge 0.17/MSCF sedangkan metode yang cocok adalah evaluasi kumulatif harian dengan toleransi batas atas sebesar 1/6 kapasitas pipa yang dipesan dan batas bawah 1/6 kapasitas pipa yang dipesan dan penerapan pinalti berjenjang.

*In the operation of the gas transmission pipeline network, Transporters not only providing natural gas transportation services but also natural gas storage services belonging to the shippers. In fact, there is currently no implementation of gas storage costs (imbalance charge) for gas pipeline operations. The economic calculation of the cost of gas transmission pipeline construction that is taken into account is only the cost of natural gas transportation services called toll fee while the cost of gas storage services (imbalance charge) has not been calculated so compensation for risk factors for pipe failure due to gas storage has not been considered. Therefore, this study aims to analyze and develop whether the application of imbalance charge can be an additional value in returning investment for transporter.*

The research process starts from the literature study of pipe functions as a means of transporting and storing natural gas, the phenomenon of linepacks which causes the existence of gas imbalance, the application of charge imbalances in European countries, After that, the operation of one of the pipe segments is carried out, namely the EGJP pipe to get the phenomenon of the occurrence of linepacks, cost of imbalance charge and the concept of applying imbalance charge. Based on the results of the above observations, there is an excess volume of 27.46 MMscf at 3 months of operation, the amount of the charge imbalance value is 0.17 / MSCF while the suitable method is the daily cumulative evaluation with an upper limit tolerance of 1/6 reserve capacity and the lower limit of -1/6 reverse capacity and implementation of tiered penalties