

Peningkatan pemanfaatan gas bumi untuk sektor transportasi di Jakarta menggunakan metode rekayasa nilai = Increasing the natural gas utilization for the transportation sector in Jakarta using value engineering method

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Abstrak

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Rekayasa nilai adalah aplikasi metodologi nilai pada suatu proyek atau layanan yang telah direncanakan atau dikonsepsikan untuk mencapai peningkatan nilai. Metode rekayasa nilai dipilih karena mempunyai kelebihan dalam hal mengendalikan biaya dengan menggunakan pendekatan dengan cara menganalisis nilai terhadap fungsinya tanpa menghilangkan kualitas serta reliabilitas yang diinginkan. Penelitian ini membahas mengenai peningkatan pemanfaatan gas bumi untuk sektor transportasi di Jakarta menggunakan metode rekayasa nilai dengan mengimplementasikan kebutuhan pengembangan unit SPBG yang berdampak langsung pada keekonomian investasi SPBG dan usulan skema bisnis yang menarik bagi investor. Parameter yang paling berpengaruh dalam hal pemanfaatan gas bumi untuk sektor transportasi dengan menggunakan fast diagram adalah ketersediaan infrastruktur gas dan pasar penggunaan BBG sampai dengan menentukan keekonomian harga jual BBG. Dengan infrastruktur SPBG yang kuat, pasar BBG yang kompetitif serta skema bisnis yang jelas tentunya akan menarik minat investor. Untuk memenuhi kondisi tersebut, beberapa parameter harus dipenuhi, yaitu harga pokok gas maksimal sebesar USD 4,3/mmbtu + Rp 750/m³, utilitas volume penjualan minimum 70% dari kapasitas dan harga jual BBG minimum sebesar Rp 4.087/Lsp serta usulan skema bisnis yang cocok untuk meningkatkan pemanfaatan gas bumi di sektor transportasi bagi semua stakeholder di Jakarta adalah menggunakan model bisnis jasa kompresi dan biaya marketing.

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ABSTRACT

Value engineering method is a value method application that is applied on a project or a service that has underwent planning or conceptualized in order to achieve greater leverage. Value engineering method was chosen because it has a greater advantage in controlling costs using an approach via function analysis without relinquishing the quality as well as the reliability needed. This research discuss the raise of natural gas utilization for the transportation sector in Jakarta using value engineering method by implementing the requirements of gas station development, which not only directly affects the investment economics of gas station but also how the business scheme draws the attention of investors. The parameter with the most influence in natural gas utilization for the transportation sector is the availability of gas infrastructure, the gas fuel market, and gas fuel pricing. With strong gas station infrastructure, competitive gas fuel market, and clear business scheme, the level of attractiveness will surely increase among investors. In order to fulfill the aforementioned conditions, a few parameters

must be satisfied, which are maximum feed gas price is USD 4,3/mmbtu + Rp 750/m³, the minimum sales volume utilization is 70% and minimum gas fuel retail price is Rp 4.087/Lsp (Lsp ≈ Nm³). Furthermore, the most suitable business scheme for all stakeholders in order to increase the natural gas utilization for the transportation sector in Jakarta is the compression fee & marketing fee business model, Value engineering method is a value method application that is applied on a project or a service

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