ABSTRAK

Pesatnya perkembangan Telekomunikasi maka perlu penambahan jaringan pemancar BTS. Dikarenakn keterbatsan lahan dan rumitnya perijinan maka diperlukan alternative jenis tower telekomunikasi. Tower pole sebagai alternative investasi telekomunikasi. Untuk mengetahui kelayakan Tower Pole harus dibandingkan dengan Tower Greenfields. Metode yang dipakai dengan analisa Life Cyle Cost atau biaya siklus hidup yang merupakan biaya keseluruhan selama umur rencana yaitu selama 25 tahun. Biaya yang dihitung biaya awal, biaya operasional, biaya rutin spare part dan biaya pembongkaran pada akhir umur rencana

Tujuan dari penelitian ini menghitung Life Cycle Cost pada dua jenis tower sehingga diketahui tingkat kelayakan, perlu diketahui radius tower greenfields besarnya 9 (Sembilan) X tower pole

Biaya Siklus Hidup atau life cycle cost (LCC) tower greenfields yang dimulai dari tahun 2019 sampai umur ekonomis selama 25 tahun didapat meliputi biaya awal Rp1.574.594.170, perawatan Rp3.131.117.258, pergantian Baterai Rp172.816.381 dan pembongkaran Rp23.268.008.Biaya Siklus Hidup atau life cycle cost (LCC) tower pole yang dimulai dari tahun 2019 sampai umur ekonomis selama 25 tahun didapat meliputi biaya awal Rp 639.708.300, perawatan Rp 457.883.814, pergantian Baterai Rp 86.408.190 dan pembongkaran Rp 2.115.573 Hasil analisa kelayakan investasi tower greenfields terhadap biaya siklus yg terjadi Pemasukan selama 25 tahun, NPV = 13.502.642.390 > 0, PP terjadi pada tahun ke 4 bulan mei dan IRR 23,5% > MARR 17,5 % Hasil analisa kelayakan investasi tower Pole terhadap biaya siklus yg terjadi Pemasukan selama 25 tahun, NPV = 4.229.144.725 > 0, PP terjadi pada tahun ke 4 dan IRR 25,96 %> MARR 17,5 % Dari dua macam tower tersebut sama layak untuk investasi, dari hasil penelitian Tower pole dari Tower Greenfields lebih menguntungkan didasarkan berhitungan BCR dimana tower Pole Punya BCR =15.36 dan tower Greenfields BCR =12.33

Kata kunci : Life Cycle Cost Kelayakan Investasi Tower Pole Greenfields

ABSTRACT

The rapid development of telecommunications requires the addition of a BTS transmitter network. Due to land limitations and the complexity of licensing, alternative telecommunication tower types are needed. Tower pole as an alternative telecommunications investment. To determine the feasibility of Tower Pole, it must be compared with Tower Greenfields. The method used by the analysis of Life Cyle Cost or life cycle costs which is the overall cost over the life of the plan that is for 25 years. Costs are calculated as initial costs, operational costs, routine spare part costs and dismantling costs at the end of the planned life

The purpose of this study is to calculate Life Cycle Cost on two types of towers so that the level of feasibility is known, it is necessary to know the radius of the tower greenfields of the magnitude of 9 (Nine) X tower pole

Life cycle costs (LCC) for tower greenfields starting from 2019 to economic life for 25 years include initial costs of Rp1,574,594,170, maintenance of Rp3,131,117,258, replacement batteries of Rp172,816,381 and dismantling of Rp23,268,008 .The life cycle cost (LCC) of tower pole starting from 2019 until the economic age of 25 years is obtained including an initial cost of Rp 639,708,300, maintenance of Rp 457,883,814, Battery replacement of Rp 86,408,190 and dismantling Rp 2,115,573The results of the analysis of the feasibility of tower greenfields investment on cycle costs incurred for 25 years, NPV = 13,502,642,390> 0, PP occurred in the 4th year in May and IRR 23.5%> MARR 17.5%The results of the analysis of the feasibility of Pole tower investment against the cost of the cycle that occurred Income for 25 years, NPV = 4,229,144,725> 0, PP occurred in the 4th year and IRR 25.96%> MARR 17.5%Of the two types of towers equally worthy of investment, the research results of Tower pole from the Greenfields Tower are more profitable based on BCR calculations where the Pole tower has a BCR = 15.36 and the Greenfields tower BCR = 12.33