

ABSTRACT

Along with the change of strategic system in the government that changed the scheme of contracts for oil and gas product from Cost Recovery to Gross Split in the oil and gas company like Pertamina Hulu Energi Offshore North West Java (PHE ONWJ), the company is required to be more effective and efficient in carrying out its operational activities especially in goods procurement activities such as maintaining performance vendor, considering a good performance from vendor will have direct impact to company operation.

The objective of this research is to get a vendor performance appraisal design in choosing the best vendor in procurement phases by using Fuzzy Analytical Hierarchy Process (FAHP) method.

The results of this research contained 12 main criteria, 19 sub-criteria at the procurement phase, 11 sub-criteria in the after-procurement phase, the vendor performance appraisal proposal form, and come by the best vendor in the Subsea Tanker Rail Hose (16", 15BAR) is Vendor B who has been registered in APDN, DPM, and CIVD PHE ONWJ with the final value during the procurement process in the amount of 86.792% and the final value after procurement in the amount of 85.910%.

Keywords: *Fuzzy, FAHP, PHE ONWJ, Vendor Performance*