

Analisis kelayakan pembangunan instalasi pengolahan air bersih dengan sistem reverse osmosis di teluk Jakarta = The feasibility study of water treatment plant with reverse osmosis system in Jakarta bay

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Abstrak

[ABSTRAK

Penelitian ini bertujuan untuk melakukan analisa kelayakan pembangunan dan pengoperasian instalasi pengolahan air bersih dengan sistem dan teknologi reverse osmosis di Teluk Jakarta Pembangunan instalasi pengolahan air bersih tersebut dimaksudkan sebagai wujud nyata upaya pemerintah untuk mengatasi masalah defisit air bersih dan memenuhi kebutuhan air bersih penduduk di wilayah Jakarta Utara Sistem reverse osmosis yang dikembangkan dalam penelitian ini adalah instalasi pengolahan air laut sebagai bahan baku dan diproses menjadi air bersih dengan kualitas air minum desalinasi Pendekatan studi dilakukan dengan melakukan proyeksi jumlah penduduk dan kebutuhan air bersih hingga masa 30 tahun ke depan periode 2016 2047 Untuk analisis keinginan membayar dan kemampuan membayar dilakukan dengan pendekatan survei menggunakan metode Contingent Valuation Analisis kelayakan dilakukan dengan mempertimbangkan aspek pasar aspek teknis aspek kelembagaan aspek lingkungan aspek keuangan dan aspek ekonomi Perhitungan analisis kelayakan menggunakan metode analisis biaya manfaat dengan berdasarkan nilai Net Present Value NPV Internal Rate of Return IRR Benefit Cost Ratio dan Pay Back Period Penelitian ini menggunakan beberapa asumsi diantaranya adalah kegiatan operasi selama 30 tahun dengan Opportunity Cost of Capital sebesar 12 dan kapasitas mesin pengolah minimum 100 000 meter kubik per hari Upaya perhitungan perkiraan pendapatan biaya dan pemenuhan kebutuhan air bersih konsumsi dilakukan berdasarkan hasil survei dengan menggunakan Contingent Valuation Method Selain analisis kelayakan penelitian ini juga melakukan analisis alternatif kebijakan dan strategi investasi serta analisis dampak (eksternalitas).

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ABSTRACT

This study aims to analyze the feasibility of the construction and operation of water treatment plant with reverse osmosis systems and technology in Jakarta Bay Construction of water treatment plant is intended as the government 39 s efforts to address the problem of clean water deficit and meet water needs population in North Jakarta Reverse osmosis system developed in this study is a sea water treatment plants as raw materials and processed into water with the quality of drinking water desalination Approach to the study done by the projected population and the need for clean water until the next 30 years period 2016 2047 For the analysis of the willingness to pay and ability to pay is done by using the survey with Contingent Valuation Method CVM Feasibility analysis performed by considering the market aspects technical aspects institutional aspects environmental aspects financial aspects and economic aspects The calculation of the feasibility analysis using cost benefit analysis on the basis of the value of the Net Present Value NPV Internal Rate of Return IRR Benefit Cost Ratio and Payback Period This study uses a number of assumptions which are operations for 30 years with interest rate as the Opportunity Cost of Capital of 12 and a minimum processing engine capacity of 100 000 cubic meters per day Efforts approximate calculation of

revenues expenses and clean water supply consumption based on the results of a survey carried out by using the Contingent Valuation Method In addition to the analysis of the feasibility of this research is also conducted an analysis of the alternatives policies and investment strategies as well as the analysis of the effects (externalities). , This study aims to analyze the feasibility of the construction and operation of water treatment plant with reverse osmosis systems and technology in Jakarta Bay Construction of water treatment plant is intended as the government 39 s efforts to address the problem of clean water deficit and meet water needs population in North Jakarta Reverse osmosis system developed in this study is a sea water treatment plants as raw materials and processed into water with the quality of drinking water desalination Approach to the study done by the projected population and the need for clean water until the next 30 years period 2016 2047 For the analysis of the willingness to pay and ability to pay is done by using the survey with Contingent Valuation Method CVM Feasibility analysis performed by considering the market aspects technical aspects institutional aspects environmental aspects financial aspects and economic aspects The calculation of the feasibility analysis using cost benefit analysis on the basis of the value of the Net Present Value NPV Internal Rate of Return IRR Benefit Cost Ratio and Payback Period This study uses a number of assumptions which are operations for 30 years with interest rate as the Opportunity Cost of Capital of 12 and a minimum processing engine capacity of 100 000 cubic meters per day Efforts approximate calculation of revenues expenses and clean water supply consumption based on the results of a survey carried out by using the Contingent Valuation Method In addition to the analysis of the feasibility of this research is also conducted an analysis of the alternatives policies and investment strategies as well as the analysis of the effects (externalities).]