

## Analisis keekonomian sistem off-grid pv dengan menggunakan simulasi monte carlo dan homer energy = Economic analysis in off grid pv system using monte carlo and homer energy simulation

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### Abstrak

#### <b>ABSTRAK</b>

Fokus utama tesis ini adalah saat ini masih belum adanya kajian mendalam mengenai analisis kelayakan keekonomian pada PV Off-Grid dengan menggunakan Metode Monte Carlo dan Homer Energy. Peneliti akan membahas pemodelan yang dibangun dengan kedua metode tersebut.

Hasil penelitian ini adalah model yang dibangun ini diharapkan dapat memenuhi prinsip "to produce electricity at the lowest possible cost" dengan mencari nilai COE (Cost of Energy) terendah dalam batasan parameternya seperti minimum NPV (Net Present Value), Cost to Benefit Ratio, DPI (Discounted Profitability Index) dan IRR (Internal Rate Return). Hasil pemodelan ini divalidasi dengan software Crystal Ball dan perhitungan manual.

#### <hr><i><b>ABSTRACT</b>

The main focus in this thesis is currently still lack of study related to economic feasibility analysis on PV Off-Grid using the Monte Carlo method and Homer Energy. Researcher built the modeling constructed by these two methods.

Results of this research is a construct model to meet the principle of "to produce electricity at the lowest possible cost" by looking for the lowest value of COE (Cost of Energy) within the range of parameters such as minimum NPV (Net Present Value), Cost to Benefit Ratio, DPI (Discounted Profitability Index) and IRR (Internal Rate of Return). This modeling result is validated with Crystal Ball software and manual calculations.</i>