GREEN BUILDING ENERGY CONSUMPTION ANALYSIS
AT OPERATIONAL STAGE

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"I declare that this project report entitled "Green Building Energy Consumption Analysis at Operational Stage" is the result of my own research except as cited in the references. The thesis has not been accepted for any degree and is not concurrently submitted in candidature of any other degree."

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Date: 08 AUGUST 2012
to my beloved wife and daughter for being strong...

to my beloved mom and dad for being honest...

to the world...for a better future...
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ABSTRACT

Energy consumption in a building is one of the main aspects of green building certification, according to GBCI GREENSHIP for New Building Standard, energy consumption ranked first in terms of evaluation. This is means that energy consumption in a green building should really be considered to get a good rating in the certification process. In Indonesia, the only government building that is certified as platinum is Ministry of public works new green building, that rank is the highest rank, that certification rank achieved at design stage, however, for the operation stage, the building has not yet received certification from the GBCI. One of the aspects that affect energy consumption in green buildings at the operational stage is the behavior of its occupant. That is why the aim of this study is to find out whether the energy consumption in building operation stage, which is affected by the behavior of its occupant, will be more than the energy consumption at the design stage, which later will affect the rank of certification by the GBCI. To calculate the energy consumption at operational stage, the data collection of energy at design stage based on the drawing plan and operational stage trough an observation is needed, using this two data then the comparison will be made. Based on the analyzed results which was done by calculating the energy consumption both at the design stage and on operational stage which is affected by it behavior of its occupant, showed that the Ministry of Public Works building energy consumption operation stage not exceed the energy consumption at the design stage. This is happened because at the design stage the calculation of energy consumption is flat, without considering the behavior of its occupant. Based on the analysis results we also know that the behavior of the occupant is indeed affected the energy consumption but it is not to make the energy consumption at operational stage exceeds energy consumption at design stage, so based on this initial results, the new green building of Ministry of public works certification for energy feature at operational stage will remain platinum.