

Identifikasi variabel desain konsep near zero energy housing (nZEH) pada bangunan rumah di daerah tropis = Identification of near zero energy housing (nZEH) design variables of residential buildings in tropical climate

Evelyne Kemal, author

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Abstrak

Penelitian ini bertujuan untuk mengidentifikasi variabel-variabel desain konsep near-zero energy housing nZEH serta penerapan terbaiknya di daerah tropis seperti Indonesia. Metode penelitian yang digunakan adalah penelitian kualitatif melalui expert judgement dari pihak pemerintah, swasta, serta akademisi yang memiliki keahlian di dalam bidang desain bangunan dan energi.

Hasil penelitian menunjukkan bahwa variabel desain nZEH di daerah tropis meliputi desain pasif, fenestrasi, pengaturan pencahayaan, dan penggunaan panel photovoltaic PV. Pertimbangan lain meliputi penggunaan peralatan listrik ramah lingkungan, pemasangan sub meteran untuk air conditioner AC dan kotak kontak, penggunaan kipas angin atau AC dengan variable refrigerant flow VRF, serta pemanfaatan perangkat lunak simulasi bangunan dalam proses desain.

.....This research is aimed to identify design variables of near zero energy housing nZEH and its best practices in tropical climate, including Indonesia. This study was conducted by using expert judgement, which included government, private sector, and academician who are considered to have expertise in the field of building design and energy.

The results showed that the design variables of nZEH in tropical areas include passive design, fenestration, indoor lighting arrangements, and use of photovoltaic panels PV. Other considerations include the use of environmentally friendly electrical equipment, installation of sub meter for the air conditioner AC and socket, use of fan or AC with variable refrigerant flow VRF, and use of building simulation software in the design process.