

## ABSTRAK

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Judul : Faktor - Faktor Penentu Pembangunan Biogas Plant di Kabupaten  
Katapang, Provinsi Kalimantan Barat

Penelitian ini mengkaji faktor – faktor penentu pembangunan Biogas Plant di Kabupaten Katapang, Provinsi Kalimantan Barat dengan membandingkan Green Construction dan Green Factory. Metode Analytical Hierarchy Process (AHP) digunakan untuk memberi bobot pada kriteria Man, Material, Machine, Method, Money, Environment, dan Sustainability. Hasil menunjukkan Green Factory unggul tipis (0,2358) atas Green Construction (0,2306) dengan selisih 0,0052 (deviasi < 5%), sehingga keduanya secara kategori “sama pentingnya” dan layak menjadi prioritas. Green Factory unggul pada keberlanjutan operasional, sedangkan Green Construction pada pelaksanaan dan inovasi metode kerja. Dalam perspektif manajemen konstruksi, strategi integratif keduanya dapat memperkuat pengendalian mutu, efisiensi biaya, dan koordinasi proyek berkelanjutan.

**Kata kunci:**

Biogas Plant, AHP, Green Factory, Green Construction, Manajemen Konstruksi

## ABSTRACT

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Study Program : Master of Civil Engineering

Title : Determining Factors for Biogas Plant Development in Ketapang  
Regency,

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This study examines the determining factors in the development of a Biogas Plant in Ketapang Regency, West Kalimantan Province, by comparing Green Construction and Green Factory approaches. The Analytical Hierarchy Process (AHP) method was used to assign weights to the criteria of Man, Material, Machine, Method, Money, Environment, and Sustainability. The results indicate that Green Factory slightly outperforms Green Construction (0.2358 vs. 0.2306) with a difference of 0.0052 ( $< 5\%$  Deviation), meaning both are considered “equally important” and worthy of priority. Green Factory excels in operational sustainability, while Green Construction shows strengths in implementation and innovative work methods. From a construction management perspective, an integrative strategy combining both approaches can enhance quality control, cost efficiency, and coordination in sustainable project delivery.

**Keywords:**

Biogas Plant, AHP, Green Factory, Green Construction, Construction Management