

**Analisis Kerjasama Bilateral Indonesia-Singapura Melalui JDA (*Joint Development Agreement*) Studi Kasus PLTS Batam-Singapura**

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**Abstrak**

Penelitian ini mengkaji peran *Joint Development Agreement* (JDA) sebagai instrumen kerja sama *Business to Business* (B2B) sekaligus landasan hukum dan operasional dalam mendukung kerja sama energi terbarukan Indonesia-Singapura, dengan studi kasus proyek Pembangkit Listrik Tenaga Surya (PLTS) Batam-Singapura. Kerja sama ini melibatkan Sembcorp Industries dan Bright PLN Batam dalam pengembangan PLTS berkapasitas sekitar satu Gigawatt peak yang dilengkapi sistem penyimpanan energi (*battery energy storage system*), tersebar di kawasan Batam, Bintan, dan Karimun sebagai bagian dari kawasan Free Trade Zone (FTZ) Kepulauan Riau-Singapura. Penelitian ini menggunakan pendekatan kualitatif dengan strategi studi kasus, didukung kerangka teori Kompleksitas Interdependensi (Keohane dan Nye) dan Multi-track Diplomacy (Diamond dan McDonald), guna menganalisis interaksi aktor negara dan non-negara dalam kerja sama lintas batas ini. Data dikumpulkan melalui wawancara dengan pemangku kepentingan terkait, kajian literatur, serta penelaahan dokumen resmi seperti kesepakatan bilateral, regulasi nasional, dan kerangka kerja sama ASEAN. Hasil penelitian menunjukkan bahwa JDA berfungsi sebagai jembatan regulasi strategis yang menghubungkan kesepakatan tingkat *Government to Government* (G2G) dengan implementasi teknis-operasional di tingkat B2B, sekaligus memberikan kepastian hukum yang tidak dapat diakomodasi oleh Memorandum of Understanding semata. Dinamika kerja sama ini juga memperlihatkan bagaimana jalur diplomasi resmi dan non-resmi saling melengkapi dalam mendorong realisasi proyek. Selain itu, Badan Pengusahaan (BP) Batam berperan sebagai katalisator melalui kemudahan perizinan dan penyediaan lahan di kawasan FTZ, yang turut memperkuat posisi Indonesia dalam diplomasi energi hijau regional serta mendukung target transisi energi berkelanjutan di kawasan Asia Tenggara.

**Kata Kunci:** *Joint Development Agreement*; Kerja Sama Bilateral; Energi Terbarukan; *Government to Government*; PLTS Batam-Singapura.

***Analysis of Indonesia-Singapore Bilateral Cooperation via the Joint  
Development Agreement (JDA): A Case Study of the Batam-Singapore Solar  
Power Project***

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***Abstract***

*This research examines the role of the Joint Development Agreement (JDA) as a Business to Business (B2B) cooperation instrument as well as a legal and operational foundation supporting Indonesia-Singapore renewable energy cooperation, using the Batam-Singapore Solar Power Plant (PLTS) project as a case study. This cooperation involves Sembcorp Industries and Bright PLN Batam in developing a solar power plant with a capacity of approximately one Gigawatt peak equipped with a battery energy storage system, spread across the Batam, Bintan, and Karimun areas as part of the Riau Islands-Singapore Free Trade Zone (FTZ). This research employs a qualitative approach with a case study strategy, supported by the theoretical frameworks of Complex Interdependence (Keohane and Nye) and Multi-track Diplomacy (Diamond and McDonald), in order to analyze the interaction between state and non-state actors in this cross-border cooperation. Data were collected through interviews with relevant stakeholders, literature review, and examination of official documents such as bilateral agreements, national regulations, and ASEAN cooperation frameworks. The research results show that the JDA functions as a strategic regulatory bridge connecting Government to Government (G2G) agreements with technical-operational implementation at the B2B level, while also providing legal certainty that cannot be accommodated by a Memorandum of Understanding alone. The dynamics of this cooperation also demonstrate how formal and informal diplomatic tracks complement one another in driving project realization. In addition, the Batam Free Trade Zone Authority (Badan Pengusahaan Batam/BP Batam) serves as a catalyst through licensing facilitation and land provision within the FTZ area, further strengthening Indonesia's position in regional green energy diplomacy and supporting sustainable energy transition targets in the Southeast Asian region.*

***Keywords:*** Joint Development Agreement; Bilateral Cooperation; Renewable Energy; Government to Government; Batam-Singapore Solar Power Plant.