



BUSINESS

COMPANY PROFILE

PT. GENI BUANA
NUSANTARA

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HI THERE!

Welcome to **PT Geni Buana Nusantara**, where we blend professional expertise with innovative solutions to guide your journey toward **energy transition** and **decarbonization**. As a trusted partner in **engineering** and **sustainability**, we're dedicated to supporting Indonesia's sustainable development through customized consulting services and strategic biomass solutions, designed to meet **your unique needs**.





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ABOUT COMPANY

PT Geni Buana Nusantara, affectionately known as **Geni Energi**, was born from the shared vision of a group of innovators who aimed to create something entirely new in the world of engineering consulting. Officially opening its doors in 2022, Geni is dedicated to providing cutting-edge solutions and exceptional services that cater to the evolving needs of clients in the energy-related industries.

At Geni, customer satisfaction is not just a priority, it's our driving force. Our products and services are meticulously designed to meet the diverse needs of our clients, anytime and anywhere. What sets us apart is our unique ability to tailor our offerings to each client's specific requirements, supported by our proprietary frameworks and structured processes. Our team of highly skilled and experienced engineers is committed to delivering innovative, cost-effective solutions that uphold the highest standards of quality and value. Whether you're navigating the complexities of energy transition or seeking expert guidance in sustainability and decarbonization, Geni is here to partner with you every step of the way.

NIB: 0102230073406.





CEO MESSAGE

Welcome to PT Geni Buana Nusantara!

As the CEO of Geni, I am thrilled to introduce you to our company. A place where innovation meets dedication, and where our mission is to drive meaningful change in the world of energy and sustainability. When we first envisioned Geni, we wanted to build more than just a company; we wanted to create a movement, a team of passionate experts united by the common goal of supporting Indonesia's transition to a greener, more sustainable future.

From the very beginning, we've been committed to delivering exceptional quality and value to our clients. We understand that each project is unique, and that's why we take a personalized approach to everything we do. Our team works closely with you to understand your challenges, anticipate your needs, and develop tailored solutions that not only meet but exceed your expectations.

Our journey has been nothing short of extraordinary, and it's all thanks to our fantastic team and the trust our clients have placed in us. Thank you for taking the time to learn more about Geni. We look forward to partnering with you on your sustainability journey and to building a future that we can all be proud of.

Warm regards,
Marcellino Lorenzo

HOW WE WORK



CLIENT-CENTERED APPROACH

We begin by listening closely to your goals and concerns. Every project is tailored to your specific requirements, ensuring solutions that align perfectly with your vision.

INNOVATIVE SOLUTIONS

Our team leverages the latest technology and industry insights to craft innovative, sustainable solutions. We pride ourselves on staying ahead of the curve to deliver results that are not just effective but future-proof.

COLLABORATIVE PROCESS

We believe in partnership. Throughout the project, we work hand-in-hand with you, maintaining open communication and transparency at every step. Your input is valued, and we ensure that you're always in the loop.

STRUCTURED METHODOLOGY

Our proprietary frameworks and structured processes are designed to deliver consistent quality and efficiency. We apply a rigorous approach to project management, ensuring that every aspect is meticulously planned and executed.





OUR SERVICES

ADVISORY SERVICES

1

FEASIBILITY STUDIES

We conduct comprehensive feasibility studies to help you make informed decisions. Our analysis covers **technical**, **economic**, and **environmental** aspects to ensure that your projects are viable and sustainable.

2

PROCESS ENGINEERING

Our process engineering services are designed to **optimize operations**, **enhance efficiency**, and **ensure compliance** with industry standards. We tailor our approach to your specific processes to achieve optimal performance.

3

CARBON ASSESSMENT

We provide detailed carbon assessments to **measure** and **manage** your **carbon footprint**. Our assessments are crucial for companies committed to reducing emissions and meeting regulatory requirements.

4

BIOMASS UTILIZATION

We offer specialized **biomass assessments** and **utilization** to evaluate the **potential and sustainability** of biomass resources. This includes analyzing availability, quality, technology, utilization, and the environmental impact of biomass options.



5

ENGINEERING ADVISORY

We provide other engineering advisory including **Engineering Design** (Conceptual Design, FEED, DED, Shop Drawing), **Risk and Failure Analysis** (RCA, RCFA, FMEA, Forensic Engineering), and **Maintenance Advisory** (Preventive and Predictive Maintenance).

BIOMASS SUPPLY

As a trusted biomass supplier, Geni offers high-quality biomass resources to meet your energy needs. We ensure a consistent and sustainable supply chain, tailored to the specific requirements of your projects. Whether you need biomass for energy production, industrial processes, or other applications.





MEET THE TEAM & EXPERTS

At PT Geni Buana Nusantara, our strength lies in our people. Our team is a diverse group of passionate experts dedicated to driving innovation and excellence in engineering, energy transition, and sustainability. Here's a glimpse into the talented professionals who make up our team:

**Marcellino
Lorenzo, S.T.**

Director



With a vision to create a pioneering engineering consultancy, Marcel leads Geni with a commitment to innovation and sustainability. Marcel brings extensive experience in sustainability and a track record of successful projects that align with Geni's mission.

**Hafif Dafiqur-
rohman, M.T**

Commissioner



As our commissioner, Hafif oversees the direction of our projects, ensuring that we deliver cutting-edge solutions. With expertise in biomass and renewable energy, Hafif plays a crucial role in developing and implementing our engineering strategies.

**Ardiyansyah,
Ph.D.**

Senior Expert



Ardi is an expert in energy efficiency and heat transfer. As a key member of our team, he provides valuable insights into optimizing building systems for sustainability. With years of experience in reviewing and consulting on energy-efficient designs, Mr. Ardi ensures that Geni delivers cutting-edge solutions in engineering and energy performance.

**Ir. Riezqa
Andika, Ph.D.**

Senior Expert



With a focus on optimizing processes and enhancing efficiency, Riezqa is integral to our process engineering services. Their innovative solutions and meticulous approach ensure that our projects meet the highest standards of performance and sustainability.

**Sri Rachmawati
H S, M.T**

Senior Expert



Sri specializes in environmental, energy, and sustainable technology, guiding our clients through decarbonization and mapping sustainable energy pathways. Their strategic advice helps organizations achieve their environmental goals effectively.





MEET THE TEAM & EXPERTS

**Felly Rihlat
Gibran S, M.T.**

Senior Expert



Felly brings his expertise in energy efficiency to Geni, where he plays a key role in optimizing energy use across various projects. As our Energy Efficiency Specialist, he works to identify and implement solutions that reduce energy consumption and enhance sustainability.

**Ahmad Syihan
Auzani, M.Eng.,
Ph.D., AFHEA.**

Senior Expert



Syihan brings a wealth of knowledge specializing in energy and combustion systems, focusing on low-carbon fuel combustion and the decarbonization of energy systems.

**Nur Aini
Hidayah, M. Epid.**

Human Resources



Aini is dedicated to building and nurturing our team. As our Human Resources Manager, she oversees recruitment, employee development, and workplace culture. She ensures that Geni selects the right expertise for each project while fostering a positive and productive work environment.

**Sarah Islamiati
Pertiwi, M.T.**

Senior Associate



Sarah is an innovative and driven in research. With a solid foundation in engineering, she brings valuable expertise in simulation and mechanical process. Her experience and her recognition as a top presenter at international conferences highlight her commitment to advancing sustainable energy solutions.

**Muhammad
Adim Majid, S.T.**

Associate




Adim is a committed and forward-thinking Mechanical Engineer at Geni, with a focus on engineering and energy. His analytical acumen and teamwork-oriented approach contribute to Geni's continued leadership in project execution and development.

**Anisah Zahira
La'ali, S.T.**

Associate



Anisah is an emerging talent in environmental engineering, bringing fresh insights and a proactive approach to our team. As an Environmental Engineer, she evaluates project impacts and explores innovative solutions for sustainable practices.



Our team's diverse skills and collective experience are at the heart of everything we do at Geni. In addition, Geni boasts a range of specialists in various fields. We tailor our team of experts to meet the specific requirements of each project. We are committed to delivering exceptional value and innovative solutions and look forward to partnering with you on your sustainability journey.

OUR PROJECT



At PT Geni Buana Nusantara, our portfolio encompasses a diverse range of sectors, reflecting our expertise in engineering, biomass, renewable energy, and beyond. Below is an overview of our key projects, categorized by service area:

BIOMASS ENERGY

Feasibility Study of Biomass Waste Utilization and Business Development

Client : PT Mitrabara Adiperdana Tbk
Year : 2024

Conducted surveys in 13 regencies for biomass and market potential, mapped biomass potency, and proposed a sustainable business model for biomass processing.

Study of Corn Waste Biomass Pellets

Client : PT Mitrabara Adiperdana Tbk
Year : 2023

Collected and pre-treated biomass feedstock, processed and pelletized it, and analyzed pellet properties and compliance with standards.

Feasibility Study of 5 MW Biomass Power Plant *

Client : PT. TBS Energi Utama Tbk
Year : 2022

Developed project schedules, performed technical analysis, and estimated costs for a biomass power plant in Ponu, East Nusa Tenggara.

Boiler Retrofitting of Coal Conversion to Biomass

Clients : PT Su (2024) and PT Sunjin HJ (2023)

Performed data assessments and surveys for converting coal boilers to biomass, optimized standard operating procedures (SOPs) for boiler operations.

Wood Pellet

Clients: PT Malinau Hijau Lestari (2023) and PT Energi Management Indonesia

Pre-treated and pelletized wood feedstock, evaluated pellet parameters, and analyzed technology and processes for wood pellet production.

Technical FS of Mobile Biomass Gasifier *

Client : Ministry of Research and Technology, Indonesia
Year : 2018

Analyzed technology and feedstock for mobile biomass gasifiers.



* Founder's Professional Experience



OUR PROJECT



RENEWABLE ENERGY

Re-FEED for Geothermal Well and Pipeline System

Client : PT Geo Dipa Energi (GDE)

Year : 2024

Supported the Re-FEED and pump calculations for geothermal well SLR-31B, including technical specifications and related engineering aspects.

Pre-Feasibility Study of Solar Wind Desalination Pilot Project

Clients : NHRI, People's Republic of China

Year : 2023

Conducted water and power analyses, and evaluated desalination technologies for a pilot project in Bungin, Bekasi.

Feasibility Study and DED for Solar PV *

Client : MCA I - Indonesia

Year : 2016

Created detailed engineering design and technical assessment for solar PV implementations in Wakatobi Island and Tanjung Jabung, Jambi.

Study of Biomass Gasifier and Its Implementation *

Client : PT Pembangkit Jawa Bali

Created technical analyses, conceptual designs, and provided training on biomass gasifiers.

GIS Analysis for Fossil-Fueled Power Plants and Renewable Energy Potential

Client : Institute for Essential Services Reform (IESR)

Year : 2023

Consolidated database of captive power plants in Indonesia and assessed renewable energy potential at these sites.

Utilization of Wind Energy for Power Generation *

Client : ICCTF BAPPENAS

Year : 2018

Planned and developed wind and solar desalination projects, managed technical development processes.

Study of Re-development of Cikoneng Micro-hydro Power Plant *

Year : 2015

Create technical analysis of micro hydro power plant and list of component needed for re-development of Cikoneng micro hydro power plant.



* Founder's Professional Experience



OUR PROJECT

ENERGY EFFICIENCY AND ENERGY TRANSITION

Energy Audit for Textile Industry

Client : World Resources Institute (WRI)

Year : 2025

Performed an energy audit for a textile industry, evaluating electrical, mechanical, and thermal systems, including chillers, boilers, and lighting, with energy efficiency recommendations.

Energy Audit Governmental Building

Client : Institute for Natural Resources, Energy, and Environmental Management (IREEM)

Year : 2025

Conducted Level 2 Energy Audits for ESDM buildings across regions, covering HVAC, lighting, thermal comfort, OTTV, and solar rooftops. Provided energy-saving recommendations and cost estimates.

Knowledge Product on Sustainable Urban Cooling

Clients : ICLEI Southeast Asia

Year : 2025

Developed a knowledge product on sustainable urban cooling, covering incorporating insights on sustainable cooling technologies, policy frameworks, and urban development strategies for local governments.



Pilot Project on Guideline for Business Energy Transition

Client : Indonesia Business Council for Sustainable Development (IBCSD)

Year : 2025

Assessed six companies across diverse sectors to pilot energy transition guidelines. GENI led the implementation; conducting assessments, analyzing efficiency, and providing recommendations for decarbonization strategies.

Policy Analysis on RUEN and RUED Implementation at National and Sub-National

Client : WE for JET Indonesia

Year : 2025

Produced a policy paper on the alignment of Indonesia's National Energy Plan (RUEN) with the provincial RUEDs of NTB and NTT, incorporating gender equality aspects for an inclusive energy transition.



OUR PROJECT

ENERGY TRANSITION AND DECARBONIZATION



Overview of Steel Sector in Southeast Asia

Client : Agora Industry
Year : 2024

Analyzed decarbonization pathways for the steel sector in five ASEAN countries, focusing on low-carbon technologies like DRI and hydrogen, and examining growth potential, supply-demand dynamics, trade deficits, and foreign investment trends.

Guidelines for Energy Business Transition in Indonesia

Client : Indonesia Business Council for Sustainable Development (IBCSO)
Year : 2024

Developed guidelines for decarbonization and energy efficiency, based on Indonesian practices and business cases. Included market readiness and member surveys.

STTA for PLN's De-dieselization Program MENTARI

Clients : Castlerock Asia
Year : 2023

Conducted scoping studies and resource assessments for wind and biomass energy, and developed pre-feasibility studies for energy transition in de-dieselization plants.

Building Efficiency Policy Impact Assessment

Client : Initiative for Climate Action Transparency (ICAT) - UNOPS
Year : 2024

Assessed the applicability of the UNOPS ICAT guideline in Indonesia by analyzing the Green Building Regulation, establishing emissions baselines, and projecting reductions using ex-ante and ex-post methods.

Readiness Assessment for Industry Decarbonization Technologies

Client : Institute for Essential Services Reform (IESR)
Year : 2024

Mapped decarbonization technologies for high carbon emitters, assessed technology readiness levels (TRL), and explored electrification opportunities in process heating.

Assessment of PLTU Palu PT Pusaka Jaya Palu Power *

Client : Prima Adjusterindo
Year : 2019

Analyzed steam power plant components affected by a tsunami, documented current conditions for insurance purposes.



* Founder's Professional Experience



OUR PROJECT

PROCESS ENGINEERING

Development of National Standard Design for Waste Processing Facilities (IPS)

Client : Kementerian Pekerjaan Umum - Arkonin EMP

Year : 2025

Developed MEP specifications for Indonesia's standard Waste Processing Facility (IPS), covering power needs, process equipment, and supporting systems.

Simulation Study of Heat Exchanger and Fire Engine Station Failure Analysis

Client : PT Pertamina Hulu Rokan

Year : 2022

Conducted simulations and re-engineering for heat exchanger systems and fire engine stations.

Root Cause Failure Analysis for RDO Explosion *

Client : PLTU Tarahan

Year : 2021

Analyzed RDO explosions using RANS simulations, provided conclusions and recommendations.

Training Module for Drive Train Maintenance *

Client : PT Kaltim Prima Coal

Year : 2016

Developed training modules for maintenance of coupling, gearbox, and braking systems.

Basic Engineering Design for Freight Rail Facilities

Client : Dinas Perhubungan DKI Jakarta

Year : 2025

Provided MEP design for supporting buildings and planned train depot as part of Jakarta's freight rail infrastructure development.

RUPTL of JIPE Combined Cycle Power Plant 4x125 MW *

Year : 2022

RUPTL Feasibility Study of JIPE Combined Cycle Power Plant 4x125 MW PT BKMS (Java Integrated Industrial Port and Estate).

Investigation of Refractory Dry Out (RDO) in Furnace Boiler *

Client : Jasindo

Year : 2021

Conducted LES and CFD simulations to analyze RDO explosions and recommended further steps.

Root Cause Analysis for PKT Kaltim V Plant Steam Cycle Failure *

Client : PT Pupuk Kaltim (PKT)

Year : 2015

Analyzed steam turbine corrosion and steam cycle issues, made recommendations for prevention.



* Founder's Professional Experience

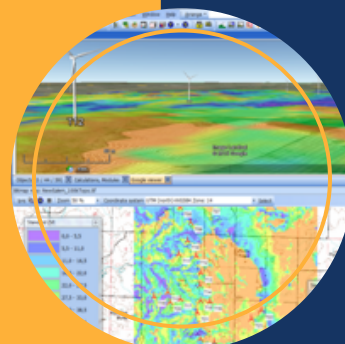


INNOVATION AND BREAKTHROUGHS



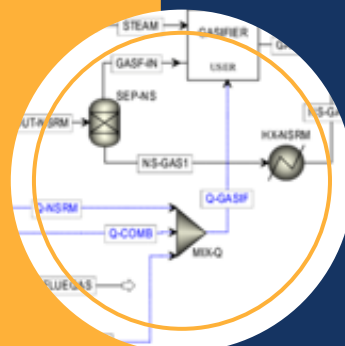
Desk Study and Resource Assessment

With the inhouse simulation and potential software, we can develop desk study and resource mapping. Also, deep knowledge in latest technical update and research, we can strive to produce detail study.



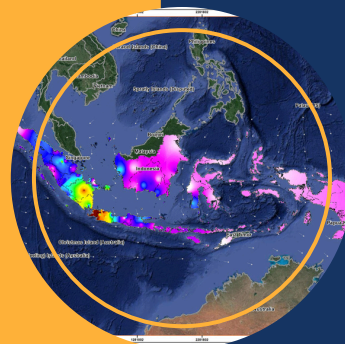
Process Integration and Energy Intensification

With the inhouse mathematical simulation and software dedicated to integrate and optimized the energy production, along upstream to downstream. Collaborate with expert from top universities.



Energy Resource Mapping and Emission Reduction

GIS based mapping for renewable energy potency (PV, Hydro, Biomass, Wind, and Hydrogen/Methanol) and emission analysis for carbon reduction. Carbon assessment based.



Market Survey and Supply Chain of Renewable Energy

Market survey and supply chain of biomass to energy, technology pool assessment for Solar PV, wind power, hydro, decarbonization technology, etc.



***Innovation is at the core of
our operations. We are
constantly pushing the
boundaries of what's possible
in engineering, sustainability,
and energy transition.***



IMPACT ON INDUSTRIES



PT Geni Buana Nusantara is dedicated to driving meaningful change across industries by delivering impactful solutions that address today's most pressing challenges. Our work spans various sectors, with a focus on energy transition, efficiency, and sustainable practices. Here's how we're making an impact:

Biomass and Renewable Energy Integration

We are champions of biomass and renewable energy as vital components of the energy mix. Through our projects, we have helped industries harness the power of biomass, turning waste into energy and reducing dependence on non-renewable resources.

Energy Companies Implementing Energy Transition

We support energy companies in their journey toward sustainability by providing expert guidance on decarbonization and energy transition strategies. Our projects have enabled companies to align with global sustainability goals while navigating the complexities of transitioning to greener energy sources.

Advancing Energy Efficiency

Our focus on energy efficiency helps industries reduce their carbon footprint and operational costs. By conducting thorough assessments and implementing best practices, we empower companies to optimize their energy use. For instance, in our Readiness Assessment for Industry Decarbonization Technologies, we identified opportunities for process heating electrification, which enhances efficiency and reduces reliance on fossil fuels.

Fuel Replacement Strategies

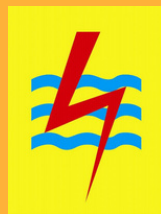
In the quest to reduce carbon emissions, fuel replacement strategies play a crucial role. We have been at the forefront of these efforts, helping companies transition from traditional fossil fuels to cleaner alternatives.

Achieving Lower Carbon in Industrial Processes

Reducing carbon emissions in industrial processes is at the heart of our mission. Our innovative approaches allow us to identify and implement solutions that lower carbon emissions in various industrial applications. By optimizing process design and operation, we help companies achieve significant reductions in greenhouse gas emissions, contributing to global efforts to combat climate change.



OUR CLIENTS





CONTACT US

Whether you have questions, need consultation, or want to learn more about how we can assist with your energy and decarbonization projects, we're here to help.



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