

# Unlocking Opportunities: How Tokenisation Can Transform Malaysia's Energy Infrastructure



Malaysia's renewable energy ambitions are well-documented. The National Energy Transition Roadmap (NETR) targets 70% renewable energy capacity by 2050, with large-scale solar (LSS) initiatives as a central pillar.

But the capital flowing into green infrastructure today is concentrated. High capital costs mean only large solar companies can build and manage these facilities. For the average investor, the only available route into green energy is through the listed shares of those same companies.

This is a structural participation gap, not a policy shortcoming. Commercial power purchase agreements (PPA) for solar assets run as long as 20 years, carrying a steady projected internal rate of return over the PPA lifespan. The economics are sound. The access is not.

Tokenisation is one structural response to this gap. Over the past decade, blockchain has progressed from an experimental technology into a foundation for real-world financial infrastructure. One of the more significant developments in that evolution is the tokenisation of real-world assets (RWAs): the process of representing physical assets as digital tokens on-chain.

By fractionalising ownership of physical infrastructure, tokenisation lowers the minimum viable threshold for investor participation. Investors can hold tokens representing verified assets and receive on-chain yield flows that are distributed back to holders.

## An Early Builder in This Space

GEN is a Malaysian startup attempting to build the trust layer this model requires. Founded by Ines Yong, who brings close to a decade of experience as a builder in the Web3 space, GEN's thesis is that Malaysia's solar market is a viable starting point for energy tokenisation at scale. "GEN specialises in energy," Yong says, "specifically, turning energy infrastructure into accessible, tokenised assets which will open up new opportunities for institutional or small scale investors, particularly those who want to diversify into clean energy."

The company's product, GEN Core, is a proprietary end-to-end solution. In Yong's words: "The hardware captures verified energy data at source, a data layer that standardises performance, and a tokenisation engine. Real assets generate real data, and investors can capture real yield." The model's logic rests on what Yong calls a verified data layer, a trusted foundation for transparent, fractional and liquid investment. "Tokenisation unlocks access, but validation creates trust," she says.

GEN is building on the Solana blockchain, selected for its speed and low transaction costs, which the team identifies as essential requirements for tokenised assets tied to physical infrastructure.

The company is at pre-commercial stage. It has been shortlisted in SIDEC's Token-X programme, which provides mentor support, resources and incubation. It has also applied for Cradle's CIP SPARK grant, which covers development and pre-commercialisation of technology startups. It has also received backing from the Solana Foundation to further develop its products.

These are third-party signals that the approach has merit worth developing. However, proving commercial viability is the next challenge for an ambitious startup like GEN.

## How a Trust Layer Supports Data Integrity

GEN's model rests on a specific claim: that the data integrity problem in RWA tokenisation can be solved through hardware-level capture and on-chain verification. Yong is direct about the differentiation: "Most builders only do tokenisation without real data, or energy management without investment tools. GEN does both, and we are building a trust layer on top of this. Blockchain technology ensures transparent on-chain data, stable returns, and open access."

Whether that differentiation holds commercially depends on questions the market has not yet answered. Developing GEN Core requires striking agreements with large-scale power producers while simultaneously developing tokenised assets for investors. These are parallel tracks with different stakeholders, different timelines, and different risk profiles.

Yong acknowledges that getting disparate ecosystem participants aligned has not been straightforward. "Getting government programmes and a blockchain protocol to sit at the same table was not easy. But we made it happen, and that's the only way to push real use cases forward."

Malaysia's solar market provides the structural conditions that make this locally relevant. The market is mature, with established operators, existing infrastructure, and a policy environment that supports the sector. Global capital is already coming to Malaysia to build in this space, and the NETR provides a long-term demand anchor for green infrastructure development.

## What this means for the ecosystem

Early stage builders like GEN represent a starting point. They are tapping into new opportunities in energy infrastructure through frontier technologies such as tokenisation. Having participated in hackathons and investor pitches, Yong believes the ecosystem is listening.

Builders in the blockchain space aim to scale from the start. Venture capital (VC) investors are cognisant of this, and more firms with investment theses focusing on blockchain and Web3 are starting to look closer into the ecosystem of developers based in Southeast Asia.

Tokenisation in energy infrastructure unlocks new opportunities to connect operators and investors. The participation gap in green energy financing is a function of how the asset class has historically been structured, not a reflection of investor appetite. Tokenisation does not change the underlying assets. It changes who can access them, provided the trust architecture works.

For that architecture to work, the data integrity layer needs to be independently verifiable. The yield distribution mechanism needs regulatory clarity. And the capital supporting companies at this stage needs to be structured around the timelines that pre-commercial infrastructure development actually requires.

GEN is one early attempt to build that architecture in Malaysia. The ecosystem programmes backing it reflect a recognition that the approach is worth developing.

Whether tokenisation closes the participation gap in green energy financing depends on whether the trust layer being built now holds at scale.

*Jelawang Capital supports the development of fund managers with the capability to evaluate and back frontier categories as they mature in Malaysia's venture ecosystem.*