



Technical **Whitepaper**

Decentralized Solar Financing & Infrastructure in Sri Lanka





[NEXT ECO WAVE](#)

Executive Summary

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Next Eco Wave (PVT) Ltd, a subsidiary of South Korea's **Next Solar Energy Co., Ltd**, is pioneering a decentralized approach to renewable energy in Sri Lanka. By merging advanced photovoltaic (PV) engineering with blockchain-based financial instruments, the company aims to overcome traditional funding barriers and stabilize the national grid through a 75MW Solar and 150MWh Energy Storage System (ESS) rollout.

Technical Framework: The STO Model

A core innovation of Next Eco Wave is the implementation of a **Security Token Offering (STO)** platform for solar assets.

- **Asset Tokenization:** Solar power plants are treated as financial assets. Their value is assessed based on remaining asset life and projected energy yield.
- **Blockchain-Based Securities:** Using blockchain technology, the company issues tokenized securities that represent a share in the physical power plant.
- **Micro-Investment Accessibility:** This platform allows both large and small-scale investors to trade energy securities in small amounts, democratizing access to green infrastructure.

Flagship Infrastructure Project: SLTDA Rooftop Solar

In partnership with the SLTDA, Next Eco Wave is executing a massive rooftop solar initiative specifically for registered hotels, guest houses, and restaurants.

Project Specifications:

- **Total Capacity:** 75MW Solar PV.
- **Storage:** 150MWh Energy Storage Systems (ESS) for power stabilization.
- **Financing:** Supported by a loan facility from **DFCC Bank**.
- **Strategic Goal:** Providing sustainable energy management and reducing electricity overhead for the Sri Lankan tourism sector.

Engineering & R&D Capabilities

The technical validity of these projects is supported by the company's extensive research and patent portfolio:

- **Energy Storage Optimization:** Ongoing feasibility studies on 4MW ESS construction and tropical climate performance.
 - **Patent Engineering:** Development of specialized support devices for fixed solar panels and solar heat collection systems.
 - **Global Technical Support:** As an authorized agent for **Hansol Technics**, Next Eco Wave provides high-tier technical support and follow-up management for PV products.
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Alternative Business Models

Beyond STOs, the company utilizes diverse models to ensure project viability:

- **ESCO (Energy Service Company):** A subscription-based model designed to reduce electricity bills for clients while responding to ESG and greenhouse gas emission requirements.
- **Roof Rental Solar:** A site-provider model where Next Eco Wave acts as the business owner (SPC), paying rent to landlords while acquiring EPC (Engineering, Procurement, and Construction) rights.

Conclusion

By integrating South Korean technical expertise with local Sri Lankan infrastructure needs, Next Eco Wave (PVT) Ltd is creating a transparent, efficient, and decentralized energy ecosystem. The combination of STO-led financing and large-scale ESS deployment positions the company as a leader in Sri Lanka's transition to a carbon-neutral future.

Contact us -

- 291/50, Ground Floor, Havelock Gardens, Colombo 06, Sri Lanka
 - +94-77-277-9463
 - next.eco.wave2024@gmail.com
 - nextecowave.com
 - nextsolar.co.kr
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