



Small Island Developing States (SIDS) Decarbonization Forumⁱ

Vanuatu, PNG

- Providing Electricity Access in Remote Area -



Event	Small Island Developing States (SIDS) Decarbonization Forum (Held in March 2025)
Presenter	Mr. SUZUKI Masao Project Manager, Delighting Everyone Project Team New Business Development Office, Next Business Development Div. Toshiba Corporation
Summary	Distributed renewable energy services for remote islands and remote areas in Pacific Island countries by Toshiba Corporation
Reference	



Toshiba will resolve these issues with our services, together with the rural community.

This service enables sustainable access to electricity in remote areas without power grids, as we provide the necessary equipment to charge, and electrical items to small store owners.

As the first step, we install solar power generators and a large number of rechargeable LED lanterns, portable batteries, etc. in the stores in remote area villages.

As the second step, such store owner charges the LED lanterns and related items, and rents them to the residents for a small fee.

The residents use the lights and batteries for a day, and return them to the store owner on the following day. The store owner recharges them.

The key to this business is the 'payment system'. The electrical items have a lock function to prevent them from being used. When a resident comes to borrow an item, the store owner uses our application to unlock it for one day, charging the resident a small rental fee. To unlock, the store owner needs to purchase Business Entity Points from the service operating company through Local Mobile Money Company.

The service operating company is responsible to manage, repair, and replace generators and lanterns loaned to the village. By relying on the service operating company in management and operation of these services, residents can use electricity safely and stably at a low cost without worrying about breakdowns.

Providing Sustainable Service

Features of the Service

- **Deployable Even in Sparsely Populated Areas.**
Electricity can be used even in sparsely populated areas without laying power lines, ensuring continuity from a cost-effective perspective.
- **Low Impact on the Environment**
We are responsible for the provision, operation, maintenance, and replacement of each asset, so no assets remain in the village permanently, the impact on the environment is extremely small.
- **Speed of Service Spread**
The process of explaining the service to the village, reaching an agreement, installing the equipment, and training the store owners can all be completed in just a few days.
- **Contribute to Employment and the Local Economy**
Create new sources of income for store owners, Increase resident's income by increasing productivity for them, Employ local people in business companies



This is a transitional technology until full electrification. However,
Can help visualize the need for electrification. And contribute to the create of optimal social infrastructure.

Features of Service (P5 of Original Presentation)

The features of our service are as follows:

1. The service can be implemented even in areas with a dispersed population.
No extension of power lines is necessary. Continuous operation is possible solely with revenue from residents, without any burden on the national treasury.
2. The service has a low environmental impact.
Thanks to the nature of the sharing service, we can reduce the amount of equipment. Also, the service operating company maintains and replaces the equipment, so the broken equipment is not left in remote areas.
3. The speed of deployment is remarkable.
It only takes a few days to reach an agreement with the village, install the service, and train store owners.
4. The service can contribute to employment and the local economy.
The service creates new income sources for store owners, increases residents' productivity, and hires local people.

While this is yet a transitional technology until full electrification, it can surely help visualize the need for electrification, and contribute to the construction of optimal social infrastructure.

Excellent Reputation in Vanuatu and PNG



Interviews for Service Users



- I rented four LED lanterns.
- **I would really like to borrow more** , but I want other people in the village to use them, so I'm limiting the number
- **Uses**
 - **Children's study**
 - **Cooking**
 - **Store (Kaba Bar) lighting**
 - **Security**
- ★ **A major reason for multiple rentals**
The living environment in rural areas is **structured with multiple small buildings for different purposes**, such as bedrooms, kitchens, and toilets.

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Interview to Users in Vanuatu (P7 of Original Presentation)

More than two years have passed since the start of trial in Vanuatu, and about 600 LED lanterns are being rented out every month in a village with about 120 people. According to the user interview, one of the users explained that the lights are used for children's study, cooking, lighting the Kava-bar (her family's store), and home security. We also hear from many other residents that our services are helpful in their lives.



Field study in Papua New Guinea

Established relationships with government agencies and other organizations in Papua New Guinea.
Confirmed the needs and acceptability of the service through a demonstration.



Nov 2023

- Survey of potential 2 sites
- Building relationships with government agencies (received implementation permission)



Jan 2024

- Confirmed needs and acceptability through a short-term demonstration.



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8

Field Study in Papua New Guinea (P8 of Original Presentation)

We also conducted a demonstration in Papua New Guinea. With the support of the PNG Investment Promotion Agency, we conducted surveys in Paramana and Mushu Island, and received affirmative feedbacks from the local residents there as well.

Conclusion

As we have completed the feasibility study phase, we are now going to start the business phase. Toshiba plans to establish a new company with the aim of implementing the service. Like this, we are committed to contribution to "access to electricity" and "spread of renewable energy" in Pacific Island countries. If you have the same issues or are interested, please come and work with us together.

Speaker Introduction

Mr. SUZUKI Masao

Project Manager, Delighting Everyone Project Team

New Business Development Office, Next Business Development Div.

Toshiba Corporation

After joining Toshiba Corporation, Mr. SUZUKI participated in the JICA Volunteer Program from 2002 to 2004, working in Vanuatu. Drawing on this experience, he developed the idea for this project in 2020 and has since been engaged in research, demonstrations, and other activities toward its commercialization.

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ⁱ This article is prepared based on the presentation by Toshiba Corporation, with its permission, at Small Island Developing States (SIDS) Decarbonization Forum (2025)
https://www.env.go.jp/en/press/press_03884.html