

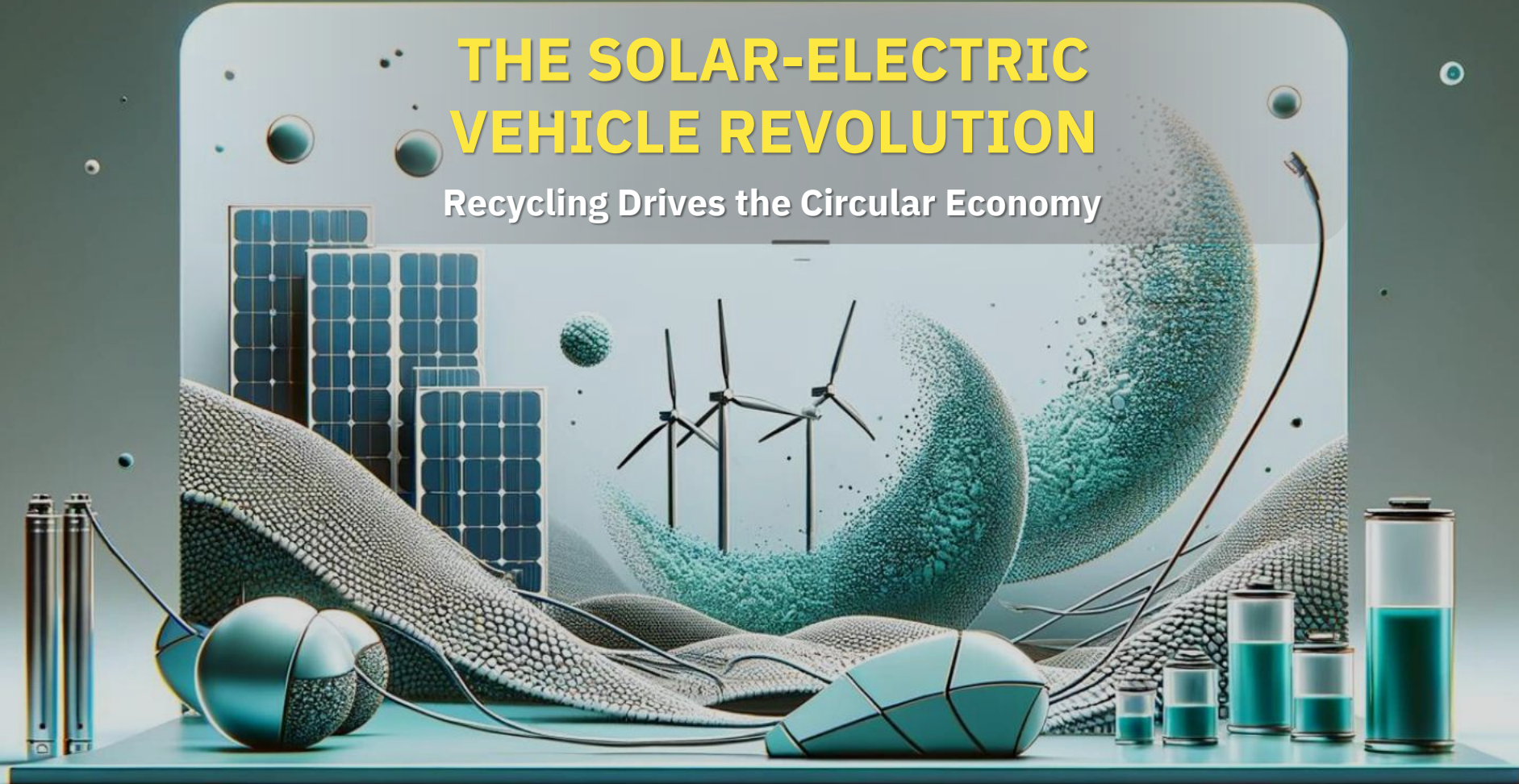


UVOLT RENEWSI



THE SOLAR-ELECTRIC VEHICLE REVOLUTION

Recycling Drives the Circular Economy



Tokyo-Thailand Business Connecting 2024: Innovation for EV

February 21, 2024 | Bangkok, Thailand





MISSION

We aim to revolutionize energy in Thailand and Asia through next-generation batteries and clean energy innovation. Our approach ensures top-quality, compliant products while fostering knowledge transfer and personnel development in advanced technologies.

THE UNSEEN GOLDMINE

Turning Waste into Tomorrow's Energy Today

- **99 %** of end-of-life solar cells (**1.55 million tons in next 35 years**) has been improperly dumped into local landfills
- **No solar cell recycling** plant has been established in Thailand
- **Toxic materials** released into environment



Why we can't be continued the recycling process in Thailand? "The low value of recycling product is not a worthwhile investment"

Current recycling technologies

5.68 USD



Solar waste 1 panel

3.41 USD



Total value of recycling products

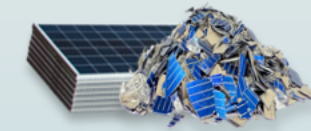
- **Nano Si Anode Batteries: 2025 est. imported value 6,000-10,000 million THB (Thailand)**

CURRENT NANO SI PRODUCTION



- A linear economy and global warming
- Expensive process
- Using highly hazardous chemicals

OUR TECHNOLOGY



Solar panel waste



Nano Si

- Tailor capacity
- Tailor morphology
- Tailor size

- Reduce cost for anode battery producer by 50-60%
- Local sources and return benefits to Thai people
- Sustainable and low cost of material sources
- Nature-friendly process and cost-effective process

+ Upcycling valuable silicon material for current solar recycling manufacturing

- Battery grade nano Si (>29 USD/kg)

> 40 USD



Metallurgical grade Si
(1.42 USD/kg)

5.68 USD



Solar waste 1 panel

Total value
of recycling
products/ 1 panel

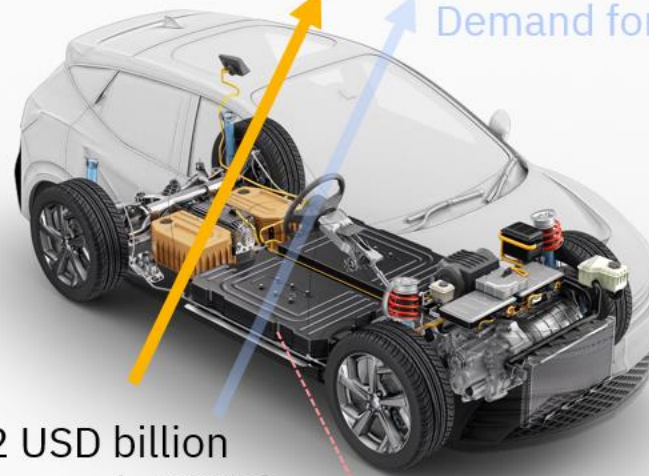
RENEWSI technology

+ Enhancing EVs performance with excellent features

- The global silicon anode battery market size is predicted to expand at 68% CAGR between 2023 and 2035

211 USD billion in 2035

Demand for EVs



2 USD billion
(revenue in 2020)

Source: New York , Oct. 31, 2023
(GLOBE NEWSWIRE)

- The excellent features of Si anode battery for EVs



✓ Enables fast-charging



✓ Higher energy density



✓ Longer driving range

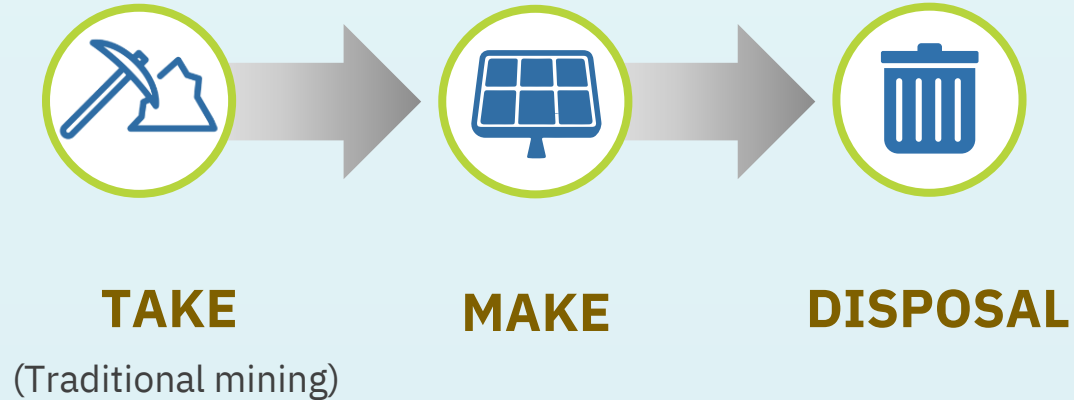


✓ Better safety

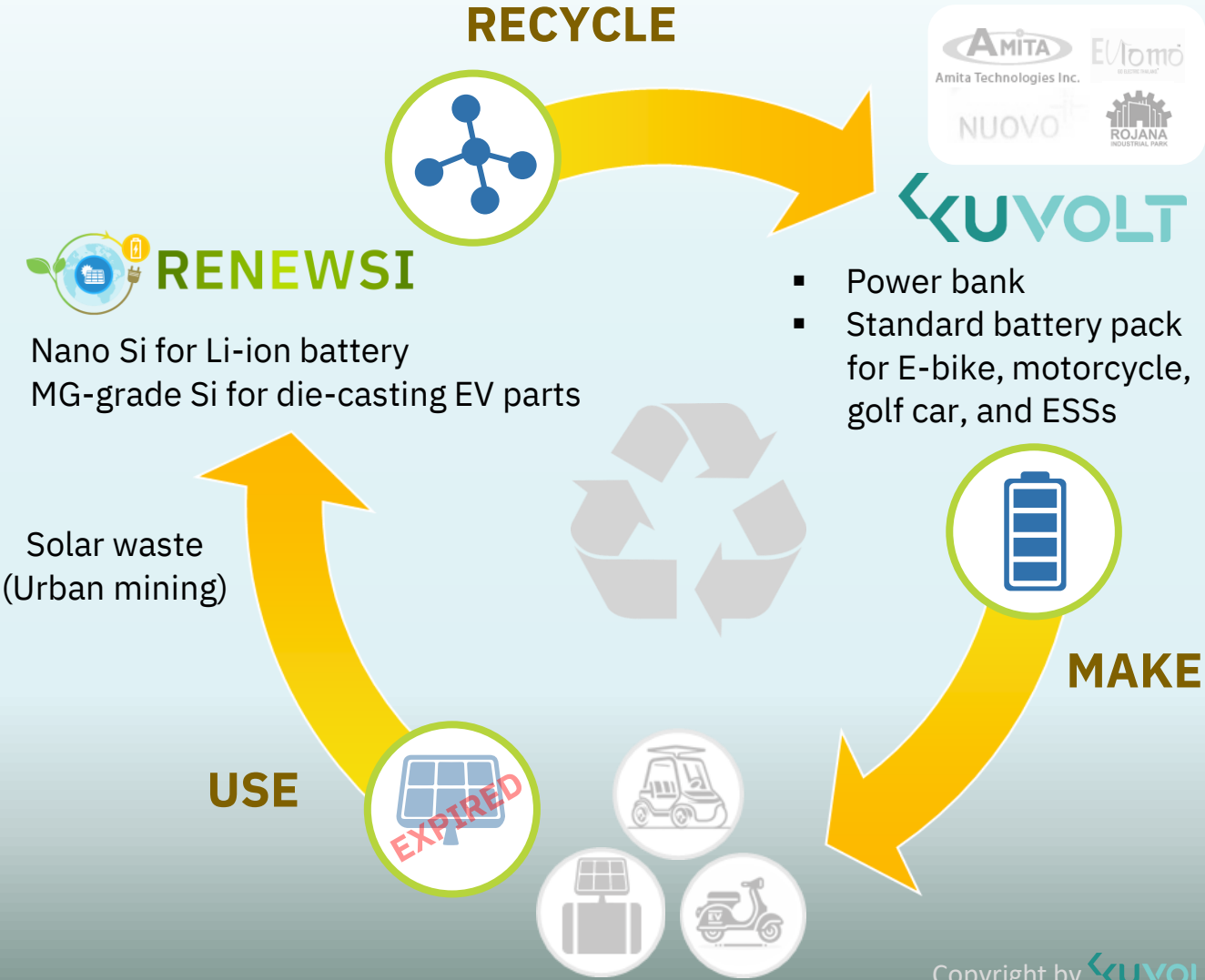


Battery grade nano Si

CURRENT LINEAR ECONOMY



CIRCULAR ECONOMY



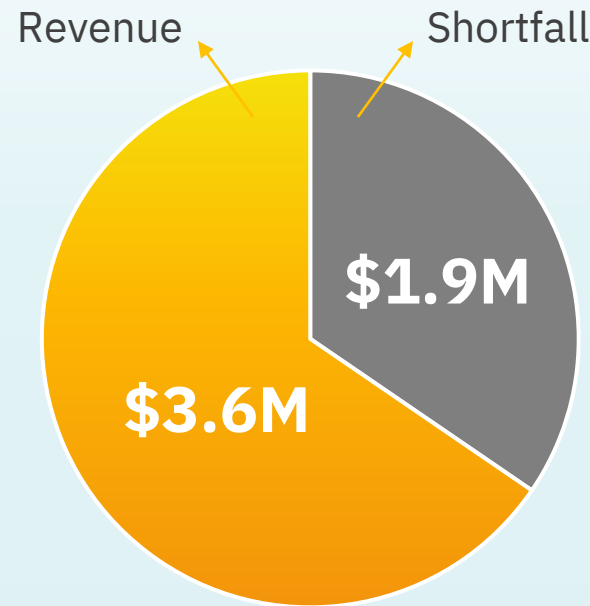
- Revenue of Si anode in Thailand based on Thailand's EV battery demand



2025

5% market share expectation

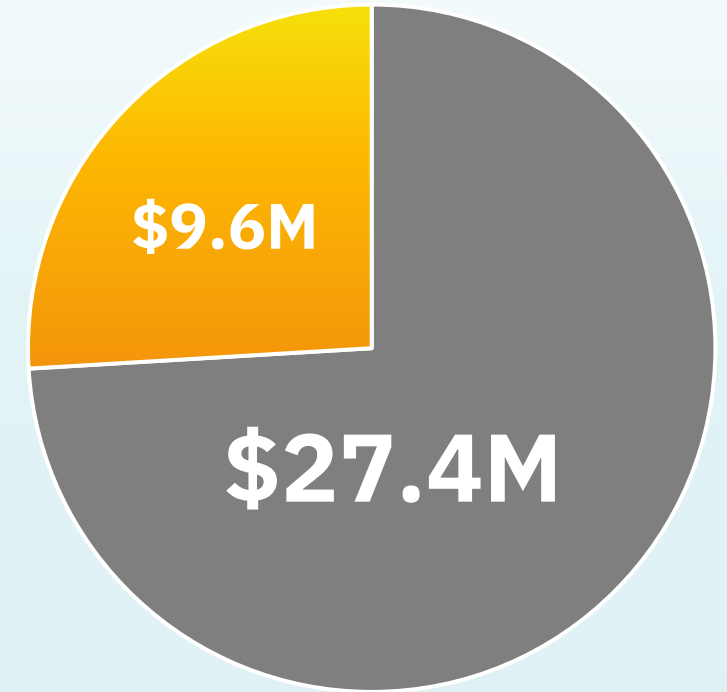
In 2025, solar waste is sufficient to meet the demand for Si anode production for use in the battery industry in Thailand.



2030

30% market share expectation

Since 2030, the demand for Si anodes has exceeded raw material supply, indicating an opportunity to expand the technology on a global scale, particularly in regions with a larger installation of solar cells.



2035

100% market share expectation

THE GLOBAL GOLDMINE

Scale and Impacts

Scale

Lab scale



Accomplished

Pilot scale



Manufacturing scale



How?

Expansion

Impacts

Solar panel waste

- + Provide healthy environment
- + Saving ~175,000 tons of CO₂ emissions, saving ~ 8,300 M Liters of water, and saving 7.27 M of trees in 2035
- Reduce mining and stop landfill disposal

Products (Quotation + PO)

01

Standard Solutions

02

Customized Solutions

03

R&D for New Solutions

KUVOLT

Services

01 (Contact)

R&D & Product Development

02 (Quotation + PO)

Performance and Safety Testing & Certification

03 (Quotation + PO)

Consultancy, training and workshop

Partnership



Strategic Investment Partners

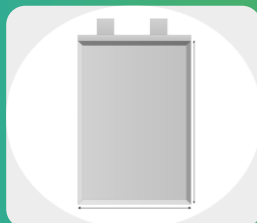
Capabilities



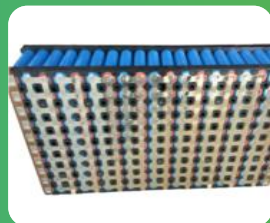
2MWh/year Cylindrical cells



25 m² Dry-room facility



5 MWh/year Pouch cells



20S30P/pack automatic packing facility



Battery performance and safety facilities



TIST
2217-2548



TIST
2879-2560



TIST
2952-2561



9001:2015



17025:2017
(In progress)



UNR136
PASSED

IEC 62133
PASSED

IEC 62660
PASSED

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Li-ion battery



Nano Si-based anode for LIB from rice husk and solar cells waste

18650 Li-ion Battery Cells



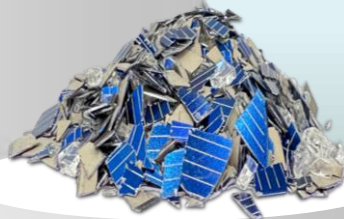
Nano silicon/Anode



Nano silica



Rice Husks



Solar cells waste



Winner of National Innovation Award 2023

Na-ion battery



NVP cathode for NIB from rock salt

18650 Na-ion Battery Cells



Sodium Vanadium Phosphate (NVP)



Rock Salt



- We are looking for suppliers specializing in silicon wafers waste



- We seek partners fostering a resource recycling cycle in our circular economy



- Seeking partners for seamless integration of our products into battery manufacturing through global credibility and collaboration

UVOLT: RENEWSI

Our Team



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UVOLT



RENEWSI



RENEWSI: CORE TECHNOLOGY FOR CIRCULAR ECONOMY

We transform solar cell waste into nano-silicon for extraordinarily high-performance batteries, promote sustainable technology, and contribute to global restoration.

We're rewriting the story of waste.
It's no longer trash; it's a goldmine of sustainable energy.