PPA Conference

November 2026

Pacific Engineering Projects Ltd

REVERLAST









From Retired Wind Turbine Blades to Renewable Power: Floating Solar for the Pacific



Pacific Engineering Projects Ltd

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Engineering Projects Ltd

Pacific Engineering Projects

Design and build engineering contractor

Founded in 2010

Head office in Auckland, New Zealand

Branches across the Pacific

Widest geographic footprint in the Pacific

Triple ISO certified

ISO 9001 ISO 14001 ISO 45001

Have a look at www.pacificprojects.co.nz

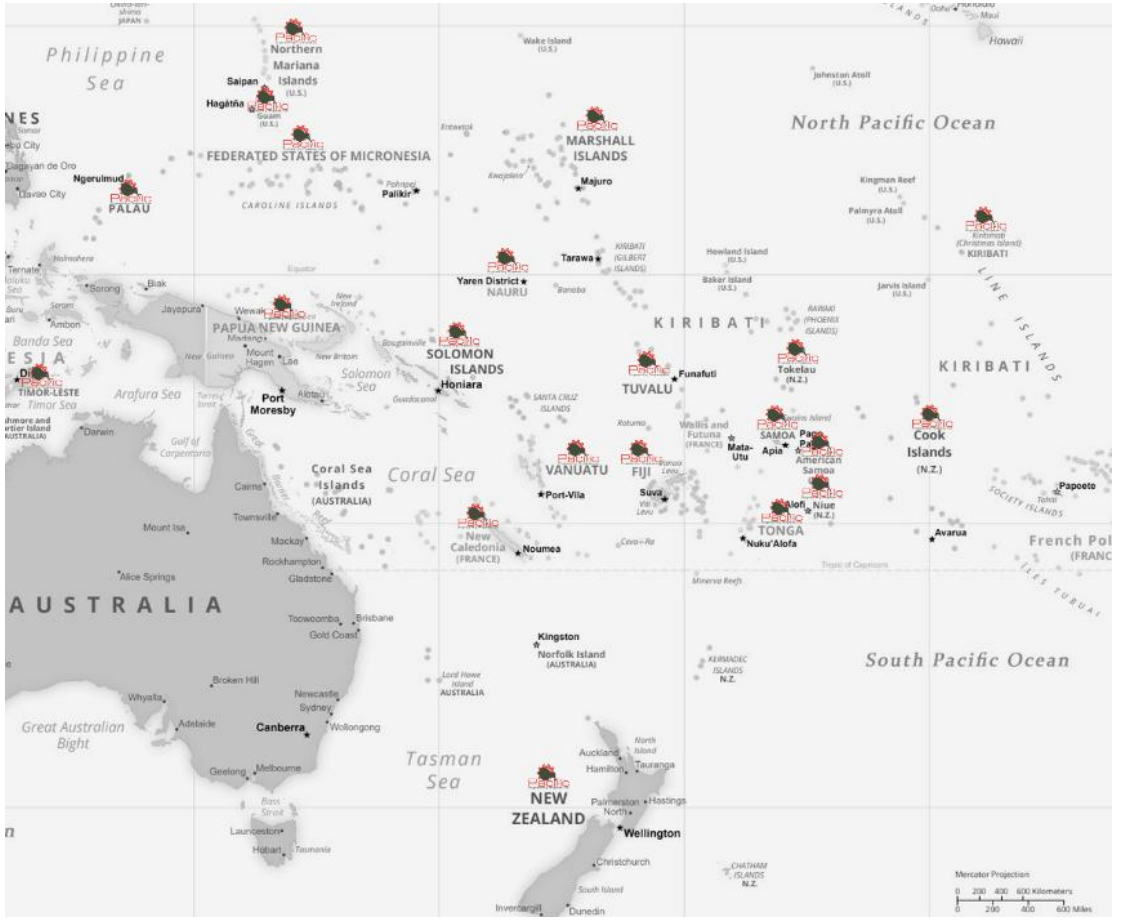


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Countries – *where we work in*

American Samoa	Cook Islands	Commonwealth of the Northern Mariana Islands	Fiji
Federsated Stated of Micronesia	Guam	Kiribati	Niue
Nauru	New Caledonia	New Zealand	Papua New Guinea
Republic of Marshall Islands	Republic of Palau	Samoa	Solomon Islands
Timor Leste	Tokelau	Tonga	Tuvalu
	Vanuatu		



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PEP's Industries

- **Power Generation**
- **Power Distribution**
- Water
- Wastewater
- Fish and Food Processing Plants
- Petroleum and Chemical
- Environmental
- Oil and Gas
- Mining and Mineral Processing Plants
- Pulp and Paper



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Floating energy independence

- Nearshore floating solar and battery storage for island grids
- Pontoons engineered from retired wind turbine blades
- Built for open water: sea states up to 4 m significant wave height
- Pacific delivery partner: Pacific Engineering Projects (PEP)
- Finnish innovation company, global projects and partners
- Patent protected: Utility model granted, PCT application filed
- DNV Approval in Principle Certificate in progress
- Founded by liveaboard sailors with hardware and marine backgrounds



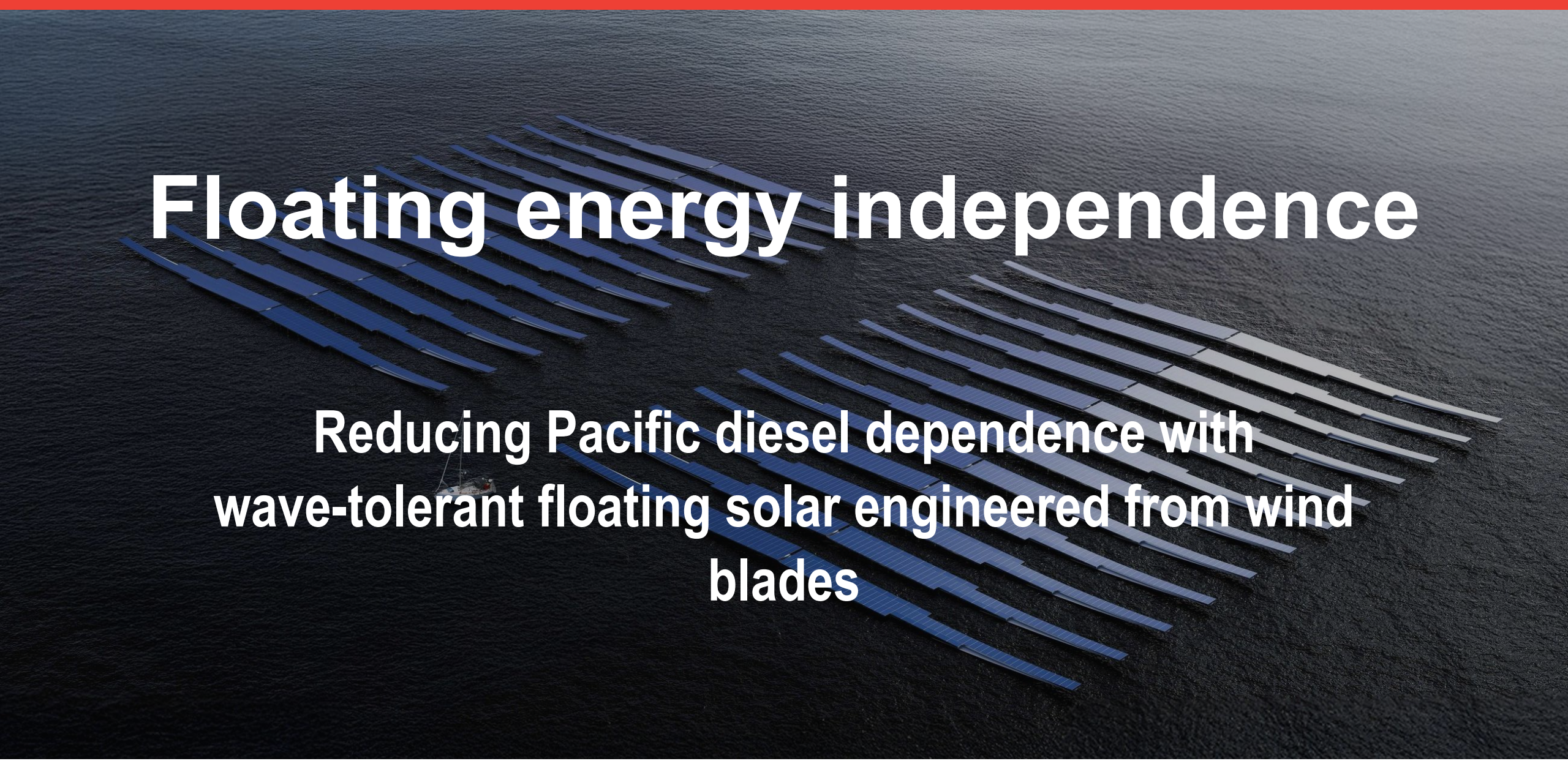
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Floating energy independence

Reducing Pacific diesel dependence with wave-tolerant floating solar engineered from wind blades



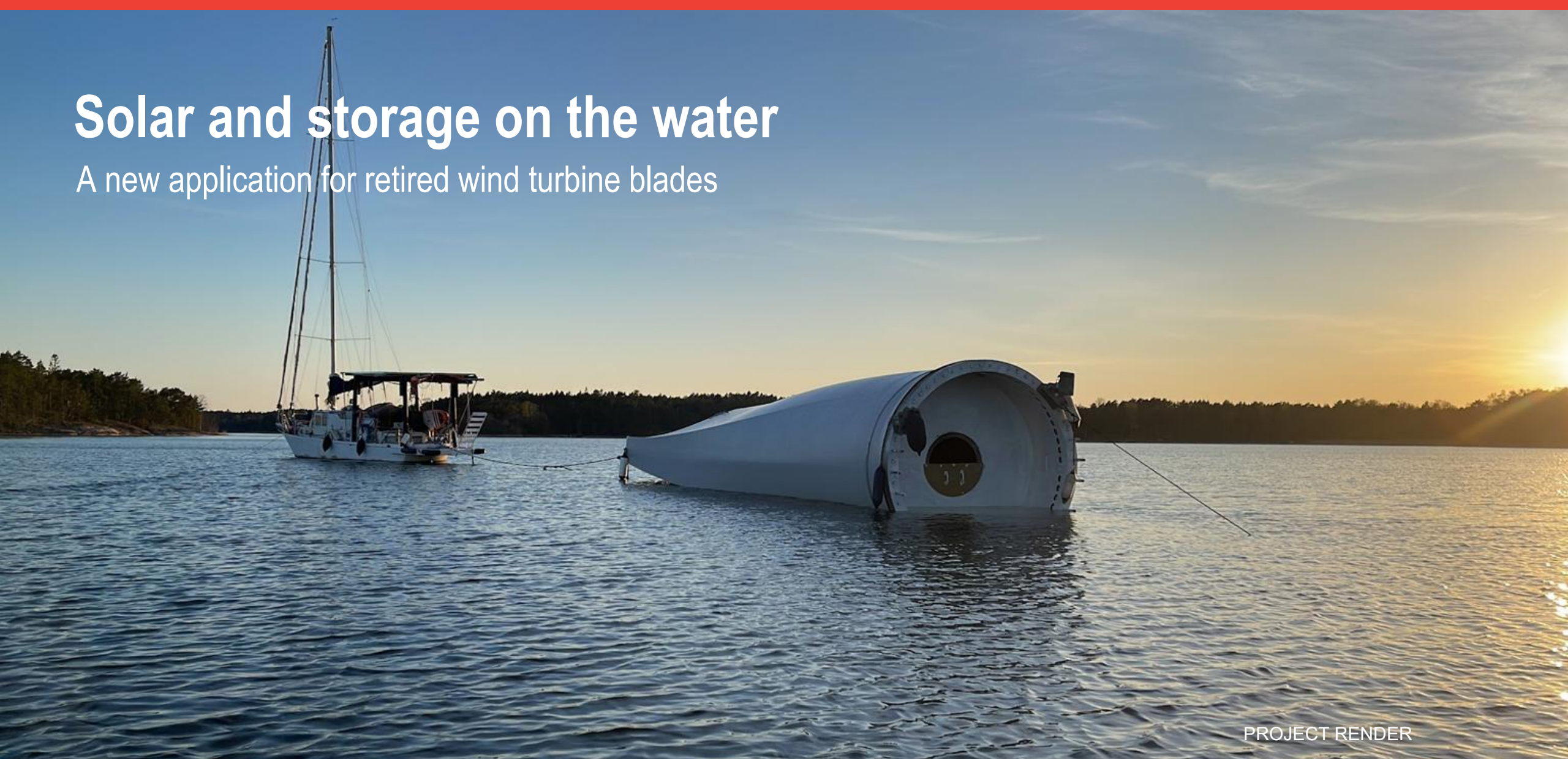
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Solar and storage on the water

A new application for retired wind turbine blades



PROJECT RENDER

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A second life for retired wind blades

Retired infrastructure.
A new energy asset.

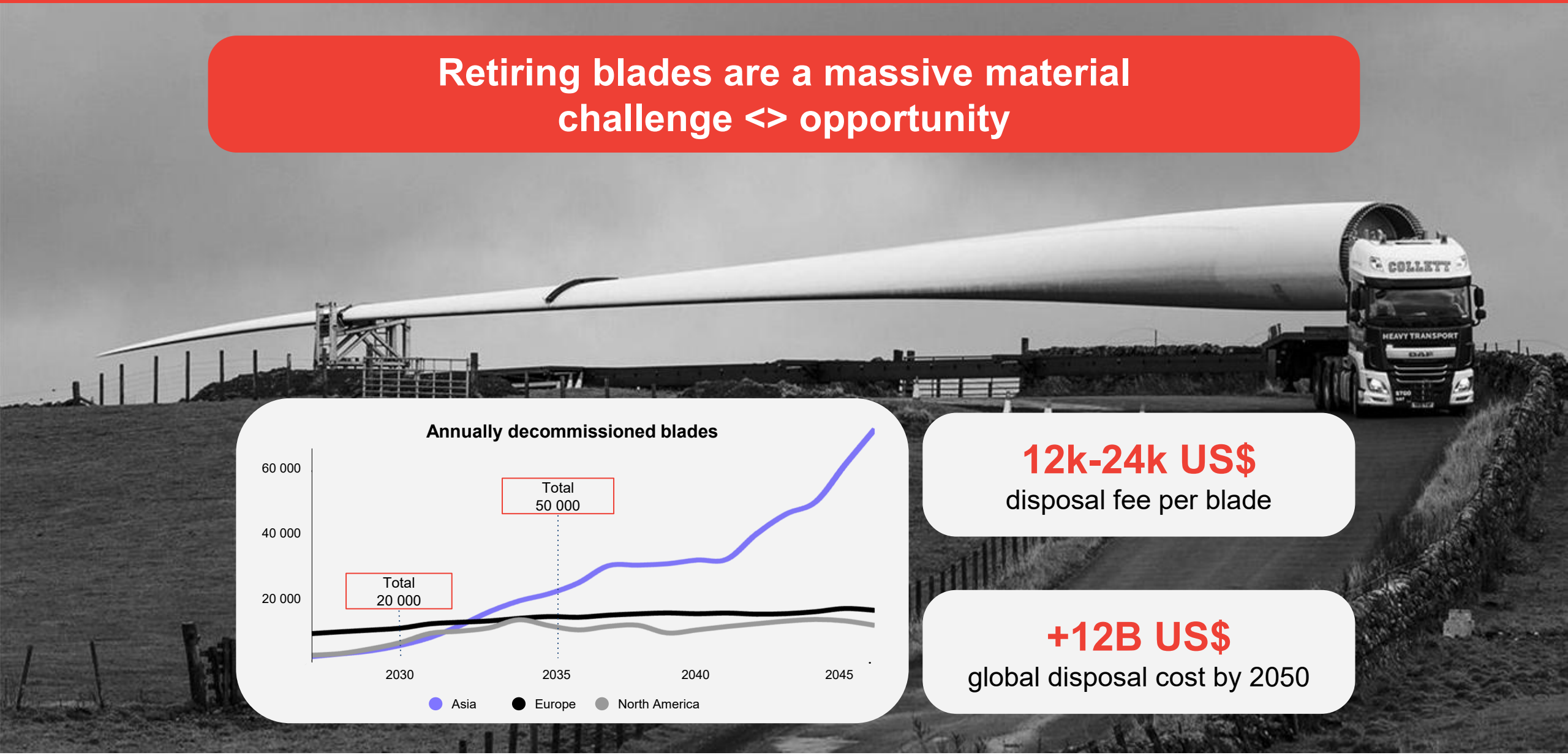
Whole wind turbine blades form the structural backbone of floating solar pontoons.



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Retiring blades are a massive material challenge <> opportunity



12k-24k US$
disposal fee per blade

+12B US$
global disposal cost by 2050

Blade end-of-life options

01

Repurpose

Use the existing blade structure in a new application

Our approach

02 **Recycle**

Break down the composite to recover fibres or fillers

03 **Recovery**

Recover energy or co-process in cement kilns

04 **Disposal**

Landfill or incineration without energy recovery

Two challenges, one application

Retired blades become a platform for renewable power

End-of-life wind blades

Composite materials are difficult to recycle.

Repurposing gives the existing structure a second use.

Pacific island grids

Imported diesel remains a major energy source.

Land for solar competes with other needs.

Why repurpose whole blades?

Existing structural value

The engineered blade becomes part of a new asset.

Less material breakdown

Minimal cutting and shredding.

Less intensive processing

No thermal decomposition or chemical solvents.



Why repurposing is the optimal route

Breaking the blade down

Cutting, shredding, or thermal and chemical decomposition breaks down the composite's structural properties and consumes significant energy.

The resulting recovered materials can struggle to achieve favourable value in their respective markets.

Keeping its structure intact

Repurposing preserves the blade's engineered strength, corrosion resistance and geometry intact.

The same properties that supported 20+ years in harsh outdoor operating conditions make the blade a structural component for marine solar, and ultimately a valuable end product.



We are looking forward to collectively offering the combined strengths of Reverlast and PEP to PPA members.

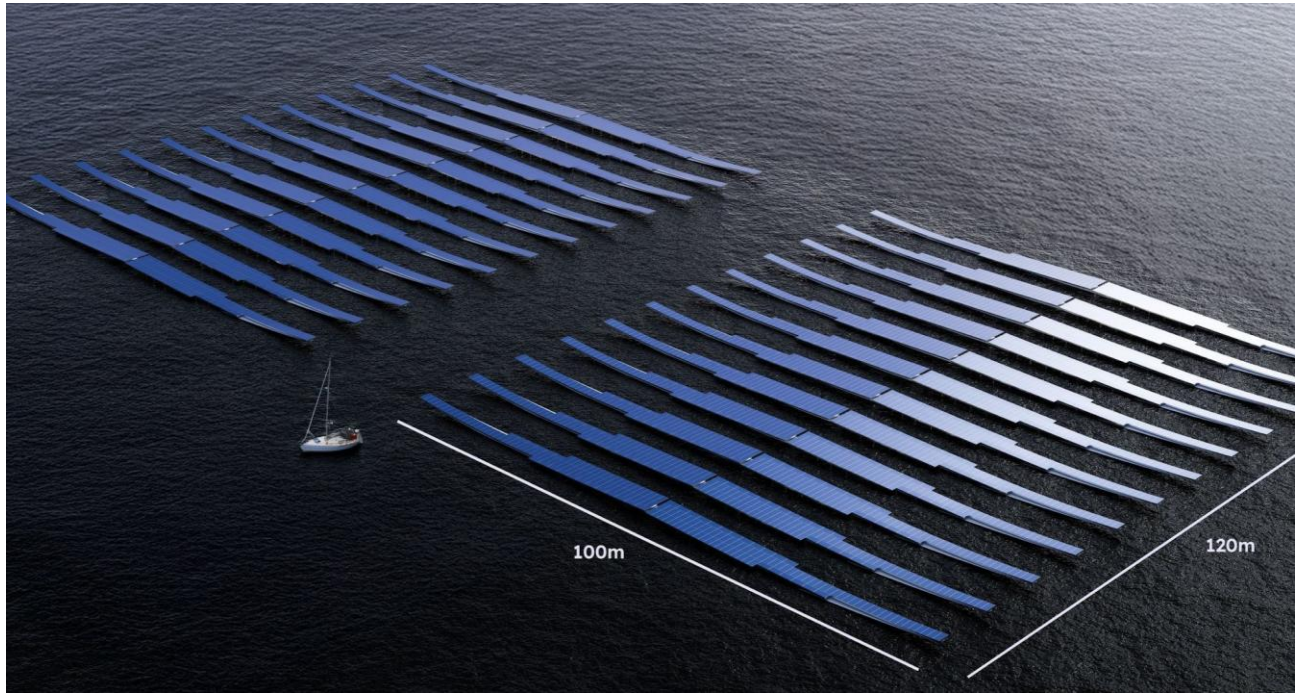
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What we deliver

Solar plus storage on the water, delivered as electricity or as hardware



Arrays of 84 kWp modules, each about 100 m long

Who we serve

Island utilities and IPPs, resorts, ports and island industry

Main offer

Power purchase agreement: plant funded, built and operated, no upfront investment

Built and serviced with PEP

EPC, local maintenance and service across the Pacific; turnkey sale also available

Every plant includes

Battery storage inside the pontoons, about 3 MWh per MWp, for the evening peak

Wind turbine blades are made from GRP, like your boat

A material with a long history in marine use

🌊 Gigantic size, negative price

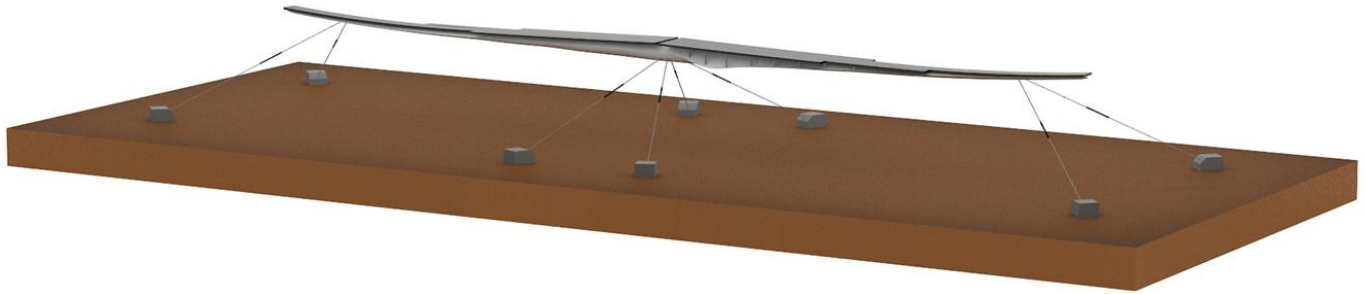
- 1 Module: 100m long, 40 tons weight
- Blade owners pay us to take them

🛡️ Wind Blade structure

- Corrosion and impact resistant
- Hollow inside - protects crucial components

🪸 Artificial reefs incl.

- Artificial reefs attached below
- Increases biodiversity





Same material

← **50 years old**

25 years old →



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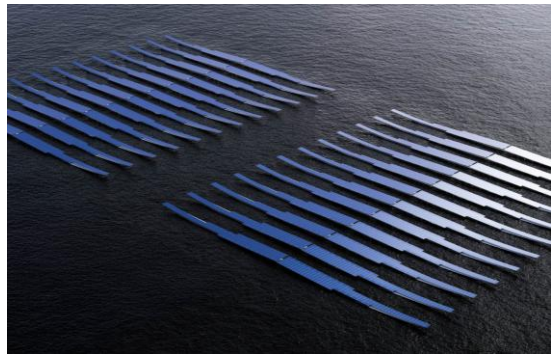
Built for remote islands without heavy ports



Retired blades and our prefab team meet at the port nearest the decommissioned wind farm



Prefab pontoons are breakbulk shipped and splashed to site with the ship's own cranes



Pontoons are connected, fitted with panels and anchored by PEP's local teams



At end of life, about 25 years, modules are winched ashore and containerised for reuse or recycling

~1.3 MWp
per shipment: 16 pontoons from 32 blades

5-6 months
from site agreement to commissioning

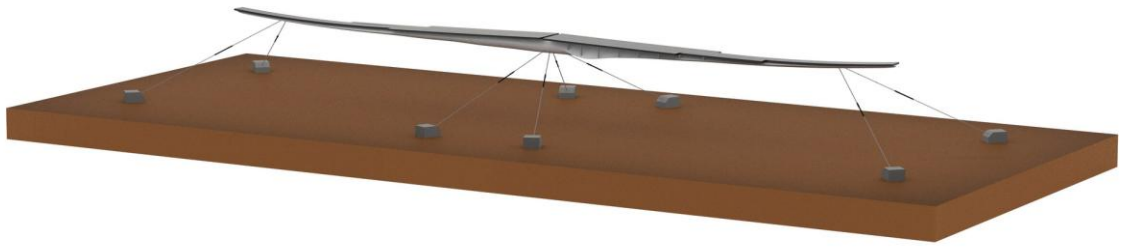
No factory
prefabrication happens port-side

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Good for the water it floats on



Module and chain-free mooring, seabed view

- **Artificial reef**. Reef elements are pre-installed below the array to create habitat.
- **No antifouling coatings.** Nothing is designed to leach into the lagoon.
- **Tested clean.** Microplastic and chemical tests on our Baltic Sea prototypes came back clean.
- **Circular at end of life.** Planned 70% repurposed and 30% recycled, with decommissioning priced in from day one.

470-600k L
diesel avoided per MWp each year

1300-1600 t
CO2e avoided per MWp each year

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Baltic Sea, Finland

- Towing tests done using an ordinary boat
- 24m root section only floated out to sea
- Non-binding preliminary agreement with the municipality

What we have found out

- ✓ 6 months in water without any issues
- ✓ Generating kW's of power for light and battery
- ✓ Not grid-connected; power curtailed



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Click for Pontoon Test Video

PILOT 2 | PRODUCTION SCALE

Ventotene, Italy

- Full-size modules in open Mediterranean water
- Site confirmed, permitting under way
- Non-binding preliminary agreement with the municipality

Why it matters for the Pacific

Same module, same logistics chain, same contract model as a Pacific project. Independent engineering review through DNV Approval in Principle and a permitting study with Politecnico di Torino, supported by an awarded EU-funded grant.



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Majuro, Marshall Islands

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Marshalls Energy Company: letter of intent for 1-10 MWp

Marshalls Energy Company

Non-binding preliminary talks
Letter of intent, 1-10 MWp

~60 GWh a year, over 90% diesel

Electricity tariff, US$/kWh (MEC)

Class	From 1 Jun 2026	From 3 Sep 2026
Residential	0.588	0.543
Commercial	0.672	0.627
Government	0.682	0.637

Solar + BESS

Up to 10 MWp + 30 MWh

About a third of Majuro's electricity
~4.8M L diesel and ~13,000 t CO2e avoided a year

PPA 0.20-0.35 $/kWh, fixed

Built and maintained with PEP



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Weno, Chuuk, Federated States of Micronesia

Chuuk Public Utility Corporation: letter of intent for 1-3 MWp

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Chuuk Public Utility Corp.

Non-binding preliminary talks
Letter of intent, 1-3 MWp

~18.5 GWh a year, over 97% diesel

Electricity tariff, US$/kWh (CPUC, Weno)

Class	From 22 Jul 2026
Residential	0.5459
Commercial	0.5759
Government	0.5959

Solar + BESS

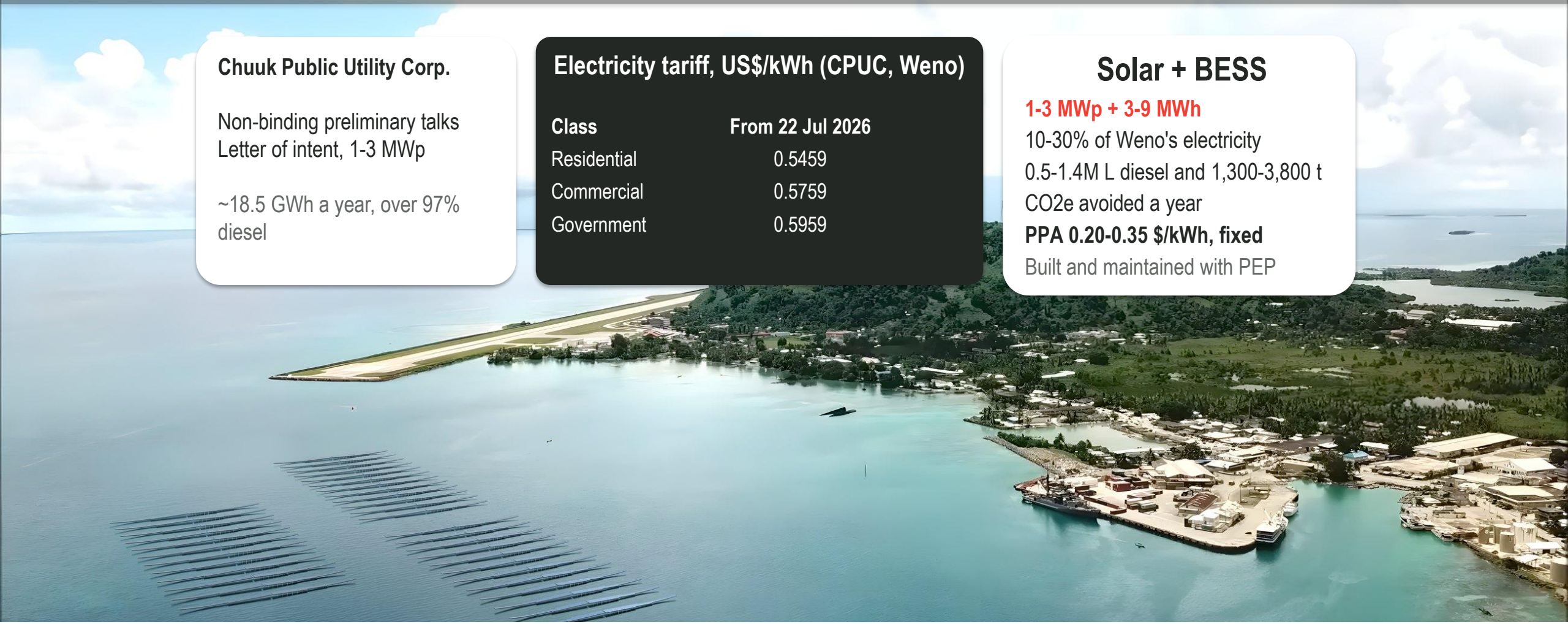
1-3 MWp + 3-9 MWh

10-30% of Weno's electricity

0.5-1.4M L diesel and 1,300-3,800 t CO2e avoided a year

PPA 0.20-0.35 $/kWh, fixed

Built and maintained with PEP



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PEP + Reverlast: one offer for PPA member utilities

Partners working exclusively together under a memorandum of understanding since 2025

Utility

- Site and grid connection
- Buys the electricity under a long-term PPA
- Keeps diesel as backup

PEP

- Design and build (EPC) on site
- Local operation and maintenance
- Branches across the Pacific,
- Triple ISO 9001, 14001, 45001

Reverlast

- Floating solar and storage technology
- Module supply and project development
- Arranges project funding

Focus on local maintenance and service

Permitting and planning

- site studies
- approvals
- grid connection

Electrical and electronics

- inverters
- batteries
- controls

Boat work

- towing
- anchoring
- inspections

Diving work

- moorings
- cables
- reef elements

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How the power purchase agreement works

Investors and climate finance
Fund the project

Project company
Owns the plant

PEP + Reverlast
Build, operate, maintain

Utility
Buys electricity at a fixed price

Indicative PPA price to the utility

US$0.20-0.35/kWh

Without grant support. Includes storage for the evening peak. Price depends on site, distance and plant size.

- **No upfront investment** by the utility
- **15-25 year** fixed-price contract
- **Performance risk** sits with the project company
- **Option to buy** the plant outright instead
- Financed using commercial lenders, not donors – so a bankable prospect

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Next steps for PPA members

1. **Screen your island**
   Free first estimate at **powercalculator.reverlast.solar**
2. **Share site data**
   Load profile, diesel cost, candidate water areas, wave and depth data
3. **Letter of intent**
   Non-binding, reserves early production capacity
4. **Feasibility and PPA**
   Site study with PEP, then PPA and build

Early production is limited

15+ MWp of projects already in discussion. First Pacific deployments are allocated in order of signed letters of intent.

Contact

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Delivered in the Pacific with Reverlast

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Questions?

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