

TREE-TYPE SOLAR POWER GENERATION SYSTEM

E-1

AI (PC) CONTROLS OPTIMAL SOLAR TRACKING

AI (PC) is installed with an annual solar tracking program. At the installation site, the latitude and longitude of the location are entered into the AI, which performs optimal solar tracking.

MEASURE THE ACTUAL SYSTEM AND READ THE ENCODER.

1. True south and horizontal
2. Maximum elevation position
3. True east at 45° angle

CAN GENERATE POWER EVEN AT **SUNRISE AND SUNSET**.
CAN BE USED EVEN IN **SNOWY REGIONS**.

Installation efficiency is tens of times higher than that of mega solar systems.

TOP PULLEY

CONNECTION BETWEEN WIRE, PANEL FRAME, AND PANEL FRAME CONNECTOR

WIRE (ROTATING SIDE)

POWER CABLE (FIXED SIDE)

ENVIRONMENTALLY FRIENDLY, USABLE EVEN IN SNOWY REGIONS, AND CAN BECOME A POWERFUL EXPORT INDUSTRY.

PANELS ARE STORED DURING STRONG WINDS OR HEAVY SNOWFALL.

WATER FAUCET FOR CLEANING

BURIED UNDERGROUND AT THE BEARING END.

MAINTENANCE FLOOR

wire Winder

wire Winder

WORM GEAR MOTOR (with encoder)

WORM GEAR WHEEL (with encoder)

PANEL STORAGE COMPARTMENT

SOLAR PANEL

SOLAR PANEL

MAIN SUPPORT COLUMN

Remote villages, areas without rivers, snowy regions, and inland Ukraine need this system.

BRAKE & GEARED MOTOR WITH POWER OFF
Equipped with brake and speed reduction.

ENCODER PULLEY
WIRE WINDER

By winding the wire with a motor after the wire passes once around the encoder-equipped pulley, the position of the solar panel is proportional to the number of encoder pulses.

Patent Information

The tree-shaped solar power generation system (AI solar tracking) is a standard model consisting of a five-stage, two-sided perovskite module, maximizing power generation with the same land area, offering storage capability, high wind resistance, and snow and sand resistance.

[City sola]

It coexists with the surrounding nature and existing buildings without causing environmental destruction. It can be installed beneath panels in farmland and on flat-roofed buildings. Additionally, it can be installed in the central median of wide roads, enabling local power generation.

[Sea sola]

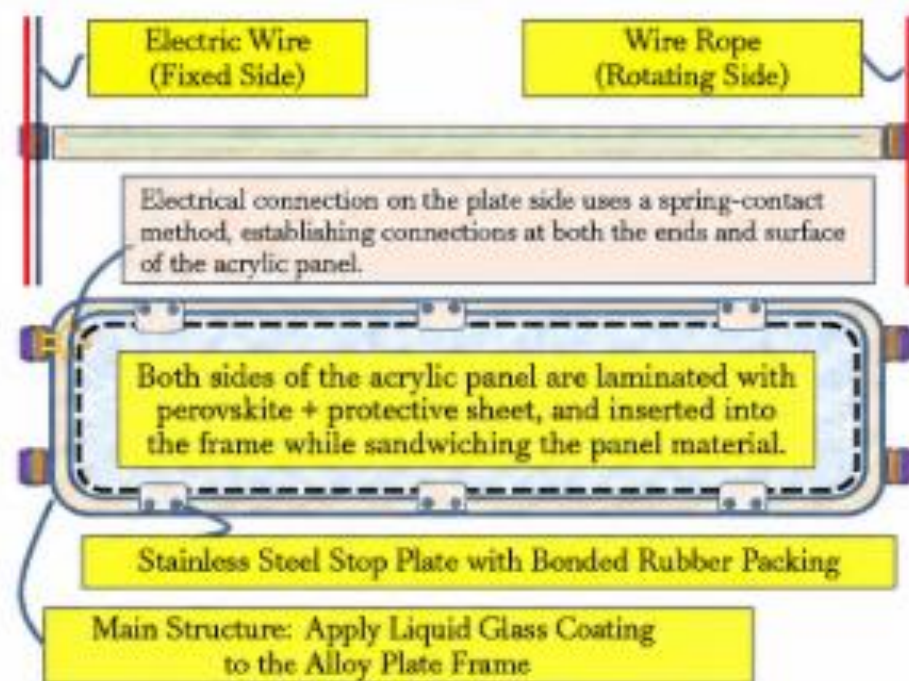
When installed on artificial islands in the ocean, it does not require foundations or soil preparation. It can generate power not only in the morning and evening but also by utilizing reflected light from the sea (albedo).

It can also be installed in marine areas and wind power sites, allowing both solar and wind energy generation.

Storage batteries, AI (PC) capable of conversation via smartphones, wind speed meters, rainfall meters, and other sensors are mounted on the structure. These units measure wind speed and strength, as well as rainfall conditions, and the AI lowers the panels when strong winds are predicted, stores them, or orients them horizontally (stow position) during snowfall.

Through conversations with AI and smartphones, manual operation is possible for cleaning and maintenance.

Perovskite Panels are Inserted Type (Exchangeable for Maintenance)



Both sides of the module (perovskite panel and protective sheet) are inserted into the frame and the surfaces are coated with liquid glass coating. The frame is constructed by inserting the acrylic panel material into the alloy frame, then fixed in place.

The fixed method uses embedded insert nuts (blind nuts) on the main structure, with rubber packing interposed, and the acrylic panel surface is secured by fastening.

Electrical connections on the wood frame side use spring-contact electrical connections, establishing connections at both the ends and surface of the panel.

By connecting the perovskite panel in this way, the + and - electrodes are connected, enabling power from both sides of the panel to be linked to the electric wiring.

AI Perovskite Separated Device

Solar Tracking & Wind-Resistant Retractable Tree-Shaped Solar Power Generation System

By installing in place of utility poles and streetlights (including bearing holder parts), as well as roadside trees and overhead wires, on roads and streets, it can also be attached to the upper side surfaces of buildings that allow it to be installed, and there is almost no limit to installation locations.

City sola

Double-sided perovskite

Storage Box

Maintenance & Cleaning Workspace

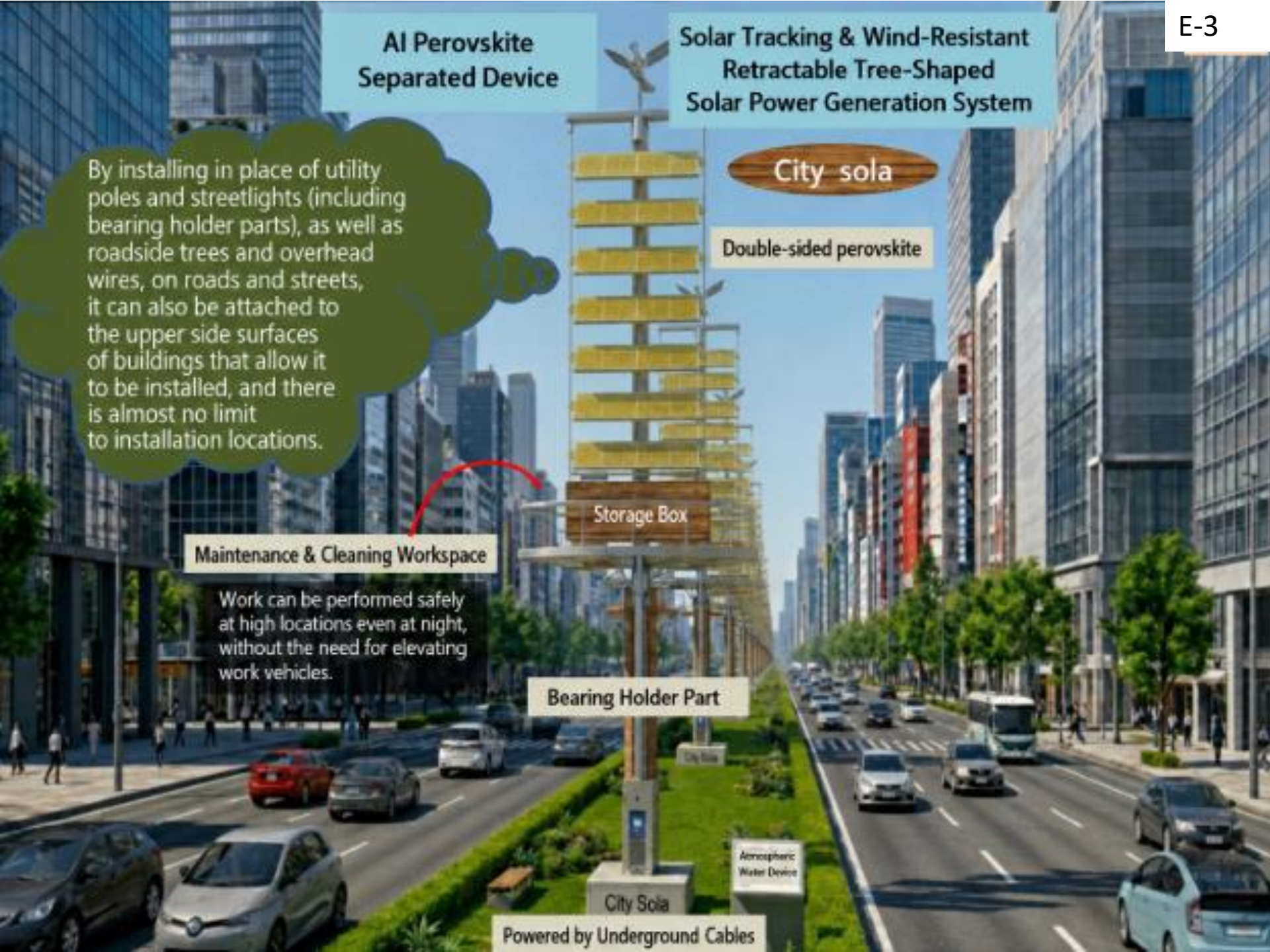
Work can be performed safely at high locations even at night, without the need for elevating work vehicles.

Bearing Holder Part

Atmospheric
Water Device

City Sola

Powered by Underground Cables



Perovskite Tree-Shaped Solar Power Generation System

PTS

If the same space as a conventional utility pole is available, it can also be used without electrification. Since it is underground, underground cables can be installed simultaneously with water supply and sewage renewal work.

Poetry of Urban Scenery

City sola

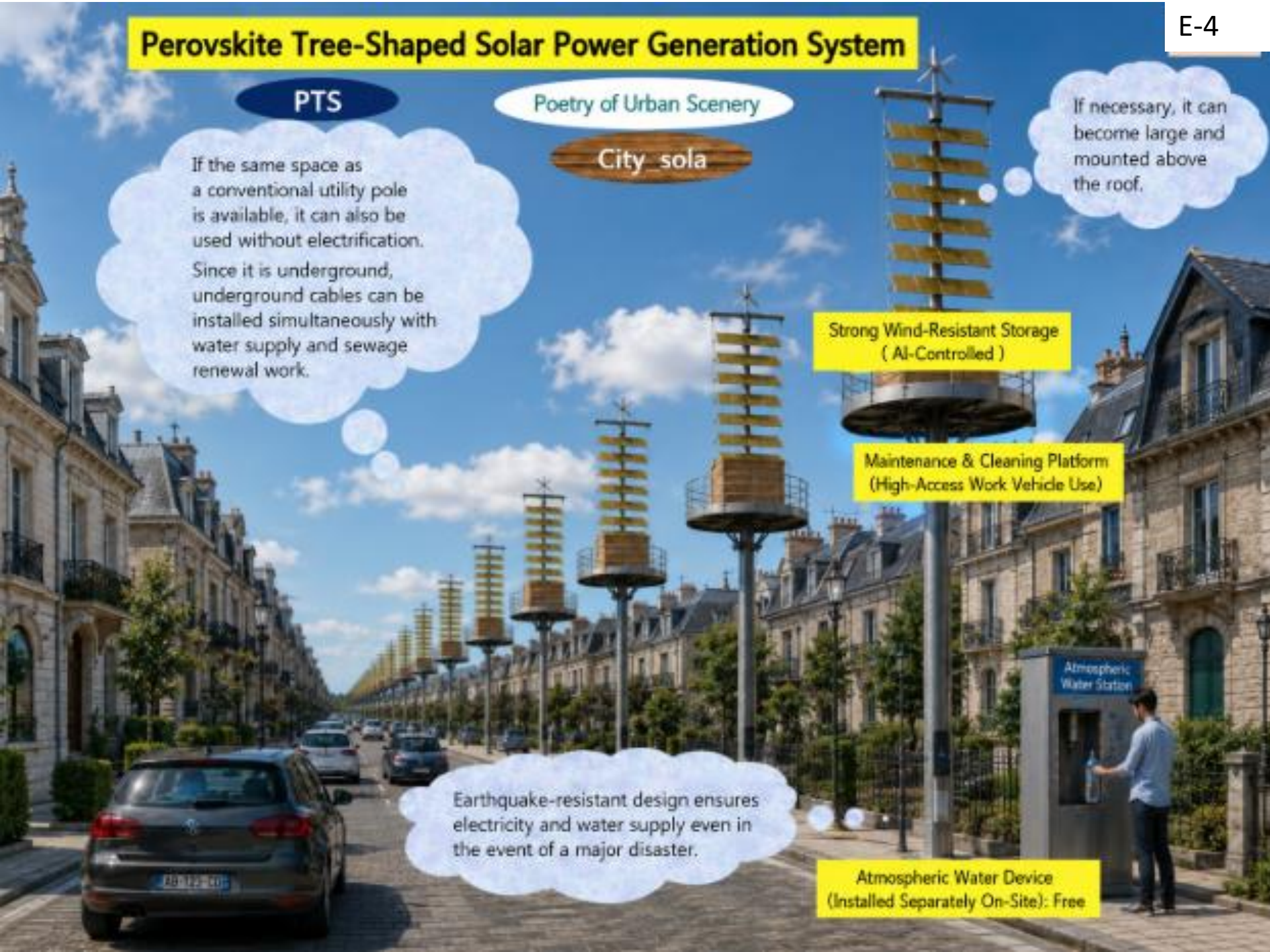
If necessary, it can become large and mounted above the roof.

Strong Wind-Resistant Storage
(AI-Controlled)

Maintenance & Cleaning Platform
(High-Access Work Vehicle Use)

Earthquake-resistant design ensures electricity and water supply even in the event of a major disaster.

Atmospheric Water Device
(Installed Separately On-Site): Free



A system with high added value that uses domestic panels in Japan

Japanese Style Design (Vertical)

Since the vertical type here can include 100% to 120% (reflected light from the surface), the power generation can be about 4 times greater.

100%

70%

45%

25%~0%

(May be hidden by mountains or buildings)

When installed vertically at 100%, the power generation decreases depending on the incidence angle.

Using all-reflected light on the water surface from morning to evening

AI Solar Tracking

Artificial Island

Offshore Vertical Solar Power Generation System

At sea, (all) reflected light and diffuse reflected light are also received, so solar panels can be installed on both sides.

Storage BOX (When strong winds occur at night, lower and store the panels)

Solar Panels

Solar Panels

At sea, there are no obstacles, allowing power generation from sunrise to sunset.

At sea, no land is required, so it only needs to be fixed to the wooden frame of the artificial island.

Diffuse Reflected Light

All-Reflected Light

Maintenance-free for decades

Sealed Wooden Structure (Liquid Glass Coating)

No Land Required

Wooden Bearing Holder (Liquid Glass Coating)

Sea sola

Earth

Japan-US-France PTS International Cooperation "Various Link" Meeting

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Switching from manufacturer-led to user-driven development: "International Various Link Conference"

Current revitalization policies (local creation, startups, urban redevelopment, etc.) are basically corporate-driven proposals.

Many talented engineers are leaking overseas (e.g., BYD's mini EV design was led by ex-Nissan engineers), failing to pursue what users truly want.

Lessons from Nikon vs. ASML: Nikon once dominated the global semiconductor stepper market, but lost to ASML because they attempted to enclose technologies in-house. Former Nikon Engineer's View: "Trying to cover the vast array of stepper-related technologies solely within our company led to a shortage of resources and made operations extremely difficult."

To compete against high-performance, low-cost EVs & Hybrid vehicles driven by AI from totalitarian regimes, liberal democratic nations must unite to standardize specifications and provide user-friendly EVs.

Stronger Structure than
Totalitarian Regimes

Usability &
Low Cost

Bring together cutting-edge patented technology from numerous companies, listen to user feedback, advance legal frameworks, and develop/deliver products that everyone truly desires. 、

Transfer to
GoldenTTM Co., Ltd.

Work with enjoyment.
Strict prohibition of
hesitation & criticism.

Prioritize the user's perspective above all else

Create new trends
based on future
technical scenarios.

Highest priority on user benefit.



PTS&LUMBER

Entrusted with the overall operation of "City car & City HUB" starting January 2027.

(The president rotates every two years among Japan, the U.S., and France.)

Golden TTM Co., Ltd.

Honorary Chairpersons: Top leaders of Japan, the US, and France

International Various Link Conference

Comprehensive Strategy Meeting (Performance Evaluation of Each Agency)

METI (Moderator)

R&D and Intellectual Property Meeting

General Meeting (Monthly) Second Friday, starting at 2:00 PM

Preparatory meeting for sales, installation, service, and maintenance

(We will collaborate with local service providers in each country to share information on regional issues and explore common solutions.)

AI Technology (Automatic Control +)

Sub-host manufacturer OpenAI

U.S. Representative

Sub-host manufacturer Schneider Electric

European Representative

Host Manufacturer Sekisui Chemical

Idea provided by Garden Field

Meeting (three days prior to the International

Information Disclosure, Meeting Preparation, and Document Archiving

Cabinet Office

METI

MLIT

MOE

MOFA

Tokyo

AIST FREA

CEA-INES

NREL

UNIDO

regular

Tokyo Electric Power Company

TMEIC

First Solar

Enel Green Power

Related manufacturers in Japan, the U.S., and France (Europe)

Non-permanent

Oxford PV

Swift Solar

Osaka

Kyoto

Fukuoka

Hokkaido

(Countries complement each other's shortcomings.)

All costs incurred in the research and development of this system must be reported to Golden TTM (via the submission of a preliminary plan). Golden TTM evaluates the performance of the reporting companies—taking factors such as patent acquisition into account—and makes payments ranging from 1.2 to 30 times the expenses incurred by each company.

Share all technologies across all companies.

Any company in the U.S. can participate with OpenAI's approval, while any company in Europe can participate with Renault's approval. Participation can involve just a portion of the overall system; by submitting a plan in advance, contributing in some way, and self-reporting incurred expenses, a company can receive at least 1.2 times the cost incurred. If the implementation of the new system leads to a significant boost in efficiency or the acquisition of a groundbreaking patent, the company can receive up to 30 times the cost.

Patent Information

First meeting (October 2)

Opening Remarks (Prime Minister Takaichi)

1. Policy on the Deployment and Regulatory Framework for Perovskite Tree-type Solar Power Systems (PTS) in Japan (METI)); and an introduction to key partner companies in Japan (Sekisui Chemical)

2. AI-based automatic control system for solar tracking and stowage during strong winds, and a voice-based communication system for manual operation (OpenAI).

3. Mutual patent sharing and ultra-low-cost mass production roadmap (Sekisui Chemical) established by an alliance of leading perovskite companies from Japan, the US, and Europe (Sekisui Chemical × Swift Solar [US] / Oxford PV [Europe], etc.)

4. Overview of PTS Patented Technology and Plan for Obtaining International Patents (Garden Field)

5. Plan for the Introduction and Adoption of PTS within Europe and Introduction of All Partner Companies (Schneider Electric)

Participation is optional

Wrap-up party with a 1,000-yen fee (until 5:00 PM)

Second meeting (November 6)

Opening Remarks (Governor Koike)

1. Plan for the introduction and widespread adoption of PTS in the U.S. market and introduction of all partner companies in the U.S. (First Solar)

2. Explanation of the overall basic structure and schematic drawings of the PTS (Japan Representative: TMEIC)

3. Explanation of the overall basic structure and schematic drawings of the PTS (European Representative: Enel Green Power)

4. Explanation of the overall basic structure and schematic drawings of the PTS (US Representative: First Solar)

Following the meeting, the three companies will hold discussions—including on the standardization of DC power distribution and power conditioner specifications—to determine the optimal standard configuration, which TMEIC will announce at the next session.

5. Explanation of the patent for blue carbon using wooden artificial islands and the technological scenario for achieving global carbon neutrality around 2040 (G.F.)

Participation is optional

Wrap-up party with a 1,000-yen fee (until 5:00 PM)

120m ± 1m

120m ± 1m

"Blue Carbon of the Timber Artificial Island"

LUMBER = Large-scale Urban & Marine Blue carbon Ecosystem Restoration

LUMBER is a large-scale project that restores urban and marine ecosystems, including areas such as large-scale cities and coastal regions, by growing seaweed in many areas and absorbing CO₂ through photosynthesis. By combining these efforts with the cultivation of marine resources, it aims to create a new industry for timber artificial islands.

Liquid ballast coating: long-term durability (equivalent to 1,000 years)

The large sealed wooden box is sealed to the LUMBER frame with an eco-friendly sealant so that it can be integrated with the structure. The box size is 1.6m × 7m (longer cases can be used depending on the species).

In conventional natural growth, at a depth of 5–10m, CO₂ is fixed by seaweed, but it is quickly decomposed by microorganisms, so the effect is limited. On the timber artificial island, cultivation at a depth of 5–10m is highly efficient, and seaweed can be grown for a long period of 10–30m. After withering, it is harvested and used as a resource, allowing for stable, long-term CO₂ fixation.

(*) For the LUMBER cycle, please refer to the illustration on the next page.

Hatch

Seawater is pumped in/out
(depth adjustment)

1 Unit
□ 12m

Connected with ropes

Sealed wooden box

Lifting hook

Fish-exclusion net

Composition of seaweed,
culture soil, sheets, timber
frames, and sealed wooden boxes

Anchor installation point

IMAGE DIAGRAM OF LUMBER RECYCLING (Refer to the URL below for details)

https://www.garden-field.com/_files/ugd/954e39_8433ee043bfd451cb82a9178cf3e8cfd.pdf

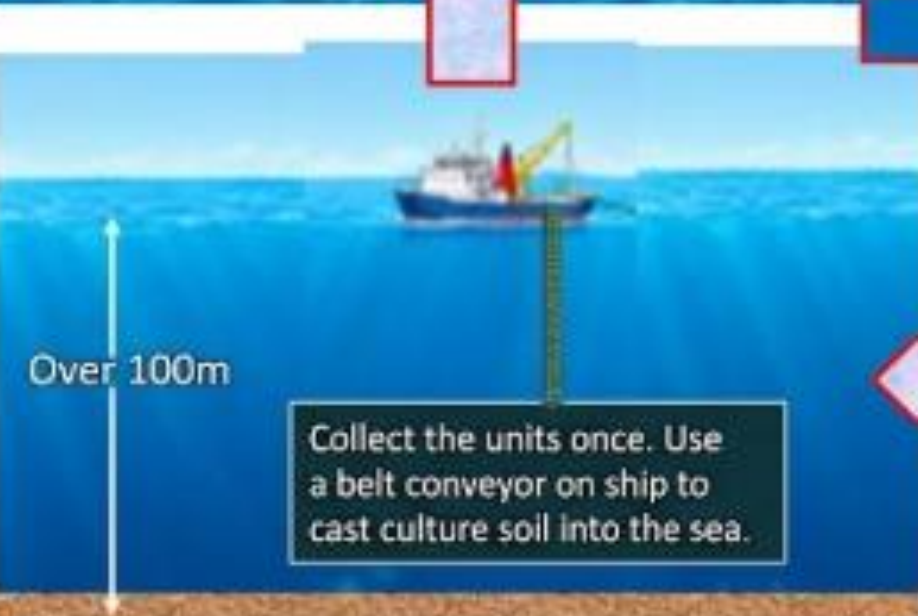
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Load sea weed seedlings cultivated in tanks and other materials. Construct wooden artificial islands on ship. Cranes lower the units containing box sheets, culture soil, and seedlings into the sea.



Cultivate sea weed at a depth of 5~10m in a sea area of 10~30m depth.



Collect the units once. Use a belt conveyor on ship to cast culture soil into the sea.



Once sea weed is mature, tow each unit by ship to a deep sea area with a depth of over 100m.

ZERO DEATHS FROM MAJOR EARTHQUAKES & TSUNAMIS

(If you come here, you can find anything.)

Various commercial facilities, medical facilities, various stores, children's facilities, amusement parks, sports facilities, restaurants, hot springs, hotels, mahjong, karaoke, various game machines, shrines...

Marine Cooling
Marine Firefighting

Relocation of the Shrine

Even if total cost and scale become 10 times larger, if it can be maintained for 1,000 years, it is still more than worth it.

1,000-Year Floating Artificial Island

Ultra-Large Communication Center
500 m × 100 m, Central Passage 40 m,
Central Sports Facility 120 m × 80 m (Passage 9 m × 2)

Marine Product Agriculture

Sea sola

60 m Guide Pole

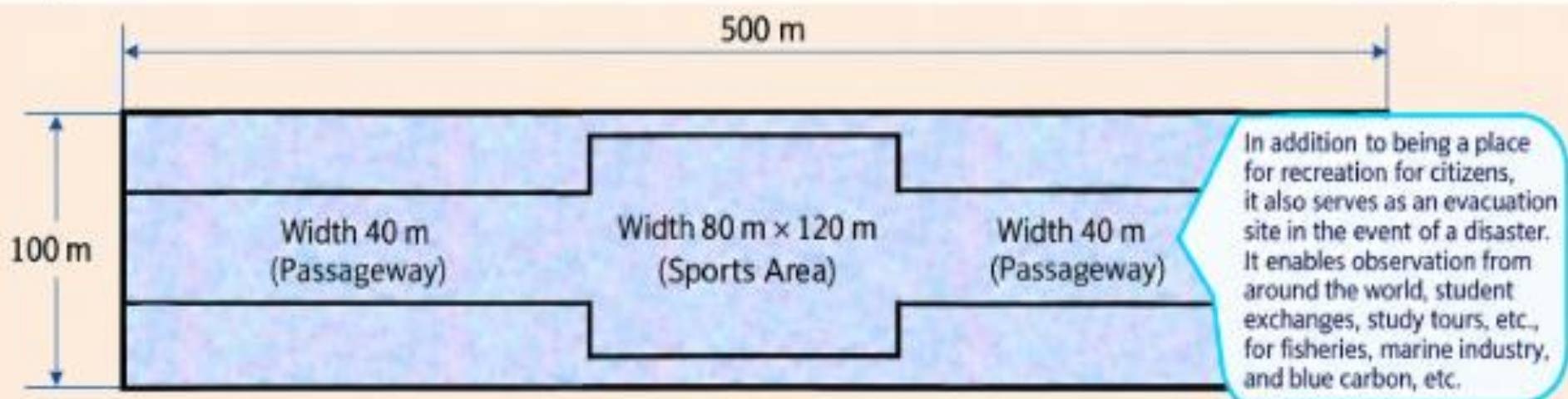
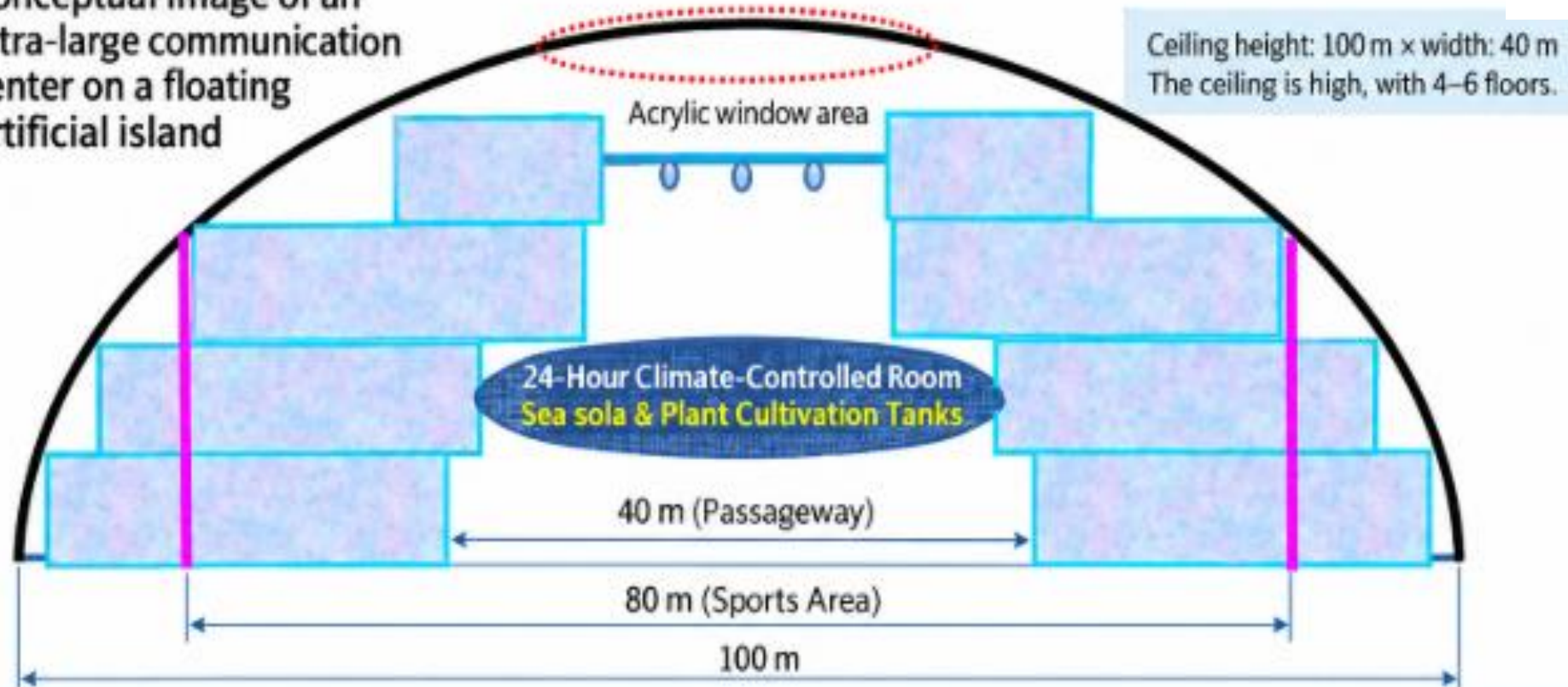
Compared with mega-solar, about 5 times the output in one layer × 5 layers = about 20 times; about 40 times, the output in one layer × 10 layers.

Wave Barrier of the Floating Artificial Island: 30 m wide × 1,200 m diameter

Even if a 60 m tsunami arrives, no one dies... Electricity and water are always secured.

Since securing a large area of land is unnecessary, the necessary area can be assembled anywhere.

Conceptual image of an ultra-large communication center on a floating artificial island

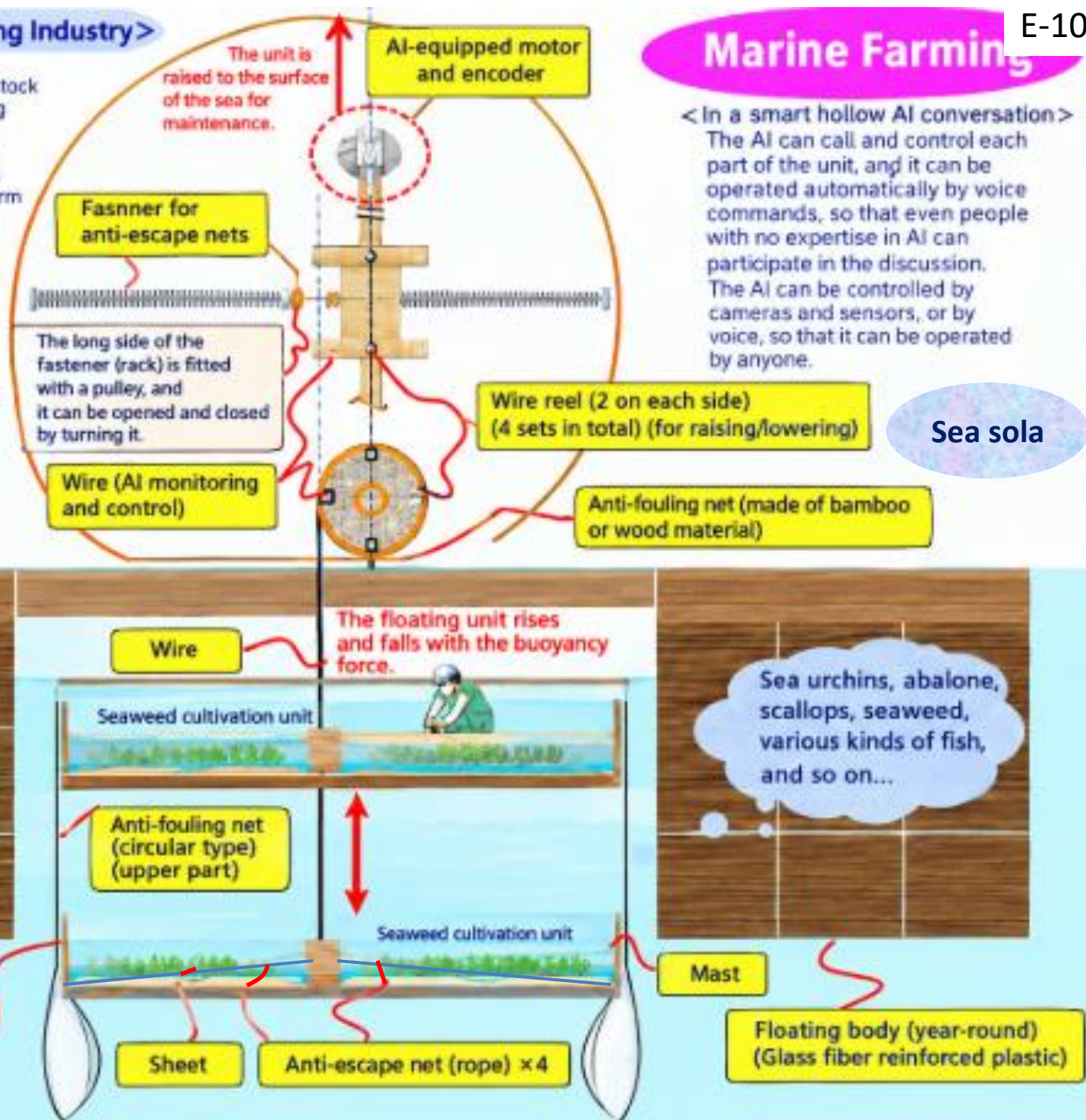


Plan view of the ultra-large communication center on a floating artificial island

< Overview of the Marine Farming Industry >

Marine farming can be done not only for seaweed and crops, but also for raising livestock and can be operated by a single person, using the natural power of the sea. We use the same principle as the "Marine Farming Unit" to grow seaweed and other marine resources in a floating state, with the stocker (floating farm unit) serving as a breeding unit. We cultivate marine resources in the sea, and the facility is designed to grow seaweed, shellfish, and other organisms. We also cultivate seaweed in the sea by allowing it to float, thereby promoting the growth of marine resources while reducing the burden on the environment.

The floating farm unit, the control unit, and the seaweed cultivation unit are integrated, using a wire system to be raised and lowered. By using a pulley system, the cultivation unit can be raised to the surface for maintenance at any time. This makes it possible to carry out efficient and sustainable marine farming while minimizing the environmental impact.



Marine Farming

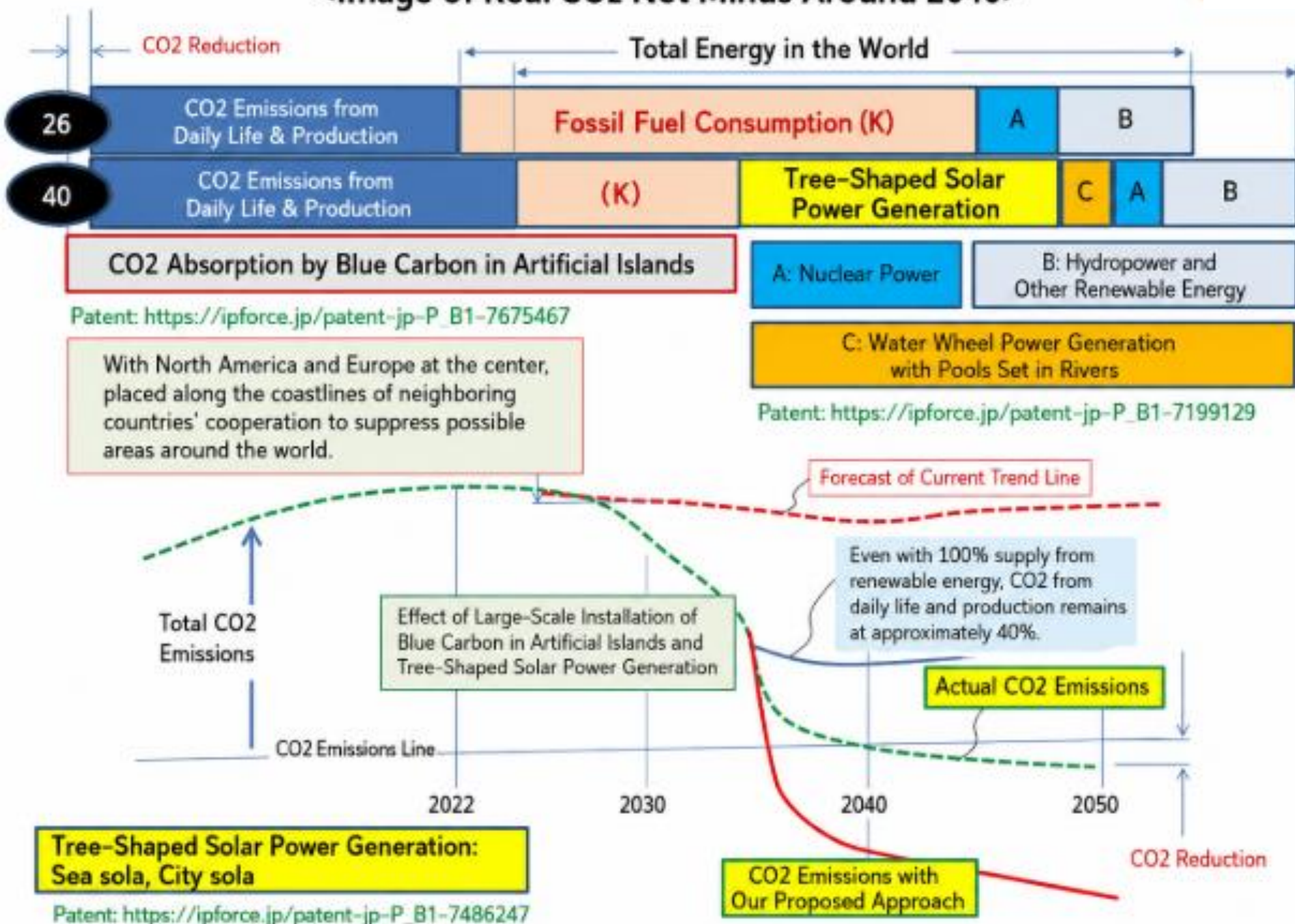
< In a smart hollow AI conversation >

The AI can call and control each part of the unit, and it can be operated automatically by voice commands, so that even people with no expertise in AI can participate in the discussion. The AI can be controlled by cameras and sensors, or by voice, so that it can be operated by anyone.

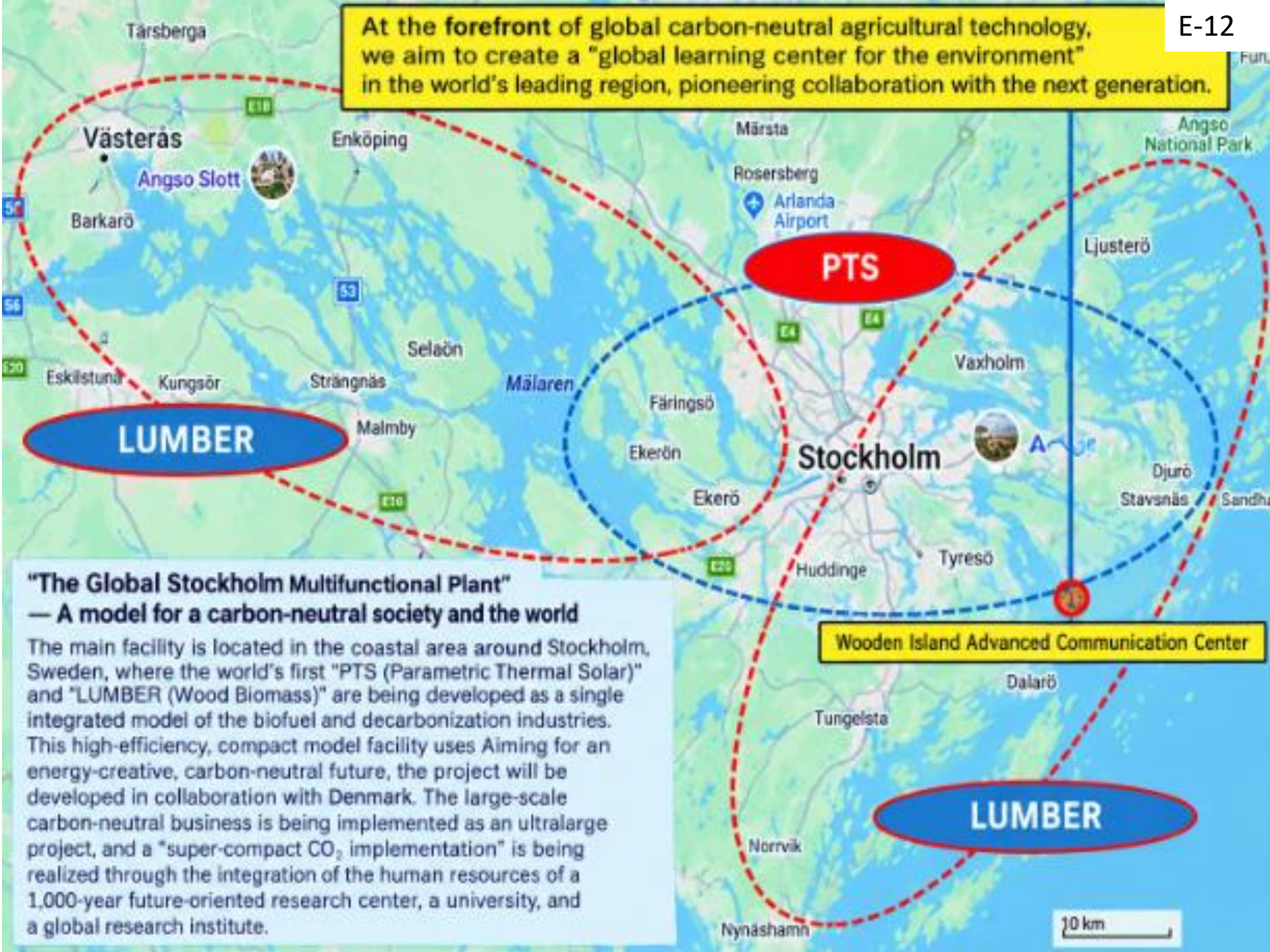
Sea sola

<Image of Real CO2 Net Minus Around 2040>

E-11



At the forefront of global carbon-neutral agricultural technology, we aim to create a "global learning center for the environment" in the world's leading region, pioneering collaboration with the next generation.



"The Global Stockholm Multifunctional Plant" — A model for a carbon-neutral society and the world

The main facility is located in the coastal area around Stockholm, Sweden, where the world's first "PTS (Parametric Thermal Solar)" and "LUMBER (Wood Biomass)" are being developed as a single integrated model of the biofuel and decarbonization industries. This high-efficiency, compact model facility uses Aiming for an energy-creative, carbon-neutral future, the project will be developed in collaboration with Denmark. The large-scale carbon-neutral business is being implemented as an ultralarge project, and a "super-compact CO₂ implementation" is being realized through the integration of the human resources of a 1,000-year future-oriented research center, a university, and a global research institute.