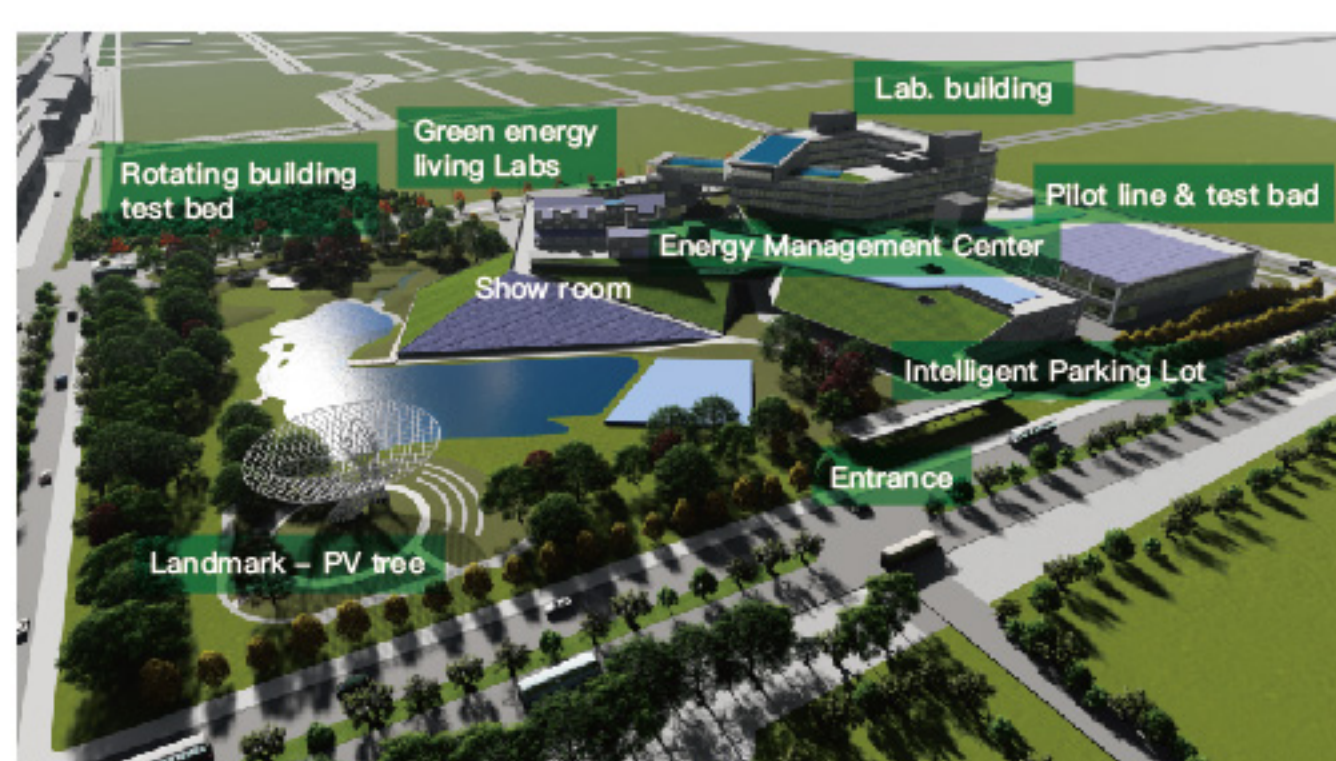


INNOVATING A BETTER FUTURE

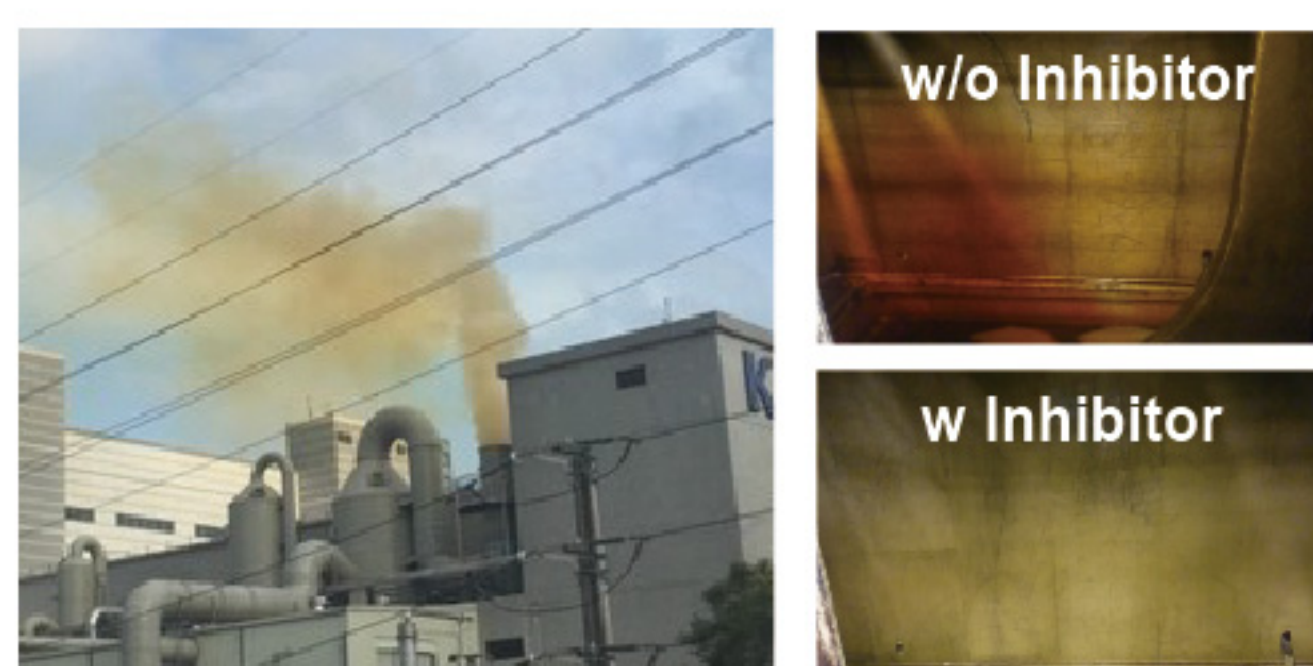


Green Energy Technology Demonstration Site – Shalun SmartGreen Energy Science City



- The Shalun Smart Green Energy Science City is an integrity linkage of research, demonstrative verification, and industrial promotion to complete green energy industry.

Yellow Smoke (NO₂) Control Technologies



- **Two ways to solve the problem of yellow smoke (NO₂):** inhibition in the process and removal in the emission.
- **Inhibition of NO_x:** Inhibitor added to the pickling solution to avoid the acid decompose to NO_x ; Low control cost and NO₂ emission (< 20ppm).
- **Removal of NO_x:** Oxidize NO_x with O₃ dry scrubbing and absorb HNO₃ with wet scrubbing.

Reclaimed Asphalt Pavement Regeneration Technology



- The Bio-based Asphalt Rejuvenating Agent (ARA): solves the problems relating to the stacking and reuse of asphalt waste-materials.
- The consumption of aggregates and asphalt will be reduced respectively by 2.3 million tons and 96,000 tons every year in Taiwan.
- Road tested approved.

Energy-Saving Building Technology Testbed

Cross-Disciplinary Cooperation: TEPCO, RECHI, HITACHI, and HISS



- Envelope
- LED Lighting
- Aircon IEM
- Solar HW, HP
- PV, Energy storage
- HEMS

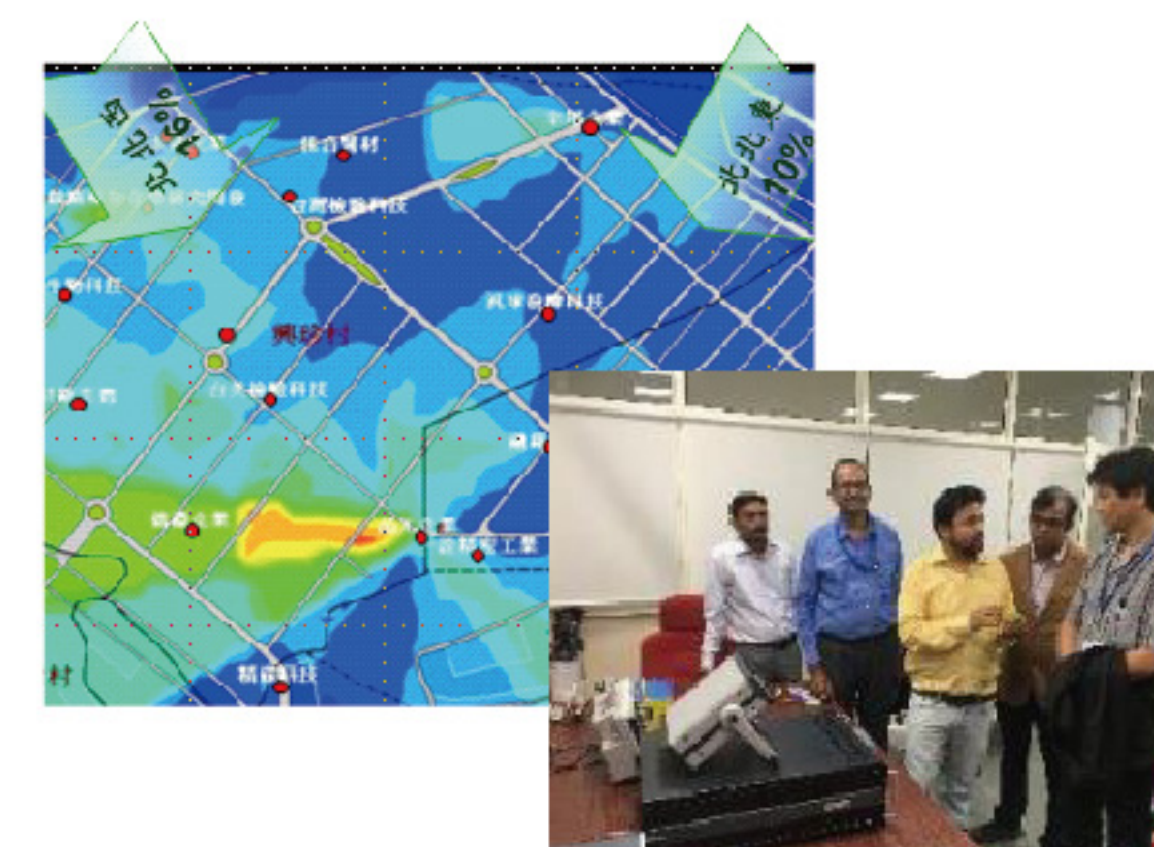
- **Stand-alone Net-Zero Energy House:** Energy Saving up to 50% more than a traditional single home.
- **Smart Home Scenario:** Energy Saving up to 40% more than a traditional home with smart control.
- **Basic Control Scenario:** Energy Saving up to 40% more than traditional home.
- **First-tier Energy Efficiency Performance Equipment:** Energy Saving up to 30% more than traditional home.

Lignocellulose Hydrolysis Technology



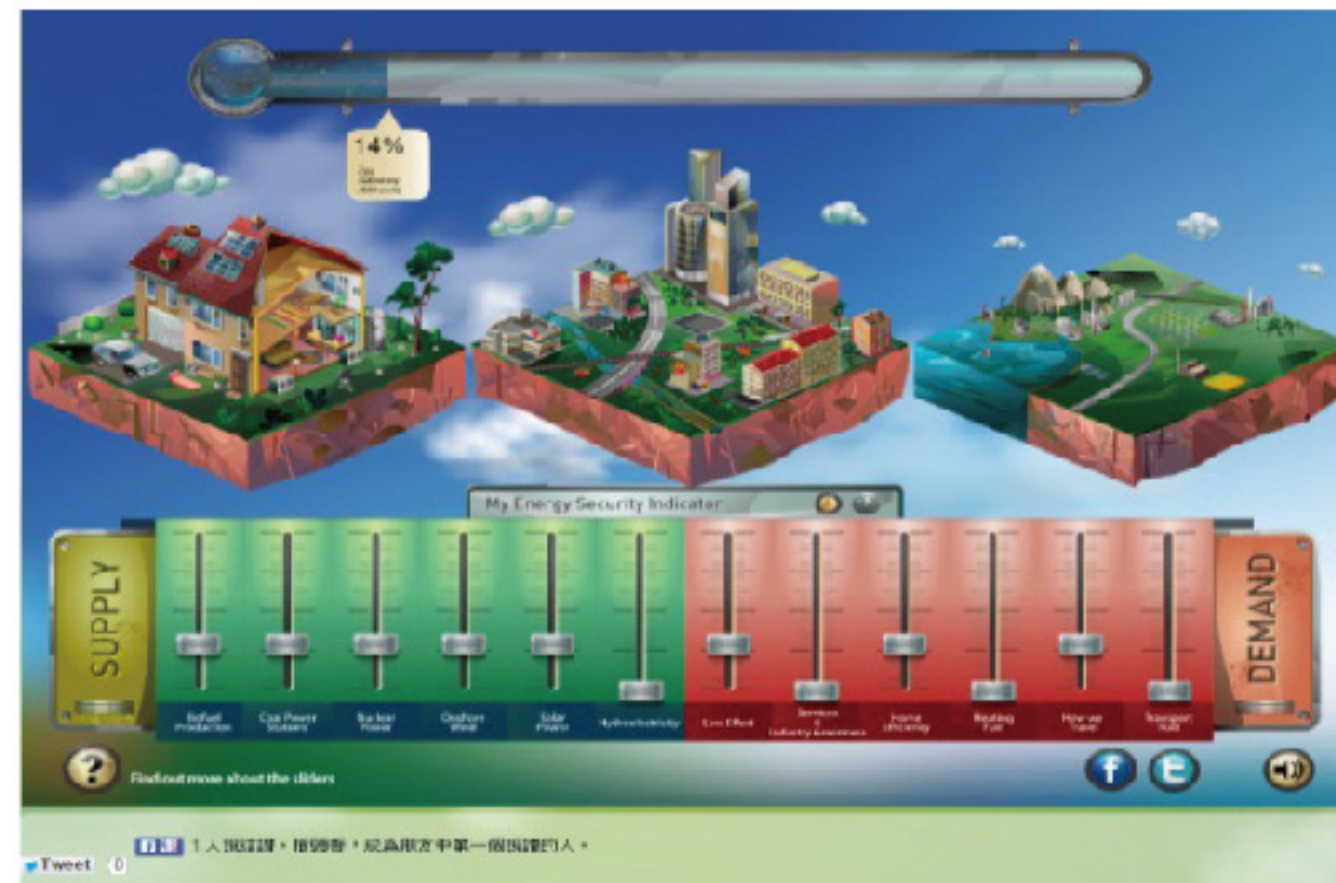
- Oil Palm Empty Fruit Bunches
- Lignocellulose Hydrolysis System
- High-value Products
- Collaboration Partners

Air Quality Monitoring System



- The AQMS is a smart air monitoring network that monitors the environment on a minute-by-minute basis. When pollution is once discharged, the precise measures will be introduced to solve problems effectively.
- ITRI-CSIR cooperate and finish phase I and II verification (in Jaipur, 500 sensors) and will initiate new EIOT and sensor projects to apply to smart city projects in other cities or countries.

Taiwan 2050 Calculator



- In 2013, ITRI launched the "Taiwan 2050 Calculator" as a public communication platform for energy policy options in various scenarios.
- Joint works with partner countries for capacity building improvement.

Energy Management and Control Technology



- Tailored-made energy management and control system with wireless Internet of Things (IoT) and AI control.
- Installed in more than 3,100 convenient stores and supermarket, achieved 5~10% overall electricity saving.

INDUSTRIAL SERVICES

ITRI provides comprehensive industrial services. Leveraging its edge in patents and the professional assistance of the open lab and incubation center, ITRI helps drive the development of emerging technologies and promotes service industry innovation, thereby increasing the industrial impact and economic value.

