

### Activity Report

## From DIY Projects to Large-Scale Buildings, GTPO Helping to Make Zero-Energy Consumption Possible



Taiwan's Green Trade Project Office (GTPO) is one of Asia's most prominent sustainable-development and green-economy facilitators, and it is once again showcasing some of the highest-quality eco-friendly products and innovations in the world.

In fact, the GTPO's trademark green-products promotion, "Taiwan Green Demo House", will be exhibited at Singapore's BEX Asia 2016 from September 7 to 9. This easy-to-assemble, reusable demo house is designed to present the use and application of high-quality green products and services in a realistic way, enabling visitors to experience the full benefit of each display, just as if they were in a real home, office, or other setting.

In specific, the Taiwan Green Demo House utilizes IES-VE, an advanced building-energy- modeling software, to ensure the best energy-saving strategies for the entire setting. IES-VE analyzes a number of inputs, including climate data, building design, HVAC design, among others, to calculate the building's energy consumption and anticipated energy bills. It then proposes strategies based on the return-on-investment (ROI) of the application of energy-saving products.

According to energy-modeling results, a Net-Zero Energy Building can be achieved installing the Taiwanese products on display. In specific, by installing Shun-Fu International's power saver, energy savings of 10 to 30 percent can be attained. This device, easily installed at the power source input, helps filter out electricity harmonics. It can also achieve reactance filtering and 3-phase balance, while efficiently recovering the best-quality voltage and current. Additionally, by installing Prolink's energy-saving glass, reductions in temperature of 8 to 11 degrees can be achieved, and more than 50 percent of noise can be

blocked, resulting in total energy savings of 13 percent. What's more, SunValue's Solar Power Brick, a green building material that can be integrated with existing buildings, is ideal for vertical installation. With the help of these solar bricks, solar energy can be easily absorbed from various angles, yielding energy savings of 15 percent. Nan Ya Photonics is well-known for its explosion-proof LED lights, with many already in use at various hazardous locations around the world. With these LED lights, lighting-energy savings of 44 percent can be achieved. And by applying Heatax's insulation coating to the building's rooftop, 88 percent of solar heat can be reflected, delivering a temperature reduction of 6 degrees Celsius.

Other smart, eco-friendly innovations in the demo house include Spring Pool's energy-saving bricks, which are made from recycled LCD fragments and cement, and can withstand temperatures of up to 600 degrees. In addition, these bricks offer excellent soundproofing and are only at 1/5 the weight of conventional red bricks. They have also recently received fireproof certification from TÜV SÜD PSB Singapore. Another one-of-a-kind building material on display is Nustone, which transforms ordinary surfaces by giving them the look-and-feel of stone, with less difficulty and less expense. Nustone is essentially a new generation of spray paint that creates a genuine stone-like surface of granite, marble, or quartzite, among many others. The demo house also features Taiwan's largest wooden-flooring-products exporter Ua Floors, with their toxic-free products and far-infrared technology that helps to facilitate blood flow.

Another must-see exhibition is Skynergy. Skynergy is a self-contained, self-sustaining power station that is well suited to support disaster relief and humanitarian efforts, as well as various residential, retail, or recreational needs, in places where power is unavailable. In addition, since it is housed in a standard shipping container, Skynergy is easy to transport via land, air, or sea.

Skynergy runs on high-power photovoltaic panels, and it features a photovoltaic module on the rooftop area of the container. These panels feed the station's grid with electricity, with any excess electricity then stored in the onboard batteries, which are compact chambers of lithium-ion battery packs. It also has a hydrogen fuel cell to provide reliable backup power, in case of blackouts. Additionally, with the help of a smart-energy-management system, cloud-monitoring technologies have been implemented to help ease the burden on administrators who must face the challenge of overseeing the central control of scattered equipment.

For more information, please visit [www.greentrade.org.tw](http://www.greentrade.org.tw)

### Recent Events

## Next Power – Taiwan's Role in Clean-Tech:2016 Annual International Conference



- ◆ **Location:** Taipei, Taiwan
- ◆ **Venue:** Room 401, Taipei Nangang Exhibition Center, Hall 1
- ◆ **Date:** 2016.10.13
- ◆ (02)2735-6006 #158
- ◆ <http://www.gtpoforum2016.net>

In response to the growing impacts of climate change, Taiwan's new government is prioritizing clean-tech as a focus area for further investment. Recognizing this growth potential, the Green Trade Project Office (GTPO) under the Ministry of Economic Affairs and in partnership Bloomberg New Energy Finance are proud to host the annual conference, Next Power – Taiwan's Role in Clean-Tech. Presentations will focus on energy generation, efficiency, management, and smart grids. In Session 1 speakers will share analysis on global market trends and new business models, and Session 2 will focus on case studies from successful clean-tech companies in Taiwan. Be sure to join us and don't miss out on understanding the next wave of power generation not only for Taiwan, but globally!