

# BETTER LIVING

ADAPT AND CHANGE OUR WAYS  
TO EASE THE GLOBAL BOILING



As the hands of the CLIMATE CLOCK continue to tick, the world faces an unrelenting natural crisis. BETTER LIVING urged us to confront the urgency of global warming, examining its root causes and seeking answers to the critical question: 'How can we live our lives to create a better world?' Let's learn from both the public and private sectors, who are committed to finding solutions and adapting their operations to mitigate the impacts of climate change. It's time for action... before time runs out.

## CLIMATE CLOCK COUNTDOWN TO THE GLOBAL CRISIS

Rising temperatures, unpredictable extreme weather, rising sea levels, declining biodiversity, and worsening air pollution—these are all severe consequences of climate change. These events not only impact quality of life but also disrupt the economy, society, and the environment. As the CLIMATE CLOCK continues its



countdown, we have less than five years to unite and address global warming before the world surpasses its tipping point. The BETTER LIVING exhibition reflects on humanity's energy history, from coal to oil and natural gas, and our current shift to renewable energy. It also examines the seven greenhouse gases and various activities, both at the individual and industrial levels, that contribute to their emissions.



This exhibition highlighted ideas, industry standards, and innovations aimed at fostering a low-carbon society. **The Thai Industrial Standards Institute** introduced the Guidance on Sufficiency Economy for Industries (TIS 9999), which supports personnel and organizational development based on the Sufficiency Economy Philosophy. **The Innovation Institute for Industry**, under the Federation of Thai Industries, showcased the LIIN coat—liquid thermal insulation developed from space-grade nanomaterials. **The Thailand Forest Certification Council** presented the PEFC (Programme for the Endorsement of Forest Certification) standard for sustainable forest management. A model of Switzerland's "Mammoth" carbon capture facility was also displayed, demonstrating its ability to remove up to 36,000 tons of carbon dioxide from the atmosphere each year, equivalent to taking around 7,800 cars off the road.

On a more relatable context, such as food consumption, **BANGKOK ROOFTOP FARMING** presented the concept of urban farming, transforming vacant rooftop spaces into areas for growing food and generating income for urban communities. The exhibition showcased food innovations that benefit both the planet and people. Leading food producer **Charoen Pokphand Foods Public Company Limited** introduced its low-carbon food concept across all product lines, earning Carbon Footprint Product (CFP) and Carbon Footprint Reduction (CFR) labels for 88 items. Meanwhile, **S&P Syndicate Public Company Limited** developed products and services that reduce greenhouse gas emissions throughout their life cycles, offering consumers carbon footprint information before they make purchasing decisions. As a result, 16 of their products received CFP labels, while 6 earned CFR labels.







Beyond food choices, everyone can adopt more eco-friendly lifestyles by changing habits and choosing innovations focused on carbon reduction. This includes selecting products made from recycled materials, such as food packaging, furniture, and construction materials-like eco-friendly décor from **Royce Universal Co., Ltd.** or lightweight synthetic blocks, **GREEN ROCK**, from **Charan Business 52 Co., Ltd.** The latter, which won an innovation award from the National Science and Technology Development Agency, provides effective insulation, reducing indoor temperatures by 2-3 degrees Celsius.

Ultimately, no matter how eco-conscious we strive to be, our very existence still generates waste-from food scraps to byproducts from everyday activities. One immediate action everyone can take is to properly



separate waste, ensuring as much as possible is directed into the recycling process. **The Thailand Institute of Packaging and Recycling Management for Sustainable Environment (TIPMSE)** and the **PackBack project** shared insights on waste management in Thailand, proper waste separation, and Extended Producer Responsibility (EPR), which covers all stages of a product's life cycle. The exhibition also featured collection boxes for electronic waste by **Advanced Info Service Public Company Limited** and for old underwear by **Sabina Public Company Limited**, both of which are either recycled or used to generate clean energy. **ShooShoke**, by the **Bang Kachao Organic Farming Community Enterprise**, showcased a Thai-made food waste disposal machine that turns waste into compost within 24 hours, without using heat.



### Driving Sustainability Fostering Awareness, Understanding, and Action

As the world grapples with environmental challenges, government agencies and organizations play a crucial role in fostering awareness, promoting understanding, and driving meaningful action. Through effective policies and communication, they inspire societal change. This year, **the Ministry of Natural Resources and Environment** introduced the Department of Climate Change and Environment, tasked with advancing Thailand's sustainable growth through a low-carbon economy and enhanced climate resilience, supported by active public participation. The ministry focuses on four key areas to address climate challenges: (1) Climate Policy: formulating strategies for greenhouse gas reduction and climate adaptation, (2) Climate Action: promoting collaboration among the public and private sectors and civil society to tackle climate issues, (3) Climate Technology: adopting innovations to mitigate emissions and support adaptation, and (4) Climate Finance: driving green financing to support sustainability initiatives.



**The Department of Industrial Promotion** supports creative product development by applying circular economy principles, upcycling waste materials into valuable new items. This year, it showcased "Waste to Value" innovations from SME networks, supported by the department, including the Green Dollhouse, a modular house set with furniture designed to educate on environmental conservation and energy efficiency. The Metropolitan Electricity Authority introduced the TripleGo for Goal initiative, highlighting advancements in reliable electrical systems (Go SMART), enhanced e-services tailored for urban lifestyles (Go Digital), and the development of EV ecosystems for households, public spaces, and commercial use (Go Green). **The Foundation for Forests in Our Hearts** encouraged environmental awareness by inviting attendees to experience the sounds of nature from Thailand's iconic forests, such as Doi Chiang Dao Wildlife Sanctuary, the country's fifth UNESCO biosphere reserve. Visitors were invited to support forest conservation efforts through donations or by participating in an Eco-Print workshop to create nature-inspired designs on fabric bags.







### SUSTAINABILITY THROUGH ENHANCED PRACTICES FROM UPSTREAM TO DOWNSTREAM

As industries depend on natural resources, many organizations are taking a more responsible approach to managing resources, from upstream to downstream, to preserve environmental balance and support local communities. A prime example of this commitment is **Thai Beverage Public Company Limited**, which focuses on sustainable water management. This year, the company showcased the "Water of Life" exhibition, presenting advanced technologies aimed at reducing water and energy use. Their goal is to return 100% of water to nature and communities by 2040 through projects like the Community Water Management

following the Royal Initiatives in collaboration with the Hydro-Informatics Institute (HII) in the Mae Had mining community of Chiang Mai. It also partnered with the Mae Fah Luang Foundation to support over 90,000 rai of community forests, implemented 33 clean drinking water initiatives across 11 provinces, and launched a solar-powered drinking water project in San Hpe village, Myanmar. Thai Beverage promotes post-consumption packaging management and recycling through initiatives like the Bring Back - Recycle program and waste management collaborations with local governments and 'Saleng' waste collectors on Koh Samui and Koh Si Chang. These efforts have reduced environmental impact and generated over nine million baht annually for local communities.



**Thai Union Group Public Company Limited**, a global seafood industry leader, continued its sustainability mission through the SeaChange® 2030 strategy, focusing on a sustainable future for both people and the planet. Its efforts cover a wide range of initiatives, from ocean conservation and waste management to employee and community welfare. At the core of this strategy is transparency and traceability, allowing consumers to track seafood products from catch to production and consumption via a QR code on the packaging. This year, Thai Union introduced the ECOTWIST® innovation, currently in the patent process, featuring lightweight, vertically stacked cans that reduce the use of steel, plastic shrink wrap, and paper packaging, offering a simple yet effective solution to reduce resource consumption.

### ENERGY AND AUTOMOTIVE INNOVATIONS FOR CARBON FOOTPRINT REDUCTION

As the world faces environmental challenges, energy and automotive companies globally are rapidly developing innovations to minimize their environmental impact and maximize resource efficiency. **PTT Group**, a leader in Thailand's energy sector, operates on the principle of 'Balanced Sustainability,' aiming for energy security and business growth while targeting net-zero greenhouse gas emissions by 2050. Their 3Cs strategy includes: (1) Climate-Resilience Business: reducing emissions by exiting coal-related businesses and investing in renewable energy; (2) Carbon-Conscious Business: improving energy efficiency in existing operations through advanced technology to reduce carbon dioxide emission; and (3) Coalition, Co-Creation, and Collective Efforts for All: collaborating among PTT subsidiaries to invest in forestation projects to absorb



carbon dioxide and Carbon Capture Storage (CCS) to separate carbon dioxide from industrial installations and transport it to submarine storage locations. The company also showcased products made from recycled materials, including the r-Pet Upcycling Mini Box Bag and fashion items from the GC Circular Living Shop.

Solar energy is vital for sustainable energy development, as it not only helps reduce dependence on fossil fuels but also lowers greenhouse gas emissions while enhancing energy security for the country. **SPGC Public Company Limited**, a leader in solar energy investment, operates 36 solar farms across 10 provinces in Thailand, covering over 5,000 rai. The company has also expanded to Japan with three solar projects: Tottori Yonago Mega Solar Farm, Ukujima Mega Solar Project, and Kanoya Ohura Mega Solar Project. With a total capacity of over 878 megawatts, SPCG continues to lead in renewable energy production.

Beyond the energy sector, the automotive and transportation industries are significant contributors to carbon emissions. As a result, many car manufacturers have shifted towards developing electric vehicles to reduce their environmental impact.







At SUSTAINABILITY EXPO 2024, **Hino Motors Sales (Thailand) Co., Ltd.** showcased the fully electric Hino Dutro Z EV, which offers a 150-kilometre range on a 6-hour charge and can carry up to 1 ton of cargo. This model is already available in the market and in use by the leading Japanese logistics company, YAMATO TRANSPORT. **Hyundai Mobility (Thailand) Co., Ltd.** introduced the Hyundai IONIQ5, which features spacious interiors, multiple charging options, and an 80% charge in just 18 minutes. **AAS Auto Service Co., Ltd.** presented the Porsche Taycan, a luxury electric vehicle that took four years to develop and offers a 400-kilometre range on a single charge, completed with a four-wheel drive system. Additionally, **Chulalongkorn University's Faculty of Engineering**, in collaboration with the Broadcasting and Telecommunications Research and Development Fund for Public Interest (BTFRP), developed and tested a 5G autonomous shuttle bus at the university and the BTFRP office. The development of electric vehicles and clean energy technologies is revolutionizing travel and energy consumption, offering us all a unique opportunity to contribute to a truly cleaner, more sustainable future.



### SUSTAINABLE INNOVATION IN PACKAGING AND CHEMICALS

Packaging and chemical products touch every aspect of our daily lives, making it no surprise that leading companies in these industries are prioritizing environmentally friendly innovations. **Indorama Ventures Public Company Limited**, a global leader in petrochemical and chemical products, showcased the excellence of PET, an "Indispensable Chemistry" commonly used in food and beverage packaging. With over 1.5 billion US dollars invested, Indorama now operates 20 recycling plants worldwide and has processed more than 126 billion PET bottles into high-quality rPET. **BASF (Thai) Limited** introduced sustainable products in everyday life under the concept "Sustainable Future in a Day with BASF." These included toxin-free cosmetic ingredients from rambutan by-products which were approved by COSMOS, the environmentally friendly Elastocool® insulation material which features polyurethane



insulation that causes less environmental impact, and the development of wind turbine blade coatings aimed to extend service life and reduce wear. **Royce Universal Co., Ltd.** drives business growth with a circular economy model, focusing on recycling and upcycling under the ROYCECYCLING program. This initiative involved purchasing waste materials directly from consumers and businesses to create new products, including FDA-approved packaging for food and beverages, as well as construction and decorative materials under the LUMINA brand, and furniture and household items under the Modern Furniture, Chic, and Montana brands.

**Berli Jucker Public Company Limited**, a producer and distributor of consumer goods and packaging, enhances its production processes and product designs to reduce the consumption of energy and natural resources. For example, Parrot shower cream's refill pouches were resized and could reduce plastic use by 1.13 tons annually. Cellox introduced refillable tissue boxes, while Big C created baskets using LIMEX material, made from limestone, to reduce plastic. **Thai Beverage Can Limited** joined Aluminium Loop to support aluminum can recycling. **Starprint Public Company Limited**,



a paper packaging manufacturer, switches to FSC® (Forest Stewardship Council) certified paper and establishes the Innovation Center that encourages customers to choose more sustainable materials and innovations, such as brown paper boxes which are easier to recycle than colored boxes and a beverage packaging with less plastic coating but still eye-catching and durable. To ensure a beautiful and livable world for the future, we must act now by changing our lifestyle in all aspects from adopting sustainable energy and responsible consumption to environmental accountability. Together, we can build a more sustainable society and planet.

