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Taiwan's first fast charging station for electric vehicles, Delta assists in transforming gas stations

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FROM THE EDITOR

As the year 2021 draws to an end, Delta's "50th Anniversary Live in Concert" marked the perfect ending to our "Sustainable Conservation & Nurturing Life" events. As the pandemic gradually ceased in Taiwan, we resumed the concert which was originally planned to debut in May. The first screening of BBC's epic nature documentary "Blue Planet II" in Asia, displayed on Delta's ultra-clear 8K high-definition projector, combined with the orchestra and treated thousands of audience members to an immersive, unforgettable visual feast. Delta wishes to urge the public to focus on marine conservation; at the same time, we also strive to achieve carbon neutrality by adopting energy-saving measures including using recycled papers, recycling promotional materials, taking emissions inventories, and purchasing renewable energy certificates (RECs). This issue's "Special Report" invites you to focus on our marine ecology and its preservation.

The most important environmental and climate topic in the international community recently has been the COP26 (the 26th UN Climate Change Conference of the Parties), held in Glasgow, Scotland in November. This is the most important and the first progress assessment since the Paris Agreement in 2015. Delta was present in this monumental conference, and besides engaging the conference for the 14th consecutive year running, we also held a side event at the official negotiation zone to share Delta's low-carbon transportation and micro-grid applications. We also shared our experiences in playing crucial roles in energy resilience and working toward a more sustainable city. First-hand observations from the staff at Delta Foundation will be available at "Delta Green Life".

As the age of smart transportation dawns on us, electric vehicles have become an inevitability. In this issue, we will cover Delta's participation in the inaugural 2035 E-Mobility Taiwan exhibition and present how Delta gets up close and personal to participants through demonstrating its onboard power electronics, powertrain systems, fans and thermal management, passive components for EVs.. At the same time, we have built charging solutions for electric vehicles with micro-grid concept by integrating renewable energy charging and energy storage systems. The "IOT Smart Solutions" will introduce you to the key role that Delta plays in the global electric vehicle supply chain.

Besides low carbon emissions, the entire human race has been equally focused on ways to lead healthier lives over the past couple of years. Delta has recently partnered with Daikin to provide a healthy environment for young children by successfully integrating the UNOnext indoor air quality detector and management platform with an indoor air flow system at preschools in Taiwan. Though the pandemic has limited overseas travels, Delta can take you worldwide with our Vivitek projector! By integrating and applying Delta's display solutions, the Armagh Observatory & Planetarium in Northern Ireland has been taking visitors on visually immersive explorations to the universe. More exciting cases await in our "Brand Circle"!

Brand Management Division



Delta's 50th anniversary activities

"Net Zero Concert" aims to raise public awareness to marine conservation

Text by BMD

Celebrating its 50th anniversary this year, Delta has launched a series of special reports around its 50th anniversary activities. In this issue, we will walk readers through the "Delta 50th Live-in Concert" that was previously delayed due to COVID-19 in May. As the epidemic gradually ceased in Taiwan, we raised the public's awareness to the marine environment by conveying our philosophy for "Sustainable Conservation & Nurturing Life" through lively melodies and video images. Thousands of audience members were treated to an unforgettable visual feast. On the other hand, Delta Newsroom exhibit was held at Delta Electronics Americas Limited (DAL)'s headquarters at Fremont, California, USA. Employees were transported back in time to witness Delta's developments over the last five decades, as well as our sustainable plans going forward.



台達50影像音樂會



Raising public awareness to ocean conservation via "Blue Planet II"

Words, music, and visual images all have the power to touch a person deep down. They can all clearly convey a concept or an action. In this October, 'Blue Planet II', an epic documentary from BBC Natural History Unit, was perfectly shown through an ultra-high 8K resolution projector on an 800-inch screen at Delta's "50th Anniversary Net Zero Concert" in Taipei. At the same time, Taipei Philharmonic Orchestra played renowned composer Hans Zimmer's scores while the documentary was shown. This audio and visual feast led the audience to feel the ocean's vitality and to focus on the pressing marine ecology issues.



Delta Founder Bruce Cheng and his wife attended "Delta 50th Live-in Concert"



By integrating 'Blue Planet II', shown using 8K projection technology and an 80-person orchestra, the audience experienced the underwater world



Delta's 8K projector makes the video crystal clear and fresh even when shown on an 800-inch screen. The finest details are clearly visible, bringing optimized visual performance



"Blue Planet II" is one of the world's most popular natural documentaries. Shot in 39 countries over four years, underwater scenes were shot using pioneering high definition digital cameras to unveil a breathtaking world that was never seen before. This documentary has sparked the outcry for marine conservation and actions from many governments, enterprises, and individuals. It also coincides with Delta's mission toward environmental protection over the years.

Renowned ecologist and Editor-in-Chief of Taiwan's "Scientific America" provided commentary throughout the documentary; the public is urged to focus on marine conservation through video, music, and knowledge



“Net Zero Concert” integrates carbon reduction and recycling to practice Delta's ideal for sustainable development

How does one focus on environmental protection while organizing an event? Delta has successfully organized a brilliant "Net Zero Concert" ! "Carbon reduction" and "recycling" are the most important factors to fulfilling net zero emissions. Delta calculates electricity used in the event and carbon emissions from visitors' methods of transportation, including driving, riding motorbikes, and taking public transportation, then actively discloses the Company's carbon emissions and purchases corresponding Renewable Energy Certificates (RECs) to offset such emissions. All umbrella covers used during the event are recycled and reproduced as other products, so that visitors can join Delta in caring for the environment and achieving a more sustainable future while enjoying the concert!



Many Delta employees attended the concert with their family members in the hopes of raising the public's awareness to ecological problems with the beauty of the sea

DAL joins Delta in celebrating 50th anniversary milestone

After launching the 50th anniversary activities at Tongli Lake, China in this spring, currently exhibits have been held at 6 plants throughout China and a special exhibition was held at the new plant in Chungli , Taiwan. After the global pandemic has gradually ceased, the office of Delta Electronics Americas Limited (DAL) was reopened in September, and a Delta Newsroom exhibition was also held at DAL's headquarters in Fremont, California. Staff were led back in time to witness the 50 milestones that set the cornerstone for Delta along the way.

At the beginning, Delta was merely one small office when it first expanded to the US market in California. Through years of hard work and perseverance, Founder Bruce Cheng and his team gradually expanded Delta's market share in the US. Looking back on Delta's developments over the years, the Company has always maintained its business philosophy for innovation. Just like its name - Delta - which represents changes in both scientific and business fields, we continue to create a better life for the future through enhancements in energy efficiency.

Both managers and the staff in DAL gained more understanding to Delta's 50th anniversary theme, "Sustainable Conservation & Nurturing Life" through the exhibition, as well as Delta's visions and actions for a sustainable future as we embrace the next 50 years to come!



Kelvin Huang, President of DAL (center) and management team celebrate Delta's 50th anniversary in front of Delta Newsroom



TVs and a time corridor was set up at DAL's courtyard, leading employees to gain more insights to Delta





Collaborating and integrating multiple fields to establish Delta's building automation brand

Interview with senior marketing manager of Delta's Building Automation BG - Ms. Wen Fan

Text by BMD

Since 2016, Delta has gradually expanded its business to include building control management, digital security monitoring, and smart lighting through mergers and acquisitions of quality companies such as LOYTEC, Delta Controls (DCI), Vivotek, and Amerlux. The Building Automation Business Group (BABG) was established in 2017 to integrate the software, hardware products, and services of various companies with Delta's years of experience in energy-saving green buildings to create Delta's smart and healthy building solutions. In this issue of Brand People, we invite Ms. Wen Fan, Senior Marketing Manager of BABG, to share her experience and tips on how to integrate diverse products and promote brands at Delta.





BRAND PEOPLE

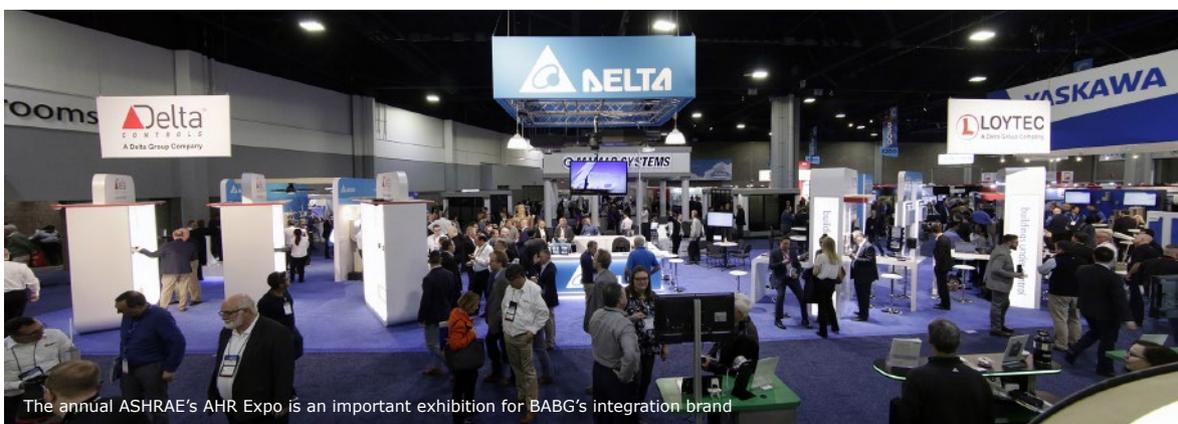
"With our elite system, the marketing team of the Building Automation Group (BABG) is always multitasking!" Speaking about the organization of the marketing team, Wen gave her team members a lot of credit right off the bat. BABG's marketing department is organized as a matrix model, with product lines as the vertical axis and divided into the different areas of building control, lighting, and security surveillance, each with its own corresponding marketing team members. The horizontal axis of the matrix includes content marketing, digital marketing, as well as exhibition and showroom planning. With a cross-cut division of labor, each team member must be able to multitask and support each other to achieve maximum effectiveness.



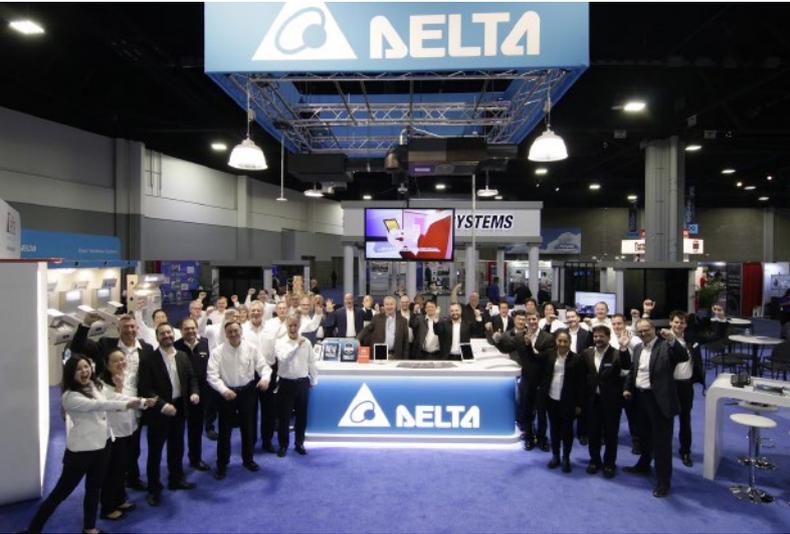
BABG marketing team members (From left: Vivian Kao, Iris Lee, Wen Fan, Monica Chao, Ishan Yeh)

Promoting a 4 in 1 integration strategy to polish and shine Delta's building automation brand

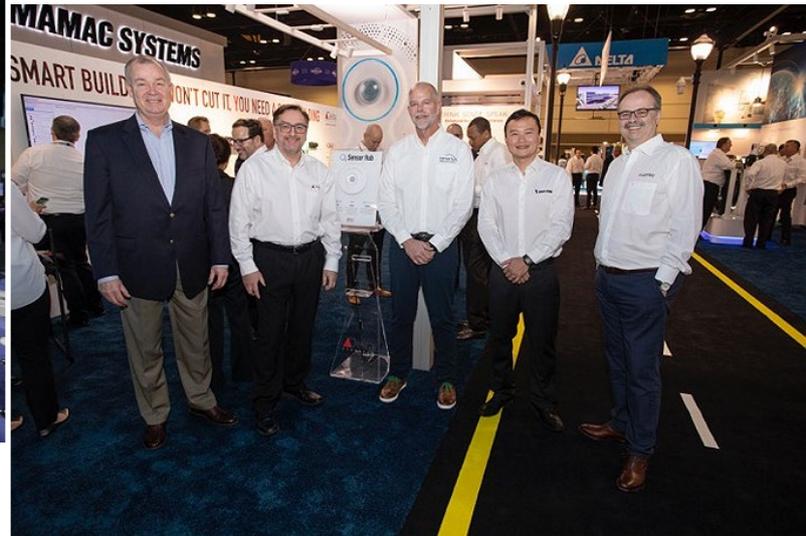
"BABG has many product lines and a wide range of application fields which makes the work we face every day daunting from either the perspective of products or business models." Compared to other business groups, BABG's organization encompasses multiple mergers and acquisitions and faces the challenge of integrating diverse multicultural products and solutions. Wen shared her strategy and approach saying, "Each merged company has a different brand identity and culture. By understanding the DNA of the various brands, we can combine the strengths of each brand into Delta and then introduce them to the world through Delta's platform." Wen emphasized that in the process of building a One Delta brand, they respect the merged company's business model in the existing market and strive to preserve the unique vitality of the brand. This allows the existing ecological chain to trust that Delta will continue to invest more technology and sales resources to co-prosper and expand the market together, so that the diversified advantages of multiple brands in terms of products and technology can play a complementary and multiplying effect.



"Creating a 4 in 1 integrated platform that starts from Asia and North America!" The "4" represents four brands: DCI, LOYTEC, Vivotek, Amerlux, and "1" represents Delta. DCI's market is strongest in the U.S. and Canada, LOYTEC is mainly in German-speaking regions, Amerlux is based in the eastern U.S., Vivotek has had success in Southeast Asia, the Americas, and Europe in recent years, and Delta's BABG focuses on extending brand influence to the Chinese and Taiwanese markets through the One Delta platform. In 2019, the group's overall strategic direction moved towards increasing integration in North America. We hope that a unified platform can link the capabilities and strengths of each brand together and allow us to work with partners to integrate systems and expand applications to extend our business reach.



All four brands were shown at the AHR Expo. Image on the left is a group photo; while the image on the right shows (from the left) Joe Oberle, John Nicholls, CEO of Delta Controls, Bill Plageman, Vice President of Amerlux Marketing and Product Management, David Liu, CEO of Vivotek USA, and Hans-Joerg Schweinzer, CEO of LOYTEC



Fully unleashing the strength of 1+1>2 through internal and external cooperation

Since 2016, the BABG has merged several of its units and acquired companies to create its multi-faceted capability that strengthens the brand. Cross-field teamwork is key! "In the field of building automation, it is not easy for new brands to gain a foothold because of the ecosystem's high stickiness and the high transaction costs," Wen added that it takes time for engineers to adapt to a new system and for system integrators to smooth human resource operations from top to bottom. We can take Delta's building automation business group's promotion model in China as an example. Through Delta GreenTech China's (DGC) participation in local exhibitions, the Delta Cup, and channel conferences presented by different business groups, we shared our network and raised awareness of Delta's building automation solutions in China.

Apart from collaborating with Delta's internal units, we are also expanding outwards, which requires more strategic planning. Wen further shared the story of how LOYTEC was introduced to the Chinese market a few years ago. LOYTEC had the advantage of covering 23 communication protocols, allowing LOYTEC's strategies to often surpass the current competition. Whether it is to enter the market with DALI lighting control or with integrated area control systems, LOYTEC can pursue more opportunities to become the leading building control system provider. When Delta entered China many years ago with LOYTEC, the DALI agreement had yet to penetrate the Chinese market. "We first combined cross-BG resources within Delta and successfully became a member of the DALI Consortium and the DiiA Digital Lighting Interface Consortium Board of Directors." Wen recalled the time when she put much effort into convincing the directors of the consortium to work together to expand DALI's presence in the Chinese market. Delta then held a DALI forum with a keynote speaker from the headquarters, which brought local system integrators in China closer to the DALI agreement, further inducing positive results and increasing the willingness to cooperate. In the second year, DALI headquarters became more proactive and invited other key board members to co-organize forums with Delta. Subsequently, the DALI China Annual Forum was officially budgeted as one of the major events, and a China Focus Group was established to put the China market on the official agenda. This example shows the important attempt by Delta to invite world-class industry alliances to work together to develop important markets and expand their market presence.



For the first time, Delta invited Digital Illumination Interface Alliance (DiiA) to co-host DALI China Annual Forum in 2018. Keynote speaker, Scott Wade, the Technical Manager of DiiA was arranged to visit the lighting design companies in Shenzhen before the Forum to obtain more in-depth understanding to market demand and feedback. In the middle: Ms. Wen Fan, Senior Marketing Manager of Delta's Building Automation Business

Utilizing the "three-in-one" collaboration method to capture customer mindshare

The sales model for building automation is different from that for general product sales as it places emphasis on integrated solutions. Wen believes that the "three-in-one" cooperation model that incorporates R&D and design, sales, and marketing can solve customers' pain points and gain support and trust in the market. The sales division can communicate customer needs to internal units, the product development division can propose solutions, and the marketing division presents the products/solutions to the market and continues to expand the company's reach to its target users. Wen went on to give an example, saying, "The BIC Lighting App User Interface (UI) project that the team developed in collaboration with the Brand Management Division (BMD) in recent years is an important example of this "three-in-one" method. Through this project, the R&D and design team was able to understand real customer needs of the the sales team. In the meantime, the marketing team provided a blueprint for brand promotion to increase market share and customer mindshare, displaying how the three parties worked together to enhance brand awareness and product power.

Always do better than yesterday

Wen joined Delta Foundation in 2004 and was in charge of green energy promotion and environmental education-related work. In 2009, she joined Delta Group where she started from the solar solution business unit and then entered the system integration and building automation field. "At BABG, I've met many teams with different cultural backgrounds, and I have also encountered many possibilities and challenges. I'm always trying to think of better ways to do things." Wen has experience in different kinds of work and expects herself to keep improving. She encourages her Delta colleagues to challenge themselves and pursue the unlimited possibilities in life during their careers.



2035 E-Mobility Taiwan Debuts Delta's IoT-based Smart Green Park creates a new future of smart mobility

Text by BMD

Faced with environmental changes and disasters brought about by climate change, energy has become the focus of public attention. Various countries have been implementing environmental protection regulations to reduce carbon emissions, such as those for enhancing the electrification and efficiency of vehicles. The market is also moving towards the development of electric vehicles which is revolutionizing the mobility industry. This issue of "IoT Smart Solutions" will cover Delta's participation in the 2035 E-Mobility Taiwan exhibition and present how Delta outlines the new urban future of "IoT Smart Solutions, Energy for Sustainability" through smart energy and electric vehicle (EV) solutions.





IoT SMART SOLUTIONS



Chief Brand Officer of Delta, Ms. Shan-Shan Guo (third from the right) and Technical Director Lin Chih-Yi of Electric Vehicle Business Group (EVSBG) (second from the left) at Delta's IoT-based Smart Green Park

Delta's "IoT-based Smart Green Park" made an eye-catching debut at the first "2035 E-Mobility Taiwan" exhibition! The exhibition booth was mainly planned based on Delta's newly completed Chungli Plant 5. The "IoT-based Smart Green Park" integrates energy storage and EV-related components and chargers to create a future blueprint of smart park applications. The booth is divided into three themes: automotive electronics and fans and thermal solutions, energy infrastructure, and EV charging solutions. The situated experience tour route leads visitors to visit and experience Delta's products and solutions.

The three key energy solutions create an IoT-based Smart Green Park

Visitors' eyes will be drawn to the semi-transparent electric car at our booth. Built with a real-sized car body model, the display presents the integrated on-board power system and a motor drive system that combines a traction motor, traction inverter, combo on-board charger, battery junction box. Delta's four-in-one system not only reduces the weight of the electric vehicle but also improves the volume efficiency. Next to it is our quality product counter that showcases Delta's automotive-related fans and thermal solutions that can be used in a vehicle's air conditioning, infotainment, and Advanced Driver Assistance System (ADAS). The highly efficient and lightweight design can meet the needs of electric vehicles. Visitors were able to get a closer look at the electric vehicle's interior components, and many stopped to ask questions.

EVSBG Technical Director Lin Chih-Yi (second from the right), TAITRA Chairman James C. F. Huang (third from the right), and international guests introduce the advanced technology of EV power and electronic controls





IoT SMART SOLUTIONS

The "EV Charging" area showcases a full range of AC, DC, and bi-directional EV charging products, including 350kW and 200kW fast DC chargers that can supplement users in 10-15 minutes for long-distance travel, and 17.6kW compact AC MAX chargers for residential and community charging needs. The "Energy Infrastructure" area displays energy-saving applications for energy creation, storage, and use, with a microgrid concept. Through DeltaGrid's visual energy management system that integrates renewable energy generation, power conditioning systems, storage systems, and energy management solutions, Delta provides decentralized energy for buildings and electric vehicles. The V2X bi-directional EV charger turns the electric vehicle into a power source, allowing the EV to become a storage battery or a virtual power plant that controls and dispenses energy according to different power demand and consumption strategies.



The "Electric Vehicle Charging" area showcases a full range of AC, DC, and bi-directional electric vehicle charging products



The energy infrastructure zone: DeltaGrid's visual energy management system provides unified control of all energy information via a touch screen

In addition to the physical exhibition, the Brand Management Division (BMD) and the Taiwan External Trade Development Council (TAITRA) worked together to launch a LiveTour video, which allows visitors who cannot attend the exhibition in person to learn more about Delta's total solutions for electric vehicles.

Delta's E-Mobility Taiwan Live Tour video:
<https://www.youtube.com/watch?v=Eo-qQ1QRp8kU>



Delta and TAITRA jointly launched a LiveTour video to introduce Delta's "IoT Smart Solutions Park" with its three major themes!



Delta joins EV100 to promote low-carbon transportation and explore opportunities in EV and charging solutions

Text by Sustainability Development Office

Climate change has already become a pressing issue now at the end of 2021. Countries around the globe are advocating for net-zero emissions and actively proposing new ways to reduce greenhouse gas emissions caused by transportation facilities in cities. With various industries and sectors behind the wheel, electric vehicles have become an important solution for reducing carbon in cities and a green business opportunity that garners much attention (Note 1). Delta was already preparing for this trend as early as 2005.

In that year, Delta's founder, Mr. Bruce Cheng, learned that TOYOTA's second-generation hybrid car, Prius II, was launched in the U.S. but had yet to cooperate with any Taiwanese dealerships, so he helped import the model to Taiwan through its U.S. office. This is the first hybrid car in Taiwan that can run 35 km on one liter of gasoline, which is three times more fuel-efficient than ordinary cars. This vehicle not only became Delta's energy-saving educational tool, but also an EV experience project for the R&D team. It provided numerous inspirations and became the greatest motivation that pushed Delta to officially move into the EV sector in 2008.





Grasping the EV business opportunity, Delta signed the We Mean Business Coalition in 2015, listing "Transitioning to Electric Vehicles and Unifying Charging Infrastructures" as one of its five commitments to address climate change. In 2018, we officially announced our membership in the Climate Group's EV100 initiative (Note 2), becoming the first EV energy infrastructure provider member from both Taiwan and the world.

The TOYOTA Prius II hybrid vehicle imported from the U.S. to Taiwan by Delta's founder, Mr. Bruce Cheng in 2005 inspired the R&D team and became the initial impetus for Delta's EV business

Echoing the EV100 initiative, Delta commits to the transition of electric vehicles and increasing the coverage of charging infrastructures

Delta echoes the EV100 with three major commitments and works with like-minded partners to promote the development and popularization of electric vehicles in their respective fields (Note 3). Delta's EV100 commitment includes 1) the popularization of electric vehicles: at least one charger should be installed at each of the major locations by the end of 2020; 2) electrification of company vehicles: as of 2025, all new vehicles must be electric, and by the end of 2028, all diesel vehicles will be replaced with electric vehicles, with completion by 2030; 3) providing incentives for employees and customers to use electric vehicles to help accelerate the transition to low-carbon transportation.

After joining EV100 in 2018, Delta has since been actively promoting low-carbon transportation and has been installing charging stations at its global locations. In the early stages, Delta faced many challenges when promoting internally. The main reason is that EV charging will increase electricity consumption, and the instantaneous increase in electricity consumption for fast charging will affect the stability of the power supply in a plant. In some instances, there is a lack of grid capacity and system control devices available for charging at some locations and the charging time will impact operations. All these factors put factories in a dilemma when promoting EV100. In addition, other factors such as the insufficient number of EV models suitable for company operations (e.g., business cars or minibusses) and the increased cost needed for procuring electric vehicles need to be taken into consideration by the project team. The team needs to fully communicate with different divisions to gain an in-depth understanding of the difficulties and requirements for local implementation and to find appropriate solutions.



Officially joining EV100 in 2018, Delta is the world's first electric vehicle energy infrastructure provider member. Image shows the electric vehicle charging area at Delta's EMEA headquarters in Hoofddorp, Netherlands

Low-carbon transportation is globally promoted and Delta encourages employees and customers to use electric vehicles

Dedicated to entering the electric vehicle sector and determined to promote energy saving and carbon reduction, Delta's management team gave clear instructions saying, "we need to fully strive to achieve our commitment to the EV100 initiative" and gave the project full support. In August 2020, the Sustainability Committee approved the provision of allowing employees and customers to use EV chargers for free (subsequent adjustments to the payment mechanism and management regulations will be made depending on usage). In September, an internal announcement was issued to encourage all of Delta's employees to work together to achieve the goal of low-carbon transportation. As of February 2021, the EV100 project will be coordinated by the Public Affairs Office in China, and in cooperation with the ESG Office and local plants, the project will be promoted internally in conjunction with existing plant energy management systems and reported regularly to the Sustainability Committee. In April, the Public Affairs Office and various plants jointly explored methods for managing charging stations to encourage the transition to electric vehicles by severing the charging power supply from the plant's electricity consumption.



Proactive deployment of electric vehicles and charging infrastructure moves Delta towards sustainability with technological innovation

Although the progress of promoting EV100 varies from region to region due to different government policies, market development, and demands, each region is actively developing localized measures with the support of the company's policies, to facilitate the use of EVs by employees and customers. For example, nearly 20 chargers were installed at the Fremont headquarters in the U.S. Combined with the solar power installation on the roof of the building and the roof of the parking lot, the chargers achieve the real use of green electricity. Also, our Shanghai headquarters provides 10 electric buses as vehicles that reduce carbon emissions that arise from commuting.

On the other hand, as governments around the world are increasing their subsidies for electric vehicles, the demand for charging has increased significantly. For example, Shanghai has benefited from Tesla's local factory and its policy for issuing free license plates for newly purchased electric vehicles. The number of electric vehicles at Shanghai headquarters has already exceeded 20. The Shenzhen government has also offered incentives such as tax relief for purchasing electric vehicles and subsidies for vehicle replacement. The neighboring Dongguan plant has also benefited from this and has recently installed five chargers.

The various education and training programs Delta held in cooperation with business units also help employees to keep abreast of international trends and acquire new knowledge in related industries. For example, the live Youtube event held by EISBG introduces the application and development of chargers in the community and urban areas from an industrial and technical perspective. The China region integrated this into the Academy and e-Learning platform and transformed it into seven series of in-depth educational courses on chargers. The content covers charging tutorials, system introduction, future applications, policy development, and much more for Delta employees.

Through our joint efforts, Delta has installed a total of 149 (AC or DC) EV chargers at 22 of our global locations as of October 2021 (Note 4) to support the charging needs of vehicles with different specifications and to encourage employees and customers to use electric vehicles.

Delta has accumulated years of R&D innovation and market experience since 2008 and has now become a first-line supplier of key powertrain systems to major vehicle manufacturers around the globe. Delta's wide range of advanced EV charging solutions and products have been shipped to more than one million customers worldwide. More recently, Delta's Yokohama EV Charging Station, a joint project between Delta and Japan's Idemitsu Kosan, has recently been selected by the Yokohama City Hall Climate Change Response Headquarters as the city's disaster emergency response location. In February 2021, EV100 published this case study in its official publication "Progress and Insights Report," sharing Delta's technological innovation combined with sustainability concepts with EV100 members around the world, hoping to create more and longer-term sustainable business opportunities through a common advocacy platform.

Notes:

- 1 The International Energy Agency (IEA) called on the world to stop investing in new oil and gas development projects immediately to meet the Paris climate agreement emissions reduction targets. IEA also proposed that by 2030, the sales of electric vehicles should account for more than 60% of the total of cars sold, and sales of conventional vehicles will cease by 2035 (Source: IEA Net Zero 2050).
- 2 Launched by The Climate Group in 2017, EV100 is a global initiative aimed at accelerating the transition to low-carbon transportation and transforming electric vehicles into the norm by enlisting globally influential companies and government organizations. This is being done in response to the UN's goal of limiting global temperature increases to below 1.5 °C. 120 international influential companies such as ABB, HP, IKEA, NTT, Unilever, etc. have responded to this initiative. For more details, please visit the official site: <https://www.theclimategroup.org/ev100-members>
- 3 EV100 requires participating members to publicly commit to switch their owned and contracted fleets to electric vehicles, install charging infrastructure for employees and customers at all relevant locations, or require the use of electric vehicles in relevant service contracts by 2030.
- 4 Delta originally planned to have EV chargers installed at all remaining stations by the first half of 2020. However, the COVID-19 pandemic coupled with semiconductor chip shortages affected EV charger supply, delaying the plans until 2021.



Delta responds to the EV100 initiative by providing 10 electric buses as transportation vehicles at its Shanghai headquarters to reduce the carbon emissions of its employees' commute



The "Progress and Insights Report" published by EV100 shares the technological innovations and sustainability concepts of Delta's EV charging station in Yokohama with EV100 members worldwide



Taiwan's first fast charging station for electric vehicles, Delta assists in transforming gas stations

Text by EISBG

In the face of the huge impact brought about by climate change, many countries have formulated carbon reduction policies and set a timetable for banning the sales of diesel cars in the future. Taiwan plans to promote the installation of 7,800 public chargers by 2025, bringing with it the era of electric vehicles. Delta has partnered with Tail, a new brand from North-Star Petroleum, to set up Taiwan's first highway EV fast-charging station, located at the gas station in the Xiluo Service Area North Station on National Highway No. 1. Delta's latest 200kW fast-charging technology will be introduced, and by the end of the year, installations will be expanded to 12 gas stations on national highways, allowing electric vehicle drivers to travel north and south without worrying about running out of electricity.

The Delta city charger 200kW DC chargers installed at the Xiluo Service Area North Station gas station on National Highway 1 are the first chargers in Taiwan to combine the CCS1 and CCS2 specifications. Each charger is equipped with two charging guns, covering mainstream electric vehicles in Taiwan, and supports dynamic power deployment to charge two cars simultaneously, allowing both cars to be set in the shortest possible time.

Delta's city charger 200kW not only meets the needs of mainstream electric cars in Taiwan but with a charging efficiency of over 96%, it can save 11,680 kWh of electricity consumption each year (based on 8 hours a day), saving operators a significant amount of money on electricity bills. In addition, Delta's 200kW is the first singular charger in Taiwan with a single gun output of 400A, offering more flexible installation plans in terms of size. Charging could give electric cars about 200 kilometers of range in 10 minutes. Fast-charging stations for electric cars help transform traditional gas stations into a new type of diversified and low-carbon gas stations.

Delta will cooperate with Tail to transform 57 gas stations into gas/charging stations. In the future, Delta will expand the network of charging stations to North-Star Petroleum's parking lots, national highway rest stops, hotels, and land to be developed in three regions. This seizes the fast charging business opportunities for electric vehicles and sounds the call for the transformation of traditional gas station operations in Taiwan.



Delta will cooperate with Tail to transform 57 gas stations into gas/charging stations



Delta donates indoor air management system to create safe and clean classrooms in preschools

Text by BABG

To provide a healthy environment for preschool children and in response to Taoyuan City's air quality improvement plan for preschools and special education facilities, Delta joined up with Ho Tai Development Co, the agent for Daikin air conditioning, to install indoor air quality management solutions for monitoring and improving the environment in six preschools. The partnership uses Delta's UNOnext indoor air quality monitor and a management platform to monitor the indoor air quality of the preschools 24/7. When indoor air quality turns poor, Daikin's smart-linked HVAC/fresh air system kicks in to filter out the bad air. Since the installation, the 8-hour average of CO₂ measured at below 1000ppm in all of the classrooms and the 24-hour average of PM_{2.5} averaged below 35µg/m³. After the Taiwan Indoor environment quality management association (TIEQM) conducted rigorous field testing to confirm standard compliance, Delta was awarded the clean & safe certificate, which is designed especially for epidemic prevention and indoor air quality management.



Mr. Roland Chiang (right), General Manager of Delta's Building Automation Solutions BU, receives a certificate of appreciation from Mr. Cheng Wen-Tsan (left), Taoyuan City's Mayor, for Delta's contribution to Taoyuan City's demonstration plan for improving air quality at preschools and special education facilities

Mr. Roland Chiang, general manager of Delta's Building Automation BU stated that the donated UNOnext indoor air quality monitor sports an all-in-one design that instantly monitors fine particulate matters such as PM_{2.5} and PM₁₀, organic vapors, formaldehyde, ozone, carbon monoxide, carbon dioxide, temperature, humidity, and many other variables. Each indicator can be monitored and controlled in real-time through a cloud management platform and can be connected with various HVAC/fresh air systems brands. We are glad to take this opportunity to not only help preschools improve their environment but also to raise awareness of how important indoor air quality management is in the wake of the pandemic.

Delta is actively developing smart, energy-efficient, and healthy buildings. In 2019, Delta acquired a keystone membership of the international WELL Building Institute (IWBI) and provides corporations with relevant solutions to create more comfortable, convenient, and safe indoor environments. The preschools that participated in the Taoyuan City's demonstration plan for improving air quality include Taoyuan City Longtan Kindergarten, Yangmei Preschool, Chungli HSR Kindergarten, Bade Kindergarten, Luzhu Kindergarten, and Taoyuan Municipal Taoyuan Special School.



Linxdatacenter chooses Delta UPS to protect the data centre in Russia

Text by ICTBG / EMEA

The international cloud and colocation service provider Linxdatacenter needed to upgrade its data centre in St. Petersburg. As voltage variations and power failures often occur in the region, maximum availability and reliability are key. As well as meeting traditional requirements, the new UPS units needed to be compatible with the existing data centre systems, easy to integrate into the existing data centre landscape, and suitable for modular expansion. Four Delta Modulon DPH series 500kVA UPS systems were installed. These new modular UPS units offer the world's leading power density per rack and are particularly well suited to mission critical applications in large data centres.

Their modular design allows the UPS to manage redundancy of the power modules and offer additional capacity. The DPH 500kVA systems have an efficiency up to 96.5% in normal mode and 99% in ECO mode, which significantly reduces energy costs. The compact design of the DPH 500 increases the usable area and requires 50% less space for the same power. The architecture of this UPS series also allows individual modules to be hot swapped. The devices can be brought online more quickly and service periods are drastically improved in comparison with traditional UPSs.

Vladislav Solotskiy, UPS Key Account Sales Manager at Delta Russia & CIS, Communication and Information Solutions (CIS) Business Unit, is also happy with the successful project in Russia: "Once again we have demonstrated that everyone wins when they work with Delta on large-scale data centre projects. Our customers all benefit from our understanding of the technical requirements, expert advice, reliable high-performance products, excellent customer service, and installation support."



Linxdatacenter chose Delta UPS to protect the data centre in Russia

Russian oil and gas company prefers Delta Modulon DPH 300kVA UPS to ensure stable operation

Text by ICTBG

A major Russian oil and gas company required an uninterruptible power supply (UPS) with compact battery back-up supply for its new server room in St. Petersburg, Russia. The company's objective was to ensure secure and stable operation of the building's infrastructure and maintain a constant supply of power for various critical needs at one of its key sites. The region's power distribution grid is volatile. Due to limited space onsite the offered solution's power density required a very high level. One of the main customer needs was high scalability and the longest possible battery lifetime. The project implementation was slated for the first half of 2021 and comprised a modular UPS DPH-series 300 kVA with Delta's NMC Li-ion master battery cabinet. Delta's DPH series UPS is particularly well-suited to installation in rooms where space is at a premium thanks to its very compact size. In addition to the increased power density, extensibility and lower overall costs of the solution, the Russian oil and gas company was impressed with Delta's customer service, advice, and fast turnaround.

Maria Mityureva, Key Account Sales Manager Delta Russia & CIS, Communication and Information Solutions (CIS) BU, was pleased with the successful collaboration during this project. "Smooth cooperation of local sales, service teams, the distributor and partner allowed us to provide our customer with the best expertise, as well as reliable products and solutions, and skilled service and implementation support throughout the project. We are delighted to see another successful project with a happy customer and we eagerly anticipate further cooperation."



Russian oil and gas company prefers Delta Modulon DPH 300kVA UPS to ensure stable operation



The Armagh observatory and planetarium explains the universe with Vivitek display

Text by EMEA

Technology has always been at the heart of the visitor experience at the Armagh Observatory and Planetarium, located in Armagh, Northern Ireland. It was the first planetarium in the world to project video on to its dome. In line with its approach to adopting pioneering technology, today the latest in digital projectors and digital signage solutions from Vivitek are playing a key role in creating a truly thrilling and immersive visitor experience.

Vivitek created an out of this world experience

Contributing to a positive visitor experience, are three Vivitek DU8090s. Lamp-free and eco-friendly, the DU8090Z features a WUXGA resolution, 8000 ANSI Lumens brightness and 10,000:1 contrast ratio for a clear and bright projection. The projector's legendary reliability was a key attraction and made them ideally suited to the environment projecting content that shows space, the universe, planets as well as educational power points and even live feeds from cameras.

Also on site, is a Vivitek DU8190Z projector. The DU8190 uses DLP® technology with BrilliantColor™ for vibrant and rich picture quality, while the 10,000 ANSI lumens of brightness, WUXGA resolution, and 10,000:1 contrast ratio ensures clear, crisp and bright projection. Meanwhile, its long lasting laser light source delivers constant brightness levels and colour performance for up to 20,000 hours of operation. Commenting on their use, Ciaran Magee, ICT Manager, Armagh Observatory and Planetarium, said: "It's important that Armagh Observatory and Planetarium conveys the thrill and excitement of space. We're dependant on technology to help us achieve that, and Vivitek's solutions are instrumental in creating an immersive environment that helps captivate our visitors."

Flexible and easy to use; NovoDS meets all information needs

NovoDS Cloud is Vivitek's exceptionally easy to use digital signage solution. The content displayed on the NovoDS Cloud can be changed and updated remotely, making it simple to update content. The NovoDS solutions are arranged in a matrix format, while one is located in the café, advising visitors of the day's specials, and of any offers. With NovoDS, the digital signage content can incorporate text, photos, audio, video, and web content in fully customisable configurations for a variety of environments, making ideally suited to Armagh Observatory and Planetarium. "We are thrilled with the performance, reliability and value offered by Vivitek's solutions. With their advances features, the solutions are an investment for the future, and will play a key role entertaining visitors for years," Ciaran added. Combined, Vivitek's solutions are helping visitors to the Armagh Observatory and Planetarium to delve into the wonders of the universe, and to immerse themselves in its mysteries.

More info can be found about how our solutions are being used at www.Armagh.Space



Vivitek display solution with vibrant and rich picture quality provided a positive visitor experience



Contributing to a positive and flexible visitor experience, are three Vivitek DU8090s



VIVOTEK surveillance cameras bolster security for Thailand's new MRT

Text by DET



VIVOTEK provided intelligent surveillance cameras to bolster the security system of Thailand's new MRT Red Line

For this project, Taiwanese company Glory Technology is a subcontractor to MHI for planning and design of the railway communications system. Glory Technology selected the VIVOTEK MD 8563-EH as the most premium brand product providing intelligent surveillance capabilities. A total of 570 VIVOTEK MD 8563-EH Mobile Dome Network Cameras are in the security systems of the MRT Red Line's four-car type and six-car type trains. The 10 four-car type trains have 180 cameras in total. The 15 six-car type trains have 390 cameras in total.

VIVOTEK's MD8563-EH is a compact 2-megapixel network camera with vandal-proof IK10-rated metal housing. The camera can withstand shocks, vibration, humidity, dust, and temperature fluctuations to maintain stable and reliable video during vehicle movement. In addition, MD8563-EH features WDR Pro for unparalleled visibility in high contrast environments, Smart Stream II to optimize bandwidth efficiency, Trend Micro IoT Security and video rotation for corridor scenarios.



Delta's dynamic micro-module builds energy-saving mechanical room for the Hangzhou Olympics

Text by DGC



Delta partners with Hangzhou Olympic Sports Center to provide a reliable and efficient micro-module data center for the 2022 Hangzhou Asian Games

For the 19th Asian Games to be held in Hangzhou in 2022, Delta built a micro-module data center at the Hangzhou Olympic Sports Center to provide a highly reliable and efficient event management platform. Delta provides a dynamic series of micro-modules, including products such as the DPH series modular UPS, precision air conditioning, and DCIM data center infrastructure management system. The Dynamic series can be prefabricated at the factory with micro modules, reducing the cycle time of construction by at least 50%, saving construction costs by 50% (Note 1), and helping data centers reduce PUE by approximately 25% (Note 2). The DCIM system integrates motion monitoring, video, and access control to achieve smart control, real-time monitoring, and analysis of the data center's energy consumption, providing green and low-carbon operations for the Hangzhou Asian Games.

According to Jie Cai, Director of Information and Communication Business Department of Delta GreenTech China (DGC), modern sports events involve a large number of application systems, with a high concentration of more than a dozen applications that include an event management system, competition result calculation system, office system, and many more. Complex IT systems thereby fully depend on a reliable data center infrastructure. After careful consideration, the Hangzhou Olympic Sports Center chose Delta's Dynamic Micro-module series, which demonstrates full recognition of Delta's data center solutions. The energy-efficient product feature echoes the "green and smart" concept of the 2022 Asian Games in Hangzhou.

The integration of traditional sports events with the IoT technology has become increasingly tighter, from venues, broadcasting, ticketing, to even spectator services are using IoT technology to provide more convenient and real-time services.

Note 1. The calculation is based on an actual case in which Delta built a data center for an IDC provider.

Note 2. The PUE value of traditional data rooms is more than 2, while the PUE value of Delta's micro-module data rooms is measured at around 1.5.



Delta integrates software and hardware to introduce green smart manufacturing for a new era

Text by IABG

Article reproduced from the issue of Aug. 2021, "Manufacture & Upgrading Today"

Delta has been dedicated to the field of industrial automation for over 20 years and has gradually migrated from a components supplier to a systems integration and solutions provider. Through internal integration and external mergers and acquisitions, Delta has put the final piece of the puzzle into software skillsets. Mr. Chientan Lien, the CTO of Delta's Industrial Automation Business Group (IABG) stated, "Delta was focused on hardware products initially. However, with the expansion of our business and the rise in demand for customization, adding value to hardware with software was important to increasing our competitiveness."

"Internally, since Delta has accumulated experience and success in working with hardware, many departments thought in terms of hardware while considering resources and time for software development." In this regard, Mr. Lien set up a technology-sharing platform across business units in 2019. With the common goal of meeting customers' application requirements, the teams honed new workflows and collaboration in "soft-and-hard integration." Externally, many customers are still in a rudimentary stage in regards to paying for software." Mr. Lien emphasized that a "hardware mindset" should not be directly applied to software. Customers should experience how software solves problems that cannot be solved with hardware, such as in human resources or time management. Delta has introduced integrated software and hardware solution packs, which have been increasingly adopted in the past year. In Mr. Lien's view, software is ingenuity that has been captured to enhance value. Only when users do not judge software's value on being either "free or cheap," can the sustainable development of the software industry occur and create a win-win situation.

When it comes to green smart manufacturing, many enterprises need practical implementation more than a vision, while moving towards "Industry 4.0." With extensive experience in manufacturing and technology capabilities, Delta serves as a mentor in providing comprehensive green smart factory solutions. "To many companies, building a green smart factory was just a slogan for their corporate image. However, it has become a real challenge that all companies are facing or will face soon since energy and labor shortages are becoming ever more severe. To achieve sustainable management, Delta believes that investing in green manufacturing is becoming more urgent." Mr. Lien also asserted that "the idea of environmental protection and energy-saving has been deeply rooted in Delta and is reflected in the design of every product." With the understanding that individual energy-saving products are far from enough to achieve green manufacturing, Delta has introduced the DIAEnergie Industrial Energy Management System and the VTScada/DIAView SCADA System. With the implementation of these systems, customers can monitor energy consumption and facility status in real-time to achieve energy savings, data collection, and anomaly alarms. In addition, Delta has launched the DIALink Equipment IoT Platform for the older equipment of the traditional manufacturing industry. The platform standardizes communication to integrate OT and IT for useful management insights. At the same time, the DIAMES Manufacturing Execution System completes the digitized automation system by adding new value to old equipment and helping customers reach an environmentally-friendly smart manufacturing future.



Delta's industrial automation helps customers reach an environmentally-friendly smart manufacturing future



Upgrading household water, Delta launches a smart water treatment system

Text by DGC

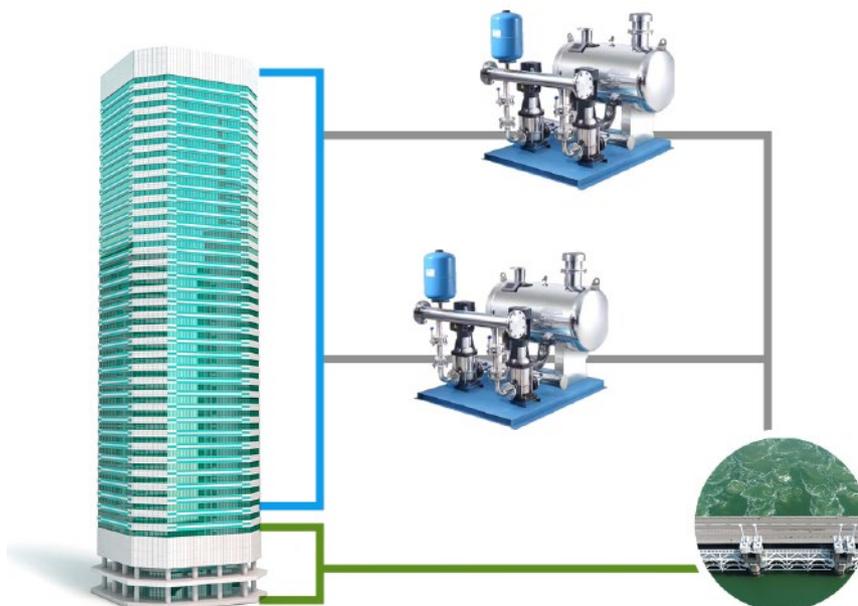
Water pumps play an essential role in water supply and drainage systems. Traditional pumps with induction motors run on utility power and adjust the flow and pressure through throttle valves, which can easily cause energy waste. Delta has launched the knapsack Motor-mounted Pump Drive—MPD series which adopts an all-in-one design and integrates the functions of a driver, motor, and PLC. This makes the product smarter and able to meet the needs of a variable frequency and constant pressure water supply system, thus pushing water supply technology into a new era that is highly efficient, intelligent, and convenient.

Mr. Wenxiang Shi, Product Director of Industrial Automation BD of Delta GreenTech China (DGC) mentioned that "after many upgrades and adjustments, we have developed the variable frequency and constant pressure water supply system that is now widely used today. However, faced with environmental protection, energy-saving, and intelligentization, most of the pumps currently used are outdated, leaving much room for improvement in terms of operational stability, control mode, pre-warning of malfunctions, maintenance, and energy consumption." Driven by Delta's smart manufacturing concept, Delta's knapsack Motor-mounted Pump Drive—MPD series were developed specifically for the secondary water supply industry. Delta's smart manufacturing and deep understanding of users' needs are realized in this product with its smart functions such as multi-pump redundancy, flow estimation, cavitation, high and low water pressure protection, as well as features high energy efficiency, low noise, and a power-saving cabinet.

The main features of Delta's knapsack all-in-one MPD series include:

- An all-in-one design that is smart, safe, and can be used with Delta's APP Pump for remote monitoring and debugging.
- A multi-pump control mode that supports up to 8 pumps.
- Significant improvement in its overall energy efficiency, reaching level IES2, in line with the new IEC61800-9-2 standards.

Delta's knapsack all-in-one MPD series brings a smarter and energy-saving growth opportunity to the secondary water supply sector. Delta also looks forward to working with our industry partners to bring excellent water experiences to all end-users!



Delta's knapsack all-in-one MPD series brings a smarter and energy-saving growth opportunity to the secondary water supply sector



Delta (Thailand) announces prizes and funding at the 2021 Angel Fund

Text by DET

Since 2016, Delta Electronics Thailand (DET) has worked with the Ministry of Industry's Department of Industrial Promotion (DIP) to foster entrepreneurs and startup talent in Thailand. Delta Angel Fund for Startup aims to encourage young Thai entrepreneurs to establish business models that leverage advanced technology and develop useful products for commercial use. DET with the DIP and partners announced the winners of the Delta Angel Fund for Startup 2021 at a virtual awards ceremony. They awarded the 22 prize-winning Thai startup teams a combined total of three million Baht in corporate sponsorship funds.



DET, the DIP and partners then presented Angel Fund for Startup certificates and sponsorship funds to 9 top prize-winning teams and 13 participation prize-winning teams. (Left-two is Mr. Jackie Chang, Delta Thailand President)

Due to COVID-19, this year's Angel Fund awards are virtual. Speaking online, Jackie Chang, Delta Thailand President said, "Although 2021 was a challenging year, our Angel Fund has evolved to online virtual events that can continue to help fulfill our mission to discover and foster entrepreneurs and startup talents in Thailand. Angel Fund's mission is to support Thai startups' aspirations through nurturing, guidance and imparting entrepreneurial skills that create solutions for better living."

Delta's Angel Fund for Startups is a key pillar in its collaboration with the Thai government, educational institutions and industry partners to support Thailand's new normal economic recovery and Thailand 4.0 development. Throughout the year, DET supported Angel Fund for Startup teams with technical and business training to develop their business proposals for automation and energy-saving innovation. This year, winning teams also can join pitching at the business reality show Shark Tank Thailand for additional funding.



Delta wins two major awards in the 2021 OFweek Industrial Automation & Digitization Awards

Text by DGC

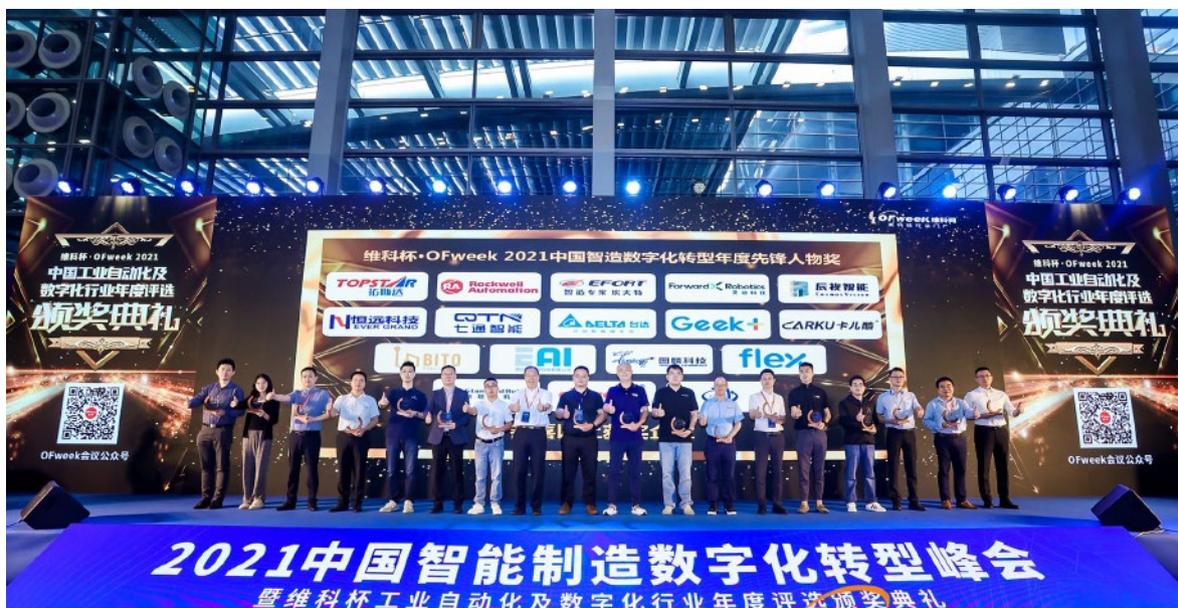
Delta is deeply rooted in the industrial automation sector, and by following the steps of simplification, standardization, modularization, digitization, virtualization, and automation to build smart factories, Delta has become well recognized by the industry. In the "2021 OFweek China Industrial Automation and Digitization Industry Annual Awards," Delta once again won market recognition for its outstanding performance in the industrial automation market in the past year by taking home two awards. The "2021 OFweek China Industrial Automation and Digitization Industry Annual Awards," organized by OFweek, has been recognizing enterprises, innovative products and technologies, leaders, and innovative models that drive China's smart manufacturing industry for more than a decade.

Pioneer of the year award — Eric Chen

Mr. Eric Chen has held the position of General Manager of Delta GreenTech's Industrial Automation BD since 2018 and has many years of experience in the industry. In the past three years, he has led the entire business team in growing steadily and achieving impressive results, with our industrial automation business growing at a rate far above the market average. In the critical period of recovery after the previous outbreak of the pandemic and the face of the reopening industrial market, Mr. Chen has led his team in fully mobilizing Delta's key technologies and solutions that have been deployed in smart manufacturing for many years, thereby providing key innovative solutions for companies committed to digital upgrade and offering customers the full "value" of smart manufacturing for future transformation.

Outstanding product of the year award—DIAStudio—Delta's smart machine suite

The award-winning DIAStudio platform is an all-in-one smart device builder software that provides an all-in-one selection and configuration software tool for integrating commonly used programmable logic controllers, human-machine interfaces, server drives, inverters, etc. for devices and systems. The single platform allows customers to quickly complete product selection, programming, product parameter setting, equipment tuning, and operator interface planning. It also simplifies and speeds up the system development process, improves convenience, and saves time and manpower needed for constructing and developing equipment systems for our customers.



Awarded the "Product of the Year Award," DIAStudio is an all-in-one smart device builder that helps customers save time and manpower in building and developing device systems



Delta's energy education volunteer service wins award for low-carbon transportation

Text by Public Affairs

In the face of global warming, extreme weather, and the danger of energy depletion, Delta established the "Delta Loves the Earth—Energy Education Volunteer Service Project." The project was recently awarded the "2021 Outstanding Volunteer Project of New Era Services in Pudong New District, Shanghai," which is yet another recognition after Heng Lin of Delta Green-Tech China (DGC) Public Affairs Office and also the project leader was awarded the Outstanding Volunteer Service Organizer of Pudong New District for 2019-2020 in June.

In response to the "30-60 Decarbonization Goal," Delta held a low-carbon transportation training workshop in Shanghai for over 30 employee volunteers from Shanghai and Wujiang. The course was led by four experienced volunteer instructors from Dongguan and Shanghai, who shared their hands-on experience with motors, coils, and other teaching aids, to "charge up" the participants' interest in learning and passing on energy knowledge to others in the future. The new materials used in the project focus on the field of transportation, which has great potential for carbon reduction. Students were instructed to observe magnets and the scientific phenomena of magnetism and magnetoelectricity, which can be used to design low-carbon transportation methods such as maglev trains and electric vehicles.

Mr. Eason Chen, Director of DGC Public Affairs Office said that since the launch of the "Delta Loves the Earth—Energy Education Volunteer Service Project" in 2013, a total of 398 staff volunteers have participated and serviced 19 schools. So far, 26,500 students have benefited from the project. We hope to inspire more children to become interested in science, energy conservation, and carbon reduction through the energy knowledge that Delta volunteers share with the public.



Group photo of the instructors and participants at the Dongguan and Shanghai plants

Delta is selected as a green and low-carbon model for its sustainable development

Text by Public Affairs Department

Delta's case model "Insisting on green development, Delta strives to become the low-carbon pioneer" was nominated for the "2021 Green and Low-Carbon Models" under the corporation category. Delta is the only electronic manufacturing corporation in this category. Delta has achieved the Scientific Based Targets (SBT) for three consecutive years since 2017 and achieved a 55% reduction in carbon intensity. In 2021, Delta also announced that it will join the RE100 global renewable energy initiative, and pledge to meet the goal of 100% renewable electricity usage in its global plants by 2030, displaying Delta's commitment to sustainable development. This nomination strongly reflects Delta's efforts in achieving energy conservation and carbon reduction in its products, production sites, and green buildings and also how Delta's actions actively address climate change and promote green and low-carbon development.

Chairman of Delta's china sustainable development committee, Mr. Wang Zhi-Ping stated that Delta has been continuously improving the energy conversion efficiency of its products and promoting energy saving in its production networks. At the same time, Delta is actively deploying renewable energy solutions to achieve the 2030 target by strengthening its capability to self-generate and use solar energy, self-build power plants, negotiate power purchase agreements, and acquire renewable energy certificates.



Delta was nominated as a corporation candidate for the "2021 Green and Low-Carbon Models," and is the only electronic manufacturing corporation in this category



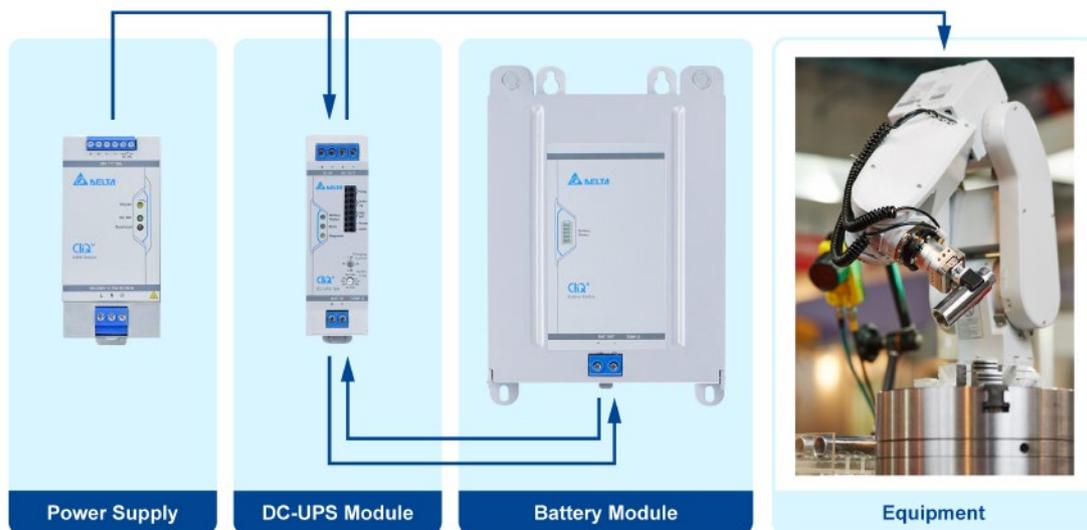
Delta expands the CliQ M series power supply with new DC-UPS and battery modules

Text by DET

Delta has started to equip its CliQ M Series Power Supplies with the new DC-UPS and battery modules for uninterruptible systems. All matched together, the CliQ M Series power supplies and modules are set to reduce production downtime during power failures. The three new DC-UPS modules for the CliQ M Series offer various output currents of 10A (DRU-24V10AMN), 20A (DRU-24V20AMN) and 40A (DRU-24V40AMN), and a wide input voltage range from 18 - 30Vdc. They can support a battery charge at 18Vdc and a 150% power boost function in 24V systems. In addition, the charging current (optional) and the buffering time are selectable according to user needs.

The CliQ M battery module (DRN-24V7AAEN) is designed to support 2 x 12V 7.2AH lead-acid batteries for 24V system as backup power. The battery module has a built-in battery voltage indicator to easily monitor the battery status during operation. Over temperature protection is available when using the CliQ M battery module together with the DC-UPS modules. The combination also helps to extend battery life and makes a better power solution for uninterruptible systems in a wide range of applications, such as industrial automation, factory automation, machine automation, and more.

The CliQ M Series Set for Uninterruptible Systems:





Delta shares “Sustainable Conservation & Nurturing Life” advocacy with the international community at COP26

Text by DEF

Many people may have seen much news and media coverage on COP26 (the 26th UN Climate Change Conference of the Parties) in early November. Delayed for two years due to the COVID-19 pandemic, COP26 is the most important international climate conference since COP21, which was held in Paris in 2015. Delta Foundation held a peripheral meeting centered on "The Transformative Power of Urban Living Labs" theme in the official negotiation zone.

According to statistics, apart from the official negotiators from nearly 200 countries, about 50,000 participants from all walks of life, including online and offline, gathered at the conference. During the conference, two protests were held in front of the venue with more than tens of thousands of people rallying.





Important progress from COP21 includes phasing out coal, conserving forests, and cutting methane emissions

Firstly, according to the Sixth Assessment Report on Climate Change (AR6 WG I) just released by the IPCC (Intergovernmental Panel on Climate Change), the average surface temperature of the Earth has increased by 1.07 degrees Celsius compared to the pre-industrial revolution, and the 1.5 degree Celsius warming threshold could be breached in less than a decade. The United Nations Environment Programme (UNEP) has published the "Emissions Gap Report" for 12 consecutive years and the recent Emissions Gap Report 2021 has directly pointed out that there is still a huge gap of 13 billion to 28 billion tons between the current situation and the Nationally Determined Contribution (NDC) 2030 carbon reduction target of 1.5 degrees Celsius and 2 degrees Celsius as previously proposed by various countries. Unsurprisingly, UN Secretary-General António Guterres warned that "the world is on a disastrous path to 2.7 degrees Celsius of global warming" before the meeting.



COP26 consensus reached after extending the conference for another day



Despite the difficult journey, Delta still held a successful peripheral meeting at COP26. Second from the right is Mr. Wim Chang, CEO of Delta Foundation

After 15 days of heated discussions and negotiations, COP26 finally reached the Glasgow Climate Pact after an extended meeting. The pact specifies that countries must strengthen their 2030 emissions reduction targets by the end of next year, cut unabated coal which doesn't use carbon capture technology, and phase out "inefficient fossil fuel subsidies." The Paris Agreement Rulebook was also finalized, including Article 6, which drives the global carbon market, and the conference consensus pledges to increase financial assistance to developing countries.

Although the results were met with some resistance from a few countries at the last minute, COP26 still achieved a milestone by moving forward on the international carbon reduction plan that was delayed for two years due to the pandemic. This also makes the Glasgow Climate Agreement the first UN climate agreement to signify the removal of fossil fuels.

The COP26 consensus includes the signing of the "Glasgow Leaders' Declaration on Forests and Land Use" by more than 120 countries. Accounting for more than 90% of the world's forests, the countries have committed to work together to halt deforestation by 2030. Secondly, the Global Methane Pledge, initiated by the U.S. and EU in September, was echoed by hundreds of countries at the meeting, agreeing to reduce methane emissions by 30% by 2030 compared to 2020 levels. There is also the global coal to clean energy transition statement, which is supported by 40 countries, in which 23 countries have already made plans to phase out coal.

Other areas ranging from climate finance, low-carbon transportation, and Nature-Based Solutions (NBS) also show good results. The World Energy Agency (IEA) recently hypothesized that if all countries implement these new commitments, warming could be curbed to 1.8 degrees Celsius in this century.



Even the world's top two sources of emissions—the U.S. and China, which had few interactions before the conference, issued the last-minute "U.S.-China Joint Glasgow Declaration on Enhancing Climate Action in the 2020s." The Declaration is a climate cooperation commitment between the two nations to work together to reduce methane, develop clean energy, and move towards the 1.5 degrees Celsius goal in the next decade.

Delta and international opinion leaders host peripheral conference to share low carbon solutions



The 8K environmental documentaries produced by Delta Foundation were screened at COP26

Due to the pandemic situation, COP26 is arguably the most restricted and difficult climate conference in history. For 14 consecutive times, the Delta Foundation has participated in the United Nations Climate Conference. This time, the Foundation, together with international opinion leaders from the Virginia Tech, UN-Habitat, Technical University of Berlin, and Local Governments for Sustainability (ICLEI), successfully hosted a peripheral meeting in the official negotiation zone of the conference, allowing the international community to witness Taiwanese companies' experience in carbon reduction.

CEO Wim Chang, representing Delta Foundation, pointed out that low-carbon transportation and microgrid applications not only play an important role in increasing urban energy resilience but are also the key to moving towards net-zero emissions in the future. Delta has provided power systems and power conversion solutions for major vehicle manufacturers around the world. Charging solutions combines innovative technologies such as energy

storage and V2G (vehicle-to-grid) to enhance the scheduling flexibility of urban power grids and resilience to unexpected events through the installation of decentralized energy systems. This year, the Foundation further promotes mobile pollution source monitoring networks. Working with electric vehicle companies, we will install PM2.5 (fine particulate matter) and carbon monoxide sensors that turn real-time data into the easy-to-understand "Street-level air pollution monitoring roadmap." We hope to promote a wider area of air quality maintenance and accelerate the spread of zero-pollution electric vehicles. In addition to organizing peripheral meetings, Delta also produced several 8K environmental documentaries such as "The Birth" and "Life in the Coral Reefs," which were screened at the United Nations official negotiating zone. The videos featured stunning images of marine ecology, in hopes of raising public awareness towards the impact of climate change on the oceans.

With the closure of COP26, next year, COP27 will be held in Egypt. Delta Foundation will then bring back first-hand updates to share with everyone.

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