



## CEO MESSAGE

RICHARD LANCASTER CHIEF EXECUTIVE OFFICER



# Fulfilling a Promise of Reliability

Dear colleagues,

It was summer in the past few months in most of our business areas and I hope you and your families had an enjoyable and fun-filled summer break. Hong Kong is often stiflingly hot in the summer but also has some stunning countryside, beaches, and country trails for us to enjoy through the school holidays.

I remember my children used to find it strange that when typhoon signal No 8 was hoisted in the summer, friends' parents would have a day at home while I remained at work. They have now grown up and realise that in the power business, maintaining a stable and reliable supply for customers through typhoons, storms and other extreme weather conditions doesn't just happen by chance and requires the efforts of many dedicated people. This is particularly true in a high-rise, 24-hour city like Hong Kong where just a few seconds of power outage can cause disruptions of significant consequences.

This was brought home when Typhoon Mangkhut struck recently. This super typhoon, the most severe to hit Hong Kong since records began in 1946, wreaked havoc across the city. While the city suffered a heavy blow, our frontline staff braved the storm and responded quickly to carry out emergency repairs and restore power. In the aftermath, our engineers worked around-the-clock to

keep the electricity system reliable and safe, while our support teams were relentless in caring for many of our customers who were affected. A speedy recovery was only made possible by their dedication and the support of numerous Government agencies working closely together. You can read more about their great work in this issue of CLP.CONNECT. Typhoon Mangkhut has sent a clear warning that we need to do more to prepare ourselves for the unexpected so we can be ready to face similar challenges in future.



In meeting this challenge, technology is our ally. Data science will soon be able to tell us more information on how an approaching typhoon will affect us and what its likely route will be, making us better prepared to protect our power lines and substations. In this issue, Chief Operating Officer Derek Parkin gives an excellent account of our work in safeguarding the reliability of our systems. Our goal is to make sure that when typhoons strike, our customers can rest assured that they are in safe hands.

We also turn the spotlight on examples of how we have improved reliability of our operations in Mainland China, India and Australia. While we continue to invest in the latest technology and equipment, strengthening our manpower is equally, if not more, important because at any time our most important asset is our people. In this issue, you will learn more about the CLP Power Academy which has a pivotal role to play in expanding our talent pool.

This continued investment and commitment to excellence has contributed to a strong set of results for the first half of 2018. Although the challenges of climate change and global economic uncertainties are considerable, I am confident that with your dedication, we will rise to them and continue to offer reliable, clean and affordable energy, and a brighter, sustainable future.

Happy Reading!

A handwritten signature in black ink, appearing to read 'R. Lancaster'.

**Richard Lancaster**

Chief Executive Officer





# Teamwork Helps Us through the Storm of the Century

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It was a Sunday morning like no other for senior engineer Tse Kwan Leung. Rather than relaxing at home with his family, Tse found himself on frontline duty at the CLP Power System Control Centre in Tai Po as Super Typhoon Mangkhut, the most severe storm to hit Hong Kong since records began, barreled across the South China Sea towards the territory on 16 September 2018.

Mangkhut left a trail of destruction: there were over 46,500 reports of fallen trees, 500 reports of broken windows, and about 1,800 people sought refuge at Government shelters. The storm also affected power

supply to about 40,000 CLP customers, many of them in remote areas of the New Territories, providing us all with a powerful reminder about the immense challenges the brutal forces of nature can present.

## Calm before the storm

In the hours before the storm strikes, Tse and his colleagues are on edge as they monitor Mangkhut's menacing approach. "We can't afford to rely on luck," Tse says. "This is a super typhoon and we have to be on our highest alert."

This is despite preparations had begun months – and in some cases years – before.

High-voltage overhead lines and towers, for example, had been reinforced to give them the best possible chance of surviving such storms, explains Ken Chan, Acting Senior Maintenance Engineer for the North Region.

"We began to strengthen the integrity and structure of our 400 kV overhead lines towers a few years ago and they can withstand wind gusts up to 300 km/h," he explains.

As weather forecasts spotted Mangkhut bearing down on Hong Kong, maintenance teams stepped up patrols of the transmission overhead line network with helicopters while vegetation management teams cleared stretches of overhead lines at risk from trees.

Another major safeguard has been the installation of flood gates to prevent substations in low-lying areas and near the coastline from being submerged, says Anson Wong, Acting Senior Maintenance Manager for East and West Region.

"At one substation which provides electricity to a government shelter, a storm surge pushed the water level so high that it would have been put out of action if not for the flood gates," Anson says.

In anticipation of Mangkhut, Tse and his colleagues began emergency planning around a week before it struck, making contingency plans for all CLP power plants in Hong Kong as well as the Daya Bay Nuclear Power Station and the Pumped Storage Power Station in Guangzhou. A coordinated strategy was in place to deal with typhoon's impact.

An even more critical element was advance manpower planning to ensure system control engineers were on duty around the clock before T9 and T10 typhoon signals were hoisted, Tse says.

“This arrangement ensures we keep our systems running through the most critical hours of Mangkhut,” he explains. “It is of critical importance given the extraordinary workloads at the height of a typhoon and its aftermath.”

## In the eye of the storm

It is two hours before the T8 typhoon signal is hoisted and the Emergency Management Team of the Power Systems Business Group is in action on the sixth floor of CLP's Sham Shui Po office. Eric Cheung, Senior Director – Power Systems, is coordinating regional offices while the public affairs team handles an avalanche of media enquiries.



In Tai Po, Tse describes the atmosphere as tense throughout the 12 hours when the storm was at its peak. “We recorded many cases of overhead line faults in our 400 kV systems when the T9 and T10 signals were up,” Tse says afterwards.

“The faults came one after the other, especially on the 11kV overhead lines circuits. Our engineers had no time to pause. They had to keep a cool head and do the best they could to restore power by remote control where possible.”

He reflects: “I have been through many major typhoons, but this was the most severe storm I have experienced.”

## Picking up the pieces

Super Typhoon Mangkhut was indeed stronger than what we had prepared for. It wreaked havoc across Hong Kong: public transport came to a halt, schools were closed for two days and both runways at the airport were open overnight to handle 2,000 rescheduled flights.

Terry Fung, an engineer with North Region, says there were huge obstacles to restoring power for some of our customers in certain areas. “When we first sent our emergency teams from Sheung Shui, they were unable to go anywhere because almost all roads were blocked. At the end, they had to go by foot to inspect the substations before System Control Centre could restore the power supply,” he says.





In the end, it was all down to teamwork. To help the massive clean-up operation, colleagues from different business groups rushed in. Employees from the Generation Business Group, the Engineering Projects Department, the East and West Region, the Technical Services Department, CLP Engineering, and even the Power Academy

rolled up their sleeves to assist.

“It was really encouraging, because we truly felt everyone in the company was supporting us and we were not alone,” says Terry.

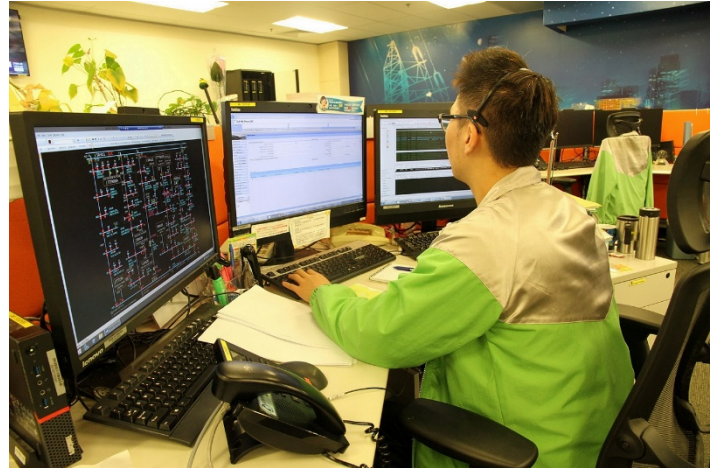
Liu Wai Lung, a leader of the North Region’s Vegetation Management Team, spent more than nine hours clearing fallen trees from an access road to Tai Lam Country Park with three colleagues from CLP Engineering and a group of contractor employees.

“The access road was almost buried under the trees but we knew that we needed to clear it so our emergency team could do repairs. We felt like we were in a war and there was no turning back,” he says afterwards.

Some trees weighed more than a tonne and Liu and his colleagues resorted to ingenious methods to move them. “It was almost mission impossible because we had to cut all these big trees into smaller pieces or roll them down the hill,” he says.

## Answering the call of duty

Simon Lam, who oversees CLP Power's residential customer services, says staff at the call centre were under immense pressure dealing with the impact of Typhoon Mangkhut. "Our colleagues were exhausted as most of us only had a few hours of sleep every night and were on duty at least until late night for about a week after the typhoon. But we knew some customers had been out of power for many days. They relied on us to help them out," he explains.



"That was what kept our people going – our commitment to our customers and to take every extra step to provide the emergency service to them and help restore power as soon as we could.

"To answer calls from customers, we pooled resources from other teams. Even colleagues from Group IT and back office helped. At the same time, we asked our Customer Care team agents to look after those customers in particularly difficult conditions.

"Despite the pressure, our colleagues still came back on weekend to support the handling of customers' enquiries on telephone, social media or email. They were all 100% supportive. That demonstrates everyone's commitment."

The same level of dedication was shown by account manager Sally Leung who deals with various government departments on utilities. "Some of the reservoirs and traffic lights are located in rural and remote areas. It will cause great disturbance and chaos to customers if the water supply facilities suffered power outage and if the traffic lights were out when the schools resumed," Sally says.

"So we proactively liaised with respective government departments and co-ordinated with our engineering colleagues to help identify the fault locations quickly and swiftly carried out repairs," she adds.



## A storm-proof team spirit

The dedication of employees in dealing with the storm has been recognised by customers, among them Lantau resident Ruby. In a letter she commended the CLP team who helped restore power to her village two days after the storm: “I would like to give my great respect to this dedication and devoted attitude to fixing the power issues for a village left in a desperate situation. Their help has left us with bright smiles on our face and a grateful heart.”

Yuen Long resident Siu Long Ming agreed, saying: “This proves once again the team at CLP Power is really world class and you always work hard to ensure a stable electricity supply for customers under any adverse circumstances.”

What impressed CLP Power Managing Director TK Chiang most was the willingness and commitment of employees to look out for and support each other. “You have shown me what teamwork is all about,” he says.

“Different teams will conduct reviews to find areas where our emergency preparedness and handling can be further improved. But with your dedication and professionalism, I am confident we will overcome challenges as we brace ourselves for more frequent typhoons and maintain our commitment to look after our customers at all times, whatever the weather.”





## Lifelong Lessons in Reliability and Safety



Derek Parkin, CLP Holdings Chief Operating Officer (COO), vividly remembers an early lesson in the importance of reliability and safety. Born into a coal mining family in the north of England, he landed his first job as a 16-year-old schoolboy cleaning the floors of the offices at a coal mine.

He was sweeping the floor one day in what seemed like a mundane chore when his boss told him to use dampened sawdust to stop dust from contaminating vital safety lamps and protective masks. “Derek, don’t think about this as just sweeping the floor. Think about it as saving a life, because by sweeping the floor properly and keeping the dust down so it doesn’t affect this very valuable equipment, you will save somebody’s life,” his boss told him.

“That lesson has stayed with me all my life,” Derek reflects.

## On the coalface

At 18, Derek followed in the footsteps of his father and grandfather by working on the coalface. He then went to university and returned under the mentorship of the deputy chairman of British Coal. He was put on a fast-track to management by being sent abroad to coal-mining countries including Australia, China, India, South Africa, Russia, Columbia and Indonesia. When he returned to the UK four years later, he was made manager of a coal mine. “I was a young man and I had 1,000 highly unionised people working for me and lots of responsibility,” he says. “It was a great learning experience.”



Coal mining went into steep decline in the mid-1980s under Margaret Thatcher's Conservative government. Sensing the end of the traditional industry, Derek switched to construction, working as an engineer on the Channel Tunnel project, which connects the UK with France, and later moving to Hong Kong for the iconic

Chek Lap Kok airport project.

He worked on a succession of tunnel and airport construction projects in Japan, Australia, and the UK before he was approached by E.ON UK to join the Executive Board. E.ON UK was of a similar size to the Hong Kong business of CLP at the time. “This was my first power generation job,” he recalls. He then went on to run E.ON's new build and engineering business in Europe across 26 countries for five years before joining CLP in 2015.

## Engineering a brighter future

As COO, Derek recognises that the function of Group Operations has a special role to play in contributing to CLP's “Focus · Delivery · Growth” strategy. His responsibility is to make sure our assets perform to the highest levels of safety, environmental performance, availability and efficiency. He believes that it can only be achieved if people are motivated, capable and inspired to deliver.



“Only when we are successful in delivering in the focused area, do we get the right to grow,” he says.

Technology also helps. In the past, power plant engineers relied on condition monitoring methods such as vibration monitoring, and pressure and temperature sensors to identify premature failures. Some even claim they could tell by the sound of things if anything needed attention. Today, with a growing digital and big data capability, new systems have been developed with tools such as machine learning and artificial intelligence, empowering engineers to do their job effectively and efficiently without having to rely on intuition alone.

“We are currently trialing some equipment health systems at a number of our plants to detect premature failure of critical components and reduce unplanned disruption,” Derek explains. “Implementing these trials raises our knowledge and understanding on reliability and many performance aspects of our equipment and plant systems.”



For example, the low-voltage cable network is one of the most important elements in providing a stable electricity supply but the monitoring of network problems can be a tedious, manual task. With the availability of sensor data and new analytics tools and algorithms, monitoring can be done automatically, allowing engineers to better manage the cable network in a timely and responsive manner that prevents outages.

The Castle Peak Power Station, meanwhile, has just completed a trial to improve its boiler efficiency and reduce wear and tear through the use of optimisers. The trial enhances fuel combustion through self-learning capability and carries out soot-blowing by tapping the power of an intelligent system. Trials are also being conducted on our renewable assets in Mainland China and India. It is early days but some promising results are beginning to emerge.

## Increasing reliability

Derek believes there is an element of trial and error in identifying the right technologies. He says it is critical to establish a consistent and reliable testing regime so the value of new tools can be evaluated and we must adopt the “fail fast, move on” approach.

Reliability is not just about having the confidence of a smooth running plant, it is about trying to identify and predict failures and interruptions to operations. “You need to time your outages to suit the requirements of the market,” he explains.

“Having a plant that is 98% available but lost 10% of value in that 2% when the plant was not available is sub-optimal. Reliability is about absolute readiness to perform whether that be from an operational, safety, environmental or security perspective. What I am looking for is a clear indication that we are managing our outages and optimising our performance and that is the key.”

## Transformational changes

While each individual initiative may have its own contribution, it is important to understand that the whole is greater than the sum of parts, Derek argues. “Take load forecast for instance, which is closely related to weather events,” he says. “Having a clearer, better, and longer-term understanding of weather events and the behaviour of our customers helps in our load prediction and therefore allows us to better manage our outages and overall performance of the plants.”

“Hong Kong is gearing towards a reduced carbon footprint and more renewable energy. When these new sources of energy are fed onto the system, utility companies will need more information to better understand the different impacts so as to optimise the overall system,” he says.

“That is why our journey is so important as we improve our system from an optimisation and efficiency point of view,” he points out. “It will help us to better understand our assets, the requirements of our customers, the market in which we operate, and therefore the energy system of the future. It is a vital part of the total transformation toward a utility of the future.”

## A Footballer's Dream

Derek was an outstanding young footballer and his childhood dream was to become a professional player. However, a serious injury at the age of 14 forced him to give up his favorite sport and focus on his academic studies.



Afterwards, he did not play any sports until he took up squash at university and made such progress that he became a county-level player within 18 months. Derek went on to play at national level, taking part in tournaments in Holland and Germany.

Derek was an avid squash player until he recently switched to tennis. Even after all these years, however, Derek says his two biggest loves in life are football and his family.

Reflecting on the injury that ended his young dreams, Derek said: “It taught me the importance of health and wellbeing and that life is fragile. Without your health, your dreams remain dreams and everyday events can change our lives forever.”





# Learning from Masters at the Power Industry's Shaolin Temple

For centuries, apprentices have learned from masters of their craft, taking instruction and watching them closely to gain their skills and expertise before eventually that precious knowledge is passed to the next generation.

It is a tradition CLP has enthusiastically embraced. But in an era of rapid technological advances and a highly sophisticated customer marketplace, apprenticeships have evolved to combine mentorship with the best possible classroom training.



CLP launched the CLP Power Academy last year to provide vocational training to the general public. Its goal is to become a world-class professional training institution, offering high quality and recognised training programmes for people who want to pursue a career in the power industry.

Separately, the Power Academy, which focuses on providing technical, safety and management training for CLP staff and contractors, has grown out of the Training School which began teaching CLP apprentices in Shum Shui Po more than half a century ago.

“The Training School was our Shaolin Temple,” says Deputy Director of Engineering Training and Development Kwan Chung Ming (CM). “Over the years, I have probably worked under the tutelage of 30 to 40 masters.

“We usually learned a certain skill at the Training School and would then practise it when we were on our duties. Our masters would correct our mistakes and show us how to improve.

“This is how we became very good at what we do. We perfected our craft through repeated learning and practice, and this contributes to the reliability and efficiency of our systems.”

## Rising to modern challenges

In the past, apprenticeship programmes focused exclusively on skills transfer. Nowadays, where the need of the electrical and mechanical engineering field for 2,000 new recruits a year is usually only half met, the curriculum at the Power Academy has also been expanded to include soft skills such as career planning and relationship management to broaden students' prospects and help retention.

The Power Academy also invites past graduates of the Training School to be mentors to provide students with counselling and advice and help them adapt to the new learning and working environment.

## Turning lives around

As Hong Kong accelerates its infrastructure development in recent years, the electrical and mechanical industry has provided a pathway to success for many young people like Au Wai Man, a senior tradesman with CLP who only three years ago was drifting from job to job. A secondary three school leaver, he worked as a waiter and a salesman.



“I would earn about \$10,000 a month but I often gave up after working for a while, realising the job was not suitable for me,” he recalls.

Ah Man found his direction when his father, a welder with CLP, got his son an apprenticeship at a friend's company. "Welding is tough and you are covered in sweat and dirt after a hard day's work. But it's a professional trade and I know I can become a master welder if I work hard at it," he says.

Ah Man successfully applied for his father's job at CLP when he retired. Helped by the stable work environment and support of the company, he enrolled in a number of Vocational Training Council courses to improve his skills and knowledge.

"Other companies rarely send their welders to take courses, but CLP encourages us to pursue further studies," he says. "I'm fortunate to have had the chance to become a welder thanks to my father, and I know if I work hard, I will succeed."

## Changing course

Diana Leung is currently a student of the CLP Power Academy. She had worked in textile printing and dyeing, but became disillusioned and successfully applied for a job in safety work at CLP.

"My friends wondered why I changed career, but I felt the textile work was rather dull. I wanted to learn new things and develop in different areas while I was young," she says. "I believe women have more room to develop in the power industry, whereas the textile industry has more limitations." Diana now has her sights set on becoming an engineer.



To Man Chun, who left school after secondary three and worked in catering industry, also wanted to find a lifelong career while he was still young. Even though he qualified as a



Japanese sushi chef after eight years in the business, he took the plunge and signed up for the CLP Apprentice Training Programme two years ago.

Man Chun found the career opportunities in catering limited and long working hours left him little time for his family. "The apprenticeship programme has a clear direction for development, and the job is stable, allowing me to develop my career," he says. "I want to learn a specialty while I am young and develop my potential so I can contribute to society."

## Skills for life

Both the CLP Power Academy and Power Academy are responding to the changing needs of their students in supporting them with the most up-to-date training methods.

"Young people of different generations have different problems," CM says. "In the past, I had to fight hard for opportunities."

"Nowadays, society has high expectations on young people in terms of learning. Our programmes not only focus on technology and practical skills, but also on building students' confidence and helping them to climb the social ladder."



# Inspirational Youngsters Find a Way to Brighter Tomorrows



They are brave, determined, humbling, and truly inspiring – young Hong Kong people who rise above difficulties to succeed in their studies and move forward in life against the odds.

This year, CLP Power for the first time partners with the Hong Kong Federation of Youth Groups in sponsoring the *CLP Energy for Brighter Tomorrows* award. The programme aims to

highlight real-life stories of young people who overcome challenging circumstances and backgrounds through the power of positivity.

CLP Power Chief Corporate Development Officer Quince Chong says: “I know we've got it right when I listen to the real-life stories of these young people.”

In addition to sponsoring the award, CLP also matches employee mentors with the award-winning students to provide them with support and guidance.

One of the mentors, CLP Power Academy senior instructor Jason Yeung, says the students have made a profound impression on him. “For many of them, just living with parents in a decent home is a luxury. The practical help we can give them may not be much but we can listen to them and give them some support and comfort. We can also share our own experiences in overcoming difficulties and offer them advice on academic and career matters.”

Here are the inspiring and life-affirming stories of three of the 20 winners of this year's award:

## Home away from home



Ka Ho was downcast when he and his family left their home in Shanwei in Guangdong province to come to Hong Kong and found themselves in a 100 square feet cubicle home. “I used to live with my family in a three-storey house and I had my own bedroom,” he recalls.

“Life in Shanwei was not luxurious but it was good. I played four hours of basketball every day. But I lost all of that when I came to Hong Kong.”

School was no easier. Not speaking Cantonese, he found himself isolated and without friends. His academic results were poor. He would go alone to the library when classes ended. “I asked myself ‘Why did I give up my good life in Mainland China and come to Hong Kong?’,” he says.

As he reflected on his new life, however, Ka Ho realised his mother had sacrificed a nursing job to move to Hong Kong to support him and his brother. His father told him: “You reap what you sow.”



“I began to realise I had done nothing to change my life and I was just sitting and waiting for opportunities,” he says. “I expected other people to give me light but I forgot that I could also shine.”

He began to work hard at his best subject, maths, and helped classmates who in turn helped him with his Cantonese and English. “I couldn’t change my environment but I could change my mindset,” he says.

Ka Ho kept going to the library and became an avid reader and went on to win a science competition with his brother. With friends and academic success has come new hope. “I am confident I can reach new heights even though I live in a cubicle home,” he says with a happy smile.

## Overcoming a motherless childhood

Tik Sun grew up in foster homes because his single mother was unwell and unable to care for him. Since childhood, he has only been able to see her at weekends.

“When I was young, I didn’t understand what was happening,” he says. “It wasn’t until I was eight or nine and my mother’s situation was explained to me that I began to sort out my relationship with her.”



Tik Sun rose above his difficulties at home to apply himself to his studies, indulging his passion for geography and astronomy in particular. He has now graduated from secondary school and was accepted by the Chinese University of Hong Kong for its science programme.

“Problems are challenging but they can be solved,” he says. “Are they crises or opportunities? It depends how you think and how you respond to them.

“I have lived under other people’s roofs since childhood. I have learned we cannot take things in life for granted – a mother, food, clothes, even a clean bed. I am grateful for what I have.”

## A dramatic turnaround

Cornelius was a troublesome pupil. Diagnosed with Attention Deficit Hyperactivity Disorder and dyslexia in primary school, he felt inferior and lonely and got into fights with other children.

“I was punished by being made to stand outside the staff room during every recess,” he recalls. “My classmates laughed at me.”



His life slowly turned around in secondary school where one teacher told him: “If you can’t cope with today’s difficulties, you won’t be able to face up to tomorrow’s challenges.” Another teacher encouraged him to divert his energy into drama.

Cornelius took to the stage and his talent shone through. A teacher invited him to enter a drama competition and he won the

Outstanding Actor award. “Even though my academic results were not good, I had been passionate about movies since I was very young,” he says.

He plans to apply for a place in the Hong Kong Academy of Performing Arts in pursuit of his dream. “My dream is to become a famous actor and even to go to Hollywood,” an excited Cornelius says.



# Scaling the Heights to Ensure Reliability

Varun Shah goes to great lengths – and heights – to ensure reliability and safety at the wind farm he manages: More than 74 meters above the ground, to be precise, to the very pinnacle of a wind turbine in rural India.

As CLP India Deputy Manager of Operations (Renewable Energy), Varun looks after the 106MW Andhra Lake Wind Farm in Maharashtra. With more than seven years of experience, he is a core member of the team of CLP managers who keep the 874 turbines of our 12 farms across seven states in India performing reliably around-the-clock.



Their work includes climbing wind turbines – sometimes using a monkey ladder, tackling daily problems, and working closely with equipment manufacturers, contractors and communities to ensure everything runs smoothly.

## Building relationships

CLP's wind farms typically run through large tracts of land covering deserts, mountains, and deep valleys and their management poses unique challenges. Annual monsoons and high winds mean that even a routine patrol of the transmission lines can be a risky business.

According to Abhay Potdar, CLP India's Senior Vice President – Renewables Operations, it is important that the CLP management team closely engages with the contract partners so the wind and solar farms can achieve safe and efficient operations. CLP India currently manages its renewable projects with the help of over 1,000 contract partner staff.

“Managing our renewable projects is challenging since a lot of events happen on our sites every day. Our renewable projects also employ a variety of technologies that require us to work closely with four original equipment manufacturer (OEM) partners who come from different cultures and are at different stages of maturity in terms of their health and safety practices,” Abhay explains.

Andhra Lake is a good example. As CLP India's biggest wind power project in terms of capacity, the farm boasts 133 wind turbines spreading over 194 hectares of land. Due to its complex terrain, road access is challenging – especially during the monsoon period – and extra care is needed to ensure safety for site personnel. To build a robust relationship with the local community, Andhra Lake has made job opportunities available for local villagers depending on their skill levels.

To manage such a huge project, Varun is convinced that apart from strong bonding with the OEM partners, a good relationship with local villagers is as essential.

“To achieve high reliability and safety, we need both,” Varun says.



## A safety partnership

In January 2017, CLP introduced the Safety Partnership Plan (SPP) across all 12 wind farms and the Veltoor solar project to cut through the demographic, social, and cultural barriers in building a sustainable culture of safety. Under the SPP, which is based upon CLP's core value of respect for all, CLP managers, OEM partners and the contract partners work together to establish a blame-free and cohesive safety culture.

"This effort is co-owned by CLP and the OEM partners. The SPP fosters and reinforces our safety and environmental standards and helps build a vibrant culture which emphasises the importance of health, safety, security and environment enabling us to achieve all-round operational excellence," Abhay stresses.



Varun says that close engagement between CLP and its partners, and public recognition of safety champions among the contract partner staff play an important role in making the SPP a success. Working together with the contract partners, CLP managers like Varun regularly identify contributors who have demonstrated positive safety behaviour for rewards and public recognition.

"Our awards play a very important role in motivating the team to ensure 100% work safety at site. The impact of SPP actually goes beyond work and can be seen in the every day's lives of the people who work on our wind farms. We have achieved our target of zero incidents in the first year of the programme," Varun says.

Abhay agrees. "Programmes with strong management support such as the SPP and good managers complement each other. Taking into account of the geographical spread of our projects, these two elements are equally important in ensuring a high standard of safety and reliability across all our assets all year long," he says.



“Wah, wah, wah...” The alarm in the central control room rings out with shrill urgency as red lights on the control panel flash insistently. Alert messages begin to fill the monitor screen signalling a power failure at the flood gates, a malfunction of dam control equipment, and an interruption in the 10kV power transmission lines.

Deputy plant manager of Jiangbian Hydro Power Station Hu Quan looks intently at the panel to decipher the avalanche of signals and messages. He then picks up his wireless device and delivers a calm message to emergency staff in the dam duty room: “Transmit the reservoir water level information to central control.”



The meter shows the reservoir has reached dangerous levels, meaning the rising water will breach the embankment if the flow continues. Minutes later, Hu breathes a sigh of relief as he receives a reassuring response from the emergency staff. “Back-up diesel power generator operating normally. No 1 and 2 flood gates open. Equipment back to normal.”

It may sound like the plot of a TV drama but in fact this was the scene of an emergency drill held in May at Jiangbian, CLP’s largest hydro power station in Mainland China. The 330MW power station, located in an alpine valley in Jiulong county of Sichuan province, is exposed to

flooding, mudslide, and landslide risks during the rainy season from June to October. To make sure employees are prepared at all times for sudden crises, about 20 drills are held every year simulating different emergencies.

## Hard-learned lessons

For Hu, the drill has a special significance. “It reminds me of the incident four years ago which I still remember vividly today,” he says.

On 29 August 2014, Jiangbian was cut off from the outside world by landslides after days of downpours. It was impossible to assess the damage because the road to the dam was blocked by huge boulders. Hu was duty leader but he was unable to contact the dam duty staff from the central control room and was deeply worried for their safety.

The plant was effectively shut down as the base tower of a 220kV transmission line had collapsed, cutting off power transmission. No one was injured but it took almost a month before the station returned to normal operations.

“Even though we got safely through that crisis, there were lessons to be learned,” says Hu. “We worked hard to identify our deficiencies, and changed our mindset to focus more on prevention to ensure the safety and reliable operation of the plant. Thankfully, we were able to maintain a high reliability standard and have not experienced any unplanned outages since.”

## Preventive measures



Hu and his team have put in place solutions and upgrades over the past four years, including a three-way wireless communication system connecting the central control room, the security room, and the dam duty room to maintain real-time communication at all times even if the external network breaks down.

In addition, the automatic control system for the flood gates has been upgraded. The back-up diesel power generator now automatically powers up the flood gates to discharge water when control is lost due to power failure. Meanwhile, the power station has introduced automatic cleaning machines to remove floating objects from the



reservoir, greatly improving efficiency and ensuring the safe operation of the power generators.

In the process of improving operational reliability, Jiangbian often relies on its own engineers to devise solutions since most of its system software and control processes are not commonly used in the industry. The engineers sometimes spend weeks working with the suppliers to deliver unique solutions.

## Keeping a watchful eye

Jiangbian plant manager Wu Xun says that although there has been no major incident in the past four years, prevention is the best guarantee of safety and reliability.

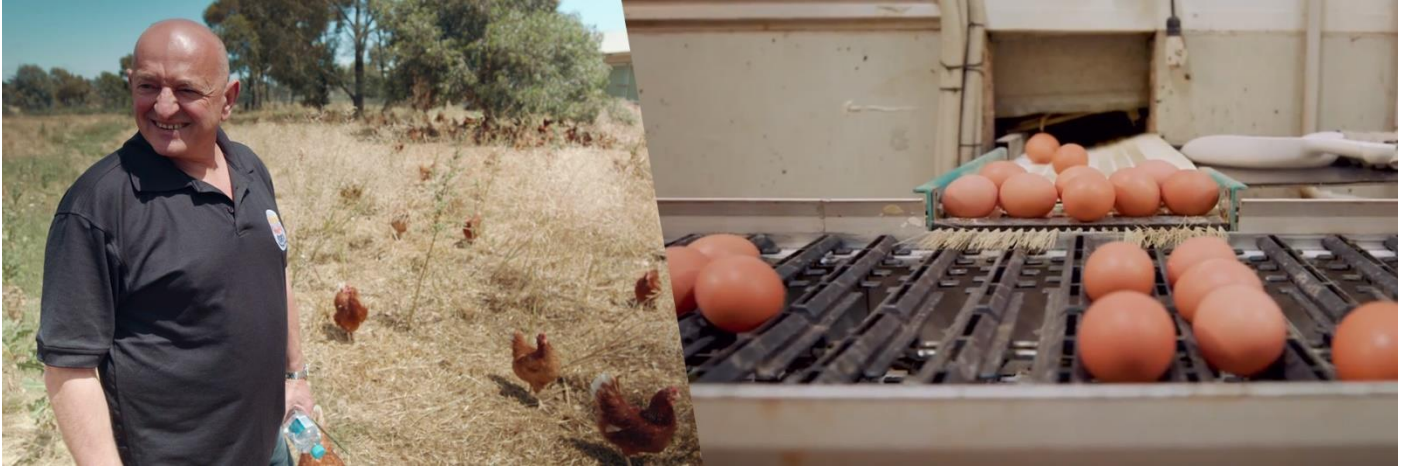
The station has enhanced its landslide monitoring and alarm systems to provide real-time data and early warnings. It also has its own ambulance and fire engine and a volunteer fire brigade. A health consultant has been appointed to advise employees on daily health issues and first aid.



“It is important for us to cultivate a vigilant attitude and to constantly improve our preventive measures so that we are always prepared for the unexpected,” Wu says.

Albeit satisfied with the drill results, Hu, together with his team at the Jiangbian plant, never lets his guard down. Before leaving the central control room, he quickly makes a note in his diary: “Post-drill evaluation to be scheduled.”





## Solar Chicken Farm Shows Sunny Side of Egg Farming

The hens at Happy Chicken Eggs in Victoria, Australia, are some of the luckiest in the country. They live 100% cage free in lush landscapes and open spaces where they can happily peck and forage all day long. Now, they are contributing to the battle against climate change too.



Happy Chicken Eggs has gone from strength to strength since it was launched in Victoria's Goulburn Valley a decade ago. A large part of its success comes from the company's commitment to giving its hens a life worth living.

"We believe happy hens lay happy eggs. Our farms are designed with lots of activity structures so our hens can live an adventure every day," says Morry Wroby, CEO and Managing Director

of Happy Chicken Eggs. Eggs produced by Happy Chicken Eggs are no ordinary eggs. They are used not only for consumption but also for the production of bird flu vaccinations.

As a farmer, Morry believes he has an obligation to consider the environment too. “It’s just a prerequisite,” he says. “And it’s one of the reasons we are putting solar panels on our sheds. There’s obviously a commercial benefit to saving on costs, but we are also reducing our carbon footprint.”

## Engineering egg-cellence

The key challenges for EnergyAustralia’s NextGen team in installing the solar panels for Happy Chicken Eggs included ensuring efficient installation, system reliability, and savings in electricity costs.

First, the team installed a 64kW solar system on the roof of one of the chicken sheds in September last year during a two-week maintenance break. The installation had to be completed when there were no chickens in the shed because egg production would be affected by installation noise. A 213kW solar system for the egg sorting facility was completed and began generating power in late January. Then in August, a second chicken shed switched to solar power.



“It was imperative that the installation of the solar systems did not jeopardise egg production,” says NextGen EnergyAustralia Project Engineer Alex Tilbury.

“We are excited that we completed the installation efficiently and on time, bearing in mind the remoteness of the site and the fact that we had to ensure all aspects of the project were aligned.”

## Laying solid foundations

All three solar systems are connected to the internet to provide real-time monitoring of all parameters of power generation to ensure reliability. In addition, automated error detection systems are in place to raise the alarm when the solar yield falls below expectation or when system faults are detected.



“An automated email will be generated notifying us and Happy Chicken Eggs of the fault or error so that swift action can be taken to rectify the problems,” Alex says. “We also used industry-leading solar panels and inverters for the installations, ensuring that system reliability and performance continues well into the future.”

About 30% of the farm’s electricity needs now come from the solar systems with the grid providing the remaining 70%, delivering significant saving in electricity costs. Moreover, the systems were designed to minimise surplus energy production and maximise utilisation to shorten the payback period. Although the systems are not fitted with batteries, they are expandable to accommodate battery charging or additional power requirements in future.

Morry says installing the solar systems made business sense, especially considering the short payback period. He believes many of his farming colleagues will come and see the results now the project is completed.

“I’ll be pleased to tell them these are savings we are achieving, these are the benefits, and to tell them about my experience with the installation,” he says.



# The Summer of Our Lives

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Summertime brings a ray of sunshine into the lives of CLP employees in the northern hemisphere. Throughout the year, we work around the clock to keep our systems performing perfectly. At this time of year, we play hard and work hard, taking advantage of the sunshine and school holidays to enjoy an exciting range of fun activities. Meanwhile in Australia, where summer is still a few months away, we took the opportunity to lay on a very warm treat for our customers.

## Making waves



In Hong Kong, summer is a time to hit the water and escape the heat – and every year, seven CLP Dragon Boat teams take part in a 13-kilometer expedition along the coast of Sai Kung called the Long March.

On the early morning of 23 June, following a full safety briefing, about 100 CLP employees including a team of senior managers set off from

Sai Sha Wan in five dragon boats for the three-hour journey.

CLP Dragon Boat Alliance team member Leung Ming Yan says she enjoyed the Long March because it gives her a strong sense of companionship and is different from races which emphasise speed. “In the Long March, we are literally all in the same boat,” she says. “We encourage each other to keep going and share jokes and laughter as we paddle.”



Yam Chi Bun, who helped organise the adventure, says the Long March is all about team spirit and a shared passion for Dragon Boating.

“When we are out at sea, we have a strong feeling that we are together as a team, and this is what keeps us going and overcoming the challenges,” he says.

For both Yan and Chi Bun, there was a mouth-watering incentive to overcome the waves and currents... a delicious seafood lunch waiting for them at the end of the Long March. “We were so hungry after paddling for three hours,” Yan smiles. “We cleaned up every dish on the table and it felt really good.”

## A night at the Opera

Summer in Hong Kong is winter in Australia, and a perfect opportunity to extend a warm embrace to customers.

Over four nights in early June, 29 selected customers and their guests were treated to dazzling performances at the Sydney Opera House by American singer Solange Knowles and New Zealand musician Neil Finn as part of a concert series celebrating ambitious popular music.

Each night, two customers and their guests were chosen as part of an EnergyAustralia Facebook campaign to promote energy efficiency in winter. Their reward is a surprise backstage experience where they got a glimpse of the inner workings of the iconic venue.



One of the customers, Ryan, says: “I was speechless. It wasn’t just the glamour of all the shows but it was also very interesting to see what goes on behind the scenes. We normally only see the front of the show, but it’s much more technical back there. I now appreciate all the hard work, not only from the artists but all the people involved in every performance here.”

EnergyAustralia entered into a two-year partnership with the Sydney Opera House in April last year aimed at helping the venue meet its sustainability goals. EnergyAustralia will apply the technology developed through the partnership to help homes across Australia use energy in ways that are smarter, more efficient, and more sustainable.

## A birthday fit for a King

Li Muwen, who works at the Huaiji Hydro Power Station in Mainland China's Guangdong province, had wanted to visit Xiashuai Village for a long time. The village is the only ethnic minority village in the Zhaoqing area and is known for its colourful and unique cultures and customs.

So when Li heard that the village would celebrate the Ox King Birthday – its equivalent of the Chinese New Year festival – he called up several colleagues and made plans for a day trip to Xiashuai.



The group left Huaiji by car in the morning and reached the village about an hour before lunch. As they got closer to the village, they could feel the excitement in the air as people streamed in from all directions.

There were already over 1,000 people at the village's central square when they arrived. The festival started soon afterwards and the villagers, who are mainly of the Zhuang ethnic

group, performed traditional dances to pay tribute to their gods and ancestors. The Ox King dance is an ancient ritual by the Zhuang peoples to thank the oxen who farm their land and was followed by a parade through the village's main street.

"It was the first time I had seen the Ox King Birthday celebrations and it was a real eye-opener to me. Understanding the local culture helps us build closer relationships with the community," Li says. "It was really fascinating to see the customs of the Zhuang people, and all of us enjoyed the big feast after the parade."

## Playing through the rain barrier

While most outdoor sports take a break during the summer months in India, our cricket teams have continued practising to prepare for the annual CLP cricket tournament to be held in February every year.

The Jhajjar Jaguars, one of the four CLP cricket teams, used their home cricket ground at the power plant to carry on practising until the monsoon started.

“The key is not the will to win – everybody has that,” explains team captain Bhupesh Janoti. “What is important is the will to prepare to win. My team believes in performing in such a way that we become unforgettable at the end of the tournament.”



The Jaguars continued to practise until June and are already drawing up strategies to beat the other three teams in February's tournament. Their top strategy is simple but effective, says Bhupesh – to get out there and have the most fun on the field.

“It's not about how much talent you have. It's more about how much passion you display and about who can go out there and play the hardest,” he says.

One of the other teams, the Wind Wizards – made up of cricketers from CLP India's wind and solar projects – doesn't have the benefit of a cricket ground for regular matches like the Jaguars. But its team members still bond well and play hard during matches.

Team member Mayuri Badu says their secret is to play with the excitement they had when they played cricket as children and not to be too concerned about winning or losing.

“We don't get a chance to practise a lot before the matches because our team is dispersed across different sites but somehow we are in sync on the field,” Mayuri says. “We love the chance to play together because it allows us to harness our team spirit beyond work. We bond

over shared jokes, team strategies, the disappointment of losing matches, and the elation of winning a few. We enjoy every match as if we were kids.”





# Boom City Shines Brightly after 33 Years of Cooperation



At 1.35 am on 15 June 2018, engineers at CLP Power System Control Centre in Tai Po, Hong Kong, disconnected the circuit supplying electricity to Shekou. Shortly after, the Shenzhen Power Supply Bureau activated its own circuit to take over the supply to the city in Mainland China's Guangdong province seamlessly.

The historic switchover marked the successful completion of the historical mission of CLP Power to provide reliable power supply for Shekou for more than 30 years.

## Growing pains

In 1979, the China Merchants Group was put in charge of building China's first industrial zone in Shekou, a small fishing village then. To attract foreign investment, a reliable supply of electricity was essential. At the time, Shekou relied on Shenzhen for electricity and the supply from that power-hungry city was unstable.

Dogged by frequent blackouts, Shekou looked for new sources of supply and neighbouring Hong Kong was a natural choice. On 24 July 1985 in the presence of its Chairman Lord Lawrence Kadoorie, CLP Power signed a contract with the China Merchants Group to send electricity from Yuen Long to Shekou. It was a major engineering undertaking at the time involving the laying of a nine-kilometer 132kV submarine cable across Deep Bay from Lau Fau Shan.



Despite the engineering challenge, the project was completed in a little over a year and went into operation on 9 November 1986. This signaled the start of three decades of cooperation between CLP Power and the China Merchants Group. As the development of Shekou accelerated, demand for electricity soared. Two more submarine cables went into operation in 1997 and 2006 to enhance supply reliability, giving it a reliability rate of 99.99%. This cooperation continued for more than 30 years. Last year, as China's power industry developed and its supply capacity increased, China Merchants Group decided that it would make the switch over to Shenzhen for electricity supply beginning from June 2018.

## Ingenious solutions

Brian Tsui, CLP Power Deputy Director for Asset Development, was one of the project pioneers participated in the pre-commissioning testing of equipment. Recalling his experiences 32 years ago, Brian says engineers and technical staff from the China Merchants Group were creative in solving day-to-day problems.

For instance, the China Merchants Group engineers substituted the plastic numbered ferrules that normally used by their CLP counterparts to label control wirings with plastic straws. “Materials were in short supply in Shekou in those days but the China Merchants Group employees were very good at seeking solutions flexibly,” Brian says.

The China Merchants Group engineers were also ingenious in making sure they could communicate effectively despite their language differences. The term “Voltage Transformer” used by CLP engineers had a different name in Mainland China so the engineers adopted a code name that people from both sides could understand, Brian recalls. “We also used body language to make sure we understood each other,” he says.

Today, the partnership between CLP Power and the China Merchants Group is continuing despite the switchover of supply. The three submarine cables connecting Hong Kong to Shekou will provide back-up support in the event of an emergency in either city. Both companies are also exploring ways to forge closer and broader cooperation in future.

## Three decades of power, three decades of transformation



**1980s** Shekou relied on a small power station in Shenzhen for energy supply for industrial development.



**1986** Brian Tsui (third from right) participated in the pre-commissioning test of the first submarine cable in Shekou.



**1996** The second Hong Kong-Shekou submarine cable was laid.



**1997** The second submarine cable was officially in operation.



**2004** CLP and China Merchants Group signed a contract to lay a third submarine cable.



**2018** Engineers from China Merchants successfully connected the power supply to the Shenzhen power grid at 1:35 am on 15 June. The smooth switchover marked CLP Power's completion of the historical task of supporting the growth of the Shekou city.





## Company News

### CLP Performs Strongly in First Half of 2018

CLP Holdings announced strong results for the first half of 2018, with a 25.8% year-on-year increase in total earnings.

Chief Executive Officer Mr Richard Lancaster said the performance was driven by the Group's focused investment strategy, solid operation, and its ability to capture growth opportunities. "We are confident our annual performance and long-term outlook will be supported by the solid fundamentals of our business, and we remain committed to making the necessary investments to ensure safe, reliable, and reasonably-priced electricity to our customers," he told in a media briefing.



The interim report is now available on the CLP Group website. Click [here](#) to read it.



## A Breath of Fresh Air for Hong Kong's Traditional Wet Markets

CLP Power has teamed up with wet market operators to transform traditional markets in Hong Kong, bringing a new shopping experience to customers and allowing them to shop with more comfort. Under the new initiative, businesses of various nature could

coexist in the same premises in a more hygienic environment thanks to technologies such as high energy efficient air-conditioners and air purifiers. CLP Holdings Chief Executive Office Mr Richard Lancaster, CLP Power Vice Chairman Mrs Betty Yuen, and Chairman of Link Asset Management Limited Mr Nicholas Allen, and senior CLP Power executives visited Kwong Yuen market in Shatin in August to witness the transformation in person.

## Leading Canadian Pension Fund Joins CLP India's Green Mission

Canadian institutional investor CDPQ has become a strategic 40% shareholder of CLP India. CLP Holdings Chief Executive Officer Mr Richard Lancaster said: "We are pleased to have a partner who shares our vision for growth and our commitment to tackling climate change. India has been, and will

continue to be, a primary growth market for CLP. With the expertise and resources this new partnership brings, CLP India will be even better placed to capitalise on opportunities to grow the business through low-carbon investment." CLP will maintain a majority 60% shareholding in CLP India.





## A Power for Good in the Community

CLP Power has announced the launch of a CLP Community Energy Saving Fund which will carry out a territory-wide energy efficient and conservation campaign in 2019 to encourage people to adopt low-carbon

lifestyles and reduce energy consumption. The fund is expected to have around HK\$70 million in its first year of operation.

It will provide financial assistance to disadvantaged groups in society to offset against their electricity expenses, and subsidise businesses to adopt energy efficient electrical equipment. Around HK\$10 million of the fund will be used to help people living in sub-divided units.

## CLP Wins Silver EEI Awards

CLP Holdings has won a silver award of the large-capitalisation category in the Edison Electric Institute's 2018 Asia-Oceania Index Awards, for Asian and Oceanian electric companies that have achieved the highest total shareholder returns. The award recognises CLP's solid fiscal performance, diversified investment portfolio, and

management strategies that have allowed the company to achieve strong shareholder return.



## CLP Teams Up with Thai Partners to Develop Smart City Technologies

CLP Innovation Enterprises Limited has signed two new agreements to strengthen collaboration on technologies intended for deployment in smart city environments. The



agreements, signed with Thai industrial park developer Amata Corporations and two state-owned enterprises – Industrial Estate Authority of Thailand and Provincial Electricity Authority – cover smart city energy management solutions, micro-grid solutions, floating solar systems, intelligent power distribution and smart energy infrastructure.

## Power Station Gets Dynamic Upgrade

EnergyAustralia has invested A\$9.5 million in a maintenance programme at the Tallawarra Power Station in New South Wales enabling the combined-cycle gas plant to react more quickly to demand in peak seasons and to support the integration of intermittent wind and solar energy into the national grid. The two-month upgrade involves replacing the plant's high-pressure drum which will shorten the time it takes to bring the plant into operation by 30 minutes.



More than 100 workers joined the existing crew in the process of replacing and upgrading the plant's equipment: "It was a big and complex operation relying on a skilled workforce with a commitment to safety. We hope the work will allow the 435MW plant to make a difference in our system reliability," said Asset Leader Jason Lee.



## EnergyAustralia Praised for Efforts to Achieve Workplace Equality

Two years after its launch, EnergyAustralia's inclusive workplace network, Prism, has been named Network of the Year in the Australian Workplace Equality Index, scoring 37 out of

41 points. EnergyAustralia outperformed 236 major companies in the definitive nation-wide benchmark assessment on LGBTI workplace inclusion. EnergyAustralia also improved from last year's bronze award for employer status, winning the silver award.



## Regional Summit Examines Low-carbon Trends

CLP Holdings, China Southern Power Grid, China General Nuclear Power Group, and Companhia de Electricidade de Macau held the 8th Power Industry Summit for Guangdong, Hong Kong, and Macau in Altay, Xinjiang, in July. Chief Executive Officer Mr Richard Lancaster analysed the trends and solutions in low-carbon and clean energy development and discussed power distribution planning in the Greater Bay Area with fellow CEOs. Mr Lancaster said that because of the urgent need for decarbonisation, the power industry should accelerate digitalisation and the use of smart technologies in deploying new-generation renewable energy, demand management, and big data analysis.



## Top Employees and Teams Honoured in CLP Grand Award

The 2017/18 CLP Grand Award presentation ceremony was held in June, recognising 14 individuals and 26 teams for their outstanding contributions in the three areas of Innovation, Customer Service Promise, and Safety. The winners were chosen by employees' votes

and a panel of judges. Over 2,300 colleagues cast votes this year. The CLP Grand Award is the highest level of staff recognition at CLP Power and replaces previous award programmes such as *Take an Extra Step* and *Let's Make Life Better*.



# The Shared Point

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CLP is a big family and we operate in countries across Asia Pacific. Our employees come from different cultural and ethnic backgrounds. Understanding your dreams and aspirations cements the bonds between us. We sincerely invite you to share your interesting stories and tell us about the things that touch your heart on this platform.

- > 1. A CLP Family Teamwork Spanning 5,000 Miles
- > 2. My Road to Becoming a Board Secretary
- > 3. An Ode of the Environment

## A CLP Family Teamwork Spanning 5,000 Miles

*by Joshua Lau, Risk Analytic Leader, EnergyAustralia*

I was born in Beijing, raised and educated in Hong Kong, and I live in Melbourne. What a nice coincidence it is that I am now connected to Australia, Hong Kong, and Mainland China through my work.

I started my career with EnergyAustralia, then TXU Energy, when I moved to Melbourne in 1998. It was at this point the Australian electricity market began to deregulate and I have grown in the company and the industry in the 20 years since.



As the Risk Analytics Leader in the finance team, I lead a team of experienced quantitative analysts. We provide a wide-range of risk analysis for different areas of the company, and those connections recently drew me back across the world to the places where I was born and grew up.

Some 5,000 miles from Melbourne, the Chinese government has begun reforms to deregulate the electricity market. CLP's generation portfolio in Mainland China has grown to over 8,000MW, its largest portfolio outside Hong Kong. The market in China is expected to remain challenging, largely because of issues such as overcapacity, keen competition for new projects, and the government's commitment to transform the country into a low-carbon economy.

The executive team at CLP China is launching a new risk management approach amid an increasingly competitive market. To help explore practices and experiences from various deregulated electricity markets, CLP China has been keen to draw on expertise and insights within the CLP Group.



Recognising that strong risk governance has always been a key element to the success of CLP Group through the years, CLP China's Chief Operating Officer Mr KB Lam recently invited me to share my experiences with his colleagues. KB believes a trading risk governance framework had contributed to the success of EnergyAustralia in the deregulated market. By learning from the Australian experience, the China team will be in a much better position to manage its risk exposure.

In March and June, with the support of EnergyAustralia's Finance senior management, I travelled to both Hong Kong's CLP head office and a regional office in Mainland China. The purpose of both trips was to share knowledge and help establish a risk framework appropriate for the Chinese market.

As a Chinese raised in Hong Kong, I was able to work with local team members without any cultural and language barriers. The welcome given to me by my colleagues made me feel at home immediately.

It has been an exciting opportunity for me to learn about the electricity market in China and I am grateful that the project allowed me to share my experience and support to our team there. In Australia, we have accumulated knowledge of many key principles and practices of risk management. These experiences

have been valuable in shaping the EnergyAustralia risk culture with a transparent, disciplined, and creative approach. I am confident this approach will help the China team enhance its framework.

It was a richly rewarding experience and I felt privileged to have been able to contribute to the growth of the CLP family in three places that mean the world to me: Australia, Hong Kong, and Mainland China.

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## My Road to Becoming a Board Secretary

*by Pamela Wang, Manager – Human Resources (China), CLP Business Management (Beijing) Company Limited (Regional Head Office)*



I used to work in human resources management before I was asked to serve as a board secretary of CLP Business Management (Beijing) Company Limited (Regional Head Office, RHO) in September 2016. Since I was new, I had little idea where to start. Fortunately, my supervisor, Cai Jingwei, General Manager of RHO, was very thoughtful and shared with me the guidelines for the operations of the company's board of directors and other documents so that I could learn the ropes faster.

With his help, I began to have a handle of the board's operations.

As I learned more about the work of a board secretary, I realised that it covers a wide range of interesting areas unknown to most people who are not familiar with the profession. A competent board secretary must have excellent planning, coordination and communications skills. Intrigued and I started to investigate how can I improve.

I later discovered that there are clear stipulations over the qualifications of board secretaries for listed companies and only certified professionals can take those jobs. In China, the Shanghai Stock Exchange (SSE) and the Shenzhen Stock Exchange (SZSE) are the two authorised bodies to provide the relevant training courses and run the qualification examinations. Students who have passed the examinations will receive the board secretary certificates.

Although the RHO is not a listed company, corporate governance and compliance are deeply rooted in CLP's corporate culture. I later shared my desire to take the qualification examination with Mr Cai and Ms



Lyon Leung, Assistant Company Secretary of CLP Holdings, , who were highly supportive and encouraged me to enroll for a three-day training programme to prepare for it.

I was notified by the SZSE a few months later that I have been accepted for the training programme and reminded that I should ready myself by studying a long list of regulations such as the Company Law, Securities Law, and Guidelines on Conduct of Corporate Directors of SME Board Listed Companies.

During the three-day training, lecturers explained the details of the laws and regulations and serving board secretaries shared their experience with us, which have greatly enlightened me on the importance of a good board secretary. Apart from performing their basic duties, they must be familiar with the company's operation, information disclosure procedures, affiliated transactions, and at the same time remain sensitive to



competitions in the industry and how capital of the company is being used. In a nutshell, a board secretary must be “honest with integrity, responsible with diligence”.

Board secretaries face immense challenges in China today as the securities industry develops rapidly. An experienced board secretary once told me that a seasoned board secretary must be a highly competent facilitator and organiser, a strategist well versed in the company's external and internal affairs, and someone who has the ability to put the company's resources into good use.

After training, I studied for three more days to prepare for the examination. Luckily, I passed it and obtained the certificate issued by SZSE.

In closing, I would like to share the following words of encouragement with you: “Nothing can be trivial if you work hard and put your heart and mind into it.”

## An Ode of the Environment

*by Bhaskar Shukla, Deputy Manager, Human Resources & Administration, CLP India*



Earth is our Mother, let's save its environment

Efforts are impending, we cannot wait for retirement

For the prevailing situation demands immediate assessment

Delaying further will cost us our enjoyment

So it's time for us to go out and plant trees

As this is the best way to get rid of such worries

Simultaneously, we need to discourage use of plastic

Since polybags are toxic and their impact is drastic

Awareness too should be spread across

To save ourselves from this looming irreversible loss

Our target should be environment education in all schools

Planting trees and using jute bags are crucial tools

Our next target is to curtail the glooming pollution

By promoting green energy as an ultimate solution

It's only then we can offer a better future

And promise our children a brighter stature

For Earth is our mother, our children can be its saviour

And a healthy environment demands positive behaviour

Developing this in every descendant is our assignment

We, the people of CLP, pledge we will save the environment



## In the Frame

Memories are for sharing – so share your favourite photographs with the CLP family. Send us your pictures of special moments with colleagues and friends and we will feature them in this section of the newsletter. You will receive a souvenir from us when your picture is published. Here is our latest selection.



On top of the world... My colleagues from the Jhajjar Power Plant in India and I were totally mesmerised by the breath-taking beauty of the view from the 3,022-metre Nag Tibba peak after a long hike through the foothills of the Himalayas. Truly a delightful weekend.



Spreading their wings... Our engineer trainees have completed the training, and are sharing their experiences in before setting out on their careers. I am honoured to have been one of their trainers and to have witnessed their growth and progress.



Keeping bugs at bay... CLP volunteers make gromwell ointment in a workshop organised by the CLPV Secretariat. The organic ointment is given to underprivileged families to keep summer bugs at bay.



Young green pioneer... It was wonderful to see youngsters learn about protecting our environment at our public education programme at the Maker Faire Hong Kong 2018 event. They can make a real difference in creating clear blue skies for our future.



A Loving Home from Home... The way we celebrate colours, smiles, and festivals is what makes CLP India my second home. Every day, I feel I truly belong to this inclusive family.