

<b>Project Code</b>	ME_SAND_1	
<b>Project Details</b>	<b>Internship Category</b>	Sandwich
	<b>Internship Period</b>	June 2019 to May 2020
	<b>Preferred Disciplines</b>	<b>First Preference:</b> Mechanical and Automation Engineering <b>Other Preference:</b> Engineering Science
	<b>Project Name</b>	Data Analytics for Power Plant Performances
	<b>Business Objective(s)</b>	<ul style="list-style-type: none"> <li>To utilize data analytic software and develop data analytic models for power plants operation &amp; maintenance optimization.</li> </ul>
	<b>Project Descriptions</b>	<ul style="list-style-type: none"> <li>Black Point Power Station (BPPS) has eight Combined Cycle Gas Turbine (CCGT) units and a new CCGT unit would be commissioned soon by end-2019. There are huge amount of plant condition and performance related data generated each year. With the adoption and big data analytics, this project aims to develop predictive models which can help improve the operation and maintenance (O&amp;M) performances and to optimize the O&amp;M process in longer term.</li> <li>A real-time plant performance monitoring tool.</li> <li>EtaPRO was implemented in BPPS to provide a versatile and user-friendly platform to monitor the unit and individual system performance through real-time and historical data. The traditional monitoring relays on high-low alarming based on a single sensor value. To further advance the condition monitoring, an EtaPRO empirical modelling tool.</li> <li>Advanced Pattern Recognition (APR) is utilized to define the pattern for normal operation based on historical operating data.</li> <li>To perform daily monitoring of the alarms generated in the APR models and analyze if the abnormal condition is genuine to initiate investigation with Operation and Maintenance teams.</li> </ul>
<b>Project Deliverables</b>	<ul style="list-style-type: none"> <li>To understand the basic operation of the CCGT unit by applying mechanical and thermodynamic engineering knowledge</li> <li>To understand and review the current condition monitoring practice of CCGT power plant.</li> <li>To adopt data analytic softwares to build predictive models which help O&amp;M optimization.</li> <li>To have monthly statistics on the overall findings of the</li> </ul>	

## Project Outline ~ Mechanical Engineering

		<p>condition monitoring system.</p> <ul style="list-style-type: none"> <li>• Experience sharing is appreciated in front-line operation and maintenance working team. Enhance developed web-based knowledge management portal software by making use of existing experience sharing system.</li> </ul>
	<b>Required Skills</b>	<ul style="list-style-type: none"> <li>• Basic power plant engineering knowledge</li> <li>• Strong analytical skill.</li> <li>• Statistical knowledge</li> <li>• Good knowledge of computer software, i.e. MS Excel, Power BI etc. would be an advantage.</li> </ul>
	<b>Learning</b>	<ul style="list-style-type: none"> <li>• Understanding of basic operation of CCGT power plant.</li> <li>• Understanding of the scope and importance of condition monitoring of critical CCGT systems in power plant.</li> <li>• Appreciation of the use of advanced computer technology in achieving plant performance excution</li> </ul>

<b>Project Code</b>	ME_SAND_2	
<b>Project Details</b>	<b>Internship Category</b>	Sandwich
	<b>Internship Period</b>	June 2019 to May 2020
	<b>Preferred Disciplines</b>	<b>First Preference:</b> Mechanical Engineering <b>Other Preference:</b> Electrical or Chemical/Process Engineering
	<b>Project Name</b>	Combined Cycle Gas Turbine (CCGT) Project (Unit D2)
	<b>Business Objective(s)</b>	<ul style="list-style-type: none"> <li>• To provide support to the engineering team in the design review process and take ownership of certain tasks</li> <li>• To provide support to the project controls team in the reporting and controls, lessons learned and co-ordination of project mgt activities</li> <li>• To develop talented engineering students by giving them meaningful experience in an environment that they can show their abilities</li> </ul>
	<b>Project Descriptions</b>	<ul style="list-style-type: none"> <li>• Additional gas generation capacity is required to help support Hong Kong government's environmental policy and to meet growth of load demand. The scope of the project is to build new Combined Cycle Gas Turbine (CCGT) unit. The D2 CCGT project has started its engineering development. The project provides a comprehensive scope of engineering perspectives and project management. The major mechanical and electrical scope includes the installation of a single-shaft gas turbine, generator, steam turbine assembly and the heat recovery steam generating (HRSG) unit. Candidates will be involved in the engineering and wider project management teams in development of D2 project.</li> </ul>
<b>Project Deliverables</b>	<ul style="list-style-type: none"> <li>• Support the engineering team in the design review process by coordinating actions and responses</li> <li>• Capture and monitor the lessons learned in project implementation</li> <li>• Produce reports and presentations on the tasks assigned</li> <li>• Create project procedures, control project reports and help to organize project events</li> </ul>	
<b>Required Skills</b>	<ul style="list-style-type: none"> <li>• Demonstrate technical understanding of systems and processes that can be found in a power station</li> <li>• Have a keen awareness of importance of safety and health, and how engineering and project management activities can have a direct bearing on a safe working environment</li> <li>• Possess a strong drive to work in a fast moving and time</li> </ul>	

CIP 2019

Project Outline ~ Mechanical Engineering

		pressured work environment
	<b>Learning</b>	<ul style="list-style-type: none"><li>• Gain real life practical experience and understanding of power stations and specifically CCGT technology</li><li>• Learn how a large scale engineering project is managed to achieve the desired results</li><li>• Understand how a major electricity utility operates to responsibly and reliably bring power to the communities it operates in</li></ul>

<b>Project Code</b>	ME_SAND_3	
<b>Project Details</b>	<b>Internship Category</b>	Sandwich
	<b>Internship Period</b>	June 2019 to May 2020
	<b>Preferred Disciplines</b>	<b>First Preference:</b> Mechanical Engineering <b>Other Preference:</b>
	<b>Project Name</b>	Managing the Steam Turbine Feed heaters of CPPS
	<b>Business Objective(s)</b>	<ul style="list-style-type: none"> <li>• To enhance the integrity and reliability of the High Pressure (HP) and Low Pressure(LP) Feed Heaters system after the existing system refurbishment service for more than 30 years</li> <li>• To develop the maintenance programmes or raise some Capital Projects of HP/LP Feed Heaters which reach mid-life.</li> <li>• To review the current design or practices to enhance HP/LP Feed heaters maintainability.</li> </ul>
<b>Project Descriptions</b>	<ul style="list-style-type: none"> <li>• The high pressure (HP) feedwater heating system is provided to improve the thermal efficiency of the heat cycle by raising the temperature of the feedwater before it is passed back to the boiler and to reduce the temperature difference between the feedwater and the boiler water to minimise thermal turbulence caused by the cooler feedwater being injected into the hot boiler water.</li> <li>• The system contains four high-pressure heat exchangers, arranged horizontally in two parallel banks of two, numbered 5 and 6 with the suffix A and B according to their bank, together with an intermediate flashbox between each pair of heaters. The banks are identical and each bank is controlled independently.</li> <li>• Since there are a lot of tube leak issues in last few years, it is expected that numbers of issue will be raised during the further operation. One of the major objectives of this project is to conduct a holistic study on the whole feed heaters system in different units, developing the control measures and establishing contingency plan to ensure a smooth transition to putting the new feed heaters in project.</li> <li>• In addition, this project serves to explore the optimum preventative maintenance programs of Feed heaters, taking the experience from the Eddy Current Test under outage. The preventative maintenance program can identify the potential leak tubes and plugged them in advance. On the other hand enhance the reliability of the whole system to</li> </ul>	

## Project Outline ~ Mechanical Engineering

		<p>prevent the unexpected breakdown.</p> <ul style="list-style-type: none"> <li>For new Capital Projects in plant, it is necessary to ensure the plan is cost-effective and match the best practice in the industry with innovative ideas for continuous improvement. This exercise can develop the intern with analytical and critical thinking by compromising the potential suppliers' recommend solution and the real plant experience.</li> </ul>
	<b>Project Deliverables</b>	<ul style="list-style-type: none"> <li>Summary of the integrity and reliability of the existing HP/LP Feed Heaters system in different units.</li> <li>Control measures &amp; contingency plan for the operation and maintenance of HP/LP Feed Heaters.</li> <li>Develop the preventative maintenance program for HP/LP Feed Heaters during outage.</li> <li>Develop the Capital Project plan so as to raise Project Request in Power Plant.</li> </ul>
	<b>Required Skills</b>	<ul style="list-style-type: none"> <li>Knowledge on Mechanical theory in identifying the issues on current plant issues</li> <li>Knowledge on Engineering Economics in developing optimum maintenance strategy and Capital investment</li> </ul>
	<b>Learning</b>	<ul style="list-style-type: none"> <li>From Systematic Study on Selected Plant System</li> <li>HP/LP Feed Heaters</li> <li>Plant Familiarization</li> <li>Hands-on Experience on HP /LP Feed Heaters</li> <li>Hands-on Experience on latest inspection skill on Non-destructive Test e.g. Eddy</li> </ul>

<b>Project Code</b>	ME_SAND_4	
<b>Project Details</b>	<b>Internship Category</b>	Sandwich
	<b>Internship Period</b>	June 2019 to August 2020
	<b>Preferred Disciplines</b>	<b>First Preference:</b> Mechanical Engineering <b>Other Preference:</b> Information Technology
	<b>Project Name</b>	Setting up Operation and Maintenance of upcoming power plant
	<b>Business Objective(s)</b>	<ul style="list-style-type: none"> <li>To set up O&amp;M for new builds. This requires preparation for: Recruitment and Training of O&amp;M Team; development of O&amp;M procedures; Setting up IT &amp; business system software, workshop &amp; infrastructure to support O&amp;M.</li> </ul>
	<b>Project Descriptions</b>	<ul style="list-style-type: none"> <li>Involve in review of plant design &amp; layout in terms of operability and maintainability of large (660MW units) thermal power plant</li> <li>Involve in identification and selection of spare parts for the power plant</li> <li>Involve in preparation of recruitment and training of O&amp;M team</li> <li>Involve in preparation of Information Technology Plan and road-map</li> </ul>
	<b>Project Deliverables</b>	<ul style="list-style-type: none"> <li>Detailed Plans for Recruitment, Training , IT and Business System</li> <li>Finalized list of spare parts</li> <li>Report of design review from O&amp;M standpoint.</li> </ul>
	<b>Required Skills</b>	<ul style="list-style-type: none"> <li>Good at basic computer skills. (preferably MS Excel and MS Project)</li> <li>Able to read and understand engineering drawings.</li> </ul>
<b>Learning</b>	<ul style="list-style-type: none"> <li>Overview of power plants and understanding of O&amp;M management</li> <li>How to set up O&amp;M of new build</li> <li>Exposure to master drawing and design of power plant from operation and maintenance perspective.</li> </ul>	

## Project Outline ~ Mechanical Engineering

<b>Project Code</b>	ME_SAND_5	
<b>Project Details</b>	<b>Internship Category</b>	Sandwich
	<b>Internship Period</b>	June 2019 to May 2020
	<b>Preferred Disciplines</b>	<b>First Preference:</b> Engineering-Mechanical <b>Other Preference:</b> Engineering-Electrical, Electronic or IT
	<b>Project Name</b>	Power Plant Generation Efficiency & Reliability Monitoring
	<b>Business Objective(s)</b>	<ul style="list-style-type: none"> <li>• Use of the Generation Efficiency Monitoring System (GEMS) to monitor the electricity generation, fuel consumption and Generation Statistics &amp; Availability Reporting (GSAR) System to compile and monitor generating unit reliability &amp; availability measures</li> <li>• To review the existing processes, refine the guidelines / procedures for using of the GEMS and GSAR</li> <li>• To develop effective tools to streamline and improve the upstream data processing</li> </ul>
	<b>Project Descriptions</b>	<ul style="list-style-type: none"> <li>• The candidate will have a comprehensive on the job training on the Generation Efficiency Monitoring System (GEMS), which monitor the electricity generation &amp; fuel consumption; and the Generation Statistics &amp; Availability Reporting (GSAR) System, which report the unit reliability and availability measures. To analyze generation statistic data to propose recommendation to manage unit efficiency and availability in order to meet our station Key Performance Index target.</li> </ul>
	<b>Project Deliverables</b>	<ul style="list-style-type: none"> <li>• The candidate is expected to go through existing processes, analyze generation statistic data and support in proposing recommendation to improve station efficiency and availability.</li> <li>• Candidate can learn from the relationship between fuel and generation efficiency by fuel consumption analysis...</li> </ul>
	<b>Required Skills</b>	<ul style="list-style-type: none"> <li>• Analytical &amp; critical thinking.</li> <li>• Sound technical and engineering skill</li> <li>• Good computing knowledge.</li> </ul>
<b>Learning</b>	<ul style="list-style-type: none"> <li>• Power plant basic operation, performance monitoring and workflow.</li> <li>• Interpersonal and communication skill</li> <li>• Time management</li> </ul>	



<b>Project Code</b>	ME_SAND_6	
<b>Project Details</b>	<b>Internship Category</b>	Sandwich
	<b>Internship Period</b>	July 2019 to June 2020
	<b>Preferred Disciplines</b>	<b>First Preference:</b> Mechanical Engineering <b>Other Preference:</b> Electrical Engineering
	<b>Project Name</b>	Generator Stator & Rotor Rewind, Exciter Upgrade, Generators Major Overhauls
	<b>Business Objective(s)</b>	<ul style="list-style-type: none"> <li>• Mid-life renewable of generator will extend the critical generation equipment life.</li> <li>• Develop the engineering and investment solution of the generation asset in order to the long term operation and maintenance strategic study.</li> </ul>
	<b>Project Descriptions</b>	<ul style="list-style-type: none"> <li>• The projects are aimed to evaluate the generators performance, life time, historical figures, new technology and the operational &amp; maintenance strategic for develop the long-term investment profile and engineering solution of all power plants generators.</li> <li>• Upgrade generator stator to eliminate all aged windings, enhance the cooling efficiency, eliminate the hot spot problem at the winding conductor.</li> <li>• Upgrade exciter rotor to eliminate all aged components and enhance the exciter rotor performance.</li> <li>• Renew the generator rotor to resume the operation performance.</li> <li>• Renew the generators to meet the reliability requirement.</li> <li>• Implement the generator and auxiliary systems overhaul works.</li> </ul>
	<b>Project Deliverables</b>	<ul style="list-style-type: none"> <li>• The project scope includes, but not limited to: -</li> <li>• Study reporting on the engineering and investment strategies of the generators</li> <li>• Deliver the effective and efficiency of generator rewinding, upgrading and overhaul</li> <li>• Develop the engineering knowledge of the generators and different power plant systems</li> </ul>
	<b>Required Skills</b>	<ul style="list-style-type: none"> <li>• Basic knowledge on mechanical engineering</li> <li>• Proactive and teamwork Good interpersonal skills and being able to work independently</li> </ul>
<b>Learning</b>	<ul style="list-style-type: none"> <li>• Understand the power plant operation and maintenance strategies of generation systems.</li> <li>• Engineering knowledge of different types of generators</li> </ul>	

CIP 2019

Project Outline ~ Mechanical Engineering

		<ul style="list-style-type: none"><li>• Enhance the on-site practice and interpersonal skills by the site work to deliver those projects.</li><li>• Enhance problem solving and critical thinking skills.</li></ul>
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<b>Project Code</b>	ME_SAND_7	
<b>Project Details</b>	<b>Internship Category</b>	Sandwich
	<b>Internship Period</b>	June 2019 to May 2020
	<b>Preferred Disciplines</b>	<b>First Preference:</b> Mechanical Engineering <b>Other Preference:</b> Civil Engineering
	<b>Project Name</b>	Enhancement of Water Management Facilities at Castle Peak Power Station (CPPS) & Enhancement of Project Management Governance System
	<b>Business Objective(s)</b>	<ul style="list-style-type: none"> <li>• To ensure CPPS has adequate capability to manage storm water before handing over of the West Ash Lagoon at Tsang Tsui to the Government, tentatively by 2020.</li> <li>• Project Management Governance System (PMGS) ?V To effectively monitor a portfolio of over 1,000 projects in SHE, Cost, Schedule &amp; Technical aspects.</li> <li>• Strengthen Communication and Collaboration</li> <li>• Enrich Project Evaluation and Monitoring</li> <li>• Promote Information Accuracy, Sharing and Learning</li> </ul>
<b>Project Descriptions</b>	<ul style="list-style-type: none"> <li>• CLP have been using the West Ash Lagoons at Tsang Tsui for storage of storm water runoff arising from the CPPS. HKSAR Government's plan on the use of West Ash Lagoon in the future for the WENT Landfill development is going to impact on the daily operations of CPPS, especially on storm water management. As such, the project is required to establish corresponding water management facilities in CPPS to address the change. The project is around HK\$300 million</li> <li>• The PMGS system consists of project categorization, a project lifecycle with defined decision and review points and a governance system to review and manage project development and execution. This system is to be function supported by training in project management skills to enable successful project execution. The next work focus and enhancement in PMGS is:               <ul style="list-style-type: none"> <li>○ To conduct health check of the PMGS</li> <li>○ To ensure / improve the document workflow system (e.g. Project Request, Project Proforma, Commitment Initiation Request &amp; Project Execution Plan, Budget Change Request and Initial Budget Request, etc.), and</li> <li>○ To enhance Project Manager / PMGS System</li> </ul> </li> </ul>	

Project Outline ~ Mechanical Engineering

		Database (e.g. Project Manager training records & accreditation records, Decision Points, Cost Estimation, etc.)
	<b>Project Deliverables</b>	<ul style="list-style-type: none"> <li>• Enhancement of Water Management Facilities at Castle Peak Power Station             <ul style="list-style-type: none"> <li>○ Project Execution</li> <li>○ Testing &amp; Commissioning</li> </ul> </li> <li>• Health Check for PMGS             <ul style="list-style-type: none"> <li>○ Plan for conducting the Health Check of PMGS</li> <li>○ Execution of Health Check</li> <li>○ Analysis &amp; Report of Health Check</li> </ul> </li> <li>• Workflow for project documents             <ul style="list-style-type: none"> <li>○ Record areas of improvements</li> <li>○ Testing of improved areas</li> <li>○ Rolling out of improved workflow</li> </ul> </li> <li>• Project Manager / PMGS System Database             <ul style="list-style-type: none"> <li>○ Maintain the Project Manager Register with enhancements</li> <li>○ Maintain the PMGS System with enhancements</li> <li>○ Support PMGS trainings</li> <li>○ Support PMGS knowledge sharing..</li> </ul> </li> </ul>
	<b>Required Skills</b>	<ul style="list-style-type: none"> <li>• Basic project management concept</li> <li>• Analytical mind set.</li> <li>• Computer skill (e.g. Word, Excel, Power Point)</li> </ul>
	<b>Learning</b>	<ul style="list-style-type: none"> <li>• Interpersonal skills &amp; team work</li> <li>• Presentation skills</li> <li>• Project management skills in SHE, Cost, Schedule &amp; Technical perspectives</li> <li>• Skills in conducting system review.</li> </ul>

## Project Outline ~ Mechanical Engineering

<b>Project Code</b>	ME_SAND_8	
<b>Project Details</b>	<b>Internship Category</b>	Sandwich
	<b>Internship Period</b>	July 2019 to June 2020
	<b>Preferred Disciplines</b>	<b>First Preference:</b> Mechanical Engineering <b>Other Preference:</b> Environmental Engineering
	<b>Project Name</b>	Hong Kong Offshore LNG Terminal Project and Renewable Energy Projects
	<b>Business Objective(s)</b>	<ul style="list-style-type: none"> <li>• Engineering, Environmental, Regulatory and Stakeholder Management support to the HKOLNG Terminal Project</li> <li>• Engineering support to the Offshore Wind Farm, Landfill Gas and Solar Projects</li> <li>• Support execution of Safety, Health and Environment initiatives in Commercial Group</li> </ul>
	<b>Project Descriptions</b>	<ul style="list-style-type: none"> <li>• Support the planning, organizing and undertaking of risk assessment works (e.g. Project Risk Assessment Plan and Risk Register) in design and construction phases.</li> <li>• Site work support in conjunction with project team, consultants and contractors.</li> </ul>
	<b>Project Deliverables</b>	<ul style="list-style-type: none"> <li>• Technical supports are provided to the HKOLNG Terminal Project and other HK Renewable Projects.</li> <li>• Project documentations including risk register and plan, as well as other system documents are properly prepared and maintained.</li> <li>• Continuous improvement</li> </ul>
	<b>Required Skills</b>	<ul style="list-style-type: none"> <li>• Sound engineering basics and practices</li> <li>• Good technical writing and communication skills</li> <li>• Fundamental knowledge on SHE management</li> <li>• Project management basics.</li> </ul>
<b>Learning</b>	<ul style="list-style-type: none"> <li>• Project management</li> <li>• Gas and Renewable technologies and market development knowledge</li> <li>• SHE management in power industry</li> </ul>	

<b>Project Code</b>	ME_SAND_9	
<b>Project Details</b>	<b>Internship Category</b>	Sandwich
	<b>Internship Period</b>	June 2019 to May 2020
	<b>Preferred Disciplines</b>	<b>First Preference:</b> Mechanical Engineering <b>Other Preference:</b> Electrical or Chemical/Process Engineering
	<b>Project Name</b>	Combined Cycle Gas Turbine (CCGT) Project (Unit D1)
	<b>Business Objective(s)</b>	<ul style="list-style-type: none"> <li>To provide support to the engineering team in the design review process and take ownership of certain tasks</li> <li>To provide support to the project controls team in the reporting and controls, lessons learned and co-ordination of project mgt activities</li> <li>To develop talented engineering students by giving them meaningful experience in an environment that they can show their abilities</li> </ul>
	<b>Project Descriptions</b>	<ul style="list-style-type: none"> <li>Additional gas generation capacity is required to help support Hong Kong government's environmental policy and to meet growth of load demand. The scope of the project is to build new Combined Cycle Gas Turbine (CCGT) units. The construction of D1 CCGT project (550MW H-Class CCGT) is underway. The project provides a comprehensive scope of engineering perspectives and project management. The major mechanical and electrical scope includes the installation of a single-shaft gas turbine, generator, steam turbine assembly and the heat recovery steam generating (HRSG) unit. Candidates will be involved in the engineering and wider project management teams leading the D1 project towards completion.</li> </ul>
<b>Project Deliverables</b>	<ul style="list-style-type: none"> <li>Support the engineering team in the design review process by coordinating actions and responses</li> <li>Capture and monitor the lessons learned in project implementation</li> <li>Produce reports and presentations on the tasks assigned</li> <li>Create project procedures, control project reports and help to organize project events</li> </ul>	
<b>Required Skills</b>	<ul style="list-style-type: none"> <li>Demonstrate technical understanding of systems and processes that can be found in a power station</li> <li>Have a keen awareness of importance of safety and health, and how engineering and project management activities can have a direct bearing on a safe working environment</li> <li>Possess a strong drive to work in a fast moving and time</li> </ul>	

CIP 2019

Project Outline ~ Mechanical Engineering

		pressured work environment
	<b>Learning</b>	<ul style="list-style-type: none"><li>• Gain real life practical experience and understanding of power stations and specifically CCGT technology</li><li>• Learn how a large scale engineering project is managed to achieve the desired results</li><li>• Understand how a major electricity utility operates to responsibly and reliably bring power to the communities it operates in</li></ul>

<b>Project Code</b>	ME_SUM_1	
<b>Project Details</b>	<b>Internship Category</b>	Summer
	<b>Internship Period</b>	May 2019 to August 2019
	<b>Preferred Disciplines</b>	<b>First Preference:</b> Fluid Mechanics <b>Other Preference:</b> Engineering Mathematics
	<b>Project Name</b>	Dynamics analysis of gas pipeline pressure
	<b>Business Objective(s)</b>	<ul style="list-style-type: none"> <li>To build up a model to estimate the gas pressure variation on various scenario.</li> </ul>
	<b>Project Descriptions</b>	<ul style="list-style-type: none"> <li>Dynamics analysis of gas pipeline pressure..Black Point Power Station (BPPS) is supplied with two natural gas sources through two sub-sea gas pipeline for electricity generation. These two sub-sea pipeline network is a major lifeline which transports natural gas safely and reliably from the gas sources to BPPS. In case of gas supply interruption, the Operator has to estimate the pressure decay rate under various generation scenario. This information is essential to allow the Operator to have a quick and appropriate decision to manage the electricity generation. to maintain efficient operation and generation availability. This project is to work out a dynamics analysis of gas pipeline pressure upon gas supply interruption under various generation scenario.</li> </ul>
	<b>Project Deliverables</b>	<ul style="list-style-type: none"> <li>A computer model with input of gas system pressure, gas production rate and gas consumption rate, and come up with an output of the pressure decay rate and the duration to sustain electric generation in a safe manner.</li> </ul>
	<b>Required Skills</b>	<ul style="list-style-type: none"> <li>fluid dynamics</li> <li>dynamics simulation</li> <li>MS office application.</li> </ul>
	<b>Learning</b>	<ul style="list-style-type: none"> <li>Combined cycle electrical generation.</li> <li>Gas turbine combustion system</li> <li>Natural gas treatment</li> <li>Pipeline dynamic simulation</li> </ul>



## Project Outline ~ Mechanical Engineering

<b>Project Code</b>	ME_SUM_2	
<b>Project Details</b>	<b>Internship Category</b>	Summer
	<b>Internship Period</b>	June 2019 to August 2019
	<b>Preferred Disciplines</b>	<b>First Preference:</b> Mechanical Engineering <b>Other Preference:</b> Information Technology
	<b>Project Name</b>	Study the wireless technology application for generation plant vibration monitoring
	<b>Business Objective(s)</b>	<ul style="list-style-type: none"> <li>• Enhance the vibration monitoring of Generation Business Group (GBG) by latest wireless technology</li> <li>• Improve the safety, work efficiency and effectiveness of the preventive maintenance services in GBG by using the latest wireless technology</li> </ul>
	<b>Project Descriptions</b>	<ul style="list-style-type: none"> <li>• Study the latest development of wireless technology and application in different industrial sectors.</li> <li>• Evaluate and study the feasibility of applying the wireless technology in generation plants vibration monitoring.</li> </ul>
	<b>Project Deliverables</b>	<ul style="list-style-type: none"> <li>• Understand generation plants operation.</li> <li>• Understand the importance of safety at work.</li> <li>• Understand the latest wireless technology and its application in different industrial sectors.</li> <li>• Feasibility study of vibration monitoring using wireless technology in generation plants</li> <li>• Submit a project proposal for using wireless. technology for vibration monitoring. in generation plants.</li> </ul>
	<b>Required Skills</b>	<ul style="list-style-type: none"> <li>• Analytical skill</li> <li>• Communication skill</li> <li>• Presentation skill.</li> </ul>
<b>Learning</b>	<ul style="list-style-type: none"> <li>• Mechanical Engineering</li> <li>• Information Technology</li> </ul>	

## Project Outline ~ Mechanical Engineering

<b>Project Code</b>	ME_SUM_3	
<b>Project Details</b>	<b>Internship Category</b>	Summer
	<b>Internship Period</b>	May 2019 to August 2019
	<b>Preferred Disciplines</b>	<b>First Preference:</b> Mechanical Engineering <b>Other Preference:</b> Electrical Engineering
	<b>Project Name</b>	Renewable Energy Assets KPI Analysis
	<b>Business Objective(s)</b>	<ul style="list-style-type: none"> <li>Perform data analysis on renewable asset KPIs and data, provide business insights on performance of wind farms, solar plants and hydro-plants and improvement areas</li> <li>Using Microsoft BI and other tools to perform effective business reDortina, to streamline and improve the overall reDortina process</li> </ul>
	<b>Project Descriptions</b>	<ul style="list-style-type: none"> <li>The CLP China Renewable team has a range of reports on KPIs and asset performance to management for our various assets located in Mainland China. The Microsoft BI platform is used to automate and generate infographics for the reporting process. A project is being carried out to further expand the capabilities of the BI platform. The intern shall be responsible for the implementation of the revamped BI platform, utilizing the automation and infographics capability of the platform to provide the most effective business reporting on our renewable assets. The intern shall also undertake analytical work on the data collected from the BI platform and provide business insights on performance of wind farms, solar plants and hydro plants and improvement areas.</li> </ul>
	<b>Project Deliverables</b>	<ul style="list-style-type: none"> <li>centralized data platform for asset KPI reporting (through MS BI)</li> <li>automated infographics and other reporting for renewable assets for various occasions (through MS BI)</li> <li>analysis reports on asset performance</li> </ul>
	<b>Required Skills</b>	<ul style="list-style-type: none"> <li>Knowledge in generation process, particularly in renewable energy</li> <li>Critical thinking skills</li> <li>Good command in written Chinese and English</li> <li>Fluent in Putonghua</li> <li>Basic coding skills</li> </ul>
<b>Learning</b>	<ul style="list-style-type: none"> <li>What drives the performance of renewable assets for wind, solar, and hydro</li> <li>Data analysis on renewable asset KPIs and data</li> <li>Using Microsoft BI and other tools to perform effective business reporting</li> </ul>	