

PROJECT CLEAN AIR
Certification Scheme for Clean Air Charter
Final Report
For
ATAL Engineering Group



Prepared by



March 2017

1. INTRODUCTION

Established since 1977, the ATAL Engineering Group¹ (ATAL) has become a leading electrical, and mechanical engineering company that is headquartered in Hong Kong with a very strong presence in Macau and Mainland China. With a workforce of over 2,500 highly qualified personnel, ATAL has been involved in diverse projects ranging from data centres, rail, airports and pedestrian transport to lighting, renewable energy, waste and water. With over 35 years of experience, ATAL strives to ensure the smooth execution of contracts and the trouble-free operation of all systems, for public and private sector clients in Hong Kong, Macau and China.

The comprehensive engineering services of ATAL range from public institutions, utilities companies, commercial developers to industrial and residential customers, with its scope of services covering design, procurement, installation, operation and maintenance of heating, ventilation, and air conditioning (HVAC) systems, electrical systems, fire services systems, plumbing and drainage systems, automation systems, water treatment plants, wastewater treatment plants, sludge treatment plants, solid waste handling, landfill and incineration plants, railway and intelligent transport systems, pattern and biometric recognitions, maintenance & servicing, etc.. ATAL has been known for their reliable, safe and energy efficient lifts and escalators that are custom-designed and can be commonly found in the theme parks, airports, railway and metro stations and supermarket chains in Hong Kong, Australia, Germany, Italy, Spain and United Kingdom.

This report outlines the findings of the Business Environment Council Limited (BEC) from a walk-through audit and an interview with Mr. Sammy Wan, Manager of Quality, Safety & Environment of ATAL.

Based on the findings of the pre-audit questionnaire completed by ATAL, it was determined that ATAL fits into Group C category of the certification scheme, showing that the organisation has comprehensive management systems and means in place to identify and verify the implementation of energy efficiency / emission reduction programmes that are in compliance with the requirements of the Clean Air Charter.

The site visit was conducted by Ms. Annie Yeung and Ms. Shirley Hui on 5th January 2017. The purpose of this audit was to verify ATAL's commitments to the Clean Air Charter.

¹ The Company changed its name from Analogue Group of Companies to ATAL Engineering Group in May 2016.

2. OBSERVATIONS AND COMPLIANCE

Based on the site meeting, ATAL's programmes and practices on reducing air emissions were reviewed. In general, a systematic approach on addressing the requirements of the Clean Air Charter has been implemented as follows:

- ATAL has set yearly targets and objectives on Environment, Health and Safety (EHS) issues, and has maintained ISO 14001 and OHSAS 18001 certifications through the management systems and operation procedures.
- Group EHS policy statement have been established since 2013 (with an updated version enacted in 2015). Environmental objectives and programmes such as EHS site walk by the top management, internal educational events and benchmarking industry visits are organised to raise staff awareness on environmental, health and safety issues.
- Regular meetings are held by the Corporate EHS committee on handling issues related to Clean Air Charter, Green Office Management and Corporate Social Responsibility (CSR) Coordination on a regular basis. Department heads are obligated to attend the meetings in order to monitor the carbon emissions and energy management from respective departments.
- Annual performance on air emissions has been reviewed by ATAL's board of directors to ensure alignment with ATAL's commitments to the Clean Air Charter.
- Environmental performance has been one of the criteria in the selections of suppliers and contractors/ sub-contractors. In addition to contractual environmental requirements, appraisal of all suppliers will be performed in accordance to their environmental performance of the relevant work orders.
- Top management's direction and commitment on air emissions/ energy reduction have been disseminated to the staff members through emails, intranet, newsletters, posters and regular departmental meetings.

Regarding the 6 commitments of the Clean Air Charter, the table below summarizes the achievements of ATAL:

Commitments	Actions done
1) Operate to a recognized world class standard, or the standards established by the Hong Kong / Guangdong governments on emissions of air pollutants, even if it is not a requirement to do so here. (Relevant to industrial operations, power plants and business with direct emissions)	<ul style="list-style-type: none"> ◆ In view of the main activities of ATAL, no major direct emissions is generated. Most of the air emissions are indirect (e.g. electricity consumption), hence this commitment has limited applicability for ATAL.
2) Use continuous emissions monitors (CEMs) at significant	<ul style="list-style-type: none"> ◆ This commitment is confined to industrial or power

Commitments	Actions done
sources, e.g. large and medium plants. (Relevant to large / medium industrial operations and power plants)	plants. Hence this is not applicable to ATAL.
3) Publish information on energy and fuel use, as well as total emissions of air pollutants annually and timely, if emissions are significant.	<ul style="list-style-type: none"> ◆ ATAL has reviewed the fuel, electricity and paper consumptions during its quarterly Corporate EHS Committee Meeting. Evaluation on EHS Compliance, fuel consumption, paper and electricity consumptions have been analyzed to seek for further opportunities in emission reduction. ◆ Energy consumption has been benchmarked amongst various departments of ATAL. ◆ ATAL has revealed the progress of carbon management among local organisations in Hong Kong through participating in “Hong Kong Quality Assurance Agency (HKQAA) - Hong Kong Jockey Club (HKJC) Carbon Disclosure e-Platform (CDeP)”. ◆ The fuel consumption of vehicle fleet of ATAL has been monitored. The statistics collected from the fuel supplier are regularly reviewed.
4) Undertake to adopt energy-efficient measures in their operations.	<p><u>Energy Saving</u></p> <ul style="list-style-type: none"> ◆ T5 fluorescent tubes and LED lights were found in the general office, conference rooms, wash-rooms and lobbies as a means to reduce energy consumption. 

Commitments	Actions done																								
	<p data-bbox="760 247 1432 279">Installations of T5 fluorescent tubes and LED lights.</p>  <p data-bbox="808 968 1386 999">Application of light sensors in the workplace.</p> <ul data-bbox="704 1020 1446 1549" style="list-style-type: none"> ◆ Light sensors have been installed in the perimeter zones of the office to regulate the lumen output of fluorescent tubes according to the intensity of sunlight entering into the workplace for energy saving. ◆ Dual-tech occupancy sensors, motion sensors and timers have been installed on all light switches in the whole office to detect motions of objects and automatically control the lighting. ◆ Building Management System (BMS) has been adopted in the office to precisely control the temperature of office in accordance with the indoor occupancy and outdoor temperature. The HVAC system can be turned off or reset during unoccupied mode. <table border="1" data-bbox="716 1581 1419 1787"> <thead> <tr> <th data-bbox="716 1581 997 1612">Electricity Consumption Analysis</th> <th data-bbox="997 1581 1127 1612">2014</th> <th data-bbox="1127 1581 1289 1612">2015</th> <th data-bbox="1289 1581 1419 1612">2016</th> </tr> </thead> <tbody> <tr> <td data-bbox="716 1612 997 1644">Total Area (m²)</td> <td data-bbox="997 1612 1127 1644">4,233.96</td> <td data-bbox="1127 1612 1289 1644">4,419.77</td> <td data-bbox="1289 1612 1419 1644">4,971.61</td> </tr> <tr> <td data-bbox="716 1644 997 1675">Electricity Consumption in Island</td> <td data-bbox="997 1644 1127 1675"></td> <td data-bbox="1127 1644 1289 1675"></td> <td data-bbox="1289 1644 1419 1675"></td> </tr> <tr> <td data-bbox="716 1675 997 1707">Place Tower (kWh)</td> <td data-bbox="997 1675 1127 1707">417,325</td> <td data-bbox="1127 1675 1289 1707">415,926</td> <td data-bbox="1289 1675 1419 1707">454,363</td> </tr> <tr> <td data-bbox="716 1707 997 1738">Electricity consumption per area</td> <td data-bbox="997 1707 1127 1738">98.8</td> <td data-bbox="1127 1707 1289 1738">94.11</td> <td data-bbox="1289 1707 1419 1738">91.39</td> </tr> <tr> <td data-bbox="716 1738 997 1770"></td> <td data-bbox="997 1738 1127 1770">% change</td> <td data-bbox="1127 1738 1289 1770">-4.75%</td> <td data-bbox="1289 1738 1419 1770">-2.88%</td> </tr> </tbody> </table> <ul data-bbox="704 1818 1446 1911" style="list-style-type: none"> ◆ Compared with the annual electricity consumption (kWh per m²) in 2014, a measurable decrease of 4.75% and 2.88% have been recorded in 2015 and in 	Electricity Consumption Analysis	2014	2015	2016	Total Area (m ²)	4,233.96	4,419.77	4,971.61	Electricity Consumption in Island				Place Tower (kWh)	417,325	415,926	454,363	Electricity consumption per area	98.8	94.11	91.39		% change	-4.75%	-2.88%
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	<p>2016 respectively.</p> <ul style="list-style-type: none"> <p>“Going Green Tips” have been provided to staff members through emails to share and promote environmentally conscious practices being adopted by the industry or colleagues in order to reduce carbon emissions.</p> <div data-bbox="776 485 1360 1325" data-label="Image"> </div> <p>“Going Green Tips”</p> <ul style="list-style-type: none"> <p>Reminders are posted in the office area to promote energy-saving practices.</p> <div data-bbox="873 1486 1318 1814" data-label="Image"> </div>

Commitments	Actions done																				
	<div data-bbox="873 243 1321 579" style="text-align: center;"> </div> <p data-bbox="867 596 1328 625" style="text-align: center;">Reminders on energy conservation.</p> <p data-bbox="750 693 1039 722" style="text-align: center;"><u>Reduce Air Pollution</u></p> <table border="1" data-bbox="721 756 1425 928"> <thead> <tr> <th>Vehicle Fuel Consumption Analysis</th> <th>2014</th> <th>2015</th> <th>2016</th> </tr> </thead> <tbody> <tr> <td>No. of Vehicle</td> <td>105</td> <td>102</td> <td>103</td> </tr> <tr> <td>Fuel consumption (Litre)</td> <td>242,594.86</td> <td>219,506.00</td> <td>200,413.00</td> </tr> <tr> <td>Fuel consumption per vehicle</td> <td>2,310.43</td> <td>2,152.00</td> <td>1,946.00</td> </tr> <tr> <td>% change</td> <td></td> <td>-6.86%</td> <td>-9.58%</td> </tr> </tbody> </table> <p data-bbox="701 966 1445 1096">Compared with the annual fuel consumption per vehicle in 2014, it has been decreased by 6.86% in 2015 and 9.58% in 2016. ATAL has adopted the following measures to reduce air pollution:</p> <ul data-bbox="701 1117 1445 1596" style="list-style-type: none"> ◆ All vehicles have been maintained in good condition by a systematic routine maintenance programme. Routine maintenance and monitoring schedules are arranged for every company vehicle to ensure the safe and efficient performance of vehicle fleet. ◆ Route planning have been deployed to maximise the efficiency of the company vehicles. ◆ Odometer records have been maintained and would be distributed to various business units by Administration Department to monitor the usage of fuel in terms of vehicle mileage. ◆ Ultra low sulphur diesel has been used for all generators maintained for the clients. 	Vehicle Fuel Consumption Analysis	2014	2015	2016	No. of Vehicle	105	102	103	Fuel consumption (Litre)	242,594.86	219,506.00	200,413.00	Fuel consumption per vehicle	2,310.43	2,152.00	1,946.00	% change		-6.86%	-9.58%
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<p>5) Identify and encourage business-relevant measures to be taken on days when air pollution is high.</p>	<ul style="list-style-type: none"> ◆ ATAL has disseminated the messages on the Air Quality Health Index (AQHI) through SMS and intranet in order to alert vulnerable staff members to reduce outdoor activities during high AQHI days as far as possible. 																				

Commitments	Actions done
<p>6) Share air quality expertise in business with others.</p>	<ul style="list-style-type: none"> ◆ ATAL has delivered seminars and public events on the deployment of green building and intelligent solution and energy optimization solution to promote energy efficiency in Hong Kong. ◆ ATAL has quarterly updated the progress of corporate social responsibility (CSR) programmes in the Group Newsletter. ◆ ATAL participated in the Take a “Brake” Corporate Green Driving Award Scheme 2014, acquiring the Gold Tier Fuel Efficiency Improvement Award and Gold Tier Fuel Consumption Saver Award regarding their improved vehicles’ fuel efficiency and overall fuel consumption. <div data-bbox="842 743 1318 1339" style="text-align: center;"> </div> <p style="text-align: center;">Certificate of the Gold Tier Fuel Efficiency Improvement Award and Gold Tier Fuel Consumption Saver Award</p> <ul style="list-style-type: none"> ◆ ATAL applied for the CarbonSmart Pilot Fund 2013 and joined the Carbon Smart Programme to conduct carbon audit for its premises. A CarbonLess 3% certificate has been obtained in 2014 for its achievement in carbon reduction.

Commitments	Actions done
	<div data-bbox="857 289 1289 884" data-label="Image"> </div> <p data-bbox="711 905 1435 932">Certificate of participation of the Carbon audit Pilot Fund</p> <div data-bbox="782 951 1365 1199" data-label="Image"> </div> <p data-bbox="870 1213 1276 1241">CarbonLess 3% certificate logo</p> <ul data-bbox="704 1266 1446 1829" style="list-style-type: none"> ◆ ATAL has continued its participation in Low-carbon Office Operation Programme (LOOP) organised by World Wide Fund Hong Kong to measure and analyse the carbon performance of the office, formulation of emissions reduction strategies, and reporting on their improved carbon performance. ◆ ATAL joined various local environmental programmes including “Hong Kong Carbon Reduction Campaign”, “The Biz-Green Dress Day” and “Hong Kong No Air-Con Night” in support of greenhouse gas reduction in 2014-2016. ◆ The chairman of ATAL, as one of the representatives from Hong Kong, attended the 2015 Paris Climate Change Conference: Implications on Businesses to share the corporate energy efficiency strategies and business approach on sustainability.

Commitments	Actions done
	 <p data-bbox="776 758 1370 821">The China Pavilion at the UN Climate Change Conference held in Paris in 2015</p>

3. CONCLUSION

The ATAL Engineering Group (ATAL) has demonstrated its commitments towards the Clean Air Charter and is recommended to be certified under the Clean Air Charter.