

BEC LOW CARBON CHARTER PROGRESS REPORT 2021

November 2022



BUSINESS
ENVIRONMENT
COUNCIL
商界環保協會



Contents

Introduction	1
BEC Low Carbon Charter and Power Up Coalition	1
Objectives of the report	2
The Charter in Numbers	3
Progress and Achievements.....	6
Reasons to Decarbonise	6
Decarbonisation Targets	7
Decarbonisation Initiatives	11
Target (Re-)Setting Step by Step.....	11
Common Decarbonisation Measures	12
Embracing Decarbonisation Challenges and Opportunities	16
Power Up Coalition	19
Activities in 2021.....	22
BEC Low Carbon Charter Signatories	24
Power Up Coalition Members.....	28
Acknowledgements.....	29
Appendix	31

Introduction

Climate change is one of the most pressing issues facing by the world today, threatening the well-being of individuals, communities, and businesses. After the successful negotiation at COP26, a rising number of countries, cities, companies, and other institutions have jumped on the bandwagon to make net-zero emission commitments.

Following the national policy direction on climate targets, the former Chief Executive of Hong Kong, Mrs. Carrie Lam, announced that Hong Kong would endeavour to achieve carbon neutrality before 2050 in her 2020 Policy Address. Hong Kong's Climate Action Plan 2050 was released the following year after Mrs. Lam's announcement, setting out the vision of "Zero-carbon Emissions, Liveable City, Sustainable Development" and outlining the overall strategies, plans and measures to combat climate change in response to Hong Kong's carbon neutrality target.

Recognising also the importance and necessity of delivering a post-pandemic green and resilient recovery, which is vital for tackling the urgent challenges of climate change and many other environment issues, the Government, the private sector and the general public must work hand-in-hand and take proactive actions in adopting decarbonisation strategies and making a concerted effort to achieve Hong Kong's climate pledge.

BEC Low Carbon Charter and Power Up Coalition

Launched by the Business Environment Council (BEC) in March 2019, the BEC Low Carbon Charter primarily aimed to encourage and support companies in the property and construction value chain to set and achieve decarbonisation targets. After receiving supportive feedback from the initial signatories and different parties, the Charter has been expanded since the beginning of 2020 to welcome companies and organisations from all sectors to participate. The Charter currently offers two pathways for companies to commit to: Pathway 1 requires companies to set decarbonisation targets consistent with the direction of transitioning towards the goals of the Paris Agreement; having the same requirement as Pathway 1, Pathway 2 has an additional commitment to the Science Based Target initiative (SBTi²).

A year later, in April 2021, BEC and Gammon Construction Limited co-launched the Power Up Coalition as a sectoral decarbonisation initiative under the BEC Low Carbon Charter, to promote the timely electrification of non-public works construction sites in Hong Kong and to promote zero-emission construction sites. As part of the Charter, Power Up is a commitment from private and semi-private project proponents and their partners to adopt an optimised

¹ https://www.climateready.gov.hk/files/pdf/CAP2050_booklet_en.pdf

² Science Based Target initiative (SBTi) is a partnership between Carbon Disclosure Project (CDP), World Resources Institute (WRI), World Wildlife Fund for Nature (WWF) and the United Nations Global Impact, aiming to promote best practices in emissions reductions and net-zero targets in line with climate science, also known as Science Based Targets. SBTi offers technical advice to companies and organisations worldwide on target-setting, particularly in the pursue of the 1.5 degrees ambition. (Reference: <https://sciencebasedtargets.org/>)

approach to electricity use and avoid diesel powered generators and equipment at construction sites. All companies and organisations who aspire to promote, support and achieve zero emission construction sites are invited to make the pledge and become a member of Power Up.

Objectives of the report

Being a signatory of the BEC Low Carbon Charter and a member of the Power Up Coalition, the company agrees to decarbonise its business and disclose and share its progress annually to BEC. This report, which compiles and summarises the information submitted by signatories, aims to:

- Study and highlight industry trends in corporate decarbonisation and target-setting for benchmarking and co-learning;
- Offer insights and recommendations to signatories to encourage and assist them in moving towards their decarbonisation targets;
- Arouse awareness of decarbonisation by showcasing relevant decarbonisation achievements of the business sector in Hong Kong

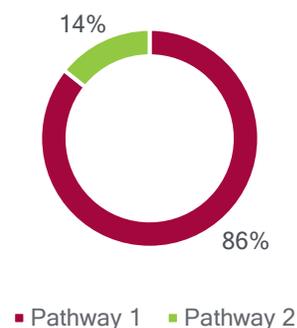


The Charter in Numbers

In 2021, the BEC Low Carbon Charter welcomed 32 new signatories, bringing the total number of signatories to 105 (as of December 2021).

Among 105 signatories, 15 (14%) have pledged to pursue Pathway 2, and the remaining 90 signatories (86%) have selected Pathway 1. While the majority of signatories commit to Pathway 1, there is an increasing number of signatories committing to the more ambitious Pathway 2 compared to previous years.

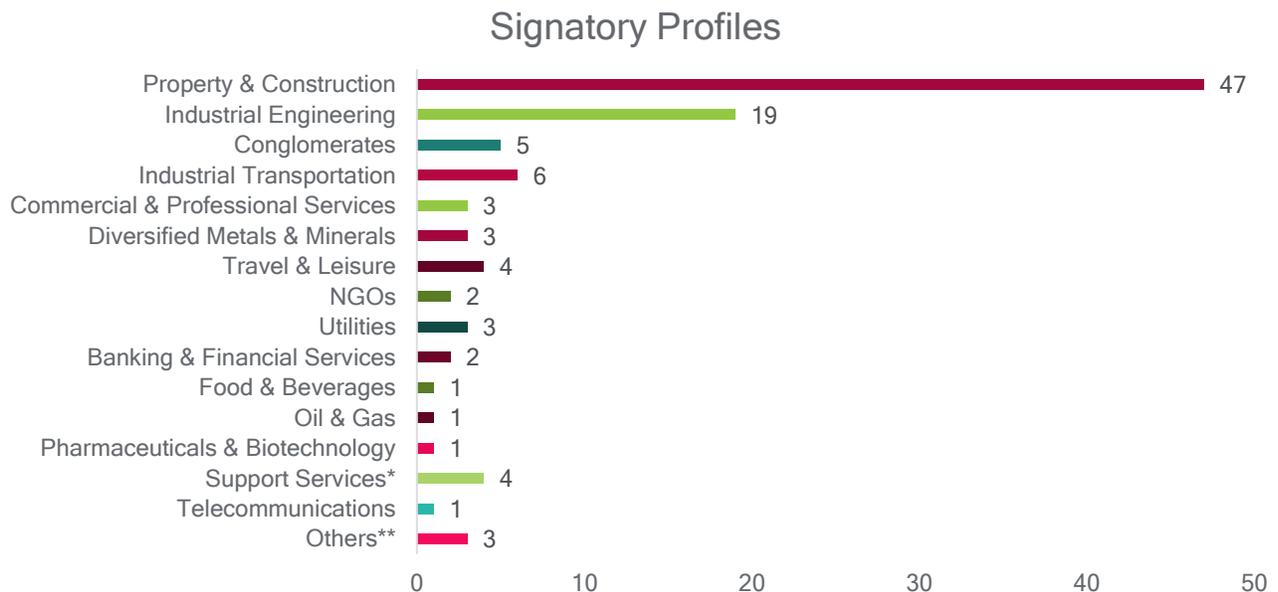
Pathway Selection



Recognising the large range of decarbonisation progress among companies and to provide flexibility, the Charter currently offers two pathways for companies to commit to: Pathway 1 requires signatories to set decarbonisation targets in consistent with the goals of the Paris agreement; Pathway 2 requires signatories to set and achieve science-based emission reduction targets with reference to the Science Based Targets initiative (SBTi).

The Charter was initially targeting the property and construction value chain, it has been expanded since 2020 to welcome businesses from all sectors to join and contribute to the long-term decarbonisation in Hong Kong. With reference to the Hang Seng Industry Classification System³, the property and construction sector accounts for the largest business sector among signatories (45%), consisting of companies including property developers and service managers, engineering consultants and construction material suppliers. The second-most represented sector is industrial engineering (18%), which mostly includes businesses related to environmental consultancy, environmental and engineering services.

To address the climate crisis, different sectors and individuals all have responsibilities to reduce their carbon footprint. The influence of the Charter has not only been expanding within the business sector with more companies from different sectors such as industrial transportation, travel and leisure joining the Charter, but also extended to the wider community including academic institutions and training providers which are categorised as support services. BEC will continue to diversify the profiles of Charter signatories.

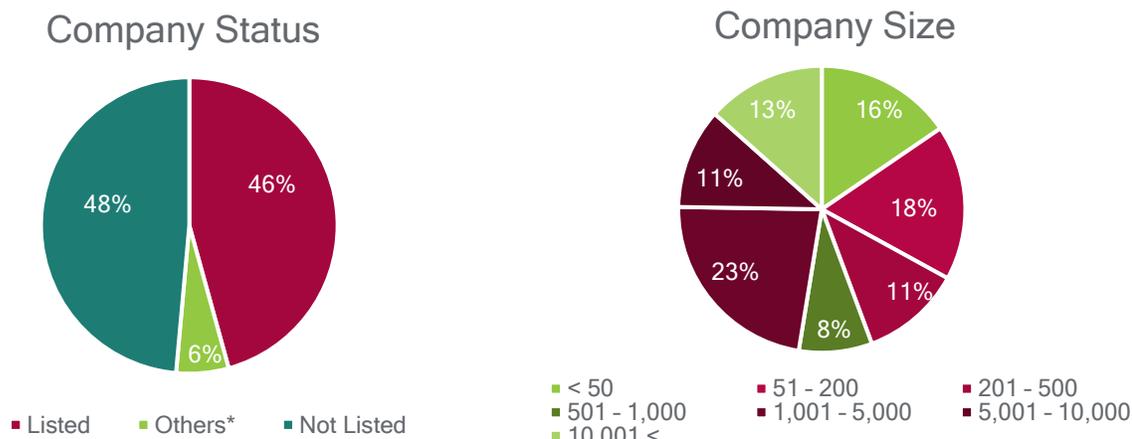


*Support services are companies that provide education related services and providers of non-financial services to consumer sector not classified elsewhere.

** Others include Healthcare Equipment & Services, Household Goods & Electronics and Media & Entertainment.

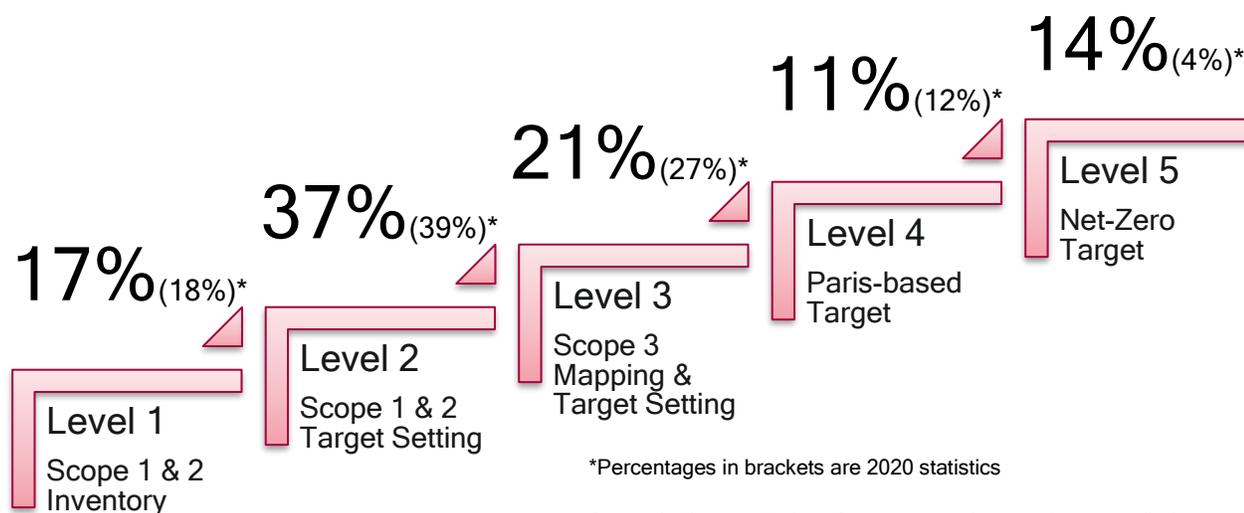
³ https://www.hsi.com.hk/static/uploads/contents/en/dl_centre/brochures/B_HSICSe.pdf

Our signatories are of different expertise backgrounds and company sizes. Among the 105 signatories, 46% of them are listed companies with a market capitalisation ranging from HK\$69 million to HK\$1,054 billion. It is observed that there is a growing number of small- and medium-sized enterprises (SMEs) in the Charter, from 6% in 2019 to about 16% in 2021, who are showing more active participation in carbon reduction initiatives.



*Others include non-governmental organisations (NGOs), statutory bodies and academic institutions.

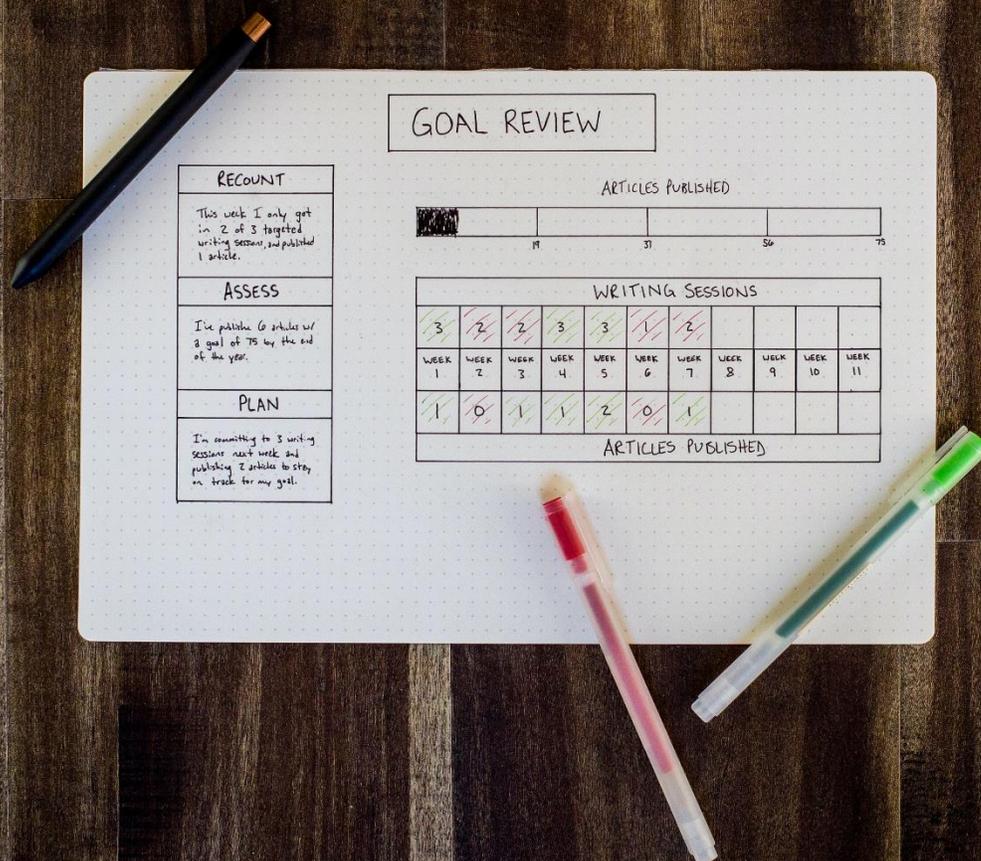
Considering the capacity difference between businesses, BEC suggests a simple 5-level framework as a reference for signatories to self-evaluate and benchmark their decarbonisation performance. While a considerable number of companies are still in the early stage of their decarbonisation journey, it is encouraging to see that an increasing proportion of our signatories have been pursuing a net-zero target (Level 5),



*Percentages in brackets are 2020 statistics

Scope 1: direct emissions from company’s owned or controlled sources, including the combustion of fuels in mobile and stationary sources
 Scope 2: indirect emissions from purchased electricity, steam, heat, or cooling
 Scope 3: all indirect emissions (excluding Scope 1 & 2 emissions) that occur in the value chain of the company

⁴ Manufacturing enterprises (1) which employ fewer than 100 persons (2) and non-manufacturing enterprises which employ fewer than 50 persons are regarded as SMEs in Hong Kong. (Reference: https://www.success.tid.gov.hk/english/aboutus/sme/service_detail_6863.html#:~:text=What%20are%20SMEs%3F,000%20SMEs%20in%20Hong%20Kong)



Progress and Achievements

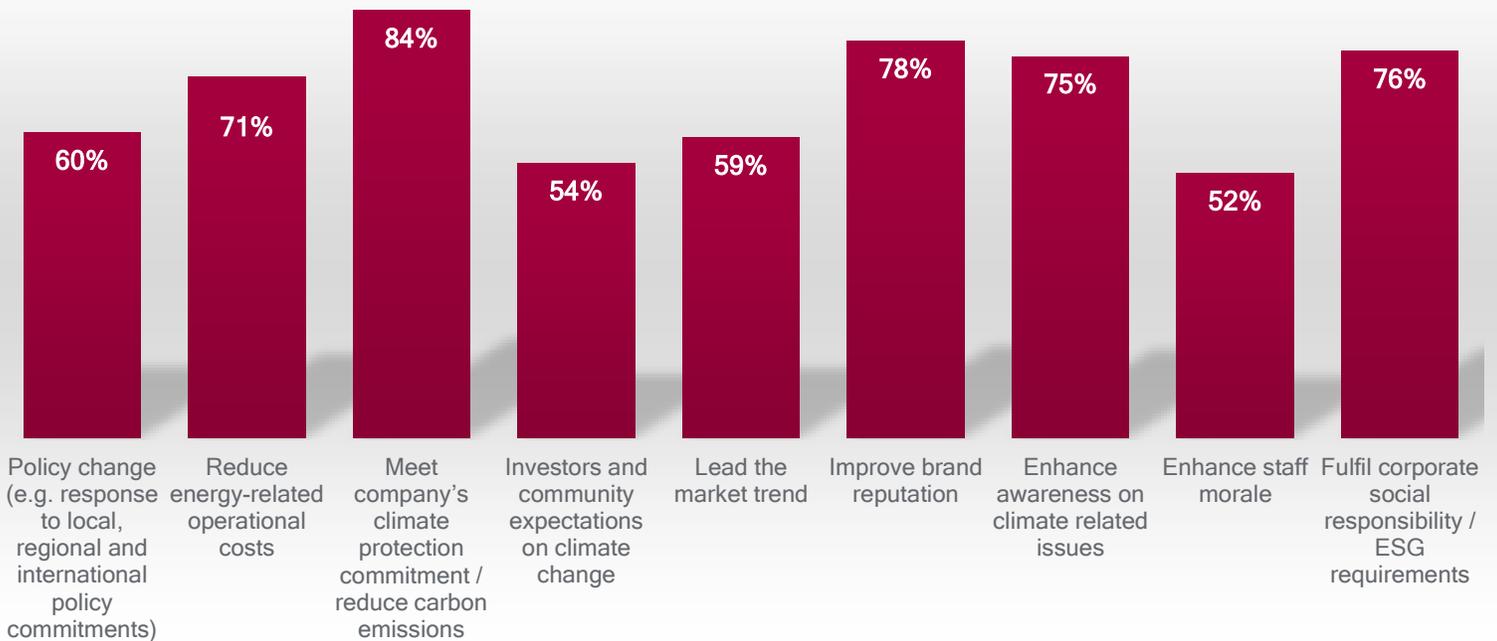
The following section summarises and outlines the progress and accomplishments of the signatories who joined the Charter between 2019 to 2021, based on a total of 97 responses of progress tracking forms collected.

Reasons to Decarbonise

Our signatories have become more aware of climate risks to the growth and operation of their businesses. The urge to combat climate change also pressurise our signatories to pursue a low-carbon transition and commit to different decarbonisation strategies. We see that many more companies decarbonise because of various external and internal drivers, for example to respond to local, region and international policy changes, rising expectations from investors and the community on climate actions, as well as the need of fulfilling their corporate social responsibility and ESG requirements.

In addition, some other most-mentioned reasons and benefits for our signatories to decarbonise include meeting the company's climate protection commitment on carbon emission reduction, improving brand reputation, enhancing awareness of climate-related issues and reducing energy-related operational costs.

Why Decarbonise?

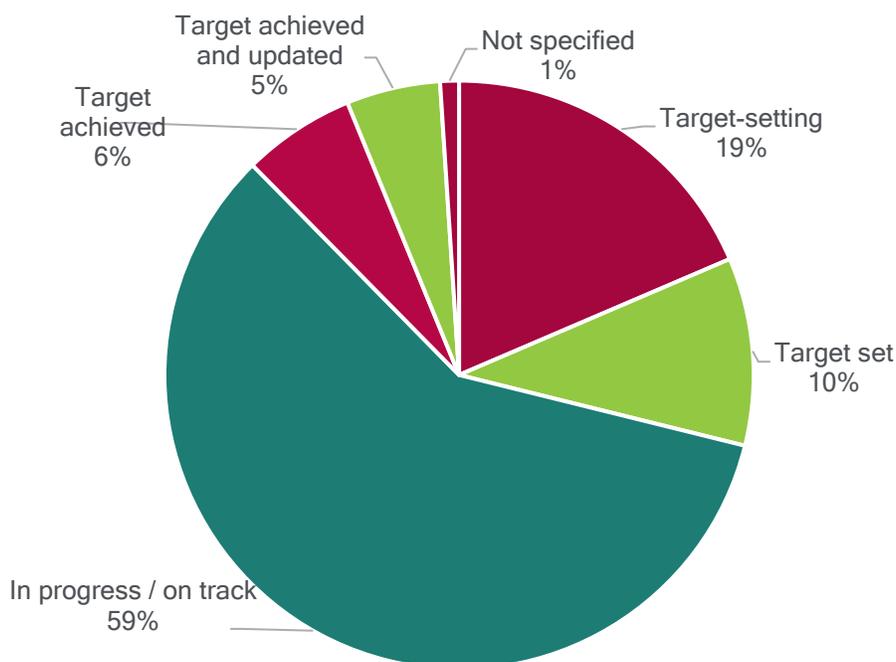


*Percentages in brackets are 2020 statistics

Decarbonisation Targets

Thanks to the continued efforts in decarbonisation and momentum brought by the BEC Low Carbon Charter, about 80% of our signatories have already set decarbonisation targets. Among them, 59% reported that they are working in progress and are on track to meet their decarbonisation targets. 6% have already reached their milestone targets, and 5% further updated their targets after achieving previous ones. The remaining 10% and 19% have just set or are determining relevant targets to reduce emissions.

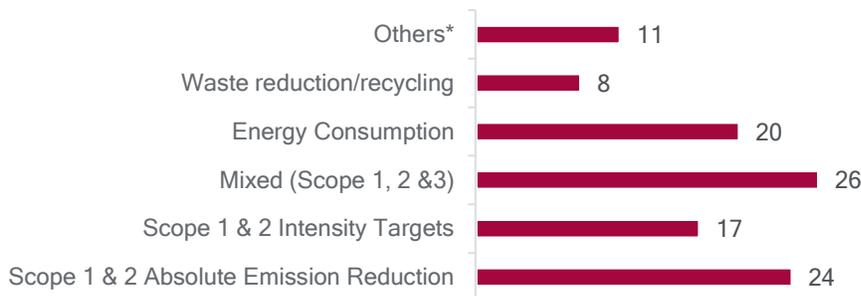
Signatory Progress



The signatories have committed to decarbonisation by setting various types of targets. Among the 81 signatories who disclosed their decarbonisation targets, 32% of them declared that they have set mixed targets which include emissions of all scopes 1, 2 and 3. For the majority of sectors, the largest emission sources of a company lie upstream and/ or downstream of their core operations. It is encouraging to see that we are having increasing number of signatories setting a target to cover the impact of scope 3.

The second-most popular decarbonisation targets are goals aimed at reducing scope 1 and 2 absolute emissions, accounting for about 30% of the signatories. Some of our signatories have also set other indirect emission targets including reducing energy use (25%) and reducing waste generation (10%).

Types of Targets



*Others include targets on reducing water consumption, increasing use of renewable energy etc.

Note: Some companies have set multiple goals targeting different elements in the decarbonisation process.

What are Absolute Emission Reduction and Intensity Targets?

Absolute Emission Reduction Target: a target that sets a definitive amount of greenhouse gas emissions to be reduced over time, e.g. tonnes of CO₂ equivalent.

Intensity Target: a target that covers the emission rate of a given pollutant relative to the intensity of a specific activity (usually a metric most relevant to a company's operations), e.g. emissions per staff or revenue generated.

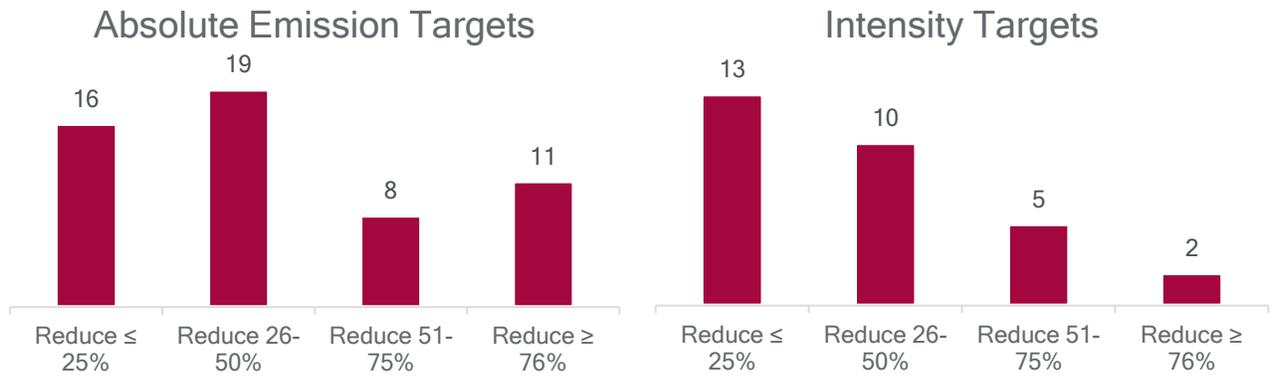
As net-zero transition becomes more mainstreamed, businesses need to understand there is increasing consensus to endorse only absolute emission reduction as an intensity target may not guarantee to reduce a company's total emissions.

The figures below present the distribution of the amplitude and timeframe of the targets set. Regardless of the scopes, all targets are categorised into absolute emission targets and intensity targets.

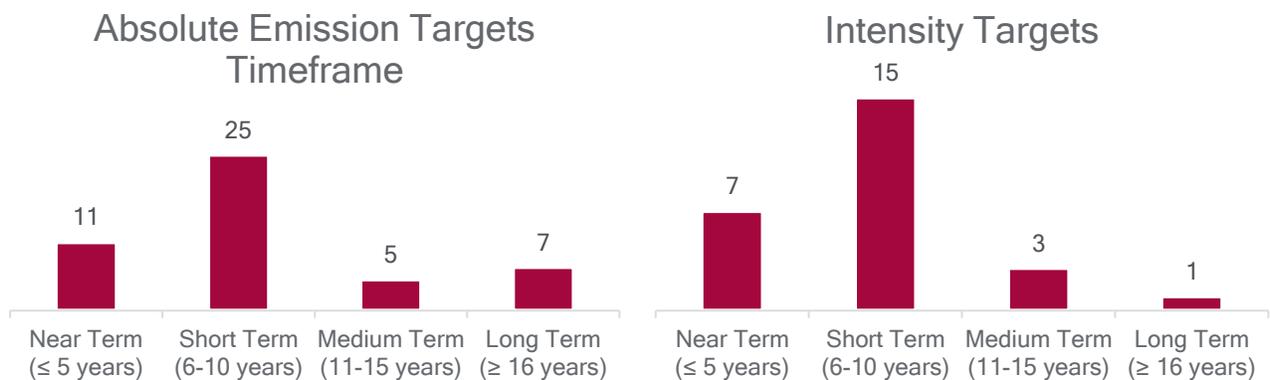
Among the 41 respondents who have set absolute emission reduction targets, about half (50%) of them set to reduce emission amount by 26-50%. 11 of them have set ambitious targets of reducing emission amount by more than 76% or aim to reach net zero emissions. A huge diversity of targets set is observed, spanning from 2% to 100% .

28 respondents have set intensity targets, with 13 of them targeting to reduce emission intensity by less than 25%. 10 of them aim to reduce emission intensity by a rate of 26-50%.

⁵ 100% emission reduction targets refer to net-zero emission commitments.



For both absolute emission targets and intensity targets, setting short-term (6-10 years) goals are more common among respondents. On the other hand, only a few respondents have set medium- and long-term goals with longer timeframes.





Decarbonisation Initiatives

Target (Re-)Setting Step by Step

To support our signatories in (re-)setting decarbonisation targets, the below framework is typically suggested based on the experience of our signatories.



To commence with, an effective climate or ESG governance structure should be established. A designated task force can be set up to manage risks and opportunities around sustainability issues, develop initiatives and engage different internal and external stakeholders. Next, companies are recommended to conduct carbon auditing to collect relevant emission data; define reporting boundaries, emission inventory, and baselines; review past decarbonisation initiatives, reports, and environmental performance (if available); explore potential emission reduction areas in the companies' value chain, and identify daily practices in offices that cause high emissions. Then, the designated task force may gather all the data and observations to suggest near-term, mid-term, and long-term decarbonisation targets and draft a roadmap with decarbonisation initiatives. The roadmap and targets should be endorsed by the top management and circulated among colleagues for obtaining commitments. Lastly, the designated task force may develop a database to consolidate and track the companies' environmental performance, as well as to identify areas for improvement.

Common Decarbonisation Measures

Our signatories have employed various decarbonisation strategies to move towards their carbon reduction goals. These strategies are classified into four major categories, namely Education and Awareness Raising, Building and Premises Management, Transportation and Operations, and Policies and Internal Governance Structure. Similar to previous years' practice, we invited one of our signatories to share its decarbonisation experience as a case study in the Progress Report 2021.

Case Study – CLP's Story of Action

Recognising the urgency for decarbonisation and the transition to net zero, CLP Holdings Limited (CLP) acknowledges the role it should take in accelerating the energy transition as a power business and has taken an early lead to set carbon intensity reduction targets with its Climate Vision 2050.

Launched in 2007 with a focus on the ambition to mitigate CLP's climate impact, CLP's Climate Vision 2050 has been instrumental in informing the company's business strategy and guiding its investment decision-making. It is also an integral part of CLP's broader climate strategy, which covers key considerations around climate adaptation and scenario analysis, among others.



As part of its roadmap to becoming a Utility of the Future, CLP in 2021 published the latest version of its Climate Vision 2050, in which the company is committed to achieving net-zero greenhouse gas emissions across its value chain by 2050.



This followed a strategic review in which CLP evaluated a comprehensive range of factors, including the latest climate science, technology trends, industry best practices and government policies, together with the evolving expectations of investors, customers, regulators, and other stakeholders.

In its move towards net-zero emissions, CLP has set science-based targets for 2030 to align with the Paris Agreement goal of limiting global warming to well-below 2°C above pre-industrial levels, and further strengthened its 2040 targets for the same ambition.

To support its efforts in meeting these targets, CLP brought forward by a decade to 2040 its commitment to phase out all existing coal-fired power generation while reaffirming it will not add any new coal-fired generation assets going forward.

In recognising the need to continue strengthening its targets and pursuing efforts to limit global warming to 1.5°C, CLP is exploring the use of new energy technologies such as green hydrogen, energy storage solutions and wider deployment of renewable energy as an alternative to natural gas in the long term. CLP is also committed to further reviewing its targets at least every five years.

Financing the energy transition

To support CLP's energy transition and to respond to the increasing investor awareness of the climate change imperative, CLP also established the Climate Action Finance Framework (CAFF) in 2017 to lay out CLP's methodology in raising Climate Action finance, including bonds, loans and other forms of finance, and detailed proceeds usage of those finance transactions to invest in projects that are consistent with its strategy to respond to climate change challenges.

In 2021, a US\$300 million 10-year Energy Transition Bond, HK\$3.7 billion medium-term Energy Transition Loan facilities and a HK\$1.6 billion 15-year Euler Hermes-covered Energy Transition loan was arranged to finance the construction of CLP's second new combined-cycle gas turbine generation unit at Black Point Power Station in Hong Kong. Together with another new unit commissioned in 2020, it will further support CLP's decarbonisation plan, which includes retiring coal-fired generating units at Castle Peak Power Station. In addition, CLP issued a US\$100 million 10-year New Energy Bond to finance the rollout of smart meters for customers in support of Hong Kong's transformation into a smart city.

Supporting customers to decarbonise

CLP also supports customers in embarking on their own decarbonisation journeys, through its Energy-as-a-Service business model. By leveraging on its core competence in the energy sector, CLP provides a range of energy management solutions to help customers improve energy efficiency as they take advantage of increased electrification to decarbonise and participate in the transition to a net-zero economy. This includes supporting the uptake of electric vehicles in Hong Kong by providing free charging facilities and offering support to private residential buildings interested in applying for government funding to install charging infrastructure.

In view of potential growing demand for sustainable energy solutions in the Greater Bay Area, CLP also set out a strategy to pursue opportunities to invest in the region's energy infrastructure projects for industrial parks and commercial sites, including district and multi-building cooling systems as well as data centres. This will be supported by CLP's investment in the CSG Energy Innovation Equity Investment Fund set up by China Southern Power Grid in 2020, which is expected to bring new smart energy and innovation-related opportunities.

Meanwhile, CLP also continues to partner with innovators to ensure it can access and deploy the latest and best-in-energy technology. This includes a portfolio of strategic investments in leading global innovation hubs within China, the United States and Israel, covering technologies such as demand response management, smart buildings, cybersecurity, and hydrogen storage.

Education and Awareness Raising

- Conduct staff training on technical terms e.g. carbon audit, decarbonisation, net zero etc.
- Encourage behavioural change among staff e.g. recycling habits, energy conservation, paperless practices etc.
- Organise stakeholders engagement workshops and best practice sharing sessions
- Assist business partners and clients to measure carbon footprint

Building and Premises Management

- Adopt light zoning and motion sensors to avoid wasting energy
- Replace T5/T8 fluorescent tubes with LED lights
- Install solar panels / purchase renewable energy
- Carry out retro-commissioning and retrofitting for building services and machinery e.g. heating, ventilation, and air-conditioning (HVAC) system, water pumps, lift, escalator, chiller plants etc.
- Switch from non-environmentally friendly refrigerants with ozone-friendly alternatives
- Increase the frequency of air-conditioners' filter cleaning and maintenance
- Install real-time building energy monitoring system
- Adopt Internet of Things (IoT) technologies
- Comply with green building standards e.g. BEAM Plus, LEED, WELL
- Develop rainwater harvesting and greywater recycling systems for flushing and cleansing water
- Perform regular maintenance of water taps and pipes to prevent leakage

Transportation and Operations

- Use electric vehicles or relatively low-carbon alternatives e.g. high-speed rails for business travel
- Phase out inefficient conventional fuel vehicles
- Shift face-to-face meetings to online virtual meetings to reduce business travel
- Install smart devices for regular data analytics on energy use to optimise operation and usage
- Conduct carbon and energy audits regularly for performance review
- Switch off office lighting during lunch time
- Assign staff to turn on and off electronic devices before and after office hours
- Carry out office waste management and reduction by practising office recycling
- Identify suppliers that contribute to significant carbon emission in the supply chain

Policies and Internal Governance Structure

- Set up a technical working group to lead and manage sustainability-related issues
- Establish green procurement guideline
- Follow Task Force on Climate-related Financial Disclosures (TCFD) guidelines and other international standards e.g. ISO14001, ISO14064, ISO50001
- Develop sustainability policies and carbon reduction roadmap with KPIs
- Purchase accredited and credible carbon offsets e.g. from the United Nations Carbon Offset Platform



Embracing Decarbonisation Challenges and Opportunities

Different core values among stakeholders

Our signatories expressed that the difference in core values among both internal and external stakeholders on environmental issues has led to the difficulty in earning buy-in from them. Office staff or value chain partners may be reluctant to support emission reduction measures due to a lack of awareness of the urgency of climate change and the significance of decarbonisation. Without their support and concerted efforts, many decarbonisation initiatives cannot be launched and run successfully.

We encourage our signatories to put more efforts in raising awareness of and gaining support from internal and external stakeholders through continuous engagement with them. For instance, concise promotional materials can be circulated among office staff and business partners to emphasise the importance and benefits of decarbonisation to drive behavioural and mindset changes. Transparent and effective communication channels are also crucial for

promoting carbon reduction initiatives, thereby meetings and workshops involving both internal and external parties should be organised regularly for idea exchange and obtaining buy-in.

Insufficient technical understanding in decarbonisation

New signatories, especially SMEs, who are at the initial stage of decarbonisation often lack the necessary knowledge and understanding in various areas related to decarbonisation, including but not limited to identifying main emissions sources, adopting suitable reporting methodology and emission calculation methods, and understanding related scientific jargons. All these issues would hinder companies from continuing their decarbonisation journey.

We advise our signatories to participate in different knowledge-sharing platforms, such as workshops and seminars, to hear from industry experts on their experiences and learn from best practices. Standardised ESG reporting mechanisms and any other relevant guidelines can be good references as a starting point, professional consultants can also be engaged when needed to offer assistance and guidance in planning their decarbonisation roadmaps.

Challenges in monitoring internal and external decarbonisation progress

Some respondents indicated the difficulties in managing and monitoring decarbonisation measures between different company departments, such as electricity consumption habits, waste management practices, paper usage, and so on. Signatories also find it inconvenient to keep track of the decarbonisation progress of their value chain partners, as the external parties may refuse to disclose relevant information due to confidentiality concerns or unavailability of data.

Signatories are suggested to set up a designated task force to manage sustainability and decarbonisation-related issues of across departments of the company. The task force will be leading emission reduction initiatives internally and externally and monitor the progress through regular interdepartmental meetings and continuous review of performance. The task force will also be responsible to communicate with external stakeholders like business partners and clients on the importance of decarbonisation and working closely with them to stay informed of their carbon reduction progress to see whether they need additional assistance.

Difficulties in obtaining accurate and consistent data

The accuracy and consistency of carbon emission data are of crucial importance for mapping out the value chain carbon emission of companies. However, there are still lack of regulations or guidelines available on data reporting and verification, making it difficult for companies to collect relevant emission data, particularly scope 3 emissions which heavily depend on the statistics from their value chain partners.

It is recommended that signatories should work more closely with their business partners, engage them regularly and provide necessary assistance on data collection. Besides, environmental consultants from trustworthy and reputable firms may be employed to provide professional suggestions and assist in data collection procedures. Well-established online

emission collection tools like carbon tracking software and carbon calculators may also be a good instrument to support relevant work.

Limited financial resources and manpower

Retrofitting and upgrading equipment and adopting new technologies would always incur a high upfront cost to our signatories. Also, decarbonisation initiatives engaging internal and external stakeholders often require extra manpower for execution. These challenges would bring burdens to our signatories, especially SMEs who lack financial resources and manpower.

Signatories may consider adopting green finance such as green loans for environmentally friendly purchases, including solar panels and machinery with higher efficiency, to reduce the initial cost of decarbonisation. Moreover, signatories who have just begun their decarbonisation journey may implement low-hanging fruits and small-scale initiatives first. For example, small-scale awareness training workshops to drive behavioral changes among staff to perform green office practices like recycling and energy conservation are always a good start for decarbonisation. In Hong Kong's context where buildings contribute to most emissions, retro-commissioning is also a cost-effective approach to reduce energy and emissions without new equipment in investment.

BEC organises events regularly to assist the BEC Low Carbon Charter signatories and interested companies in setting, operationalising and achieving their decarbonisation targets. Sustainability professionals are invited to introduce target-setting frameworks, potential roadmaps, tools, and solutions to challenges encountered to provide a clearer picture for companies to advance their decarbonisation journeys.

Power Up Coalition

In September 2020, the Development Bureau announced that all public work contracts tendered after February 2021 need to apply for temporary electricity and water supply during the detailed design phase to ensure completion of the connections before construction starts (DEVB TC(W) No. 13/2020). This would reduce the use of diesel generators and could facilitate the use of other electric plant equipment and vehicles.

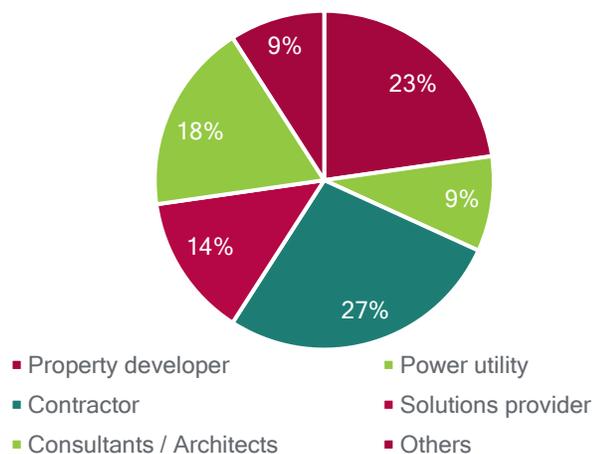


Riding on the policy change, BEC and Gammon Construction Limited co-launched the Power Up Coalition in April 2021, the first sectoral initiative under the Charter, to address decarbonisation challenges specific to the construction sector. It aims to encourage the timely electrification of non-public works construction sites in Hong Kong and to promote zero-emission construction sites in the long term. We invite private and semi-private project proponents and their partners, such as power suppliers, architects, consultants, contractors, engineers, professional bodies, and other companies or organisations who are interested in promoting, supporting and achieving zero-emission construction sites in a long run to join as members.

Around 27% of Power Up members are contractors, followed by property developers (23%) and consultants/architects (28%).

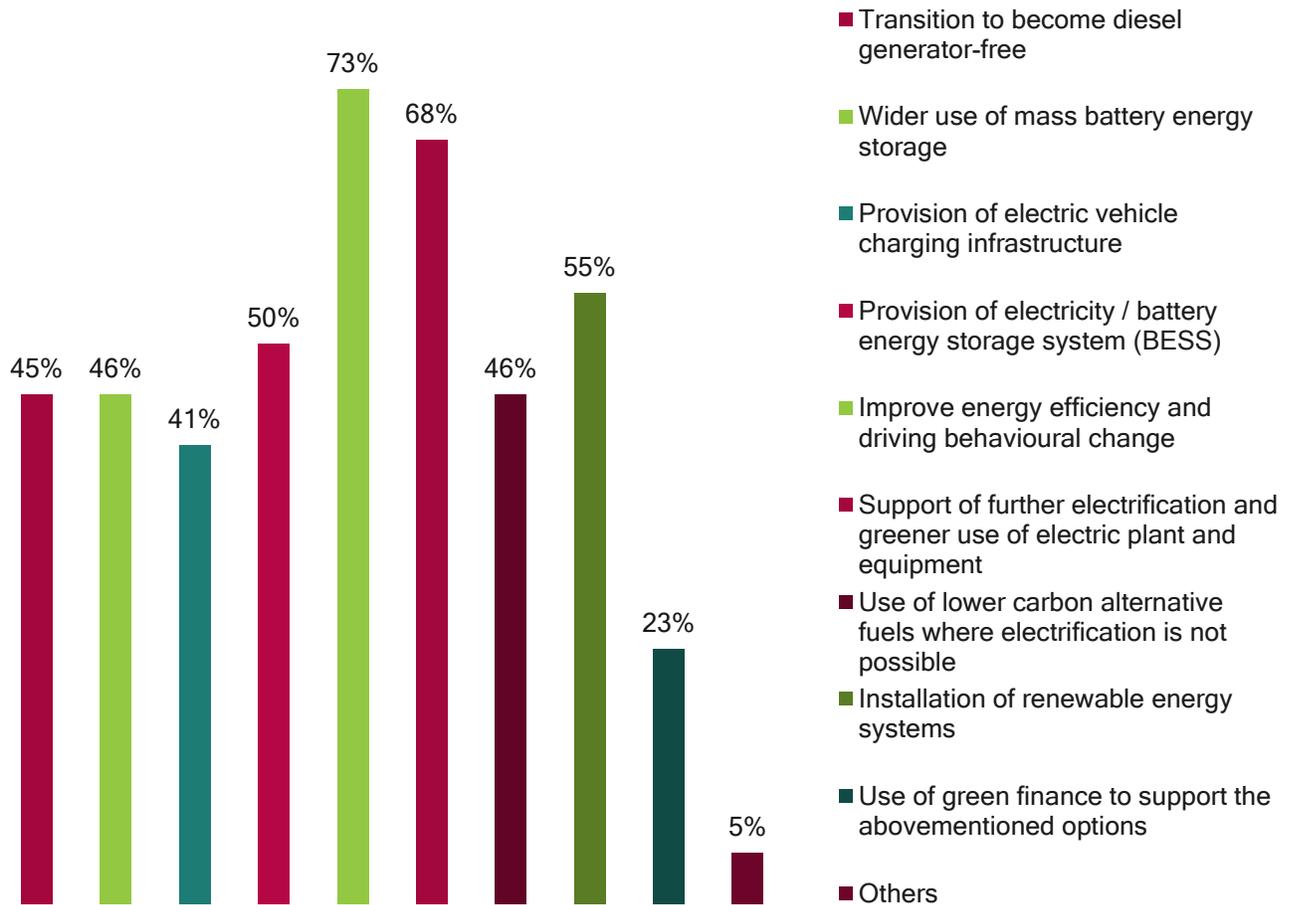
Among the 20 responses collected, 5 members (25%) have already set decarbonisation targets for construction-related emission, for example to reduce the carbon intensity of capital goods and early connection to grid power. Another 5 members (25%) are also planning to set relevant targets in the future.

Company Nature



Besides target setting, around 50% of our members have successfully electrified some of their companies' sites or made sufficient electricity available throughout the whole superstructure construction phase, with rates ranging from 20-100%. It is also encouraging to see that our members have taken or planned to implement various on-site decarbonisation actions as committed. 73% of them have put efforts in improving on-site energy efficiency and driving behavioural change, followed by supporting further electrification and greener use of electric plant and equipment (68%).

On-site Decarbonisation Actions



Note: Some companies have taken multiple on-site decarbonisation actions.

Our members also shared the challenges and difficulties they experienced while implementing decarbonisation actions, as summarised below. Most of them are related to on-site temporary electricity supply, in which its application ideally involves early engagement with power companies and accurate on-site power demand estimation. Companies are encouraged to engage consultants and architects to conduct the power demand estimation work as early as during the design and planning phase, providing sufficient time for power companies to ensure the availability of electricity with minimal delay. Collaboration between different parties is also of critical importance in facilitating the electrification of construction sites and decarbonising construction industry.

Property Developer

- Data collection and analysis
- Accurate early stage estimation of power consumption for the whole construction
- Coordination work with the power companies on sourcing early electricity to construction sites

Power Utility

- Challenging to electrify construction sites in new development areas, as there is usually no easy access to electricity supply
- Long lead time for obtaining statutory approval, e.g. Excavation Permits
- Extra space required for BESS
- Difficulties in the excavation of trench for locating a feasible T-off points at the existing power circuits due to congested underground conditions

Contractor

- Site constraints in setting up temporary electricity supply in construction sites
- Availability of electrical plant and equipment etc.
- Expensive cabling
- Underestimation of electricity demand during power supply forecasting

Solutions Provider

- Lack of incentive in transitioning away from diesel generators due to the subsidies provided by the Government on diesel fuel
- High initial cost of purchasing the Enerstainer; cost concerns on high energy efficient equipment
- Difficulties in progress monitoring due to unstructured documentation and filing in construction sites
- Remote locations of the projects sites, with no electricity grid at all in the beginning

Consultants / Architects

- Difficulties in convincing clients to adopt decarbonisation strategies with concerns about cost and time implication to the projects
- Collaboration is important between all parties involved in the construction projects

Activities in 2021

Since the launch of the Charter in 2019, BEC has been increasing efforts to enhance our support to the signatories in their decarbonisation journey. In 2021, we organised various webinars and events for knowledge dissemination and experience sharing.

BEC Low Carbon Charter 2nd Anniversary Ceremony and Launch of Power Up Coalition

BEC organised a virtual ceremony on 16 April 2021 to celebrate the Charter's 2nd anniversary. This year, we welcomed a new batch of signatories including education providers and sustainability consultancies, further reflecting the importance of cross-sectoral decarbonisation efforts. Our Guest of Honour, then Under Secretary for the Environment Mr C.W. Tse highlighted that collective efforts between industries remain crucial to accelerate a low carbon transition in Hong Kong.



On the same day, BEC co-launched the Power Up Coalition, a new sectoral initiative under the BEC Low Carbon Charter, with Gammon Construction Limited as an effort to further support the Charter signatories in addressing decarbonisation challenges specific to the construction sector. At the event, Guest of Honour, then Permanent Secretary for Development (Works) Ir S.H. Lam stressed that new initiatives like Power Up that drive collaboration with industrial expertise are key to decarbonise the construction industry.



[Webinar] Room for Improvement: Enhancing Building Energy Efficiency Through Stakeholder Engagement



The "Room for Improvement: Enhancing Building Energy Efficiency Through Stakeholder Engagement" webinar was held on 23 June 2021. Reflecting on the major challenges recognised by our signatories, this first Charter-related event on green tenancy aimed to raise awareness and facilitate

engagements between tenants and landlords. Consultants, developers, and tenants were invited to share their successful cases and lessons learned.

[Webinar] Target-setting for Long-term Decarbonisation: A Practical Challenge for Challenge for Business in Hong Kong

A webinar on “Target-setting for Long-term Decarbonisation: A Practical Challenge for Challenge for Business in Hong Kong” was held on 2 August 2021. To assist SMEs and other companies in addressing the challenge of enhancing their climate change knowledge and identifying a starting point of their decarbonisation journey, we invited academics and practitioners to share insights on the relevance of climate change to business and their experiences on target-(re)setting.



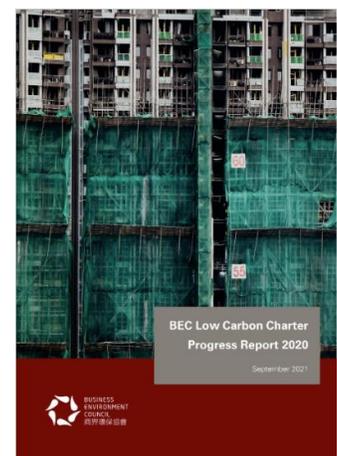
Power Up Coalition: Understanding Practical Challenges and Opportunities for Construction Site Electrification



The first Power Up workshop: “Power Up Coalition: Understanding Practical Challenges and Opportunities for Construction Site Electrification” was held on 30 Aug 2021, to discuss the technicality of construction site electrification. Industry experts were invited to share insights on applying electricity supply at site, estimating on-site power demand and the benefit of electrification.

Release of Low Carbon Charter Progress Report 2020

The “Low Carbon Charter Progress Report 2020” was published in September 2021, summarising the decarbonisation progresses of 73 signatories who have joined the Charter since 2019 and 2020. Three signatories were invited to share their experiences through case studies, offering insights and recommendations on decarbonisation and target-setting strategies.



BEC Low Carbon Charter Signatories

(as of December 2021, in alphabetical order)







Schneider
Electric
施耐德電氣

SW
STEEL

SIEMENS
Ingenuity for life

SIEMENS
energy

SK 新鴻基地產
Sun Hung Kai Properties

SINO LAND
信和置業

Supreme 超卓管理服務有限公司
Supreme Management Services Limited

SWIRE COCA-COLA

SWIRE PACIFIC

太古地產
SWIRE PROPERTIES

Tarkett

煤氣
Towngas

THE HONG KONG
UNIVERSITY OF SCIENCE
AND TECHNOLOGY

THE HONGKONG AND SHANGHAI HOTELS, LIMITED
香港上海大酒店有限公司

HSBC

港燈
HK Electric

JEC
怡和機器
Jardine Engineering Corporation

KMB

時代 **廣場**
Hong Kong Times Square

TIP

TRADEPORT

TÜVRheinland
Precisely Right.

VEOLIA

WHEELOCK
PROPERTIES
會德豐地產

和利鋼鐵有限公司
MO LEE STEEL CO LTD

WSP

有利集團有限公司
Yau Lee Holdings Limited

Power Up Coalition Members

(as of December 2021, in alphabetical order)

Founding member



List of members



Acknowledgements

The BEC Low Carbon Charter Progress Report 2021 is the work of Business Environment Council (BEC)'s Policy & Research team, supported by the BEC Climate Change Business Forum Advisory Group (CCBF AG). BEC would like to express our gratitude to the BEC CCBF AG members, technical partner and supporting organisations of the BEC Low Carbon Charter, as well as the BEC Low Carbon Charter 2019 - 2021 signatories that have greatly assisted in the content and development of this progress report.

BEC is grateful for the generous support of member companies, particularly the Steering Committee of BEC CCBF AG, who have provided financial support for this project.



Sponsors of the BEC Low Carbon Hong Kong Initiative

BEC Climate Change Business Forum Advisory Group Steering Committee (2021 - 2023)

Airport Authority Hong Kong
 CLP Power Hong Kong Limited
 Henderson Land Development Company Limited
 Hongkong Land Limited
 Link Asset Management Limited
 NWS Holdings Limited
 Ove Arup & Partners Hong Kong Limited
 Shell Hong Kong Limited
 Siemens Limited
 Sun Hung Kai Properties Limited
 Swire Pacific Limited
 Swire Properties Limited
 The Hongkong Electric Company Limited
 Veolia Environmental Services China Limited

BEC Climate Change Business Forum Advisory Group Steering Committee (2019 - 2021)

Airport Authority Hong Kong
CLP Power Hong Kong Limited
Hongkong Land Limited
Link Asset Management Limited
NWS Holdings Limited
Ove Arup & Partners Hong Kong Limited
Siemens Limited
Sun Hung Kai Properties Limited
Swire Pacific Limited
Swire Properties Limited
The Hongkong Electric Company Limited

Technical Partner (since 2019)

CDP

Supporting Organisations (2020 - 2021)

China Real Estate Chamber of Commerce Hong Kong and International Chapter Limited
Hong Kong Green Building Council Limited
Hong Kong Quality Assurance Agency
SME Sustainability Society
The British Chamber of Commerce in Hong Kong
The Canadian Chamber of Commerce in Hong Kong
The European Chamber of Commerce in Hong Kong
The Hong Kong General Chamber of Commerce
The Hong Kong Liner Shipping Association

BEC Staff

Mr Merlin Lao	Head - Policy & Research
Ms Danice Wong	Senior Officer - Policy & Research

Appendix

2021 Signatory Progress & Achievements Reporting Form

Introduction

Congratulations on being a signatory of the BEC Low Carbon Charter / member of the Power Up Coalition. Your company is part of an elite group of businesses voluntarily committing to set and achieve decarbonisation targets, disclose progress of setting and achieving targets, and advocate target setting and low carbon practices. For our Power Up members, you are also committing to promote and facilitate the early delivery of sufficient electricity connection for all Hong Kong SAR construction sites and other decarbonisation initiatives for the construction industry. Your company's commitment and actions are invaluable in the transformation to a healthy and sustainable Hong Kong.

BEC invites you to share with us your company's journey and progress in working towards the BEC Low Carbon Charter / Power Up Coalition commitments by completing this form. The purpose of this is two-fold: (1) for BEC to understand your company's target setting and decarbonisation experiences and how BEC may offer suitable support, and (2) for BEC to record your company's progress in working towards the commitments with the aim to promote and celebrate the achievements.

By completing and returning this form to BEC, your company fulfils the "disclose annually progress of setting/achieving target(s)" component of the Low Carbon Charter commitment, and "disclose and share their progress annually" component of the Power Up Coalition pledge. BEC also encourages your company to disclose progress through other channels of communication.

Handling of Information

The information you provide in this form will be used solely for materials/publications related to the BEC Low Carbon Charter and in anonymised/aggregated forms so that the identity of individual signatories will not be disclosed. We would strongly encourage you to share your experience and achievements through submitting a case study and disclosing your decarbonisation targets and progress online. You will have the chance to commit to disclose in Section E.

Be assured that BEC's aim is to track the collective progress of BEC Low Carbon Charter signatories and individual companies' own progress over time, not to compare companies against one another.

Instructions

Enter information directly into this form and submit the completed form in either Microsoft Word or PDF format by email to danicewong@bec.org.hk. You will receive an email acknowledging receipt of the form upon successful submission.

You may amend a submitted response at any time before the deadline by re-submitting a revised and completed form to BEC. The newest form will supersede any previously submitted forms and render any previous versions obsolete. You are recommended to fill in the form in English.

This form should be submitted no later than 14 January 2021 (Friday). BEC encourages you to submit the form as early as possible. BEC may follow-up and contact your contact person should clarification be needed.

BEC aims to make this reporting process easy and simple for signatories. For each question, you may make use of relevant information that may have already been compiled or be in your company's public reports. If you wish to reference information in your company's public reports, your responses may include "see page [#] of our report [link]", for example.

BEC understands that some signatories may have set decarbonisation targets using energy consumption or other units as units for measurement. If this applies to your company, BEC encourages you to translate the targets and achievements into carbon terms as far as possible as you respond to this form.

For any enquiries, you may contact Ms Danice Wong at danicewong@bec.org.hk or 2784 3951.

A. General Information

For initial signatories, you can choose to fill in questions A3-5 only in Sections A & B if there is no update since last year.

1. Your company name.

[GRI Standards Disclosure 102-1]

Click or tap here to enter text.

2. Describe your company's business profile.

Please refer to the Hang Seng Industry Classification System on the description of sector (https://www.hsi.com.hk/static/uploads/contents/en/dl_centre/brochures/B_HSICSe.pdf). [GRI Standards Disclosure 102-2]

[GRI Standards Disclosure 102-2]

- Property & Construction
- Industrial Engineering
- Conglomerates
- Industrial Transportation
- Commercial & Professional Services
- Diversified Metals & Minerals
- Travel & Leisure
- NGOs
- Utilities
- Banking & Financial Services
- Food & Beverages
- Oil & Gas
- Pharmaceuticals & Biotechnology

- Support Services
- Telecommunications
- Others, please specify: _____

3. Describe your company size.

- < 50
- 51 – 200
- 201 – 500
- 501 – 1,000
- 1,001 – 5,000
- 5,001 – 10,000
- 10,001 <

4. Is your company listed?

- Yes, in Hong Kong
- Yes, outside Hong Kong
- No

5. Contact person name, title, email address, and phone number.

This person will be your company's primary representative in all BEC Low Carbon Charter-related liaison with BEC. You may appoint multiple contact persons, indicate specific contact persons for issues related to this form, or request that other colleagues be copied in emails directed to the contact person.

Click or tap here to enter text.

6. What is your reporting period?

Please indicate your start and end date in DD/MM/YYYY - DD/MM/YYYY format.

[\[GRI Standards Disclosure 102-50\]](#)

Click or tap here to enter text.

7. What is your reporting boundary?

- All company entity
- Selected entity
- Project-based
- Selected operational control
- Others, please specify: _____

8. Is your company/organisation a signatory of the BEC Low Carbon Charter?

- Yes (Please continue to Section B. Motivation)
- No (Please continue to Section F. Power Up Coalition)

B. Motivation

- Why / what benefits did your company observe from committing to set and achieve decarbonisation targets?
(You may choose more than one answers)
 - Policy change (e.g. response to local, regional and international policy commitments)
 - Reduce energy-related operational costs
 - Meet company's climate protection commitment / reduce carbon emissions
 - Investors and community expectations on climate change
 - Lead the market trend
 - Improve brand reputation
 - Enhance awareness on climate related issues
 - Enhance staff morale
 - Fulfil corporate social responsibility / ESG requirements
 - Others, please specify: _____

C. Progress

This section seeks to understand your company's decarbonisation progresses.

Definition

Scope 1, 2, and 3 refer to carbon emissions as defined by [Greenhouse Gas Protocol](#).

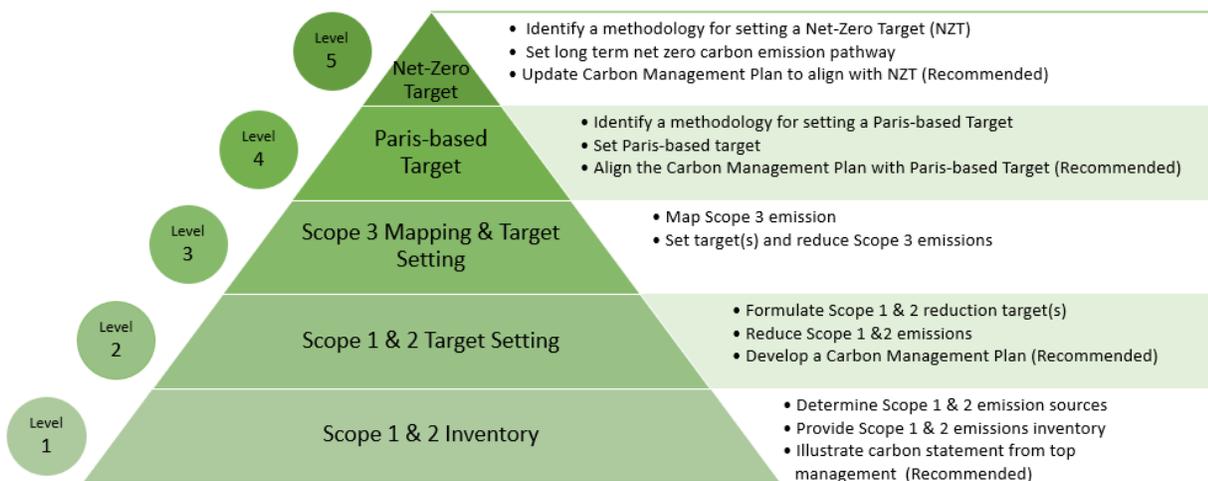
Scope 1 refers to direct Greenhouse gas (GHG) emissions from sources the company owns or controls. For example, generation of electricity and heat, physical or chemical processing, transportation of materials.

Scope 2 refers to indirect GHG emissions generated through purchased electricity.

Scope 3 refers to other indirect GHG emissions along the value chain, excluding scope 2 emissions, e.g. emissions related to purchased and sold products, business travels and commuting, leased assets and outsourced activities, and waste disposal.

Paris-aligned targets refers to the target in line with the Paris Agreement, which aims to limit global average temperature to well-below 2°C above pre-industrial levels and pursue efforts to limit warming to 1.5°C.

Net Zero refers to the scenario which the emission of carbon and the reduction/capture of carbon balances out. Net zero emissions must be achieved eventually to fully mitigate climate change and to stabilise the climate.



1. With reference to the figure above, how far along is your company in its decarbonisation journey?

For example, if your company has just begun the target setting and decarbonisation journey and is currently collecting data to understand your company's emissions, then you are in Level 1. If your company has set a target through the Science Based Targets initiative, then you are in Level 4. You should have fulfilled all the requirements of the previous levels and to be at the next level.

- Level 1
- Level 2
- Level 3
- Level 4
- Level 5

2. Describe the actions and initiatives taken in working towards (re-)setting a target.

Click or tap here to enter text.

3. If your company has mapped out and established an inventory of carbon emissions, describe your company's carbon footprint. (CO₂e).

Specify whether these are Scope 1, 2, or 3 carbon emissions. Please also specify whether the relevant data has received internal and/or external verification. If so, please specify the verification body and the verification standard e.g. ISO 14064-3.

[\[GRI Standards Disclosure 305-1, 305-2, 305-3, 305-4; HKEx ESG Reporting Guide KPI A1.2\]](#)

Click or tap here to enter text.

4. If your company has set decarbonisation target(s), describe it/them.

Include the target's base year, timeframe, ambition (reducing how much, in both **total amount** and **percentage**), type (absolute targets or intensity targets) and scope (Scope 1,2 or 3). If your company has set an energy-based target, please translate that into carbon terms. Please also indicate your sub-targets e.g. recycling if there are any.

[\[GRI Standards Disclosure 103-2\]](#)

Click or tap here to enter text.

5. Describe the decarbonisation actions and initiatives taken/ plans to take (in working towards achieving the target).

[\[GRI Standards Disclosure 103-2; HKEx ESG Reporting Guide KPI A1.5, KPI A2.3\]](#)

Click or tap here to enter text.

6. If your company has set a target and has begun decarbonising, how much carbon has been reduced so far and is it on track with the aforementioned target(s)?

Provide both the **total amount** of carbon reduced and the **percentage** of carbon reduced.

[\[GRI Standards Disclosure 305-5; HKEx ESG Reporting Guide KPI A1.5, KPI A2.3\]](#)

Click or tap here to enter text.

7. Which of the following best-describes your decarbonisation progress?

- Target-setting

- Target set
- In progress / on track
- Target achieved
- Target achieved and updated
- Others, please specify: _____

8. How has your company been advocating target setting and decarbonisation internally and externally?

Click or tap here to enter text.

9. The Hong Kong Government has pledged to reach carbon neutrality by 2050. How has that impacted your company's decarbonisation strategy?

Click or tap here to enter text.

D. Experiences

1. If your company has set a target and has begun decarbonising, what were the key factors for successfully decarbonising and achieving targets?

Click or tap here to enter text.

2. Throughout the target setting and decarbonisation process, were there challenges encountered and how were they overcome?

Click or tap here to enter text.

3. What kind of support does your company need from BEC and other stakeholders to set and achieve decarbonisation targets?

Click or tap here to enter text.

4. Has your company joined other decarbonisation pledges in addition to the BEC Low Carbon Charter and Power Up Coalition?

If yes, describe the pledge(s) and when your company joined them.

Click or tap here to enter text.

E. Tell Your Story

1. Would you like to submit a case on your company's decarbonisation achievements?

The case may include messages you would like to share with other signatories and the general public, which include your company's decarbonisation journey, stories from your colleagues, etc. We will contact you in early 2021 if you are selected for the case study exercise.

Click or tap here to enter text.

2. Would you like to disclose your decarbonisation targets through the BEC Low Carbon Charter and Power Up Coalition?

Please indicate your interests in this and we will release more details regarding the arrangement at a later stage.

Click or tap here to enter text.

F. Power Up Coalition

1. Are you a member of the Power Up Coalition?
 - Yes (Please continue to question F2)
 - No (Please continue to Section G. Anything Else?)

2. Which of the following best describes your company's nature?
 - Property developer (Please continue to question F3)
 - Power utility (Please continue to question F8)
 - Contractor (Please continue to question F3)
 - Solutions provider (Please continue to question F8)
 - Consultants / Architects (Please continue to question F8)
 - Others (Please continue to question F8)

3. Has your company set any decarbonisation targets for construction-related emission?
 - Yes (Please continue to question F4)
 - No (Please continue to question F5)

4. Please describe your company's construction-related decarbonisation targets.

Please translate any energy-based target into carbon terms.

Click or tap here to enter text.

5. Is your company planning to set decarbonisation targets for construction-related emissions in the future?
 - Yes
 - No

6. What are the difficulties hindering your company from setting construction-related decarbonisation targets?

Click or tap here to enter text.

7. What kind of support does your company need from BEC and other stakeholders to set and achieve construction-related decarbonisation targets?

Click or tap here to enter text.

8. What on-site decarbonisation actions have your company (planned to) implement? (You may choose more than one answer)
 - Transition to become diesel generator-free
 - Wider use of mass battery energy storage
 - Provision of electric vehicle charging infrastructure
 - Provision of electricity / battery energy storage system (BESS)
 - Improve energy efficiency and driving behavioural change

- Support of further electrification and greener use of electric plant and equipment
- Use of lower carbon alternative fuels where electrification is not possible
- Installation of renewable energy systems
- Use of green finance to support the abovementioned options
- Others, please specify: _____

9. Please detail your company's (planned) on-site decarbonisation actions.

Click or tap here to enter text.

10. How many (numerical value + percentage) of your company's sites have been electrified?

Click or tap here to enter text.

11. If your company has electrified construction sites, how many of your sites (numerical value + percentage) has sufficient electricity available throughout the whole superstructure construction phase?

Click or tap here to enter text.

12. What other on-site decarbonisation actions are in progress?

Please describe your actions and progress. For example, how many projects have you supported so far?

Click or tap here to enter text.

13. Did you experience any challenges / difficulties while implementing decarbonisation actions? How did you overcome them?

Click or tap here to enter text.

G. Anything Else?

1. Are there anything else you would like to share in your submission?

Click or tap here to enter text.

-----End of 2021 Signatory Progress & Achievements Reporting Form -----

Credits

Photos by

Taylor Simpson on Unsplash (Cover)

Marissa Rodriguez on Unsplash (Content page)

Blocks Fletcher on Unsplash (p.3)

Isaac Smith on Unsplash (p.6)

Landon Parenteau on Unsplash (p.11)

niko photos on Unsplash (p.16)

About BEC

Business Environment Council Limited ('BEC') is an independent, charitable membership organisation, established by the business sector in Hong Kong. Since its establishment in 1992, BEC has been at the forefront of promoting environmental excellence by advocating the uptake of clean technologies and practices which reduce waste, conserve resources, prevent pollution and improve corporate environmental and social responsibility. BEC offers sustainable solutions and professional services covering advisory, research, assessment, training and award programs for government, business and the community, thus enabling environmental protection and contributing to the transition to a net-zero economy.

About BEC CCBF AG

BEC Climate Change Business Forum Advisory Group ("BEC CCBF AG") promotes the awareness of, and builds capacity in relation to, climate change mitigation, adaptation and resilience activities amongst BEC's membership and the business community in Hong Kong. It also aims to provide a platform for BEC to engage relevant regulatory bodies on climate-change related matters, and forge collaboration between local and global experts on climate change.

Disclaimer

This publication has been prepared by BEC on the basis of information available at the date of publication without any independent verification. The information contained herein is of a general nature; it is not intended to address the circumstances of any particular company or entity and BEC is not, by means of this publication, rendering any business, financial, legal, or other professional advice or services in any form. BEC does not guarantee or warrant the accuracy, reliability, completeness, or currency of the information in this publication nor its usefulness in achieving any purpose. BEC shall not be liable for any loss, damage, cost, or expense incurred or arising by reason of any person or entity using or relying on the information in this publication. Please be aware that the websites referred to in this publication may be changed, suspended, or removed without prior notice.



Business Environment Council Limited

2/F, 77 Tat Chee Avenue,

Kowloon Tong, Hong Kong

T: (852) 2784 3900

F: (852) 2784 6699

E: enquiry@bec.org.hk

<https://www.bec.org.hk>

All rights reserved. No part of this Report may be reprinted, reproduced or utilised in any form or by any electronic, mechanical or other means, now known or hereafter invented, without prior permission in writing from Business Environment Council Limited.

Copyright

© 2022 Business Environment Council Limited