2021 Rankings of Corporate Climate Action

CHINA'S GOALS CALL LOCAL AND GLOBAL BRANDS TOGETHER

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Contents

China's goals call local and global brands together

Corporate Climate Action Transparency Index (CATI) 2021

EXECUTIVE SUMMARY

INTRODUCTION

Extreme weather events now occur frequently worldwide, and the impact of climate change on human-beings and the environment has become increasingly more visible and significant in recent years. In response, China has pledged that the nation will peak its carbon emissions by 2030 and achieve carbon neutrality before 2060. Yet, China's position as a center of global manufacturing complicates its efforts to meet these ambitious greenhouse gas reduction goals, especially as the country's manufacturing for export soars in the post-pandemic economic recovery.

As globalization has accelerated over the past decade and longer, many international brands have outsourced the production of their goods to suppliers in China that they do not own and factories that they do not operate. For these companies, many of them consumer goods brands, greenhouse gas emissions from their supply chain account for the vast share of their total greenhouse gas emissions. Their decarbonization efforts therefore must reach into supply chain policies and procurement practices as a top priority for achieving their climate commitments. The resulting greenhouse gas reductions from these Chinese suppliers will contribute substantially to achieving the country's 30.60 goal.

On a parallel track, many domestic Chinese companies operating here in the country are also major energy consumers and emitters themselves. They must similarly participate in greenhouse gas reduction by prioritizing the decarbonization of their own corporate manufacturing and business operations. Their manufacturing emissions are under their direct control.

In both cases, China's experience in industrial air pollution control over the past decades, especially promoting information disclosure to hold stakeholders accountable, offers important insight and points of leverage for climate governance at national and corporate levels.

To maximize the synergy between industrial pollution and greenhouse gas oversight and control, with the technical support from the Research Group on Corporate Climate Action Index of the Chinese Research Academy of Environmental Sciences, IPE has upgraded its corporate climate action evaluation index in 2021 and renamed the existing **Supply Chain Climate Action (SCTI) Evaluation to the Corporate Climate Action Transparency Index (CATI)**. The upgraded CATI index continues to assess corporate climate actions from four dimensions, namely: corporate climate policies and mechanisms, greenhouse gas measurement and disclosure, target settings and performance tracking, and climate actions in operation and supply chain. However, by applying sector-specific weighting factors, CATI distinguishes between companies that rely on outside supply chains for their manufacturing and those that themselves are big energy consumers in their own direct production, allocating points differently depending on the type of company being evaluated. Furthermore, by including indicators such as carbon intensity targets, carbon neutrality targets, carbon assets and third party verification, the new CATI is also more granular than its predecessor. This means CATI evaluation can provide companies with a more explicit roadmap towards effective corporate carbon management and carbon mitigation practices and help them better contribute to achieving national carbon neutrality and global goals for temperature rise.

KEY FINDINGS

Overall

With a handful of exceptions, most of the 662 companies that IPE assessed under the new CATI system in 2021 have barely started their efforts to measure and reduce their greenhouse gas emissions and have received failing grades this year.

Dell (81.42), Apple (75.44), Cisco (68.08), Target (67.49), Levis (67.03), GAP (65.2), Foxconn (65.19), Adidas (65.11), Nike (64.41) and Walmart (63.1) ranked among the Top 10. However, these leading performers were far from typical; the average score of this year's evaluation is only 9.89, which is a failing grade. Only 200 companies performed above this very poor average level, and 264 companies scored 0.

Among domestic companies from Greater China region, only Foxconn scored within the top 10 (ranked 7th). Lenovo (18th), Huawei (32nd) and Sinopec (37th) lead the list of other domestic companies, reflecting a relatively late start for companies in China on reducing their greenhouse gas impacts compared to multinationals.

Sectoral wise, companies from electronics & electrical appliances, pharmaceutical & chemical, textile and leather, and automotive industry, appear to be more active in greenhouse gas information disclosure and supplier engagement. On the other hand, power generating and real estate companies score poorly and appear to not yet embrace transparency in their operations and programs, notwithstanding their public statements supporting energy transition and technology development following the issuance of China's national climate policy guidance.

Policy
&
Governance

Section 1: Policy & Governance

This section assesses whether companies have made climate commitments, introduced policies to achieve carbon neutrality, and/or put in place policies to decarbonize their supply chain, or included climate risk into their business decision-making. IPE found that about one third of the companies have taken some steps to integrate climate change mitigation into their business goals and have considered climate change risks in business decisions. Among them, 130 companies that rely on supply chain for manufacturing have promoted supply chain emissions reductions with financial incentives and collaborative projects with their suppliers on energy efficiency improvement.

Measurement
&
Disclosure

Section 2: Measurement & Disclosure

This section determines the extent to which companies have measured or otherwise estimated their Scope 1, 2, and 3 greenhouse gas emissions, a key foundational step to begin or any serious reduction efforts. Points are allocated based on the extent to which measurement and disclosure has been undertaken in “hot spots” of emissions of the company, which in turn depends on whether the company is outsourcing its manufacturing production to suppliers or undertaking it directly itself. Thus, this important section assesses whether companies are measuring/ estimating their greenhouse gas emissions at all, and from there, whether their efforts are focusing attention where it actually matters the most.

IPE found that nearly 300 companies have disclosed Scope 1 and Scope 2 emissions in this first year of CATI scoring. About 150 companies also disclosed Scope 3 emissions, but only roughly 75 companies clarified whether this Scope 3 reporting included supply chain emissions or were derived from other less significant categories of Scope 3 emissions such as business travel or employee commuting.

Also of great concern is the type of companies reporting on Scope 3: Most consumer goods companies did **not** report whether they take supply chain emissions into account when measuring greenhouse gas emissions, although that is where the bulk of their emissions likely lie. Even those that did disclose rarely mentioned the boundary of the upstream supply chain or the methodology of carbon accounting. This makes it hard for stakeholders to evaluate the value of the data disclosure and whether it reflects the actual state of corporate greenhouse gas emissions.

Target
&
Performance

Section 3: Target & Performance

This section evaluates whether companies have set and disclosed greenhouse gas reduction and carbon neutrality targets and how far they are from meeting those targets. It also evaluates whether separate targets have been established for supply chain emissions as well.

IPE found that 106 of companies had set carbon neutrality targets for their Scope 1 and Scope 2 emissions reduction goals, to be achieved by mid-century. Among them, less than 50 extended their carbon neutrality targets to Scope 3. Among companies who have set their Scope 3 emission reduction targets, around 30 of them have disclosed Scope 3 emissions target progress.

It is worth noting that in 2021, one year after China announced its carbon peaking and carbon neutrality initiative, six out of 58 listed domestic companies controlled by central SOEs which are also major energy consumers and emitters have announced the year to peak their carbon emissions and three of them have committed to carbon neutrality by 2050.

Climate
Action

Section 4: Climate Action

This very important new section in CATI focuses on the actual activity that companies are taking to achieve energy saving and emission reductions from their own operations and their supply chain. We know that currently most companies lack the ability to identify and manage emission hot spots within their organizational boundary regardless of the scopes. As a consequence, many corporate greenhouse gas management plans are not tailored according to the company’s emission profile and the decarbonizing actions being taken are generally “low-hanging fruits”, but unnecessarily targeting the emission “hot spots”.

In the evaluation, widely-taken decarbonizing measures include green electricity procurement or investment, the replacement with LED light, logistics optimization, material recycling, and carbon offsetting by forest carbon sink or carbon trading. Low-carbon technology appliance and manufacturing innovation are often in pilot schemes due to high cost and technological limitations.

25 brands, such as Apple, C&A, Dell, Levi's, encouraged their suppliers to complete and disclose factory-level data annually using the carbon data disclosure form developed by IPE and incentivized the suppliers to set their emission reduction targets. Among them, 5 brands have promoted direct suppliers to start supply chain carbon management on their own.

RECOMMENDATIONS

Multinationals sourcing from China should prioritize supply chain greenhouse gas emissions management. Importantly, they should also encourage their suppliers to extend carbon management to their own supply chains.

Domestic companies should start improving corporate climate governance to respond to the “dual carbon” target, strengthen the measurement and disclosure of their direct carbon emissions, set scientific carbon targets, start decarbonizing in the operation, and drive the low-carbon transformation of their own value chain.

For best results, IPE recommends the following specific roadmap for both multinational and domestic companies to undertake to initiate and accelerate greenhouse gas reductions. These steps align with the CATI scoring matrix:

1. Develop corporate climate governance policy, clarify business objectives under climate change impacts, and incorporate climate change into business risk and supply chain management.

2. Carry out corporate greenhouse gas accounting, create greenhouse gas inventories, and identify emission hot spots in Scope 1, 2 and 3.

3. Based on historical carbon emissions, select a target base year and set absolute and/or intensity greenhouse gas reduction targets, and break it down into corporate operations and value chain.

4. Develop a corporate greenhouse gas management plan that focuses on where it matters the most.

5. Where significant, reduce carbon emissions in corporate operations through measures such as fossil energy substitution, energy efficiency improvement, material efficiency improvement, and reduction of fugitive emissions; reduce carbon emissions in the value chain that can be avoided.

6. Push hot spot suppliers to carry out emission measurement and reduction actions by performance evaluation, training and capacity building, encouraging innovation, and financial incentives.

7. Motivate and collaborate with carbon emission hot spot suppliers to carry out emission reduction projects.

8. Collect supplier first-hand greenhouse gas emission data to track supply chain emission reduction progress and optimize corporate carbon management plans in a timely manner.

9. Launch active emissions reduction initiatives in cooperation with pilot suppliers and promote the large-scale supply chain emissions reduction initiative.

10. Push suppliers or subsidiaries to take initiative to develop their corporate climate action mechanisms according to the above paths, and extend carbon management to further upstream supply chain.

01 Introduction

Extreme weather events have occurred frequently worldwide, and the impact of climate change on human-beings has become increasingly more significant in recent years. The Sixth Assessment Report: The Physical Science Basis, published by the Intergovernmental Panel on Climate Change (IPCC) [1] in August 2021, states that “many changes due to past and future greenhouse gas (GHG) emissions are irreversible”.

In response to climate change, China joined the Global Race to Zero by setting “dual carbon” targets in September 2020 that pledged the nation will peak its carbon emissions by 2030 and achieve carbon neutrality before 2060. A year after, China announced it would build no more coal-based power projects outside of China, once again demonstrating the country’s determination on mitigating climate change.

As a country who is still in the process of urbanization and industrialization, China relies primarily on coal for energy supplies and energy-consuming industries for economic development. This means that the transition to net zero is extremely difficult compared to the EU, the US and Japan. To reach the 30•60 targets, China must peak its emissions quickly and reduce more than 10 billion tons of GHG emissions in less than 30 years in order to reach net-zero. Currently, China is speeding up its energy transitioning process, accelerating industrial upgrades, while vigorously curbing "two high" projects (those that are both high in energy consumption and pollution). China is also developing its "1+N" policy system to achieve its dual carbon targets to guide provinces, municipalities and key industries on decarbonization.

Although the global pandemic has had a significant impact on the global supply chain, amidst the shutdowns and production suspensions in many places, China's position as a global manufacturing base was further strengthened as the pandemic situation getting under control. The total value of China's imports and exports reached a record high of RMB 3.43 trillion in August 2021[2]. However, the surge in export orders has led to increased energy consumption and carbon emissions, and has also exacerbated the power crunch in some regions.

Meanwhile, with serious energy shortages around the world, many countries in Europe, America and Asia have increased the extraction of fossil fuels, which inevitably leads to a rebound in carbon emissions and complicates the response to global climate change. The demand for fossil fuels also increased the carbon price in the EU, which then raised questions on carbon leakage and accelerated the legislation on carbon border adjustment tax. This will pose a serious challenge to the global supply chain, especially export-oriented enterprises in China.

Amidst the challenging and tough work to meet the “dual carbon” targets, enterprises must play a more significant role. This means that corporate action on climate change will no longer be just a moral issue of corporate social responsibility. Enterprises that have already made climate commitments based on the Paris Agreement or the “dual carbon” targets will need to answer questions about "climate wash" with concrete data and actions. In the next decade, ensuring environmental compliance in their supply chains and extending management beyond their Tier 1 suppliers to energy- and pollution-intensive upstream production will be a core business issue for enterprises to sustain their competitiveness in the future.

Enterprises who produce or source from China should also learn from the experience of air and water pollution control, which promotes information disclosure by using digital and information-based platforms, and undertake their own environmental and climate responsibilities.

In this context, with the technical support from the Chinese Research Academy of Environmental Sciences (CRAES) Research Group on Corporate Climate Action Index, IPE has upgraded its Corporate Climate Action Transparency Index (CATI), previously called the SCTI, to a more mature edition. CATI not only makes indicators on measurement & disclosure, targets & performance, and climate action much more granular, but also incorporates more innovative solutions in the evaluation criteria. By adding weighting factors, CATI can assess both companies who outsource their production to suppliers as well as those manufacturing companies. This allows us to expand the evaluation to 662 enterprises from 30 industries, including newly added petrochemical, electric power, iron and steel, building materials, and photovoltaic industry.

Through the first CATI evaluation, we have seen a number of Chinese and global brands standing out from the rest: extending upstream in lifecycle controls, empowering local suppliers to reduce carbon and pollutant emissions, setting reduction targets based on accounting and disclosure, as well as efficiently promoting credible monitoring, reporting & verification (MRV). We are also delighted to see that more and more banks and investors, including Postal Savings Bank of China, have started to pay attention to the environmental and climate performance of companies. We hope to identify new policy and industry trends and discover best practices in this evaluation report, so as to share with stakeholders who are interested in building a green supply chain how to address global environmental challenges and protect our Mother Earth.

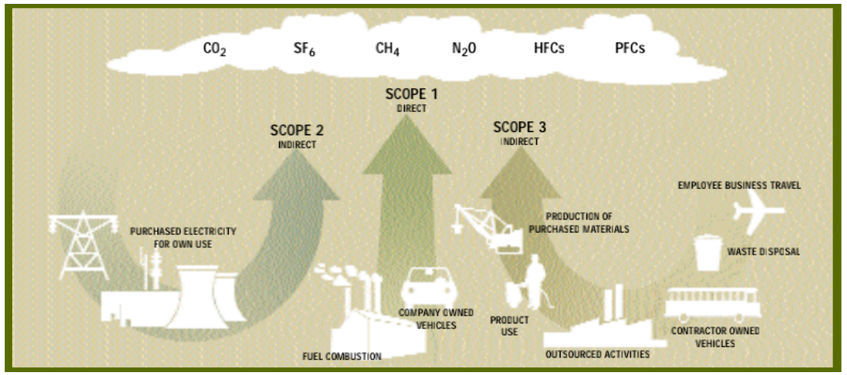
1. IPCC, AR6 Climate Change 2021: The Physical Science Basis, available at: https://www.ipcc.ch/report/ar6/wg1/
2. National Business Daily (2021) 3.43 Trillion! China’s Total Import and Export Value Hit a Record High in August, with Total Automotive Exports Multiplied in the First 8 Months, available at: https://m.nbd.com.cn/articles/2021-09-07/1905847.html

02 From SCTI to CATI:

The Maturation of IPE's Scoring Effort on GHG

In the "Post-Paris" era, many multinational companies have made bold emission reduction commitments to limiting global warming to 1.5°C. To facilitate multinationals to achieve supply chain emission reductions and to facilitate Chinese suppliers on decarbonization, IPE and CDP jointly developed the Supply Chain Climate Action SCTI Evaluation in 2018 and conducted evaluation for three consecutive years.

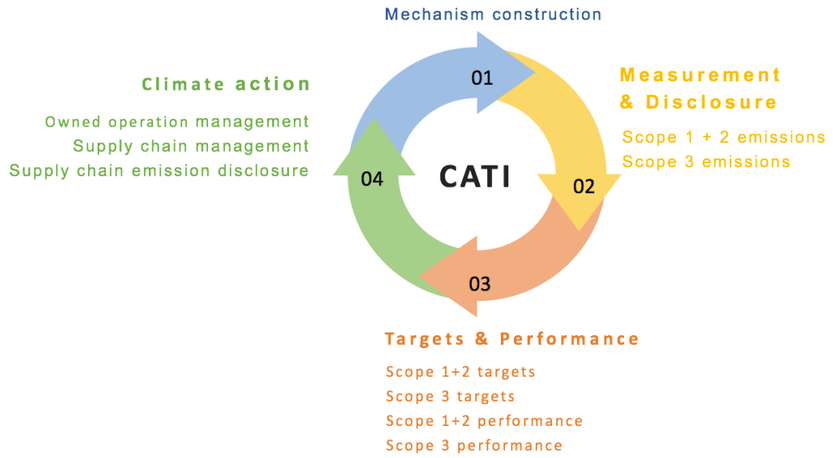
At corporate level, *The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard* divides greenhouse gas emissions within a company's organizational boundary into three scopes: Scope 1 (GHG from direct emission sources), Scope 2 (GHG from purchased energy consumption) and Scope 3 (GHG from other indirect sources, including supply chain emissions). As globalization accelerated over the past decade, many international brands have outsourced the production of their goods to suppliers in China that they do not own as well as factories that they do not operate. For these companies, many of them consumer goods brands, greenhouse gas emissions from their supply chain account for the vast share of their total greenhouse gas emissions.



Source: The Green house Gas Protocol: A Corporate Accounting and Reporting Standard, page26

SCTI evaluation has been used to advocate multinational companies sourcing from China to decarbonize their supply chains. On a parallel track, many domestic Chinese companies operating here in the country are also major energy consumers and emitters themselves. They must similarly participate in greenhouse gas reduction by prioritizing the decarbonization of their own corporate manufacturing and business operations. Their manufacturing emissions are under their direct control. Thus, a more mature approach to engaging with companies in decarbonizing across various industries should be further developed.

To maximize the synergy between industrial pollution and greenhouse gas oversight and control, IPE has upgraded its corporate climate action evaluation in 2021 and renamed it to Corporate Climate Action Transparency Index (CATI) with the technical support from CRAES Research Group on Corporate Climate Action Index.



The upgraded CATI index continues to assess corporate climate actions from four dimensions, namely: corporate climate policies and mechanisms, greenhouse gas measurement and disclosure, target settings and performance tracking, and climate actions in operation and supply chain. However, by applying sector-specific weighting factors, CATI distinguishes between companies that rely on outside supply chains for their manufacturing and those that themselves are big energy consumers in their own direct production, allocating points differently depending on the type of company being evaluated. Furthermore, by including indicators such as carbon intensity targets, carbon neutrality targets, carbon assets and third- party verification, the new CATI is also more granular than its predecessor. This means CATI evaluation can provide companies with a more explicit roadmap towards effective corporate carbon management and carbon mitigation practices and help them better contribute to achieving national carbon neutrality and global goals for temperature rise.

CATI benchmarks with international mainstream standards and criteria, such as United Nation Sustainability Development Goals (UNSDGs)[3], the GHG Protocol Corporate: A Corporate Accounting and Reporting Standard[4], CDP Climate Change Questionnaire[5] and the Science Based Targets initiative (SBTi)[6], etc. With respect to information disclosure, CATI benchmarks with reporting standards published by Global Reporting Initiative (GRI)[7], China Securities Regulatory Commission (CSRC)[8] and Hong Kong Exchanges and Clearing Limited (HKEX)[9]. As CATI directs companies to focus on emission “hot spots” and factory-level carbon accounting, the evaluation makes an important complementary contribution to broader global climate governance initiatives and reporting schemes developed for the private sector.

3. UN, The 17 goals, available at: https://sdgs.un.org/goals

4. WBCSD & WRI, The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard, 2011, available at: https://ghgprotocol.org/sites/default/files/standards/ghg-protocol-revised.pdf

5. CDP, CDP Questionnaires-Climate Change, available at: https://www.cdp.net/en/guidance/guidance-for-companies

6. SBTi, SBTi Criteria and Recommendations, available at: https://sciencebasedtargets.org/resources/legacy/2019/03/SBTi-criteria.pdf

7. GRI, GRI Standards, available at: https://www.globalreporting.org/how-to-use-the-gri-standards/gri-standards-traditional-chinese-translations/

8. CSRC, Code on the Content and Format of Information Disclosure by Companies Issuing Public Securities No. 2 - Content and Format of Annual Reports, available at: http://www.csrc.gov.cn/pub/newsite/flb/flfg/bmgf/xxpl/xxplnr/201701/P020170111425807651253.pdf

9. HHEX, Review of ESG Guide, available at: https://www.hkex.com.hk/-/media/HKEX-Market/News/Market-Consultations/2016-Present/May-2019-Review-of-ESG-Guide/Conclusions-(December-2019)/cp201905cc_c.pdf?la=zh-CN

The 2021 CATI evaluation covered 662 companies across 30 industrial sectors, including consumer goods industries such as IT, textile, and household and personal care, as well as heavy industrials such as petrochemical, electric power, iron and steel, civil aviation, photovoltaic industry and etc.

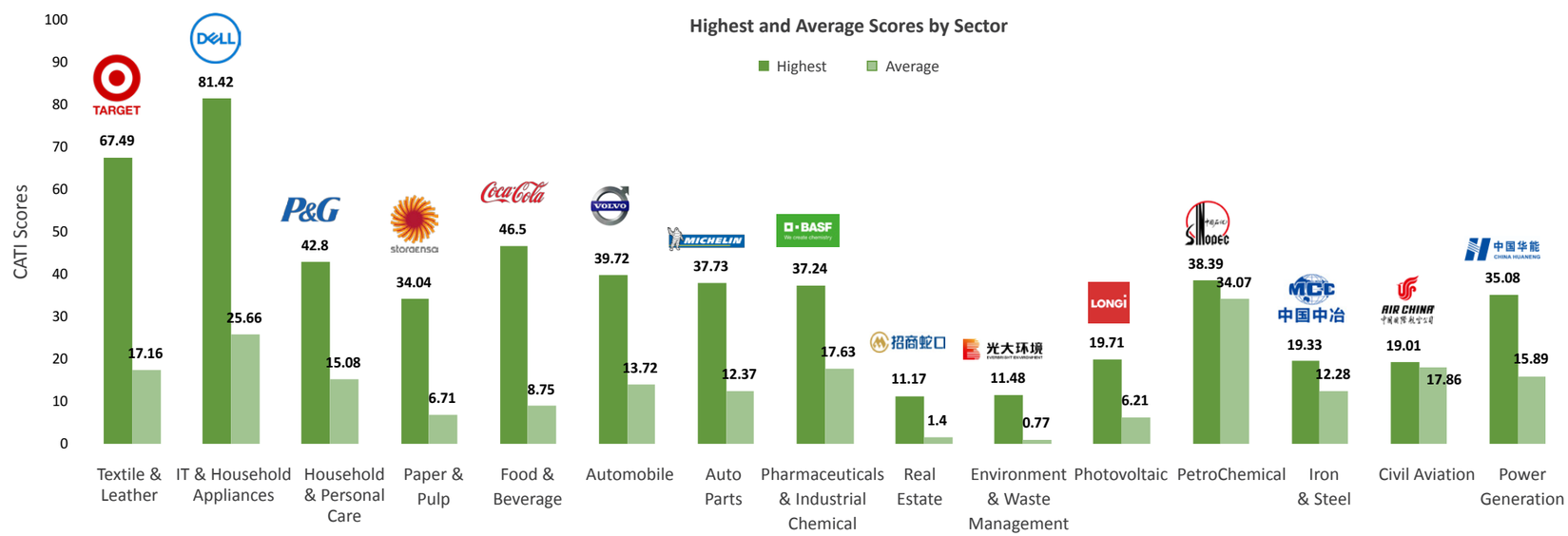
03 CATI Evaluation Results 2021

3.1 CATI TOP50

01 DELL 81.42	02 75.44	03 CISCO 68.08	04 TARGET 67.49	05 Levi's 67.03	06 Gap Inc. 65.2	07 FOXCONN 65.19	08 adidas 65.11	09 64.41	10 Walmart 63.1
11 PUMA 58.18	12 Microsoft 58.07	13 INDITEX 57.84	14 C&A 56.81	15 hp 52.05	16 H&M 50.1	17 Lenovo 49.1	18 UNIQLO 48.73	19 VF 48.51	20 AEO 47.77
21 asics 46.53	22 Coca-Cola 46.5	23 Carrefour 45.91	24 HITACHI Inspire the Nex 44.1	25 P&G 42.8	26 LINDEX 42.48	27 PRIMARK 40.98	28 花王 kao 40.88	29 TESCO 40.67	30 HUAWEI 40.17
31 VOLVO 39.72	32 TOYOTA 39.41	33 Mercedes-Benz 38.98	34 new balance 38.95	35 Sinopec 38.39	36 M&S EST. 1884 38.07	37 Google 38.02	38 Hewlett Packard Enterprise 37.88	39 MICHELIN 37.73	40 FUJITSU 37.61
41 mazda 37.59	42 L'ORÉAL 37.47	43 IBM 37.38	44 DANONE 37.3	45 BASF We create chemistry 37.24	46 Canon 37.2	47 RICOH imagine. change. 37.02	48 36.04	49 gm 36	50 RALPH LAUREN 35.89

3.2 Sector-specific Scoring

Sectoral-wise, companies from IT & household appliances, pharmaceutical & chemical, textile and leather, and automotive industry, appear to be more active in greenhouse gas information disclosure and supplier engagement. On the other hand, power generating and real estate companies score poorly and appear to not yet embrace transparency in their operations and programs, notwithstanding their public statements supporting energy transition and technology development following the issuance of China's national climate policy guidance.

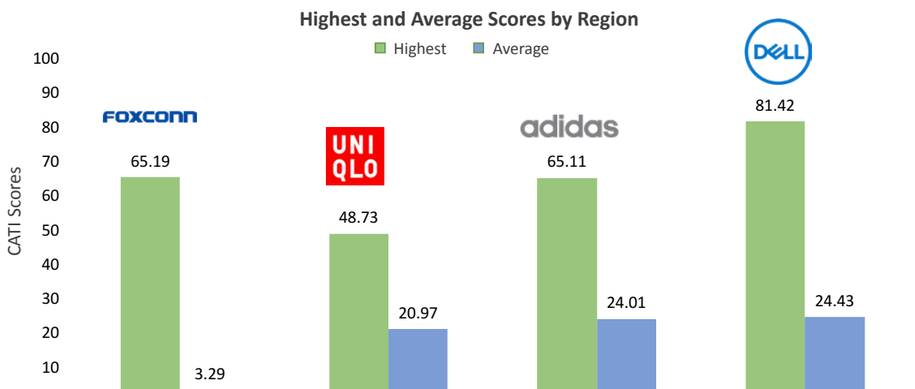


CATI TOP 5 by Sector

	Textile & Leather	IT & Household Appliances	Household & Personal Care	Paper & Pulp	Food & Beverage	Auto Parts	Real Estate	Environment & Waste Management	Photovoltaic	PetroChemical	Iron & Steel	Civil Aviation	Power Generation
1	TARGET	DELL	P&G	storaenso	Coca-Cola	MICHELIN	招商蛇口	光大环境	LONGi	Sinopec	中国中冶	AIR CHINA	中国华能
2	Levi's		花王 kao	UPM	DANONE	SCHAEFFLER	中国能建	粤豐環保	XYS	中国石油	BAOSTEEL	中國東方航空	国
3	Gap Inc.	cisco	L'ORÉAL	领驭新未来 OJI	pepsi	GOODYEAR	朗诗控股	北京北控环保	协鑫 GCL	CNOOC	MA STEEL	中国南方航空	华电国际
4	adidas	FOXCONN		恒安集团 HENGAN	McDonald's	BRIDGESTONE	万科 让建筑赞美生命	首创环境控股有限公司	SUNGROW		TISCO		中广核
5		Microsoft	Colgate	永豐餘	AB InBev	TOYODA GOSEI	seazen 新城控股	雲南水務	Trinasolar		鞍钢股份		SDIC 国投

3.3 Region-specific Scoring

Companies in Europe, North America and Japan are early adopters of climate governance. Among domestic companies from the Greater China region, only Foxconn scored within the top 10 (ranked 7th). Lenovo (18th), Huawei (32nd) and Sinopec (37th) lead the list of other domestic Chinese companies, reflecting a relatively late start for companies in China on reducing their greenhouse gas impacts compared to multinationals.



CATI TOP 5 by Region

	Greater China	Asian-Pacific (excl. Greater China)	Europe	North America
No. 1	FOXCONN	UNIQLO	adidas	DELL
No. 2	Lenovo	asics	PUMA	Apple
No. 3	HUAWEI	HITACHI Inspire the Next	INDITEX	CISCO
No. 4	Sinopec	花王 KAO	C&A	TARGET
No. 5	中国华能 CHINA HUANENG	TOYOTA	H&M Group	Levi's

3.4 TOP 10 Listed Companies Controlled by Central SOEs in mainland China

01 Sinopec 38.39	02 中国华能 CHINA HUANENG 35.08	03 中国石油 34.68	04 CNOOC 29.14	05 国 19.90
06 MCC 中国中冶 19.33	07 AIR CHINA 中国国际航空公司 19.01	08 BAOSTEEL 18.46	09 华电国际 HUADIAN POWER INTERNATIONAL 18.13	10 MA STEEL 17.82

This year's evaluation shows that listed companies controlled by central SOEs are forerunners in corporate climate governance compared to the rest of Chinese companies. For example:

Sinopec, China Huaneng, PetroChina, Datang Power, China National Offshore Oil (CNOOC) and Huadian Power International have released Climate Declaration;

China Metallurgical Group Corporation (MCC) and Air China have conducted carbon calculation of their Scope 1 and Scope 2 emissions;

Sinopec, China Huaneng, PetroChina, CNOOC and Baosteel have set and announced their emission reduction targets.

04 Analysis of CATI Evaluation Results

4.1 Governance

Dimension 1 — Governance is assessed based on the policy declaration and mechanism development to evaluate whether the company has:

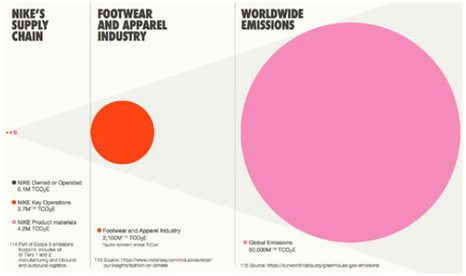
- Committed to climate actions and made climate declarations;
- Introduced policies to achieve carbon neutrality;
- Put in place policies dedicated to decarbonizing the supply chain; incorporated climate change factors into supplier screening and management mechanisms, and incentivized suppliers to cut emissions;
- Included climate risk and low carbon factors into business decision-making and the board oversight role; and
- Developed policies for low-carbon consumption.

In 2021 CATI evaluation:

- 44% of the evaluated companies have committed to climate actions and made climate declarations, but only 13% announced corporate carbon neutrality goals and related policies;
- One third of the companies have taken some steps to integrate climate change mitigation into their business goals and have incorporated climate change risks in business decisions; and
- Less than 10% of companies that rely on supply chains for manufacturing have promoted supply chain emissions reductions with financial incentives and/or collaborative projects with their suppliers.

Brand Case Study **Nike's strategy to decarbonize its supply chain**

In May 2020, Nike launched the Supplier Climate Action Program (SCAP), encouraging its suppliers to include fabric vendors, apparel factories and footwear manufacturers that represent 50% of Nike's value chain emissions to incorporate climate change into their business strategy and develop their own long-term emission reduction plans[10-11]. SCAP also seeks to provide a climate governance framework by requiring these suppliers to:



- Conduct corporate GHG inventories;
- Set science-based targets for their Scope 1 and 2 emissions;
- Disclose GHG information under the CDP supply chain program; and
- Forge a partnership with Nike to decarbonize the value chain in the long run.

Scan the QR code to read Nike's brand story

In addition, Nike's strategy to decarbonize its supply chain over the next five years includes: continuously upgrading supplier energy efficiency, phasing out coal-fired boilers in dyeing and finishing factories, helping suppliers to install photovoltaic solar panels to generate power on-site; and promoting the purchase of renewable electricity.

For this work, Nike received 11 out of 13 points on the Governance section of CATI.

10. NIKE. Inc. FY 20 Impact Report, available at: https://purpose.nike.com/fy20-nike-impact-report
11. Brand Cases, Renewable Electricity in NIKE China, available at: http://wwwen.ipe.org.cn/GreenSupplyChain/BrandStoryDetail.aspx?id=62

Among the 58 listed companies controlled by central SOEs, 91% disclosed climate-related information through CSR, ESG reports or other annual reports, during which they pledged to improve the disclosure of their carbon footprint.

Listed Company Case Study

Sinopec's response to climate change

Sinopec's 2020 Sustainable Development Report[12] has clearly illustrated that Sinopec integrated climate change into its development plan and business decision-making, continuously improved energy corporate greenhouse gas management, and established a new image of "clean, low-carbon, and industry-leading".

For this work, Sinopec received 8 out of 13 points on the Governance section of CATI.

2014.6	Launched the Energy Efficiency Improvement Plan
2018.4	Launched the Green Enterprise Campaign
2020.11	Initiated the research on strategy of peaking carbon emissions and achieving carbon neutrality
2021.1	Signed the Declaration of Achieving Peak Carbon Emissions and Carbon Neutrality of China Petroleum and Chemical Industry
2021.3	Proposed to peak carbon dioxide emissions before the national carbon peaking target and to achieve carbon neutrality by 2050.

12. Sinopec, 2020 Sustainability Report, available at: http://www.sinopecgroup.com/group/en/Resource/Pdf/SustainReport2020en.pdf

4.2 Measurement and Disclosure

Dimension 2 — Calculation and Disclosure is assessed based on the accounting and disclosure of Scope 1, Scope 2 and Scope 3 emissions and energy consumption, including total GHG emissions and third-party verification, carbon intensity and carbon allowances/offsets, and comprehensive energy consumption, energy efficiency and energy structure. Particularly, for Scope 3 emissions, CATI focuses on Scope 3 accounting boundary, which includes emission hot spots identification, cradle-to-gate supplier emissions coverage, and data collection frequency.

In 2021 CATI evaluation:

- Nearly 300 companies have disclosed Scope 1 and Scope 2 emissions in this year's CATI evaluation;

- About 150 companies also disclosed Scope 3 emissions, but only roughly 75 companies clarified whether their Scope 3 reporting included supply chain emissions or simply other less significant categories such as business travel or employee commuting;

- 36% companies disclosed data on carbon intensity and 21% on energy efficiency;

- 44% disclosed Scope 1 and Scope 2 emissions, but only 22% have been verified by third parties;

- 24% disclosed Scope 3 emissions, including 13 companies from Greater China;

- 19% claimed that their Scope 3 GHG data covered supply chain emissions, but only 11% clarified that their supply chain emissions covered hotspot suppliers; and

- Of the 58 listed companies controlled by central SOEs, 78% have measured and disclosed Scope 1 and Scope 2 emissions. Among them, those listed in Hong Kong disclosed more comprehensive carbon data than those listed in Mainland China stock markets.

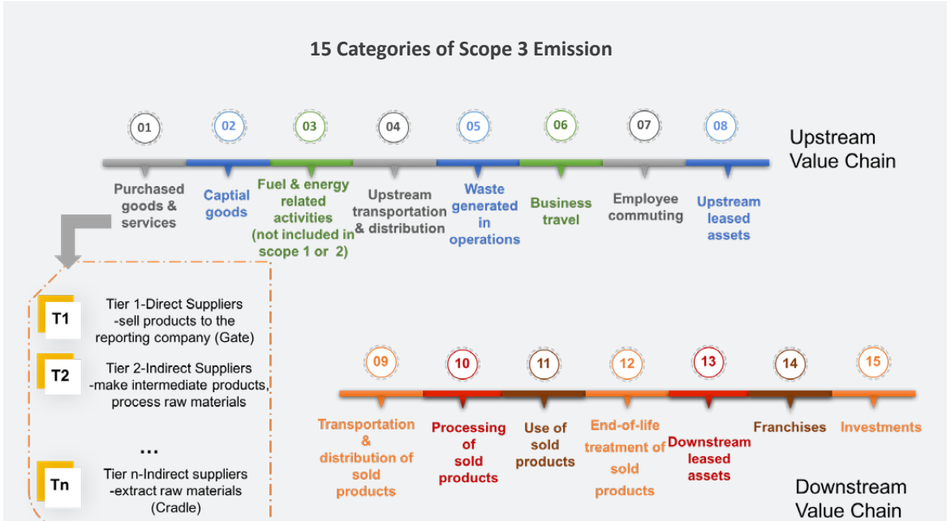
Also of great concern is the type of companies reporting on Scope 3: Most consumer goods companies did not report whether they take supply chain emissions into account when measuring greenhouse gas emissions, although that is where the bulk of their emissions likely lie. Even those that did disclose rarely mentioned the boundary of the upstream supply chain or the methodology of carbon accounting. This makes it hard for stakeholders to evaluate the value of the data disclosure and whether it reflects the actual state of corporate greenhouse gas emissions.

The Corporate Value Chain (Scope 3) Accounting and Reporting Standard (hereinafter referred to as the Scope 3 Standard[13]) categorizes Scope 3 emissions into 15 distinct categories. Companies should begin by conducting a screening process across 15 categories to identify the emission hotspots in their value chain. Although companies can decide which categories to disclose, they should focus on activities that are relevant to their business and operational objectives as well as those that generate more reliable and accessible data. This would help ensure that companies' Scope 3 disclosures reflect their actual emissions.

The Scope 3 Standard defines this part as indirect GHG emissions from "purchased goods and services", i.e. emissions associated with the production of tangible goods (commodities) or intangible goods (services) at value chain upstream. The minimum boundary for GHG accounting from "purchased goods and services" includes all cradle-to-gate emissions from the raw material extraction up to entering the reporting company.

13. WBCSD & WRI, The GHG Protocol Corporate: Corporate Value Chain (Scope 3) Accounting and Reporting Standard, available at: https://ghgprotocol.org/sites/default/files/standards/Corporate-Value-Chain-Accounting-Reporing-Standard_041613_2.pdf

Similar to conventional pollutant emissions, GHG "hotspots" mostly arise during the production of raw materials used in the manufacturing of goods, i.e. the upstream stage of the production process.



The Scope 3 Standard offers four calculation methods to conduct a cradle-to-gate GHG inventory for the purchased goods and services:

- Using product emission factors requested from suppliers;

- Combining supplier-specific method with the LCA method;

- Using industry average emission factors for purchased goods in the LCA database; and

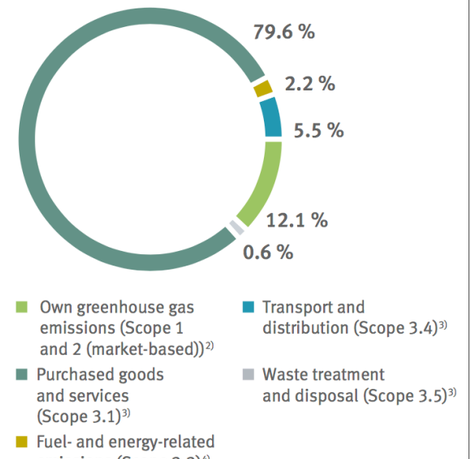
- Using industry average emission factors per unit of the purchased goods per unit of economic value in the LCA database.

Brand Case Study

Schaeffler uses Life Cycle Assessment (LCA) to calculate the GHG emissions of "purchased goods and services"

Instead of collecting data from suppliers which can be time-consuming and expensive, most companies rely partially or entirely on the LCA method to calculate emissions. For example, the automotive component manufacturer Schaeffler[14] disclosed in its sustainability report that it uses the LCA method to assess the entire life cycle of its products in order to apply a more targeted approach to emission reduction in all parts of the life cycle. As shown in the figure on the right, the GHG emissions from "purchased goods and services" account for 79.6 percent of Schaeffler's total emissions in Scope 1, 2 and 3. Schaeffler also revealed in the report that they will work with suppliers to collect measured data on their GHG emissions to track progress in Scope 3 emissions reduction.

Total greenhouse gas emissions, including Scope 1, Scope 2 (market-based), and Scope 3[1)]



Listed Company Case Study

Poly Property Group calculating and disclosing Scope 3 emissions

Poly Property Group is among the first to measure Scope 3 GHG emissions and disclose the results in its ESG Report 2020[15].

For this work, Poly Property Group received 9 out of 20 points on the Measurement and Disclosure section of CATI.

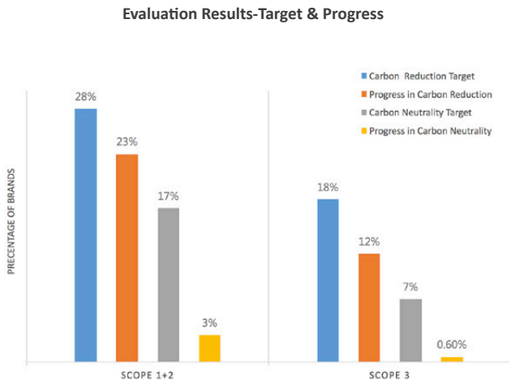
GHG Emission 溫室氣體排放	Unit 單位	FY2020 2020年	FY2019 2019年
Scope 1[6] 範圍一[6]	tonne CO_2 equivalent 噸二氧化碳當量	68.67	87.17
Scope 2[7] 範圍二[7]	tonne CO_2 equivalent 噸二氧化碳當量	270.77	254.82
Scope 3[8] 範圍三[8]	tonne CO_2 equivalent 噸二氧化碳當量	350.38	—
Total 總量	tonne CO_2 equivalent 噸二氧化碳當量	689.82	341.99
Intensity 密度	tonne CO_2 equivalent/employee 噸二氧化碳當量／僱員	6.10	2.37

14. Scheaffler, 2020 Sustainability Report, available at: https://www.schaeffler.com/remotemedien/media/_shared_media_rwd/01_company_1/sustainability/2020_sustainability_report/2020_schaeffler_sustainability_report_en_8n5mpr.pdf

15. Poly Property Group, 2020 Environmental, Social and Governance Report, available at: http://www.polyhongkong.com/en/about/report.html

4.3 Targets and Performance

Dimension 3 — Targets and Performance is evaluated based on whether companies have set and disclosed their own GHG reduction targets and carbon neutrality targets for Scope 1, 2 and 3, how ambitious these targets are, and how far the company is from meeting the targets. Importantly, CATI Section 3 also focuses on whether companies have set separate targets for decarbonizing their supply chains and committing their Chinese suppliers to setting their own GHG emission reduction targets.



In 2021 CATI evaluation:

- 27% of companies have set and disclosed targets to reduce their Scope 1 and 2 emissions, and 22% disclosed progress towards achieving these goals;

- 15% have set and disclosed targets to reduce their Scope 3 emissions, and 10% disclosed progress towards achieving the goals; and

- Compared to international brands, Chinese listed companies controlled by central SOEs are still at the initial stage in setting emission reduction targets, and only 16% of them disclosed GHG reduction targets.

Highlight: carbon neutrality targets

16% of companies set carbon neutrality targets for their Scope 1 and Scope 2 emissions to be achieved by mid-century. Among them, less than 6% extended their carbon neutrality targets to Scope 3.

It is worth noting that in the year China announced its carbon peaking and carbon neutrality initiative, six listed companies controlled by central SOEs which are also major energy consumers and emitters have announced the year to peak their carbon emissions. Four of them have pledged to reach a peak during the “14th Five-Year Plan” period (from 2021 to 2025), while three have committed to carbon neutrality by 2050.

■ Carbon Neutrality Targets made by brands in Greater China

	Year of Carbon Neutrality	Target Coverage
FOXCONN	2050	Scope 1+2+3
Jahwa 上海家化	2050	Scope 1+2+3
长城汽车 Great Wall Motors	2050	Scope 1+2
watsons 屈臣氏	2050	Scope 1+2
太古公司	2050	Scope 1+2 (excl. aviation busniess division)

■ Carbon Peak & Neutrality Targets made by listed companies controlled by central SOEs in mainland China

	Industry	Year of Carbon Peak	Year of Carbon Neutrality
中国石油	PetroChemical	2025	Around 2050
SINOPEC		Before 2030	2050
BAOSTEEL	Iron and steel	2023	2050
华电国际 HUADIAN POWER INTERNATIONAL	Power Generation	2025	
中国华能 CHINA HUANENG		2025	
国		2025	

Brand Case Study

Foxconn's initiative on the net-zero value chain

Scan the QR code to learn Foxconn’s brand stories and its actions towards supply chain carbon neutrality.

In 2021, Foxconn (Hon Hai Technology Group) released the "Hon Hai's Climate Action 100+ Net Zero Goal and Commitment", announcing that it committed to setting science-based 1.5°C targets in January 2021, and has hired specialized agencies to help calculate its carbon footprint and commit to set science-based carbon targets[16].

To achieve net-zero emissions across its full value chain by 2050, Foxconn has formulated a supporting policy to reduce emissions and broken down the emission reduction targets across all business units and supply chains. Moreover, Foxconn has put in place an evaluation and reward system to comprehensively assess energy management performance and track the emission reduction progress for each business unit on a yearly and quarterly basis. The emission reduction plans will be revised every year based on the evaluation. To advance the progress towards carbon neutrality in the value chain, Foxconn requires suppliers to submit emission data on internal Foxconn supplier GHG management platform, and support the continuous improvement of supply chain carbon management and supply chain decarbonization with a robust data foundation[17].

For this work, Foxconn received 12 out of 18 points on the Scope 3 Targets and Performance section of CATI.

16. HON Hai Corporate Sustainability Report 2020 page 98, available at: https://www.foxconn.com/en-us/CSR
17. Brand Cases, Foxconn Supply Chain Carbon Neutral Initiative, available at: http://wwwen.ipe.org.cn/GreenSupplyChain/BrandStoryDetail.aspx?id=59

Brand Case Study

IT brands urging their suppliers to set emission reduction goals

The IT industry started early in climate governance. On top of setting and disclosing emission reduction targets for their own value chains, many companies are also pushing their suppliers to set their own GHG emission reduction targets based on their emission inventories. Among them:

In 2020, **Huawei**[18] announced that it would promote its top 100 (by procurement spend) suppliers to calculate their carbon emissions, set carbon reduction targets, formulate emission reduction plans and implement emission reduction projects. By the end of 2020, all the Top 100 Suppliers have collected their carbon emission data, and 93 of them have set carbon emission reduction targets and implemented carbon reduction projects.

Cisco[19] plans to drive its suppliers accounting for 80% of its purchases (including electronics, manufacturing and logistics suppliers) to set and publish their own absolute GHG reduction targets in FY2025. Data disclosed in Cisco's 2020 CSR report shows that 33% of its supplier companies have already set GHG reduction targets and disclosed them through climate initiatives such as the CDP Climate Change Questionnaire.

Dell[20] launched a science-based target program for its suppliers in 2019, inviting SBTi experts to train supplier companies on the criteria for science-based targets and share their experience in emission reduction. In 2020, Dell already pushed two of its key suppliers to set reduction targets that are consistent with the SBTi, and also encouraged suppliers to implement the targets over time by improving energy efficiency and increasing the use of renewable energy.

18. Huawei Investment & Holding Co., Ltd., 2020 Sustainability Report, available at: https://www-file.huawei.com/-/media/corp2020/pdf/sustainability/sustainability-report-2020-en.pdf
19. CISCO, 2020 Corporate Social Responsibility Impact Report, available at: https://www.cisco.com/c/dam/m/en_us/about/csr/esg-hub/_pdf/csr-report-2020.pdf
20. DELL Technology, Supply Chain Sustainability Progress Report 2020, available at: https://corporate.delltechnologies.com/en-sg/social-impact/reporting/2020-supply-chain-sustainability-progress-report.htm#pdf-overlay=//corporate.delltechnologies.com/asset/en-sg/solutions/business-solutions/briefs-summaries/delltechnologies-2020-supply-chain-sustainability-progress-report.pdf

Listed Company Case Study

PetroChina sets GHG intensity reduction target

PetroChina[21] has been an active participant in emission reduction cooperation under China's Oil & Gas Climate Industry (OGCI) framework, staying committed to reducing carbon emissions intensity by approximately 9% from 23kg CO2e/bbl oil equivalent in 2017 to about 20kg CO2e/bbl oil equivalent by 2025, and committed to reducing 50% methane emissions intensity by 2025 compared to 2019 level.

In 2020, we

- completed the accounting and reporting of annual greenhouse gas emissions data
- set methane emission targets: to reduce methane emission intensity by around 50% by 2025 from the 2019 level, and keep in line with world leading companies in respect of methane emission

50%

Plans and initiatives for greenhouse gas emission reduction and control supported and participated in by CNPC

- *Paris Agreement*
- *China's National Program to Address Climate Change*
- *National Plan on Climate Change (2014-2020)*
- China Technology Strategic Alliance for CO_2 Capture, Utilization and Storage Technology Innovation (CTSA-CCUS)
- Oil and Gas Climate Initiative (OGCI)
- *Carbon Peak and Carbon Neutrality Declaration in China Petroleum and Chemical Industry*

For this work, PetroChina received 8 out of 14 points on the Scope 1+2 Targets and Performance section of CATI.

21. Petro China, Sustainable Energy Supply, available at: http://www.cnpc.com.cn/en/csr2020enhmshn/202105/031c7f9dff8140e9b403d26db8c9fbb6/files/bfe6a34a1b7f44d1a11c4b2ddaf7530e.pdf

Listed Company Case Study

Sinopec sets the target for absolute GHG emission reduction

In its Green Enterprise Action Plan, Sinopec[22] proposes to capture 500,000 tons of carbon dioxide per year, reduce 12.6 million tons of carbon dioxide and recycle 200 million cubic meters of methane per year by 2023, taking 2018 as the base year.

Taking 2018 as the base year, by 2023, the Company planned to realise:

500,000	12.6	0.2
tons of CO_2 captured per year	million tonnes of CO_2-emission reduced	bcm of methane recovered per year

For this work, Sinopec received 8 out of 14 points on the Scope 1+2 Targets and Performance section of CATI.

Listed Company Case Study

Baosteel sets "carbon peaking and carbon neutrality "goals

Baosteel Group[23] states in its Annual Sustainability Report 2020 that "Baosteel Corporation has included carbon neutrality into its corporate strategy ..... The Baowu Group is committed to peaking CO2 emissions in 2023, developing the technological capability to reduce carbon by 30% by 2025, striving to reduce carbon emissions by 30% in 2035 and achieving "carbon neutrality" in 2050. Baosteel is developing its carbon target action plan in line with the Baowu Steel Group targets."

For this work, Baosteel received 7 out of 14 on the Scope 1+2 Targets and Performance section of CATI.

22. Sinopec, 2020 Sustainability Report, available at: http://www.sinopecgroup.com/group/en/Resource/Pdf/SustainReport2020en.pdf
23. Baosteel, 2020 Sustainability Report, available at: http://static.cninfo.com.cn/finalpage/2021-04-27/1209806020.PDF

4.4 Climate Actions

Dimension 4 — Climate Actions is assessed based on how companies take energy saving and emission reduction measures to reduce GHG emissions from their own operations and their supply chains in order to meet their declared emission reduction targets. More specifically, this section assesses how manufacturing should first achieve their own energy-saving and emission cut targets, as well as how supply chain-based companies drive their suppliers to save energy and reduce emissions through:

- Incentivizing supplier companies to undertake emission reduction actions via performance evaluation, training, and promoting innovation;

- Collaborating with supplier companies to carry out pilot emission reduction projects and scaling up the experience;

- Requiring supplier companies to set emission reduction targets, measure and disclose GHG emissions, and track progress towards achieving targets; and

- Encouraging suppliers to extend carbon management to their own supply chains.

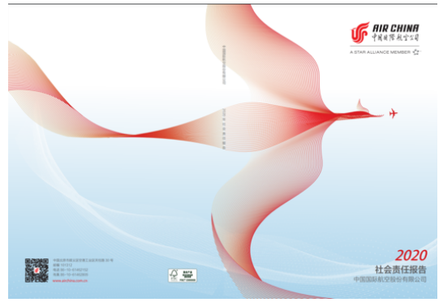
4.4.1 Evaluation results for reducing emissions from business operations

This year's evaluation shows that for Scope 1 and Scope 2 emissions reductions, 35% of companies undertook low-carbon projects such as using and investing in renewable energy, 36% implemented energy efficiency improvement projects, 16% chose other methods such as reducing fugitive emissions and developing and designing low-carbon products. As many of the listed companies controlled by central SOEs are involved in upstream production and processing of energy and raw materials, 55% of them have already taken actions to reduce GHG emissions from their own operations.

Listed Company Case Study

Air China's low-carbon flights

Air China has made energy-saving aircraft, which is the bulk of carbon emissions within its business operation and the priority in reducing its carbon emissions. In 2020, Air China's decarbonizing practices conserved over 65,00 tons of fuel, which equals saving 21,000 tons of GHG emissions[24]. In early December 2020, Air China also launched a passenger carbon emissions calculator to help passengers understand their own flight emissions.



The Calculator of Aviation Carbon Emissions

24. Air China, 2020 Sustainability Report, available at: http://www.airchina.com.cn/cn/images/investor_relations/qyshzrbg/2021/03/31/8644B6B-99F1B457044C6BBC76E6E3DC7.pdf

4.4.2 Evaluation results for promoting emission reductions along the supply chain

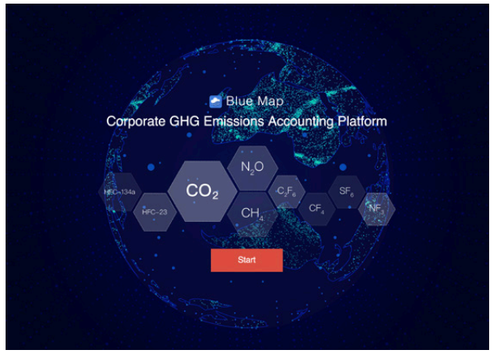
On guiding and incentivizing suppliers to reduce emissions: 17% of the companies have included emission reductions in their supplier performance assessment, such as scorecards; 15% have provided training to suppliers; 6% have incentivized supplier companies by encouraging innovation. In addition, 26 companies have worked with suppliers on pilot emissions reduction projects, accounting for 4% of the total number of companies evaluated. Among them, Apple, Adidas and Walmart have scaled up the supply chain emissions reduction efforts.

4.4.3 Evaluation results for supplier carbon emission accounting and target setting

Effective carbon management starts with carbon accounting. Likewise, requiring suppliers to carry out carbon accounting is the key to driving emission reductions in the supply chains. Companies can use suppliers' first-hand data to identify the most energy-efficient suppliers and the most carbon-intensive manufacturing processes. In this year's evaluation, a handful of companies had required their direct suppliers to carry out GHG accounting and disclosure, in which 26 of them encouraged their suppliers to set their own emission reduction targets. Furthermore, 27 companies reached further up the supply chain to promote the accounting and disclosure of GHG emissions by key indirect suppliers, in which 23 of them also set their own emission reduction targets.

Suppliers Carbon Accounting:

To facilitate small-to-medium enterprises (SMEs) who lack carbon accounting ability and budget, IPE worked with specialized agencies and launched the "Chinese Enterprise Greenhouse Gas Emissions Accounting Platform"[25] in 2020. The accounting platform was developed based on the 24 GHG Accounting Guidelines for Chinese Enterprises issued by China's National Development and Reform Commission (NDRC)[26-28]. The platform incorporates factors such as the oxidation rate of different types of fossil fuels, as well as electricity and heat emission into the automatic parameters of the calculator and has embedded mathematical models to evaluate GHG accounting uncertainty. The platform can help suppliers to "get a clear picture" of corporate carbon footprint in a more cost-effective and efficient manner.



Scan to download the Blue Map for Business APP to calculate corporate GHG emissions.

25. IPE, Chinese Corporate Greenhouse Gas Emissions Accounting Platform, available at: http://ghg.ipe.org.cn

26. General Office of NDRC on Issuance of the first batch of 10 industry enterprise greenhouse Gas Accounting Methodology and Reporting Guidelines (for Trial Implementation), available at: https://www.ndrc.gov.cn/xxgk/zcfb/tz/201311/t20131101_963960.html?code=&state=123

27. General Office of NDRC on Issuance of the second batch of 4 industry enterprise greenhouse Gas Accounting Methodology and Reporting Guidelines (for Trial Implementation), available at: https://www.ndrc.gov.cn/xxgk/zcfb/tz/201502/t20150209_963759.html?code=&state=123

28. General Office of NDRC on Issuance of the third batch of 10 industry enterprise greenhouse Gas Accounting Methodology and Reporting Guidelines (for Trial Implementation), available at: https://www.ndrc.gov.cn/xxgk/zcfb/tz/201511/t20151111_963496.html?code=&state=123

Suppliers Carbon Disclosure:

Corporate GHG disclosure is the new norm. Companies participating in the carbon market and those listed in the Hong Kong Stock Market are already required to disclose carbon data. Suppliers' carbon disclosure helps improve the brand company's Scope 3 GHG emission data quality, improves the credibility of green supply chain management, supports both parties to make science-based decisions, and facilitates the involvement of other stakeholders in the process.

Thus, IPE has developed and continuously upgraded the factory-level carbon data disclosure form[29], which shares the same accounting boundary as that required in the GHG Accounting Guidelines for Chinese Enterprises issued by the NDRC, and will be helpful when enterprises enter the carbon market. Factory-level data also helps companies identify GHG emission hotspots in their supply chains, identify those suppliers with lower emissions, and incentivize suppliers to achieve more ambitious emission reduction targets.

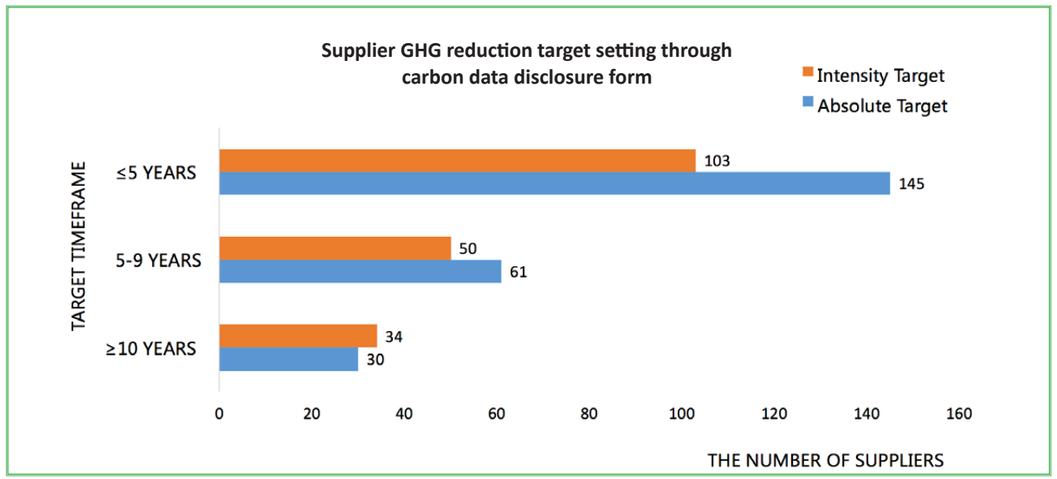
Currently, 25 brands encouraged their supplier companies to complete and disclose factory-level data annually using the carbon data disclosure form developed by IPE and incentivized the suppliers to set their own emission reduction targets. Among them, Apple, C&A, Dell, Levi's and New Balance have promoted their direct suppliers to start supply chain carbon management.

Brands that use IPE's carbon data disclosure form to manage their supply chain carbon emissions (listed in a random order)

DELL	C&A	Apple	Levi's	new balance
CISCO	INDITEX	adidas	H&M Group	TARGET
Nike	PRIMARK	PUMA	Gap Inc.	FOXCONN
VF	M&S EST. 1884	Carrefour	KONTOOR	ESPRIT
花王 Kao	SAMSUNG	LINDEX	BESTSELLER	DANONE

29. IPE, Emissions Data, available at: http://wwwen.ipe.org.cn/IndustryRecord/Regulatory.html?index=4&tab=3

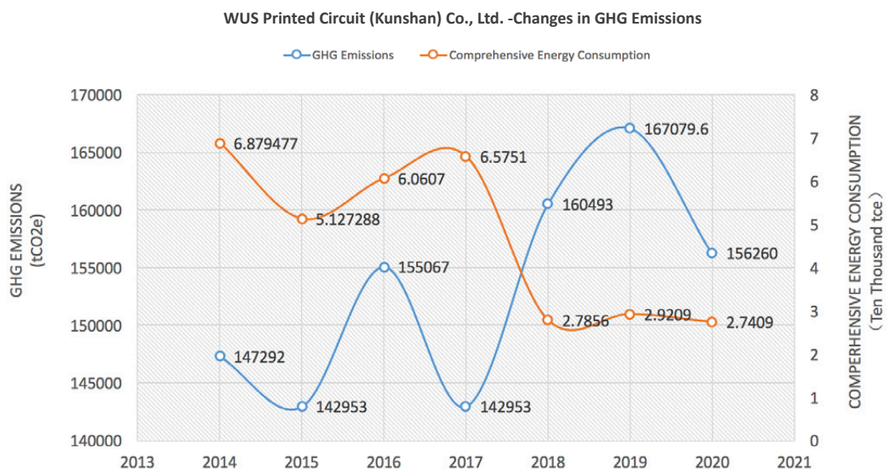
Encouraged by these firms, by the end of September 2021, nearly 1,000 suppliers had measured and disclosed their energy use and GHG emissions using the carbon data disclosure form developed by IPE; Of these, 236 supplier companies set absolute reduction targets and 187 supplier companies set intensity reduction targets (some suppliers have both absolute and intensity targets).



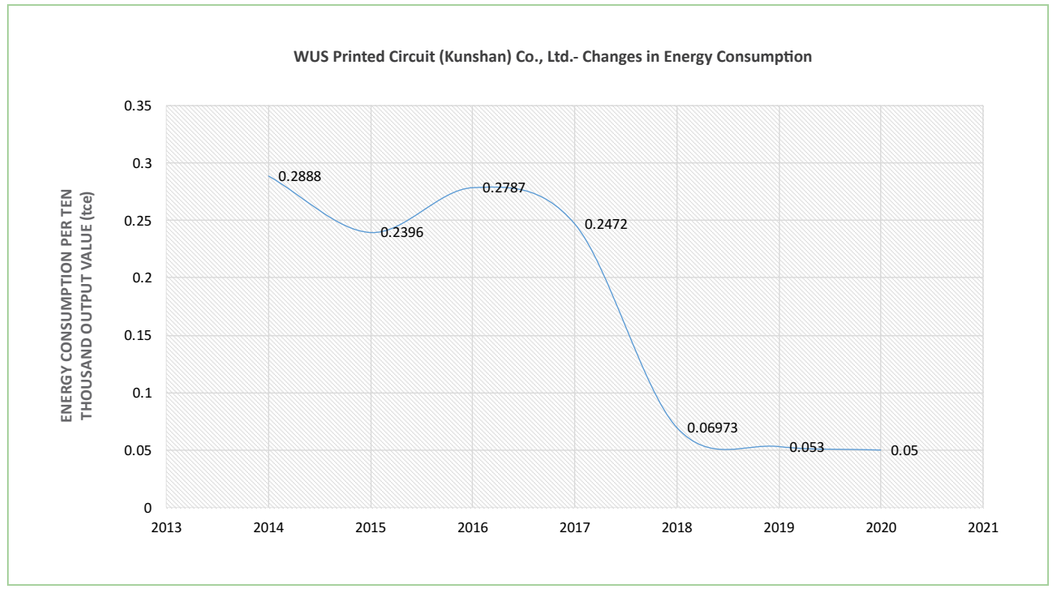
Supplier Case Study

Carbon accounting and disclosure - WUS Printed Circuit Company

In 2014, WUS Printed Circuit (Kunshan) Co., Ltd. (hereinafter referred to as WUS)[30] began to disclose its GHG emissions on the Blue Map website. Although the total corporate GHG emissions fluctuated between 2014 and 2020, there was an overall downward trend in energy consumption and a year-on-year reduction in energy intensity.



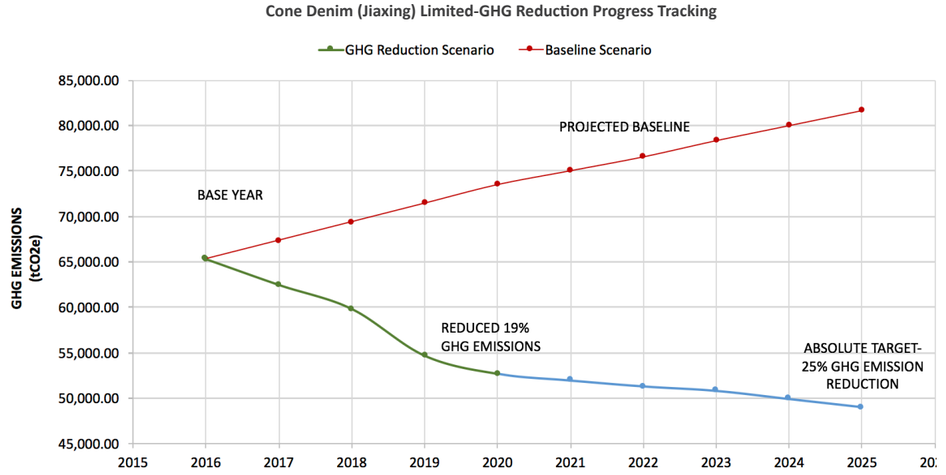
30. IPE, Records - WUS Printed Circuit (Kunshan) Co., Ltd, available at: http://wwwen.ipe.org.cn/IndustryRecord/regulatory-record.aspx?companyId=11675528&dataType=0&isyh=0&showtype=0



Supplier Case Study

Supplier company setting and disclosing emission reduction targets: Cone Denim Company (Jiaxing)

For five years in a row, Cone Denim (Jiaxing) Limited[31] (hereinafter referred to as Cone Denim) has disclosed its GHG data and set absolute targets for business operation GHG emission reduction. As shown in the graph, Cone Denim's GHG emissions have continued to decline since 2016 and achieved 77.5% of the reduction target.

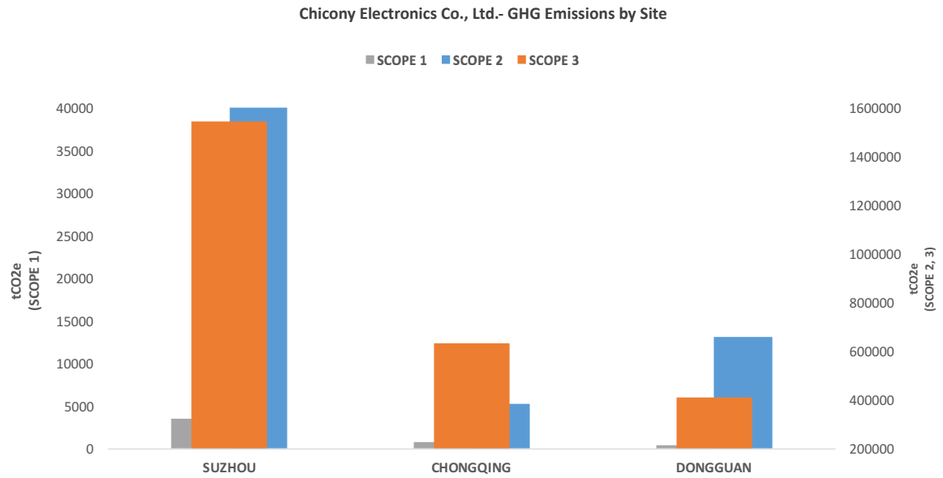


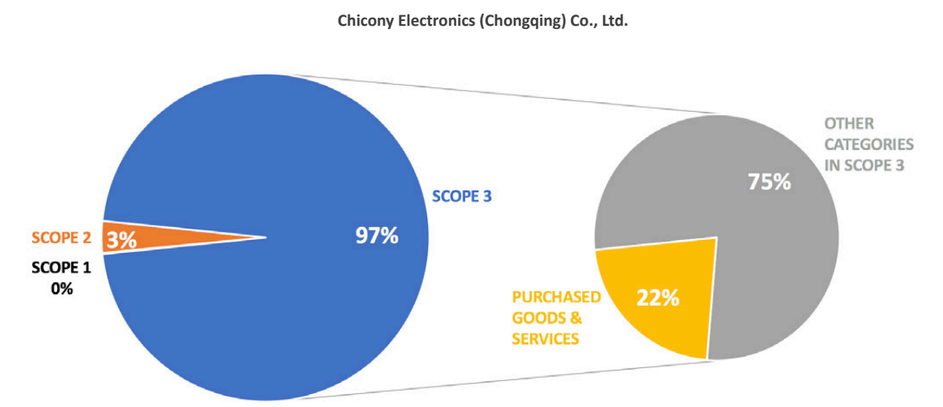
31. IPE, Records - Cone Denim Company (Jiaxing), available at: http://wwwen.ipe.org.cn/IndustryRecord/regulatory-record.aspx?companyId=104466&dataType=0&isyh=0&showtype=0

Supplier Case Study

Supplier company urging subsidiaries to disclose carbon emissions: Chicony Electronics

Chicony Electronics Co., Ltd. (hereinafter referred to as Chicony Electronics)[32-34] urges its subsidiaries in Chongqing, Suzhou and Dongguan to measure and disclose their GHG emissions for Scope 1, 2 and 3 so as to be able to identify its largest sources of GHG reduction opportunities. As shown in the figure, its Suzhou subsidiary has the largest total emissions among the three, its Dongguan subsidiary the smallest, and the structure of GHG emissions differs among these three.





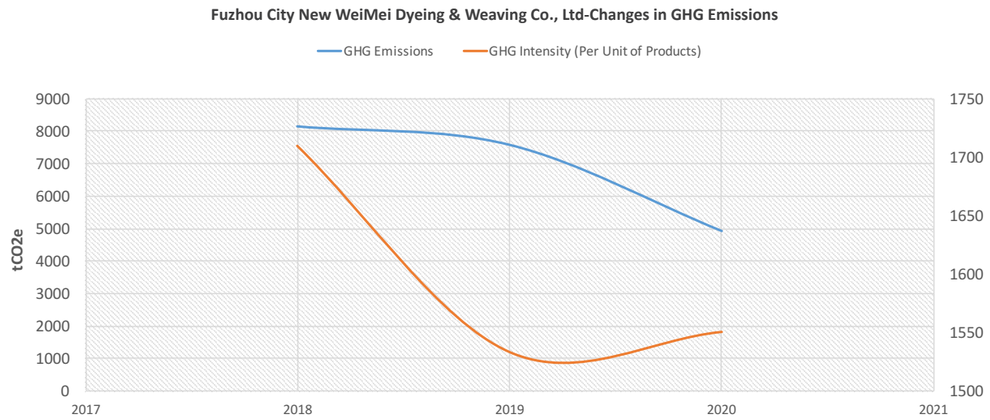
32. IPE, Records - Chicony Electronics (Suzhou), available at: http://wwwen.ipe.org.cn/IndustryRecord/regulatory-record.aspx?companyId=273339&dataType=0&isyh=0&showtype=0
33. IPE, Records - Chicony Electronics (Dongguan), available at: http://wwwen.ipe.org.cn/IndustryRecord/regulatory-record.aspx?companyId=338637&dataType=0&isyh=0&showtype=0
34. IPE, Records - Chicony Electronics (Chongqing), available at: http://wwwen.ipe.org.cn/IndustryRecord/regulatory-record.aspx?companyId=526452&dataType=0&isyh=0&showtype=0

Brand Case Study

Textile brand companies empower supplier companies to save energy and reduce emissions

Textile brands such as AEO, C&A, Gap, Levi's, PUMA, Target and VF have motivated their suppliers to participate in the Clean by Design (CbD)[35] program, encouraging them to optimize energy management in their factories and achieve energy saving and emission reduction. These textile brands also continue to require their suppliers in China to disclose GHG and pollutant emissions via the Blue Map website and encourage their suppliers to set emission reduction targets in line with national and industry standards.

Fuzhou City New WeiMei Dyeing & Weaving[36] Co., Ltd (hereinafter referred to as Fuzhou City New WeiMei), for example, encouraged and incentivized by its client company, participated in the CbD project from July 2019 to June 2021 and has adopted a number of energy management measures, including: establishing an energy management system, strengthening equipment maintenance and repair, eliminating runs, risks, drips and leaks, insulating steam pipes, pipe valves and drying cylinders, reducing openings in desizing machines and sizing machines to minimize heat loss, improving boiler energy efficiency and increasing the condensate reuse rate plant-wide.



With this project, Fuzhou City New WeiMei saved 913,158 kilowatt hours (kWh) of electricity, 2,936 tons of steam and 21,223 tons of water in 2020 compared to 2019. Their data disclosed via the Blue Map website shows that the company's total GHG emissions have decreased for three consecutive years; the unit carbon intensity, despite a slight increase in 2020, shows a downward trend. These figures show that the energy management measures taken by the company are effective in cutting the company's GHG emissions.

Gap Levi's PUMA VF

Scan the QR code to learn the brand stories of Gap, Levi's, PUMA and VF on how textile brands are empowering supplier companies to save energy and reduce emissions.

35. NRDC, Clean by Design, Apparel Manufacturing and Pollution, available at: https://www.nrdc.org/resources/clean-design-apparel-manufacturing-and-pollution
36. IPE, Records - Fuzhou City New WeiMei Dyeing & Weaving, available at: http://wwwen.ipe.org.cn/IndustryRecord/regulatory-record.aspx?companyId=334690&dataType=0&isyh=0&showtype=0

05 Looking Ahead

The Paris Agreement has aimed to limit global warming to well below 2, preferably to 1.5 degrees Celsius compared to pre-industrial levels. Climate actions that governments and key stakeholders choose to take over the next decade are essential for this goal to reach.

Fortunately, this year's evaluation results show that some leading companies have started to reduce their GHG emissions, which has subsequently motivated a number of Chinese suppliers to calculate and reduce their GHG footprints. This goes hand in hand with the Chinese government's "dual carbon" commitment and the "1+N" governance system currently under development by the Chinese government. Properly focused corporation GHG reduction activities hold promise to work synergistically with the steps that the government is taking, with Chinese and multinational companies pulling in the same direction under the policy guidance, gradually improving corporate and supply chain sustainable management, jointly reducing GHG emissions.

Multinationals sourcing from China should prioritize supply chain greenhouse gas emissions management, where the bulk of their emissions often lie. Importantly, they should also encourage their suppliers to extend carbon management to their own supply chains.

Domestic Chinese companies should start improving corporate climate governance to respond to the "dual carbon" target, strengthen the measurement and disclosure of their direct carbon emissions, set scientific carbon targets, start decarbonizing in the operation, and drive the low-carbon transformation of their own value chain.

For best results, IPE recommends the following specific roadmap for both multinational and domestic Chinese companies to undertake to initiate and accelerate greenhouse gas reductions. These steps align with the CATI scoring matrix:

1. Develop corporate climate governance policy, clarify business objectives under climate change impacts, and incorporate climate change into business risk and supply chain management.
2. Carry out corporate greenhouse gas accounting, create greenhouse gas inventories, and identify emission hot spots in Scope 1, 2 and 3.
3. Based on historical carbon emissions, select a target base year and set absolute and/or intensity greenhouse gas reduction targets, and break it down into corporate operations and value chain.
4. Develop a corporate greenhouse gas management plan that focuses on where it matters the most.
5. Where significant, reduce carbon emissions in corporate operations through measures such as fossil energy substitution, energy efficiency improvement, material efficiency improvement, and reduction of fugitive emissions; reduce carbon emissions in the value chain that can be avoided.
6. Push hot spot suppliers to carry out emission accounting and reduction actions by performance evaluation, training and capacity building, encouraging innovation and financial incentives.
7. Motivate and collaborate with carbon emission hot spot suppliers to carry out emission reduction projects.
8. Collect supplier first-hand greenhouse gas emission data to track supply chain emission reduction progress and optimize corporate carbon management plans in a timely manner.
9. Launch active emissions reduction initiatives in cooperation with pilot suppliers and promote the large-scale supply chain emissions reduction initiative.
10. Push suppliers or subsidiaries to take initiative to develop their corporate climate action mechanisms according to the above paths, and extend carbon management to the further upstream supply chain.

06 Appendix

2021 CATI Scores

Brand	Score	Brand	Score	Brand	Score	Brand	Score	Brand	Score
Dell	81.42	Canon	37.2	CNOOC	29.14	innisfree	20.29	Starbucks	12.25
Apple	75.44	RICOH	37.02	Sanofi	29.11	Singtel	20.08	CGN Power	12.23
Cisco	68.08	Volkswagen	36.04	Solvay	28.99	PORSCHE	20.05	Bentley	12.12
Target	67.49	GM	36	Johnson&Johnson	28.65	Mondelēz International	19.96	Kraft Heinz	12.06
Levi's	67.03	Ralph Lauren	35.89	Pfizer	28.13	Datang Power	19.90	GCL	11.94
GAP	65.2	Ford	35.29	Burberry	28.09	Fuyao	19.9	GE	11.8
Foxconn	65.19	Huaneng Power	35.08	Mars	27.8	LONGi	19.71	Lear Corporation	11.57
Adidas	65.11	Seiko Epson	34.69	KIA	27.77	China Metallurgical	19.33	Everbright Environment	11.48
Nike	64.41	Pepsi	34.68	Esprit	27.67	Henkel	19.03	Benetton	11.41
Walmart	63.1	PetroChina	34.68	Novartis	27.59	AIR CHINA	19.01	Hengan	11.41
Puma	58.18	Ericsson	34.59	Eastman	27.54	TOTO	18.86	China Merchants Shekou	11.17
Microsoft	58.07	DSM	34.56	Sony	27.5	XINYI SOLAR	18.81	MICHAEL KORS	11.12
Inditex	57.84	ReckittBenckiser	34.4	Dystar	27.28	Tesla	18.64	China Resources Gas	11.06
C&A	56.81	Honda	34.18	Nippon Paint	27.19	SUZUKI	18.54	Sungrow	10.98
HP	52.05	Stora Enso	34.04	Li-Ning	26.77	Baoshan Iron & Steel Co.,Ltd.	18.46	Energy China Group	10.73
H&M	50.1	Electrolux	34.02	Swire Foods	26.69	Tokai Rika	18.34	Yuen Foong Yu	10.5
Lenovo	49.1	Tommy Hilfiger	33.71	Syngenta	26.31	Huadian Power	18.13	DONGFENG MOTOR	10.45
Uniqlo	48.73	Calvin Klein	33.71	Siemens	26.27	Maanshan Iron & Steel Company Limited	17.82	Sinochem International Corporation	10.18
VF	48.51	HUGO BOSS	33.71	KOHLER	26.22	CHINA EASTERN	17.64	Vinda	10.05
American Eagle Outfitters	47.77	Takeda	33.67	UPM	25.72	bluemoon	17.63	BAIC GROUP	10
ASICS	46.53	GlaxoSmithKline	33.64	Hyundai	25.61	Kohl's	17.57	Land Rover	9.76
Coca Cola	46.5	Panasonic	33.56	Merck & Co.	24.68	Cargill	17.43	J.C. Penney	9.72
Carrefour	45.91	IKEA	33.45	Sharp	24.6	Asahi	17.38	Perfetti Van Melle S.P.A	9.49
Hitachi	44.1	Bosch	33.09	Samsung	23.69	Facebook	16.92	NEXEN TIRE	9.3
P&G	42.8	Nissan	32.92	Goodyear	23.64	CHINA SOUTH AIR	16.92	Yili	9.23
Lindex	42.48	Unilever	32.75	Arkema	23.53	Avary Holding	16.64	AVON	9.2
Primark	40.98	BMW	32.56	Clariant	23.4	HTC	16.47	GAC	9.1
Kao	40.88	Schaeffler	32.5	Oji Paper	23.36	The Very Group	16.43	Haier	9.07
Tesco	40.67	Nokia	32.33	Royal Philips	23.23	COACH	16.22	361°	9
Huawei	40.17	Groupe PSA	31.93	Nestlé	23.01	China National Building Material	16.00	BOSIDENG	8.94
Volvo	39.72	Bayer	31.82	Bridgestone	22.8	Next	15.93	MANGO	8.91
Toyota	39.41	Intel	31.49	Merck Group	22.65	Cortefiel	15.07	Changan	8.86
Mercedes-Benz	38.98	McDonald's	31.28	Carlsberg	22.6	Lilly	14.78	Shanxi Taigang Stainless Steel Co.,Ltd	8.67
New Balance	38.95	DuPont	31.2	Toyoda Gosei	21.93	Kate Spade	14.75	Hormel	8.52
Sinopec	38.39	Bestseller	30.93	Kontoor	21.9	Hankook Tire	14.39	Ann Taylor	8.48
M&S	38.07	Schneider Electric	30.65	Faurecia	21.77	Luxshare	14.26	Mengniu Dairy	8.4
Google	38.02	Decathlon	30.56	watsons	21.76	Amazon	14.2	HIKVISION	8.36
HPEHewlett Packard Enterprise	37.88	AkzoNobel	30.54	Tiffany	21.49	LG	14.1	Abercrombie & Fitch	8.31
MICHELIN	37.73	Dow	30.4	Toshiba	21.01	Whirlpool	13.87	Vitasoy	8.21
Fujitsu	37.61	BT	30.09	Guess	21.01	Fonterra	13.33	SC Johnson	8.19
Mazda	37.59	Vodafone	30.01	Hyundai Mobis	20.88	Jahwa	13.17	Victoria's Secret	8.18
L'Oréal	37.47	Colgate-Palmolive	29.82	CHANEL	20.87	G-Star	12.61	MUJI	8.02
IBM	37.38	ABInBev	29.54	Magna	20.58	MARY KAY	12.54	SMIC	8
Danone	37.3	NIVEA	29.29	Heineken	20.57	Macy's	12.41	Trina Solar	8
BASF	37.24	General Mills	29.24	SHISEIDO	20.47	Disney	12.34	China Resources Beer	8

Brand	Score	Brand	Score	Brand	Score	Brand	Score	Brand	Score
SKYWORTH	7.91	WEIQUAN CORP	5.27	FANTASIA	3.24	Overseas Chinese Town	1.73	Nine Dragons Paper	0
OPPO	7.84	ANTA	5.15	Hisense	3.11	Nongshim	1.64	HTRH	0
APP	7.68	CR Sanjiu	5.15	ecco	3.09	Huiyuan	1.64	Junlebao	0
YINGE	7.45	POLY PROPERTY	5.15	C&S	3.05	RISEN ENERGY	1.64	Kangnai	0
TJSEMI	7.4	Nongfu Spring	4.85	TIAN DI SCIENCE&TECHNOLOG	3.05	TALESUN	1.64	Mothercare	0
FAW JIEFANG	7.32	China Communications Construction	4.85	China Railway Construction	3.03	Xiaomi	1.42	Umbro	0
YADEA	7.27	China Greatwall Technology Group Co., Ltd.	4.76	Giordano	2.94	Yunnan Baiyao	1.36	Pierre Cardin	0
Want-Want	7.25	Spalding	4.61	GREE ELECTRIC APPLIANCES	2.85	Costa	1.29	HEAD	0
Modern Farming	7.18	Shuanghui	4.58	Nine West	2.75	LACOSTE	1.21	Shanying Paper	0
Daphne	7.09	EVERGRANDE	4.55	CHG	2.73	Aoyuan	1.21	Long Chen Paper	0
ORIENTAL YUHONG	7	CHINA GEOTHERMAL	4.55	CRRC	2.73	Lee & Man Paper	0.91	Sun Paper	0
Burger King	6.97	Dachan	4.4	JEANSWEST	2.63	CP	0.91	Chen Ming Group	0
Landsea Holdings	6.88	Liby	4.39	Hisense Kelon	2.59	SANYUAN	0.91	ROXY	0
Canvest	6.82	CECEP Solar	4.18	COFCO	2.55	kaimi	0.91	Beingmate	0
BEHET	6.79	China Coal Energy	4.09	Nice	2.55	Valentino	0.91	Dicos	0
Esquel	6.77	nVc	4.09	Wahaha	2.55	FUJIYA	0.91	Haima	0
Mizuno	6.73	TBEA	4.09	JA SOLAR	2.55	AUX	0.91	Southeast Motor	0
3TREES	6.54	KUMHO TIRE	4.06	TONGWEI	2.55	Monalisa	0.91	Baojun	0
CEHL	6.52	River Island	3.97	GLORY	2.42	HOdo	0.91	Meituan Bike	0
Vanke	6.36	Columbia Sportswear	3.87	Joy City Property	2.33	SEPTWOVLES	0.91	Genguquan	0
GEELY	6.36	UGG	3.85	Gloden Throat	2.27	YANGO	0.91	SENLI	0
DALI	6.36	Minmetals Land	3.85	CHINA STATE CONSTRUCTION	2.24	POWER CHINA	0.91	QINGYUAN	0
China Resources Health	6.36	Boehringer-Ingelheim	3.82	Galanz	2.14	MINMETALS DEVELOPMENT	0.91	New Hope	0
Prada	6.18	Huntsman	3.82	Grandblue	2.12	CHINA MEHECO	0.91	wondersun	0
YANGHE	6.06	Midea	3.67	Orchard Farmer	2.12	China Nonferrous Metal Industry	0.91	huishan	0
SINOPHARM	6.06	FILA	3.64	Archroma	2.12	Haitian	0.82	Pechoin	0
SEAZEN	6.05	Suitsupply	3.64	Dafa	2.12	SINOSTEEL ENTEC	0.82	Chando	0
Jinko Solar	6	SIIC	3.64	CHINA RAILWAY	2.12	Great Wall	0.76	Hanhoo	0
SDIC POWER	5.91	R&F Properties	3.64	ZTE	2.03	AikoSolar	0.7	Unifon	0
Samsonite	5.81	First Tractor Company Limited	3.64	MOMA	2.03	Brightdairy	0.61	TIANYOU	0
CHINT	5.79	Pangang Group Vanadium & Titanium Resources Co., Ltd.	3.64	CHINA MERCHANTS EXPRESSWAY	1.97	Wanna Environment	0.61	K-BOXING	0
Proya	5.77	Poly Developments & Holdings	3.64	Hush Puppies	1.94	ZhongHuanHuanBao	0.61	HLA	0
Angang Steel Company Limited	5.76	CIFI Group	3.56	Whitecat	1.82	MEIZU	0.3	Tranlin	0
Master Kong	5.67	PurCotton	3.55	LMZ	1.82	vivo	0.3	XINYA PAPER	0
CSIQ	5.58	CNSIC	3.55	Kappa	1.82	First	0.3	HONGAN	0
Uni-president	5.54	POWERLONG	3.55	FAW	1.82	Youngor	0	SHUANGDENG	0
Armani	5.45	Clarks	3.36	COOPERTIRES	1.82	Toread	0	Heping	0
Conch Venture	5.45	REI	3.34	Changhong	1.82	BYD	0	GAEA GEM	0
YUNNAN WATER	5.45	Tsingtao	3.33	Lafuma	1.73	KFC	0	Oishi	0
Shanghai Electric	5.45	Adient	3.33	ERDOS	1.73	Yanjing Beer	0	Kingstar Beer	0
China Railway Signal & Communication	5.45	Goertek	3.33	Golden Eagle	1.73	Chery	0	BRC	0
Feihe Milk	5.36	BGE	3.27	SFY	1.73	Belle	0	HISUN	0
Dongfang Electric Corporation Limited	5.32	Central China Real Estate	3.24	HENG LIN	1.73	Aokang	0	Tahoe	0
TCL Tech	5.27	sunkwan	3.24	LONKEY	1.73	DKNY	0	Vantone Real Estate	0
Yibin Wuliangye Group	5.27	zhenro	3.24	Tianma Microelectronics Co.,Ltd.	1.73	Meters/bonwe	0	SAMTAK	0

2021 CATI Scores

Brand	Score	Brand	Score	Brand	Score	Brand	Score	Brand	Score
Hodo	0	LUZHOULAOJIAO	0	JUNXIN	0	WELLE	0	Lanju	0
SINYI	0	Kweichow Moutai Group	0	BEIJING HUANWEI	0	LEO-KING	0	Threegun	0
Chengdu Jiaoda Real Estate	0	Niulanshan	0	SHOUGANG ENVIRONMENT	0	CHUNHUI	0	MENGLAN	0
BSD	0	Xifeng	0	FC ENVIRONMENT	0	VEKEN	0	MINTH GROUP	0
LUCKYKING	0	Tong Ren Tang	0	XINDU HOLDINGS	0	Capital Land	0	Plastic Omnium	0
TENHONG LAND	0	Taiji Group	0	SEPG	0	SHINSUN	0	XPeng	0
Country Garden	0	Panpan Foods	0	ZHONGSHAN PUBLIC UTILITIES	0	TIANI	0	Li Auto	0
Anhui Xinyi Group	0	Be & Cheery	0	Hello Bike	0	EAST SEA	0	NIO	0
YISHION	0	Three Squirrels	0	DAJIHUANJING	0	DAJA	0	Leapmotor	0
Tonlion	0	Bestore	0	CHANT GROUP	0	YURUN	0	Hozonauto	0
Semir	0	KONKA	0	TEDA	0	DATANG	0	WM Motor	0
Zhujiang Beer	0	LOCK LOCK	0	WEIHAI HY GROUP	0	JIN CAILUN GROUP	0	AKCOME	0
China Tianying	0	HUAYUAN	0	XINFENG GROUP	0	CSPC	0	SICHUAN ENERGY INVESTMENT	0
Zheneng Jinjiang Environment	0	TENTIMES	0	INFORE ENVIRO	0	dashenlin	0	DCCP	0
Shanghai Environment	0	sunnyworld	0	LAO GAN MA	0	TASLY	0	GUOHUAN	0
SE Environment	0	Hisense	0	Bear Electric	0	HONGBAOLAI	0	DONGGUAN INDUSTRIAL INVESTMENT HOLDING GROUP	0
DYNAGREEN	0	Dongdu international	0	Royalstar	0	JML	0	FUJIANHUANBAO	0
Sanfeng Environment	0	Kingdom	0	OPPLE	0	SHUITA	0	BINHAIJIANSHE	0
TUS-EST	0	DaHan	0	pak	0	Synear	0	GUANGDONGHUANBAO	0
CSET	0	ZhongFang	0	Dare Power Dekor	0	Angel	0	HFI	0
Shengyun	0	ROFFAR	0	Nature	0	KING'S LUCK	0	WESTERN POWER	0
Weiming Environment	0	ChiXia Development	0	JIUSHENG	0	Fortune Brands	0	JIAXING WATER	0
Shengyuan	0	Gold Mantis	0	OPPEIN	0	GROHE	0	SHAXIHUANBAO	0
PEP	0	JUNFA	0	AUPU	0	Micoe	0	SHENYANGJICHUCHANYE	0
CNEP	0	Sunriver	0	Easyhome	0	Orion	0	SHANGRAOCHENGTOU	0
WENERGY	0	ruchen	0	Macalline	0	BIMBO	0	XIANDAIHUANJING	0
CPNE	0	DaAi City	0	Jimei	0	GIANT	0	ZHENENGJITUAN	0
Herrel	0	AUX	0	Feidiao	0	MERIDA	0	ZHOGNYINHUANBAO	0
EuroGroup	0	San Sheng Hong Ye	0	A.O.Smith	0	BATTLE	0	HENYUANRELI	0
lepur	0	huajian real estate	0	GUANGDONG MACRO CO.,LTD	0	AIMA	0	China Railway Materials Company Limited	0
SAIC MOTOR	0	Sincere	0	qingju	0	SUNRA	0	China National Chemical Engineering	0
JAC	0	Zhongda	0	zhejiangyongqiang	0	LUYUAN	0	CHINA XD ELECTRIC	0
JMC	0	TUNGHSU	0	XingRong Environment	0	TAILG	0		
Brilliance Auto	0	Joyi	0	SUS ENVIRONMENT	0	SLANE	0		
GITI	0	yahe	0	SINO ECOLOGICAL	0	BYVIN	0		
CHAOYANG	0	Xinyang	0	IGILA ENVIRON	0	PHOENIX	0		
WEST LAKE	0	worldunion	0	XingLu Environment	0	Boloni	0		
GOOD RIDE	0	GCL	0	SIENSOL EP	0	Topnew	0		
Trazano	0	FEIMA	0	HENGJIAN GROUP	0	HYX	0		
SUPOR	0	HUAGUANG ENVIRONMENT&ENERGY	0	CITY ENVIRONMENT GROUP	0	Mercury	0		
Coconut Palm Group	0	Charles & Keith	0	HANGZHOU BOILER GROUP	0	Violet	0		
ASD	0	Xiamen Municipal Constraction Group	0	GZEPI	0	SAINT ANGELO	0		
Joyoung	0	KNC	0	BMEI	0	HSDP	0		
FEN JIU GROUP	0	ENFI	0	FEIDA	0	GRACE	0		
GUJING GROUP	0	yonker	0	SHUI FA	0	Jalice	0		

About IPE

The Institute of Public & Environmental Affairs (IPE) is a non-profit environmental organization based in Beijing, China. Since its establishment in 2006, IPE has developed and operated the Blue Map Database (wwwen.ipe.org.cn), and launched the Blue Map app in 2014, promoting environmental information disclosure and public participation, empowering enterprise green transition and development as well as improving environmental governance mechanisms.

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Chinese Research Academy of Environmental Sciences (CRAES) is dedicated to carrying out foundational, holistic, and strategic research on ecology and environment, including physical science, development strategy, technology policy and major ecological and environmental issues. Its research provides comprehensive scientific and technological support for national ecological and environmental management. CRAES has 16 main research directions and 80 sub-disciplinary research directions, covering all fields of ecology and environment (nuclear safety) that form a more comprehensive discipline system. CRAES collaborates with 33 world-class international environmental research institutes to establish cooperation mechanisms, covering the fields of atmosphere, water, ecology, environmental health, soil, automobile vehicles, clean production, climate change, etc. It also has extensive and in-depth cooperation with the United Nations Environment Program, the United Nations Industrial Development Organization, the European Commission, the World Bank and other international institutions.

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Note:

1. The duration for this round of evaluation is between 1st Oct 2020 and 30th Sept 2021;

2. Evaluation sources: the enterprises' official websites, annual reports, Corporate Social Responsibility (CSR) reports, Environmental, Social and Governance (ESG) reports etc., as well as their publicly accessible responses to CDP Climate Change Questionnaires and self-disclosure on IPE's Blue Map website.

3. If any divergences arise between the English and the Chinese versions of this report, please refer to the Chinese version, which is the official version of the report.

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