Alibaba Group is one of the world’s largest technology companies specialising in e-commerce, retail, and internet service.

Alibaba Cloud, its subsidiary, is also one of the world’s largest cloud-computing companies.

**Bloomberg:** 9988HK
**Market Cap:** US$214bn  
(30th June 2023)
**Revenue:** CNY869bn  
(y-e 31st Mar 2023)

## CLIMATE PLEDGE OVERVIEW

**GHG emissions:** 13.2MtCO₂e (Scope 1+2+3) – comparable to 40% of HK’s annual emissions

**Carbon intensity:** 15.5tCO₂e/CNYmn revenue (106tCO₂e/US$mn revenue)

**Climate pledge:** achieving net zero emissions in Scope 1+2, and all-scope net zero emissions in AliCloud by 2030

**Clean energy target:** 100% clean electricity in Scope 1+2 by 2030

**Temperature rise alignment:** 3.2°C (insufficient disclosure; a default value is applied)

**Power usage effectiveness (PUE):** 1.247 (average annual), 1.09 (best-performing data centre unit)

- In FY2022, clean energy powered 6.6% of Alibaba’s operations and 22% of Alibaba Cloud, which generated 8.7% of Alibaba’s revenue. An impressive start but still far from meeting the 100% clean energy target for Scope 1+2 at the corporate level and in all-scope emissions at Alibaba Cloud by 2030.

- The Group’s official projection for Scope 3 emissions indicates a continuous increase despite the commitment to halve carbon intensity in the value chain before 2030.

- Low hanging fruits of carbon disclosure improvement may include validating its net zero targets and roadmap by SBTi, clarifying the scope of “clean energy” and examining the possibility of extending the current net zero pledge to Scope 1+2+3.

## AT-A-GLANCE OWNERS & LIABILITIES

### Shareholders by location

- **Total mkt cap:** US$214bn
- **Top 5 shareholders:**
  - SoftBank, 14%
  - Jack Ma, 3%
  - Vanguard, 3%
  - BlackRock, 3%
  - APN Ltd, 2%
- **Other:** 75%

### Liabilities

- **Top 5 Liabilities:**
  - Deferred revenue & customer advances, 11%
  - Bank loans, ST, 1%
  - Accrued expenses, accounts payable and other, 44%

### Assets

- **Top 5 Assets:**
  - Equity securities & other inv’ts, 14%
  - Receivables, 5%
  - Prop & equipment, 10%
  - Intangibles & goodwill, 18%

### Revenue and profit

- **Revenue:** CNY869bn
- **Net income:**
  - Cloud, 9%
  - Cainiao, 6%
  - Local consumer services, 6%
  - International commerce, 8%
  - China Commerce, 67%

### Revenue by segment

- **FY 2019**
  - China Commerce, 67%
  - Cainiao, 6%
  - Local consumer services, 6%
  - International commerce, 8%
  - Other, 5%

- **FY 2020**
  - China Commerce, 67%
  - Cainiao, 6%
  - Local consumer services, 6%
  - International commerce, 8%
  - Other, 5%

- **FY 2021**
  - China Commerce, 67%
  - Cainiao, 6%
  - Local consumer services, 6%
  - International commerce, 8%
  - Other, 5%

- **FY 2022**
  - China Commerce, 67%
  - Cainiao, 6%
  - Local consumer services, 6%
  - International commerce, 8%
  - Other, 5%

- **FY 2023**
  - China Commerce, 67%
  - Cainiao, 6%
  - Local consumer services, 6%
  - International commerce, 8%
  - Other, 5%

Note: Financial data reflects the 2023 fiscal year (FY2023), which ends on March 31, 2022, while energy, emission and green investment data reflect the 2022 fiscal year (FY2022). 30 June was used as the cut-off for all new information related to the companies.

Source: CWR, Company disclosure, Bloomberg, Climate Watch and Carbon Neutral © HK.

This factsheet is a part of CWR’s Report “China ICT transition - The good, bad & ugly of 5 HKEX ICT listco’s net zero pledges & climate action” 2023 and should be read in conjunction with this report.
**ALIBABA**

**KEY ENERGY STATS**

**Emission & energy intensity**

<table>
<thead>
<tr>
<th>Emission intensity (tCO2e/CNYmn)</th>
<th>Energy intensity (MWh/CNYmn)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY 2022</td>
<td></td>
</tr>
<tr>
<td>0</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td></td>
</tr>
</tbody>
</table>

**Transitions Pathway**

- Alibaba illustrates a potential pathway to achieving net zero emissions in scope 1+2 using offsets and scope 1+2+3 using carbon removal.
- However, the illustration does not include explicit GHG emissions (y-axis) at the baseline, the peak or the target year of 2030.
- While indicating prospective carbon neutrality in scope 1+2+3 in the long-term, the company does not set a target year for carbon neutrality in scope 1+2+3 – for now this is not included in the official net zero commitment.

**Greenhouse gas emissions**

<table>
<thead>
<tr>
<th>Greenhouse gas emissions</th>
<th>YoY Change (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scope 1</td>
<td>0.93</td>
</tr>
<tr>
<td>Scope 2</td>
<td>4.45</td>
</tr>
<tr>
<td>Scope 3</td>
<td>7.88</td>
</tr>
</tbody>
</table>

* Due to limited disclosure, YoY change is calculated using FY2022 emission data (which covers Q2-Q4 in 2021 and Q1 in 2022) and CY2020 emission data.

**Electricity mix**

- Operations: 6.6%
- Data centres: 21.5%

**Energy efficiency**

- Renewable energy: 15%
- Fossil energy: 85%

**Net zero pathway**

- Renewable assets: 25MW
- On-site renewable energy generation: 11,000MWh
- Green Power Purchase Agreement (GPPA): 269,000MWh
- Green electricity certificates (GEC): Not found
- Carbon offsets: Not found

* Due to limited disclosure, the above may not be explicit for all investment activities that occurred in the reporting year.

**Latest green investments**

- Renewable energy, US$36mn
- Green buildings, US$148mn
- Other, US$352mn

**Latest sustainability financing products raised**

- 2021: US$1bn sustainability bond (UoP incl. energy-efficient data centres)

* CN Grade I/II refers to Chinese national efficiency standards for data centres. Large-scale data centres must meet Grade II level requirement.

**China ICT Transition**

- BAT Climate Pledges & Action Factsheets

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Source: CWR, Company disclosure and Bloomberg.

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A few inconsistencies in bilingual reports. For example, the English Carbon Neutrality Strategy document does not include the commitment to “100% carbon-neutral electricity in global production and operation by 2030”; No definition of eligible energy sources for “carbon-neutral electricity” or “clean energy”; Limited sub-targets or indicators to measure the progress of the outlined tactics, such as electrification, energy efficiency improvement, renewable energy investment and procurement, carbon offset and removal, and circular economy.

Set an absolute target (“100%”) on carbon-neutral electricity consumption in the mid-term (“by 2030”) in the Chinese “Carbon Neutrality Report”; Specified the scopes (“Scope 1+2”) and the percentage of in-scope electricity consumption (“100%”) covered by the target; Clearly defined the geographic scope of activities covered by the target (“global”); Highlight data centres’ emissions and electricity consumption, including self-operating and leased data centres; Details on decarbonisation tactics, such as electrification, energy efficiency improvement, renewable energy investment and procurement, carbon offset and removal, and circular economy.

No specification on Scope 2 emission accounting (location- or market-based calculation); No absolute targets for either “positive” or “negative” emissions, including but not limited to remaining emissions in each scope, and the amount and types of carbon offsets required to achieve net zero before and in the target year; Limited quantitative sub-targets to measure progress, e.g., PUE and CUE as key indicators of energy efficiency improvement and carbon footprint in data centres; No third-party assessment on the pledge’s alignment with the 1.5°C target of the Paris Agreement yet; No cost assessment or plans for financing the necessary transition to achieve the target.

No cost analysis or capital expenditure evaluation of the required transition to reach the target.
ALIBABABA

HOW CAN ALIBABA IMPROVE ITS CARBON DISCLOSURE?

Greenhouse gas emissions
✓ Disclosed carbon emissions: total emissions, and emissions in scope 1, 2, and 3 (MtCO₂e);
✓ Disclosed carbon intensity: total GHG emissions per unit of revenue (tCO₂e/CNYmn);
✓ Disclosed GHG categories covered by the inventory and accounting methodology;
+ Breakdown of GHG emissions from major activities, in particular, offices and data centres.

Energy consumption
✓ Disclosed energy intensity: total, direct and indirect energy use per unit of revenue (MWh/CNYmn);
✓ Disclosed Power Usage Effectiveness (PUE) in data centres within operational control;
+ Disclose LEED certification: office space (m²) and number of data centres (#);
✓ Disclosed total energy consumption, direct energy consumption (MWh) by source (gasoline, diesel, gas, LPG) and indirect energy consumption (MWh) from purchased electricity;
+ Disclose total indirect energy consumption (MWh), in particular, electricity consumption, in major emitting activities in the supply chain, such as leased data centres;
✓ Disclosed renewable energy consumption (MWh);
+ Disclose total non-fossil energy consumption (MWh) by energy source;
+ Provide electricity mix: percentage of energy sources (renewable or not) in final electricity consumption (%);
+ Provide a breakdown of total energy consumption (MWh) by energy source and supplier (e.g. grid, self-built power stations) from major activities, in particular, offices and data centres, and ideally, list such information for each building and data centre parks;
+ Detail average PUE in self-built and leased data centres by location.

Carbon neutrality pledges
#1: carbon neutrality by 2030
+ Strengthen the 50% carbon intensity reduction target for Scope 3 emissions;
+ Expand the Scope 1+2+3 net zero target in Alibaba Cloud to cover leased data centres;
+ Lay out the contribution of major transition measures in reducing carbon footprint in operation and supply chain (MtCO₂);
+ Provide a traffic-light progress tracker in the reporting year, detailing achievement and gaps.

#2: 100% neutralised electricity by 2030
+ Clarify eligible energy sources for “neutralised electricity” and “clean energy” and measures to “neutralise” power supply;
+ Clarify whether the “100% clean energy” target in Alibaba Cloud also applies to leased data centres;
+ Provide the percentage of carbon-neutral electricity consumed in the reporting year, and its breakdown by energy source and suppliers;
+ Provide the percentage of carbon-neutral electricity consumed by major activities, particularly, data centres (%);
+ Offer a one-stop tracker of the progress towards “100% renewable electricity,” as well as annual investment in renewable energy generation and procurement, R&D and energy infrastructures such as storage and microgrid.

Renewable energy procurement
✓ Disclosed clean energy procurement (MWh) and actions in place;
+ Provide a detailed breakdown of renewable energy procurement by energy source (wind, solar, and hydro), market mechanisms (e.g., direct power purchasing, GEC, over-the-fence renewable trading), suppliers, location and activity to avoid double-counting;
+ Provide accounting on the renewable energy balance between production, procurement and consumption in the reporting year, and the remaining balance for the next year, if eligible (MWh).

Renewable energy investment
✓ Disclosed energy generation (MWh) from rooftop solar (on-site distributed renewable);
+ Disclose renewable assets (CNY) and list renewable power generation capacity (MW) by source and location;
+ Provide renewable energy output (MWh) from self-built power stations by source, technology, and grid connection;
+ Disclose information on energy infrastructure, e.g., energy storage capacity by technology (MWh).

Carbon offset and removal
+ Set targets, strategies and roadmaps for offset and removal, as well as standards for quality offset projects;
+ Provide total offset emissions and net emissions in the reporting year (MtCO₂e);
+ Detail the portfolio of offset and removal by project, country, type, vendor and emissions;
+ Detail trading records in voluntary carbon markets (e.g., China Certificated Emission Reduction) to avoid double-counting.

Note: 30 June was used as the cut-off for all new information related to the companies.
Source: CWR, Company disclosure.
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