Digital Technology Empowering a Sustainable Low-Carbon Transition

Tencent

PROJECT OVERVIEW

In light of the global challenges posed by climate change and nature loss, Tencent recognises that addressing these two issues in a synergistic approach is becoming essential for sustainability efforts. We have set ambitious carbon neutrality targets and released the Tencent Biodiversity Statement to promote a more eco-friendly environment, aligning with the Paris Agreement and the Kunming-Montreal Global Biodiversity Framework.

In 2021, Tencent launched its carbon neutrality plan and set targets aligned with the Paris Agreement's 1.5°C goal. The company has pledged to achieve carbon neutrality across its own operations and supply chain by 2030, and to use 100% green electricity. Tencent's near-term targets and its net-zero goal have already been validated by the SBTi.

To address the challenge, we have further developed and implemented efficient power and cooling technologies on the basis of our fourth-generation data centre (T-Block), while employing our AI-powered energy-saving algorithm model to optimise energy usage. Meanwhile, we expanded the use of renewable energy and piloted synergistic solutions for renewable energy and power storage facilities, aiming to deliver greener cloud computing services to customers and society. Renewable electricity percentage increased from 12.4% in 2023 to 22.0% in 2024.

Tencent actively supports innovative low-carbon technologies. In 2023, we launched the "CarbonX Program", which is dedicated to supporting the research and application of emerging low-carbon technologies. We initiated the second phase of this programme ("CarbonX Program 2.0") in December 2024. We will invest hundreds of millions of RMB, focusing on three key areas in CCUS: carbon dioxide removal, CCUS for the steel industry, and CarbonXmade.

COMPANY/ORGANIZATION PROFILE

Tencent 腾讯

Tencent is a leading global internet technology company dedicated to creating innovative products and services to enrich the lives of people.

Our communication and social platform serves over one billion users worldwide, enabling them to stay connected with friends and families while enjoying easy access to life services such as entertainment, transportation and payments.

We develop and publish some of the world's most popular online games and premium digital content, delivering engaging and interactive experiences for a broad and diverse audience.

We provide enterprise services, including marketing, cloud services and computing, and FinTech services, to support the digital upgrade and business expansion of our partners.

Tencent was founded in 1998 and has been listed on the Main Board of the Hong Kong Stock Exchange since 2004.

PROJECT OUTCOME

Carbon Neutrality. Consumed 1,416,661.8 MWh of renewable energy, an increase of 123.9% compared to 2023 and reduced 807,922.2 tonnes of CO2 emissions. Net-Zero Target validated by the Science Based Targets initiative ("SBTi").

Green Supply Chain. Promoted green energy transition in leased data centres; increased the share of green electricity consumption in leased data centres. Added green and low-carbon certifications as criteria for selecting server and data centre vendors.

Innovative Low-Carbon Solutions. Launched the "CarbonX Program 2.0", investing hundreds of millions of RMB, to support the large-scale application of cutting-edge low-carbon technologies, such as carbon capture, utilisation and storage ("CCUS") and long-duration energy storage.

Biodiversity Conservation. Developed digital solutions for species conservation, for example, AI-powered species recognition.

Waste Management. Formulated and implemented the Tencent Solid Waste Management Policy. Reused 4,380.8 tonnes of electronic equipment and recycled 649.0 tonnes of hard disks and mobile terminals for resource utilisation. Tencent Tianjin Binhai data centre received a TRUE zero-waste certification.

PROJECT HIGHLIGHTS

"Tencent Digital Innovative Solutions for Biodiversity Conservation" included in UNGC's "20 Case Examples of Private Sector's Sustainable Development in China for 20 Years" report.

Tencent has been included in multiple major ESG indices, including the World Index and Emerging Markets Index under the Dow Jones Sustainability Index (DJSI), the MSCI Emerging Markets ESG Leaders Index, the MSCI China ESG Leaders Index, and more than 20 other MSCI ESG-related indices. Institutional Investor magazine ranked Tencent as the No. 1 in Asia (ex-Japan) as the "Best ESG" internet companies for four consecutive years, from 2021 to 2024.

PROJECT IMPLEMENTATION

Rooted in our vision and mission of "Value for Users, Tech for Good", our ESG strategy is closely aligned with the Company's business strategy, which prioritises users, industries, and society. Guided by leadership and embraced by employees, our commitment to ESG has become a core element of our corporate culture and serves as a driving force for the Company's sustainable development.

We implement ESG management through three approaches: (i) establishing an ESG governance structure that includes the Board, management, and employees; (ii) integrating ESG principles into corporate culture and ESG practices into daily business operations; and (iii) publishing an annual ESG report aligned with international reporting standards to enhance transparency and communicate the Company's actions and performance in ESG.

In light of the global challenges posed by climate change and nature loss, Tencent recognises that addressing these two issues in a synergistic approach is becoming essential for sustainability efforts. We have set ambitious carbon neutrality targets and released the Tencent Biodiversity Statement to promote a more eco-friendly environment, aligning with the Paris Agreement and the Kunming-Montreal Global Biodiversity Framework. We have established clear responsibilities and reporting mechanisms for environmental protection, formulated and implemented policies, including the Tencent Environmental Protection Management Policy.

In 2021, Tencent launched its carbon neutrality plan and set targets aligned with the Paris Agreement's 1.5°C goal. The company has pledged to achieve carbon neutrality across its own operations and supply chain by 2030, and to use 100% green electricity. Tencent's near-term targets and its net-zero goal have already been validated by the SBTi. In 2024 the total GHG emissions per unit of revenue was 9.2 tCO_2e/ RMB million, representing a reduction of 12.4% compared to the base year.

The acceleration of AI applications in 2024 has imposed higher demands on the computational load and power density of data centres and led to increased energy consumption. To address this challenge, we have further developed and implemented efficient power and cooling technologies on the basis of our fourth-generation data centre (T-Block), while employing our AI-powered energy-saving algorithm model to optimise energy usage. Meanwhile, we expanded the use of renewable energy and piloted synergistic solutions for renewable energy and power storage facilities, aiming to deliver greener cloud computing services to customers and society. Renewable electricity percentage increased from 12.4% in 2023 to 22.0% in 2024.

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PROJECT IMPACT & SUSTAINABILITY

Tencent is steadily moving forward with its 2030 carbon neutrality goal, follow the principle of "emissions reduction and green electricity first, followed by offset". We focused on enhancing energy efficiency in 2024, facilitating the transition to renewable energy, and increasing the use of green electricity throughout our supply chain.

On top of reducing emissions from its own operations and supply chain, Tencent also uses its digital technology and product influence to support low-carbon transition for users, industries, and society.

Expert Comments

This case illustrates the systematic efforts of a digital technology enterprise in addressing the energy challenges arising from high computing power demands. A key highlight of the case lies in the integration of high-efficiency data center technologies with the expanded use of renewable energy, resulting in a 12.4% reduction in carbon emissions per unit of operating revenue. Notably, through its "CarbonX Program", the company has made substantial investments to support the research, development, and application of cutting-edge low-carbon technologies such as CCUS, while also extending these efforts to international collaborations, demonstrating dual leadership in technological innovation and industrial incubation. Beyond achieving emission reduction in its own operations in alignment with its SBTi-certified goal of full-supply-chain carbon neutrality by 2030, the company also leverages its digital technologies and platform influence to empower low-carbon transition of the society. This has created a closed-loop model encompassing "operational emission reduction, technology incubation, and societal empowerment". With strong industry leadership and sustainability, the project offers an important paradigm for the green transition of energy-intensive industries.