

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

Table of the ESG Indicators

| Issues | Name of Indicators | Units | Year 2020 | Year 2019 | |
|--|--|--------------------------------|------------------------|--------------|--------|
| Emissions | Scope 1: Direct greenhouse gas emissions ¹ | million tons CO ₂ e | 0.21 | 0.21 | |
| | Scope 2: Indirect greenhouse gas emissions ¹ | million tons CO ₂ e | 13.55 | 13.34 | |
| | Total greenhouse gas emissions ¹ | million tons CO ₂ e | 13.76 | 13.55 | |
| | Greenhouse gas emissions per unit operating revenue ¹ | tCO ₂ e/RMB million | 34.96 | 36.07 | |
| | Sewage emissions ² | million tons | 30.57 | 35.38 | |
| | SO ₂ emissions ³ | tons | 55.75 | 68.01 | |
| | Non-hazardous waste produced ⁴ | tons | 28,717.77 | – | |
| | Non-hazardous waste produced per unit operating revenue | tons/RMB million | 0.07 | – | |
| | Hazardous waste produced ⁴ | tons | 18,378.93 | – | |
| | Hazardous waste produced per unit operating revenue | tons/RMB million | 0.05 | – | |
| | Electronic waste produced ⁴ | tons | 71,872.84 | – | |
| | Electronic waste produced per unit operating revenue | tons/RMB million | 0.18 | – | |
| | Use of Resources | Electricity consumption | 100 million kwh | 228.33 | 195.01 |
| | | Natural gas consumption | million m ³ | 7.69 | 9.23 |
| Coal consumption | | 10,000 tons | 0.41 | 0.51 | |
| Gasoline consumption | | 10,000 tons | 4.17 | 4.39 | |
| Diesel consumption | | 10,000 tons | 1.72 | 1.38 | |
| Purchased heat consumption amount | | GJ | 1,237,790.55 | 1,338,157.37 | |
| Overall energy consumption ⁵ | | tce | 2,948,806.73 | 2,544,048.55 | |
| Overall energy consumption per unit of information flow | | kgce/TB | 4.61 | 4.91 | |
| Overall energy consumption per operating revenue | | kgce/RMB million | 7,492.63 | 6,770.88 | |
| Power consumption per carrier frequency at base stations | | kwh/carrier frequency | 1,254.81 | 1,100.65 | |
| Water consumption | | million tons | 35.97 | 41.63 | |
| Water consumption per unit operating revenue | | tons/RMB million | 91.39 | 110.78 | |
| Coverage rate of energy-saving technology at telecommunications equipment room | | % | 74.54 | 70.76 | |
| Reclaimed water consumption | | tons | 253,980.38 | 53,685.43 | |

| Issues | Name of Indicators | Units | Year 2020 | Year 2019 |
|---|---|--|-----------|-----------|
| The Environment and Natural Resources | Investment in energy saving and emission reduction | RMB million | 614.09 | 636.11 |
| | Times of video conferencing | times | 37,569 | 35,672 |
| Product Responsibility | Data international roaming countries and regions | – | 248 | – |
| | Domestic administrative village fibre broadband coverage | % | 96 | 94 |
| | Domestic administrative village 4G network coverage | % | 95 | 94 |
| | Internet backbone network interconnection bandwidth | Gbps | 12,305.00 | 8,416.00 |
| | International interconnection bandwidth | Gbps | 9,985.26 | 8,766.76 |
| | Call drop rate of mobile communication ⁶ | % | 0.05 | 0.10 |
| | Call completing rate of mobile communication network ⁶ | % | 99.07 | 97.57 |
| | Call completing rate for access line | % | 93.05 | 92.45 |
| | Packet loss rate of broadband Internet ChinaNet backbone network | % | 0.06 | 0.03 |
| | Degree of satisfaction of mobile Internet users ⁷ | points | 78.20 | 81.91 |
| | Degree of satisfaction of mobile voice users ⁷ | points | 82.60 | 82.68 |
| | Degree of satisfaction of fixed Internet users ⁷ | points | 78.90 | 79.46 |
| | Degree of satisfaction of access line users ⁷ | points | 87.60 | 87.58 |
| | Percentage of in-time response to international customer repair reports | % | 99.64 | 99.16 |
| | Degree of satisfaction of international customers | points | 92.30 | 91.40 |
| | Number of newly acquired patent authorisation | – | 400 | 472 |
| | Number of newly acquired invention patent authorisation | – | 383 | 452 |
| | Number of phishing and fraud websites blocked | – | 9,080 | 13,144 |
| | Anti-corruption | Anti-corruption education programmes organised | – | 31,135 |
| Attendance of anti-corruption education and trainings | | person-times | 1,041,420 | 799,356 |
| Supplier | Total number of suppliers ⁸ | – | 277 | – |
| | Proportion of suppliers reviewed ⁸ | % | 100 | – |

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| Issues | Name of Indicators | Units | Year 2020 | Year 2019 |
|--|---|-------|-----------|-----------|
| Employment | Percentage of employees participating in labour union | % | 100 | 100 |
| | Percentage of female employees at management level | % | 20.33 | 19.97 |
| | Total number of employees ⁹ | – | 281,192 | 281,215 |
| | Total number of full-time employees ⁹ | – | 274,425 | 274,172 |
| | Total number of part-time employees ⁹ | – | 6,767 | 7,043 |
| | Percentage of employees aged 30 and below | % | 12.97 | 12.19 |
| | Percentage of employees aged 30 to 49 | % | 66.15 | 68.42 |
| | Percentage of employees aged 50 and above | % | 20.88 | 19.39 |
| | Percentage of male employees | % | 67.96 | 67.89 |
| | Percentage of female employees | % | 32.04 | 32.11 |
| | Percentage of employees of ethnic minorities | % | 6.62 | 6.97 |
| | Percentage of local employees hired in Hong Kong, Macau, Taiwan and overseas branches | % | 44 | 44 |
| | Total number of newly-hired employees | – | 11,936 | 12,350 |
| | Percentage of newly-hired male employees | % | 61.09 | 58.96 |
| | Percentage of newly-hired female employees | % | 38.91 | 41.04 |
| | Turnover rate of employees aged 30 and below | % | 5.38 | – |
| | Turnover rate of employees aged 30 to 49 | % | 1.13 | – |
| | Turnover rate of employees 50 and above | % | 1.06 | – |
| | Turnover rate of female employees | % | 1.86 | – |
| | Turnover rate of male employees | % | 1.58 | – |
| Turnover rate of employees hired in mainland China | % | 1.67 | – | |
| Turnover rate of employees hired in Hong Kong, Macau, Taiwan and overseas branches | % | 0.50 | – | |

| Issues | Name of Indicators | Units | Year 2020 | Year 2019 |
|---------------------------------|---|---------------------|-----------|-----------|
| Safety and Health | Death rate in accidents per 1,000 employees | ‰ | 0.0036 | 0 |
| | Injury rate in accidents per 1,000 employees | ‰ | 0.00 | 0 |
| | Loss of working days due to work-related injury | – | 0.00 | 0 |
| | Number of participants in safety emergency drills | person-times | 261,087 | 272,542 |
| | Number of participants in health and safety trainings | person-times | 385,305 | 362,174 |
| | Participation rate of employee health checkup | % | 89.82 | 100 |
| Training and Development | Training expenses per employee | RMB/person | 2,242.15 | 3,076.81 |
| | Number of internal trainers | – | 13,054 | 8,844 |
| | Number of training participants | 10,000 person-times | 46.53 | 55.76 |
| | Number of senior management trained | person-times | 487 | 564 |
| | Number of middle-level management trained | person-times | 58,999 | 82,842 |
| | Number of general employees trained | person-times | 405,835 | 474,193 |
| | Number of male employees trained | person-times | 297,180 | 361,199 |
| | Number of female employees trained | person-times | 168,141 | 196,400 |
| | Number of employees passed skill certification exams | person-times | 26,680 | 26,668 |
| | Number of employees enrolled in online college | 10,000 persons | 22.12 | 13.24 |
| | Average training time per employee | hours/person | 29.49 | 29.12 |
| | Average training time per senior management | hours/person | 58.30 | 52.15 |
| | Average training time per middle-level management | hours/person | 43.40 | 44.63 |
| | Average training time per general employee | hours/person | 27.75 | 27.28 |
| | Average training time per male employee | hours/person | 28.97 | 29.03 |
| | Average training time per female employee | hours/person | 30.59 | 29.31 |
| | Average training time in online college per employee | hours/person | 50.18 | 18.42 |
| | Proportion of senior management participating in training | % | 80.21 | – |
| | Proportion of middle-level management participating in training | % | 58.44 | – |
| | Proportion of general employees participating in training | % | 51.44 | – |
| | Proportion of male employees participating in training | % | 51.35 | – |
| | Proportion of female employees participating in training | % | 54.77 | – |

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|-----------|--|---------------------|-----------|-----------|
| Community | Number of registered employee volunteers | 10,000 persons | 7.43 | 6.62 |
| | Total service time of volunteers | 10,000 hours | 74.14 | 61.86 |
| | Number of participants in volunteering activities | 10,000 person-times | 14.00 | 11.80 |
| | Number of volunteering activities | sessions | 10,195 | 9,854 |
| | Volunteer service activities input amount | RMB million | 18.83 | 15.18 |
| | Number of participated pole line co-built | kilometres | 5,217 | 7,357 |
| | Number of provided pole line co-shared | kilometres | 11,946 | 23,062 |
| | Number of participated pipeline co-built | kilometres | 8,901 | 6,665 |
| | Number of provided pipeline co-shared | kilometres | 1,399 | 1,309 |
| | Number of participated indoor distribution system co-built | - | 24,865 | 7,356 |
| | Personnel involved in emergency communication support | person-times | 146,397 | 69,817 |
| | Number of emergency communication equipment dispatched | set-times | 29,342 | 17,979 |
| | Number of emergency communication vehicles dispatched | vehicle-times | 55,428 | 22,014 |
| | Number of emergency public service messages sent | million pieces | 2,489.73 | 79.09 |

Notes:

- Greenhouse gas is measured based on the Greenhouse Gas Protocol – Enterprise Accounting and Reporting Standards of World Resources Institute (WRI) and World Business Council for Sustainable Development (WBCSD), the 2006 IPCC Guidelines for National Greenhouse Gas Inventories of Intergovernmental Panel on Climate Change (IPCC) and the Fourth Assessment Report 2007 of Intergovernmental Panel on Climate Change (IPCC), etc.
Scope I: direct greenhouse gas emission includes the greenhouse gas emission from use of natural gas, coal, gasoline and diesel;
Scope II: indirect greenhouse gas emission includes the greenhouse gas emission from purchased electricity and heating power, where the electricity emission factors shall refer to the base line emission factors of regional power grids in China released by National Development and Reform Commission, Department of Climate Change.
Total greenhouse gas emission shall be the sum of Scope I (direct greenhouse gas emission) and Scope II (indirect greenhouse gas emission).
- The quantity of sewage emission is measured based on water consumption, and the wastewater discharge coefficient shall be based on GB50318-2017 Code of Urban Wastewater Engineering Planning of the National Standards of the PRC and relevant documents of National Bureau of Statistics of the PRC.
- SO₂ emissions are calculated with the method of the State-owned Assets Supervision and Administration Commission of the State Council of the PRC.
- Non-hazardous waste includes domestic waste and paper consumption. The quantity of domestic waste produced is measured based on the per capita household waste output coefficient as specified in the guidance released by the State Council of the PRC. Hazardous waste includes waste storage batteries. Electronic wastes include waste telecommunications equipment, waste cables, waste terminals and other wastes.
- Overall energy consumption is calculated with the energy statistics calculation method applied by National Bureau of Statistics of the PRC.
- VoLTE data was used for call drop rate of mobile communication and call completing rate of mobile communication network after the full commercial launch of VoLTE (based on 4G network calls) business in 2019.
- The “degree of satisfaction of mobile Internet users”, “degree of satisfaction of mobile voice users”, “degree of satisfaction of fixed Internet users” and “degree of satisfaction of access line users” are the intensive evaluation data of China Telecom by using the Telecom Customer Satisfaction Index (TCSI) model of the Ministry of Industry and Information Technology.
- Suppliers refer to the group level centralised procurement suppliers of China Telecom.
- The total number of employees includes the total number of contract workers, labour dispatch and re-employed employees, of which, contract workers are counted as full-time employees, and labour dispatch and re-employed employees are counted as part-time employees.