# 2020
# Data
# Disclosures

## Electricity Use (MWh)

| | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|
| Altoona, IA | 342,000 | 500,000 | 612,000 | 853,000 | 980,000 |
| Clonee, Ireland | 1,000 | 1,000 | 200,000 | 382,000 | 487,000 |
| Forest City, NC | 339,000 | 433,000 | 547,000 | 614,000 | 595,000 |
| Fort Worth, TX | 16,000 | 189,000 | 461,000 | 695,000 | 941,000 |
| Luleå, Sweden | 295,000 | 301,000 | 337,000 | 373,000 | 369,000 |
| New Albany, OH | not yet online | not yet online | not yet online | 38,000 | 270,000 |
| Odense, Denmark | not yet online | not yet online | 4,000 | 128,000 | 343,000 |
| Papillion, NE | not yet online | not yet online | 5,000 | 178,000 | 519,000 |
| Prineville, OR | 327,000 | 426,000 | 488,000 | 573,000 | 686,000 |
| Henrico, VA | not yet online | not yet online | not yet online | 10,000 | 204,000 |
| Los Lunas, NM | not yet online | not yet online | 26,000 | 289,000 | 571,000 |
| East Coast Leased Data Center Facility | 317,000 | 359,000 | 432,000 | 674,000 | 795,000 |
| Other Data Center-Related Facilities | 118,000 | 135,000 | 133,000 | 113,000 | 206,000 |
| **Data Centers Total** | **1,756,000** | **2,360,000** | **3,245,000** | **4,918,000** | **6,966,000** |
| **Offices Total** | **74,000** | **102,000** | **181,000** | **222,000** | **204,000** |
| **Total Electricity Use** | **1,830,000** | **2,462,000** | **3,427,000** | **5,140,000** | **7,170,000** |

## Power Usage Effectiveness

| | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|
| **Annual Data Center PUE** | **1.10** | **1.10** | **1.11** | **1.11** | **1.10** |

## Electricity mix [3]

| | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|
| **Renewable** | **44%** | **51%** | **75%** | **86%** | **100%** |
| Non-Renewable | 56% | 49% | 25% | 14% | 0% |

## Greenhouse Gas Emissions by Scope (metric tons $CO_2e$) [4,5,6,7]

| Market-Based | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|
| Scope 1 | 9,000 | 25,000 | 42,000 | 44,000 | 29,000 |
| | 1% | 2% | 4% | 1% | 1% |
| Scope 2 | 545,000 | 591,000 | 314,000 | 208,000 | 9,000 |
| | 77% | 54% | 31% | 5% | <1% |
| Scope 3 | 156,000 | 480,000 | 652,000 | 4,078,000 | 4,029,000 |
| | 22% | 44% | 65% | 94% | 99% |
| **Total** | **710,000** | **1,096,000** | **1,008,000** | **4,330,000** | **4,067,000** |
| **Carbon Removal** [8] | | | | | –145,000 |
| **Net Total** | **710,000** | **1,096,000** | **1,008,000** | **4,330,000** | **3,922,000** |

| Location-based | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|
| **Total** | **789,000** | **1,387,000** | **1,983,000** | **6,295,000** | **7,555,000** |

## Operational Greenhouse Gas Emissions (market-based scope 1 & 2 metric tons $CO_2e$) [9]

| | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|
| Altoona, IA | 1,000 | 1,000 | 1,000 | 2,000 | 1,000 |
| Clonee, Ireland | 0 | <500 | <500 | <500 | 1,000 |
| Forest City, NC | 116,000 | 136,000 | 53,000 | 9,000 | <500 |
| Fort Worth, TX | <500 | 1,000 | 1,000 | 1,000 | <500 |
| Luleå, Sweden | <500 | <500 | <500 | <500 | <500 |
| New Albany, OH | not yet online | not yet online | not yet online | <500 | 2,000 |
| Odense, Denmark | not yet online | not yet online | 0 | <500 | <500 |
| Papillion, NE | not yet online | not yet online | <500 | <500 | 3,000 |
| Prineville, OR | 239,000 | 293,000 | 137,000 | 1,000 | 3,000 |
| Henrico, VA | not yet online | not yet online | not yet online | <500 | <500 |
| Los Lunas, NM | not yet online | not yet online | 1,000 | 1,000 | <500 |
| East Coast Leased Data Center Facility | 115,000 | 98,000 | 102,000 | 188,000 | 0 |
| Other Data Center-Related Facilities | 45,000 | 40,000 | 17,000 | 4,000 | 2,000 |
| **Data Centers Total** | **516,000** | **568,000** | **314,000** | **207,000** | **14,000** |
| **Offices Total** | **39,000** | **48,000** | **42,000** | **44,000** | **24,000** |
| **Total Operational GHG Emissions** | **555,000** | **616,000** | **356,000** | **252,000** | **38,000** |
| Reduction From 2017 Baseline | | Baseline | 42% | 59% | 94% |

## Market-Based vs. Location-Based Scope 2 Facilities GHG Emissions (metric tons $CO_2e$)

| | 2018 | | 2019 | | 2020 | |
|---|---|---|---|---|---|---|
| | Market-based | Location-based | Market-based | Location-based | Market-based | Location-based |
| Altoona, IA | 0 | 346,000 | 0 | 483,000 | 0 | 555,000 |
| Clonee, Ireland | 0 | 82,000 | 0 | 143,000 | 0 | 159,000 |
| Forest City, NC | 52,000 | 201,000 | 8,000 | 208,000 | 0 | 202,000 |
| Fort Worth, TX | 0 | 212,000 | 0 | 295,000 | 0 | 399,000 |
| Luleå, Sweden | 0 | 7,000 | 0 | 6,000 | 0 | 7,000 |
| New Albany, OH | not yet online | not yet online | 0 | 20,000 | 0 | 157,000 |
| Odense, Denmark | 0 | 1,000 | <500 | 18,000 | 0 | 57,000 |
| Papillion, NE | 0 | 3,000 | 0 | 101,000 | 0 | 294,000 |
| Prineville, OR | 137,000 | 145,000 | 0 | 167,000 | 0 | 200,000 |
| Henrico, VA | not yet online | not yet online | 0 | 3,000 | 0 | 69,000 |
| Los Lunas, NM | 0 | 12,000 | 0 | 135,000 | 0 | 266,000 |
| East Coast Leased Data Center Facility | 102,000 | 128,000 | 188,000 | 193,000 | 0 | 223,000 |
| Other Data Center-Related Facilities | 17,000 | 44,000 | 1,000 | 41,000 | 2,000 | 62,000 |
| **Data Centers Total** | **308,000** | **1,181,000** | **197,000** | **1,813,000** | **2,000** | **2,650,000** |
| **Offices Total** | **6,000** | **60,000** | **8,000** | **72,000** | **7,000** | **68,000** |
| **Total Facilities GHG Emissions** | **314,000** | **1,241,000** | **205,000** | **1,885,000** | **9,000** | **2,718,000** |

## Greenhouse Gas Intensity (market-based scope 1 & 2 metric tons $CO_2e$ / monthly active person)

| | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|
| **Annual GHG Intensity** | **0.00030** | **0.00029** | **0.00015** | **0.00008** | **0.000012** |

## Value Chain Greenhouse Gas Emissions (scope 3 metric tons $CO_2e$) [10,11,12]

| | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|
| Category 1: Purchased Goods & Services [10] | data not available | data not available | data not available | 1,428,000 | 1,846,000 |
| | | | | 35% | 46% |
| Category 2: Capital Goods [10] | data not available | data not available | data not available | 1,671,000 | 1,837,000 |
| | | | | 41% | 46% |
| Category 3: Fuel & Energy-Related Activities | data not available | data not available | data not available | 264,000 | 56,000 |
| | | | | 6% | 1% |
| Category 6: Business Travel [11] | 64,000 | 246,000 | 397,000 | 529,000 | 129,000 |
| | | | | 13% | 3% |
| Category 7: Employee Commuting [12] | 36,000 | 43,000 | 71,000 | 90,000 | 61,000 |
| | | | | 2% | 2% |
| Other Applicable Categories [10, 12] | data not available | data not available | data not available | 96,000 | 100,000 |
| | | | | 2% | 2% |
| **Total** | **156,000** | **480,000** | **652,000** | **4,078,000** | **4,029,000** |

## Water Withdrawal (cubic meters) [13]

|  | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|
| Altoona, IA | 87,000 | 106,000 | 139,000 | 145,000 | 151,000 |
| Clonee, Ireland | not yet online | 10,000 | 188,000 | 395,000 | 615,000 |
| Forest City, NC | 123,000 | 129,000 | 99,000 | 85,000 | 68,000 |
| Fort Worth, TX | 14,000 | 98,000 | 269,000 | 322,000 | 300,000 |
| Luleå, Sweden | 32,000 | 66,000 | 53,000 | 58,000 | 49,000 |
| New Albany, OH | not yet online | not yet online | not yet online | 33,000 | 35,000 |
| Odense, Denmark | not yet online | not yet online | not yet online | 266,000 | 360,000 |
| Papillion, NE | not yet online | not yet online | not yet online | 62,000 | 108,000 |
| Prineville, OR | 70,000 | 172,000 | 160,000 | 208,000 | 445,000 |
| Henrico, VA | not yet online | not yet online | not yet online | not yet online | 42,000 |
| Los Lunas, NM | not yet online | not yet online | 25,000 | 92,000 | 140,000 |
| East Coast Leased Data Center Facility | 400,000 | 473,000 | 533,000 | 1,011,000 | 645,000 |
| Other Data Center–Related Facilities | 98,000 | 85,000 | 264,000 | 54,000 | 42,000 |
| **Data Centers Total** | **825,000** | **1,139,000** | **1,730,000** | **2,731,000** | **3,000,000** |
| **Offices Total** | **305,000** | **470,000** | **638,000** | **699,000** | **726,000** |
| **Total Water Withdrawal** | **1,129,000** | **1,609,000** | **2,367,000** | **3,430,000** | **3,726,000** |
| Recycled Water | 426,000 | 469,000 | 673,000 | 854,000 | 643,000 |

## Water Consumption (cubic meters)

|  | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|
| **Total Water Consumption** | data not available | **838,000** | **1,279,000** | **1,971,000** | **2,202,000** |

## Water Usage Effectiveness

|  | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|
| **Annual Data Center WUE [14]** | **0.21** | **0.24** | **0.27** | **0.27** | **0.30** |

## Water Withdrawal Intensity (cubic meters / monthly active person)

|  | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|
| **Annual Water Intensity** | **0.000607** | **0.000755** | **0.00102** | **0.00120** | **0.00113** |

**1** Values are rounded and totals are calculated before rounding throughout this report.

**2** "Other data center-related facilities" includes facilities where Facebook used less than 100,000 MWh of electricity in the reporting year, such as warehouses or colocation facilities. Owned data centers are always reported by site, even if they were below this threshold.

**3** In owned and leased data center facilities included in scope 2 and 3 emissions, Facebook has matched building operations with renewable energy.

**4** Facebook's methodology for calculating greenhouse gas emissions can be found here.

**5** Scope 1, 2, and 3 greenhouse gas emissions are calculated annually based on the WRI/WBCSD Greenhouse Gas Protocol.

**6 (a)** Scope 1 includes emissions from diesel, natural gas, and refrigerants from offices and data centers and from diesel and gasoline in the transportation fleet owned and controlled by Facebook.

**(b)** Scope 2 includes emissions from electricity of offices and warehouses leased, controlled, and owned by Facebook; electricity of data centers owned and leased (IT load) by Facebook; natural gas of offices and warehouses leased and serviced by Facebook; and purchased heat. Because Facebook does not control building operations in leased data center facilities, as of 2017, only emissions associated with its IT load electricity are included in Scope 2 emissions.

**(c)** Scope 3 emissions are indirect emissions throughout Facebook's value chain. Starting in 2019, Facebook included emissions from all relevant categories in Scope 3. Scope 3 emissions for 2015 to 2018 include business travel, employee commute, and construction.

**7** To ensure accurate tracking towards Facebook's 75% operational emissions reduction target, any material changes are also applied to the 2017 base year, at minimum.

**8** Prior to 2020, Facebook invested in avoided emissions offsets which are not considered carbon removal.

**9** In the 2019 reporting year, three updates to reporting were applied to 2017 (baseline year) and later inventories:

**(a)** Vehicles operated by the Transportation team in support of commuting and inter-campus travel were previously counted in Scope 3 – Employee commute. After re-visiting Facebook's operational control of these vehicles, it was determined that they should be accounted for in Scope 1.

**(b)** It was determined that Facebook overestimated natural gas emissions by including estimates for offices which do not in fact use natural gas. Recalculations have been applied to the inventory to remove these inaccuracies.

**(c)** Fugitive emissions from refrigerant losses at offices not under Facebook operational control were moved from Scope 2 to Scope 3.

**10** In the 2020 reporting year, two emission factors updates have significantly impacted the GHG inventory:

**(a)** Economic-Environmental Input-Output emission factors were updated and applied to relevant categeories. 2019 numbers have been updated to reflect these new emission factors.

**(b)** Waste emission factors have been updated and applied starting in 2020.

**11** In the 2020 reporting year, two updates to the methology were applied:

**(a)** A new business travel methodology was developed, which was applied to 2019 and updated. Air travel still includes radiative forcing starting from 2017.

**(b)** Employee commuting now includes telecommuting, or work-from-home, emissions starting in 2020, for which the electricity portion is matched with renewable energy.

**12** This includes the following categories in Scope 3: upstream and downstream transportation and distribution, waste generated in operations, upstream leased assets, use of sold products, and end-of-life treatment of sold products

**13** Notes on Facebook's 2020 water withdrawal:

**(a)** 17% is recycled water, 1% is ground and off-site water, and the remainder is provided by local utilities. All unconsumed water is returned to utility-owned wastewater treatment plants.

**(b)** 25% of water withdrawal occurs in high water stress areas (determined using WRI's Aqueduct tool and Facebook knowledge on local water stress).

**(c)** Not included in these figures are an additional 388,000 cubic meters of water withdrawn for the construction of Facebook data centers.

**14** Water Use Effectiveness (WUE) is calculated based on best available data, including internal flow meters, design estimates, and utility bills where applicable.

# Thank you

We look forward to sharing more of our sustainability progress with you through future reports.

For more information, please visit:

sustainability.fb.com