



ESG Data Center

Environmental

Greenhouse Gas Emissions	2019	2020	2021	2022
Scope 1 Regional GHG Emissions (metric tons CO₂e)				
North America	24,794	20,785	172,781	183,069
Latin America	21,791	20,877	45,886	21,072
Europe, the Middle East, Africa	29,245	41,924	30,797	26,127
Asia Pacific	16,772	14,097	9,711	7,370
Scope 2 Regional GHG Emissions (metric tons CO₂e)				
North America	121,156	109,152	101,520	86,213
Latin America	11,469	10,080	13,375	13,954
Europe, the Middle East, Africa	5,561	4,984	4,238	3,809
Asia Pacific	17,819	16,189	19,892	20,082
Scope 1 and 2 GHG Emissions Breakdown (metric tons CO₂e)				
Total Scope 1 GHG emissions (metric tons CO₂e)	315,747	278,682	259,175	237,639
Emissions from fuels used in manufacturing	49,021	44,767	47,305	51,377
Emissions from fuels used in service vehicles	65,011	59,977	61,619	66,667

Greenhouse Gas Emissions	2019	2020	2021	2022
Emissions from refrigerant leaks in manufacturing processes and cooling equipment	198,481	171,389	147,664	116,950
Fugitive volatile organic compound (VOC) emissions from manufacturing processes	3,234	2,549	2,587	2,645
Biogenic emissions (mtCO ₂ e)	0	0	0	78.37
Total Scope 2 location-based GHG emissions (metric tons CO₂e)	156,005	140,405	139,026	124,057
Total Scope 1 and 2 location-based GHG emissions (metric tons CO₂e)	471,752	419,087	398,201	355,290
Normalized total Scope 1 and 2 location-based GHG emissions (metric tons CO₂e/USD)	36.08	33.65	28.17	22.22
Reduction in absolute Scope 1 and 2 location-based GHG emissions from 2019 baseline (metric tons CO ₂ e)	-	52,665	73,551	116,462
Reduction of GHG emissions intensity, including location-based Scope 2 emissions, from a 2019 baseline (metric tons/USD)	-	2.43	7.91	13.86
GHG intensity ratio for the organization	32.34	28.48	22.79	18.34
Scope 2 Adjusted Emissions (metric tons CO₂e)				
Total unadjusted location-based Scope 2 GHG emissions	139,947	133,985	133,086	129,053
Avoided GHG emissions from electricity generated by on-site solar/photovoltaic systems	2,299	1,992	2,077	2,694
Avoided GHG emissions from purchased or supplier-provided RECs	1,244	4,381	21,262	24,930
Avoided GHG emissions from VPPA renewable energy credits	29,299	51,584	46,709	45,722
Total avoided GHG emissions from renewable energy	32,841	57,957	70,047	73,345
Total adjusted market-based Scope 2 GHG emissions	107,075	75,870	62,896	55,708
Total Scope 1 and 2 absolute market-based GHG emissions	422,853	354,710	322,214	293,347
Reduction in Scope 2 GHG emissions by renewable energy since 2019	-	16%	24%	31%
Reduction in total Scope 1 and Scope 2 GHG emissions by renewable energy	23%	43%	53%	57%
Percent reduction in absolute Scope 1 and 2 market-based GHG emissions from 2019 baseline	10%	15%	19%	17%
Scope 3 GHG Emissions (metric tons CO₂e)				
Product Use (assured)	365 million	331 million	366 million	303 million
Business Travel (assured)	30,340	3,788	1,895	6,313
Upstream leased assets (estimate)	67,000	65,613	63,141	63,141
Upstream and downstream distribution and transportation (estimate)	135,628	136,434	98,245	90,444

Greenhouse Gas Emissions	2019	2020	2021	2022
Other Air Emissions (metric tons)				
NO _x	104.04	95.26	98.46	107.79
SO _x	6.66	5.48	5.56	6.90
Volatile Organic Compound (VOC) emissions	269.53	212.42	215.62	220.45

Energy	2019	2020	2021	2022
Absolute Energy Use (billion kJ)				
Direct (fuel use)	1,908	1,761	1,831	1,971
Natural gas	795	766	791	799
Gasoline	807	739	784	852
Diesel	217	192	182	232
Propane	61	48	53	59
Solar electricity generated and used	9	9	9	12
Aviation fuel	18	7	12	15
Indirect (electricity)	1,167	1,100	1,148	1,098
Total Energy Consumption	3,075	2,861	2,979	3,068
Normalized energy use (billion kJ/million USD)	0.2344	0.229	0.2101	0.1918
Energy Consumption and Sales (billion kJ)				
Total electricity consumption	1,167	1,100	1,148	1,098
Total heating consumption	795	766	791	799
Total cooling consumption	0	0	0	0
Total steam consumption	0	0	0	0
Total electricity sold	0.94	1.43	0.89	2.41
Total heating sold	0	0	0	0
Total cooling sold	0	0	0	0
Total steam sold	0	0	0	0
Reduction in energy consumption achieved as a direct result of conservation and efficiency initiatives	2.49	25.20	22.68	20.10

Energy	2019	2020	2021	2022
Renewable Energy Data				
Renewable energy generated (billion kJ)	23	22	23	28
Renewable energy generated and sold to grid (billion kJ)	0.94	1.43	0.89	2.41
Renewable energy generated and used (billion kJ)	9.48	8.91	9.44	12.20
Renewable energy purchased (billion kJ)	235	451	574	604
Percentage grid electricity	79%	58%	49%	44%
Percentage renewable electricity	21%	42%	51%	56%
Number of RE100-compliant sites	3	15	20	20

Trane Technologies Renewable Energy Sources^[1]					
Renewable Energy Projects	Location	Type	2021 Production	2022 Production	REC Treatment
Trenton Solar Project	Trenton, NJ, USA	On-Site Solar PV	1,994 MWh	2,149 MWh	Utility owns RECs ^[2]
Columbia Solar Project	Columbia, SC, USA	On-Site Solar PV	1,575 MWh	1,462 MWh	Utility owns RECs ^[2]
Taicang Solar Project	Taicang, China	On-Site Solar PV	2,622 MWh	3,389 MWh	Company owns renewable energy attributes from 100% of generation
Seymour Hill Wind Farm VPPA	Northern Texas, USA	Wind VPPA	105,892 MWh	103,263 MWh	Company owns and retires RECs
Use of Zero Carbon Electricity	Bari, Italy; Galway & Shannon, Ireland; Essen, Germany	Direct supply of 100% renewable electricity by local power provider	5,086 MWh	6,926 MWh	-
Vendor Provides RECs or GOs	Barcelona, Spain; Hastings, NE, USA; Prague ETC & Kolin, Czech Republic; Tyler, TX, USA	Power company purchases and retires RECs/Guarentees of Origin (GO) for a portion or 100% of Trane Technologies electricity	44,965 MWh	54,083 MWh	Power provider retires RECs/GOs on behalf of Trane Technologies

1. MWh = megawatt hour

2. The RECs from this project are owned by the utilities. We purchase replacement RECs, equal to the amount of solar generated by the PV system, from other renewable energy facilities in the U.S.

Waste	2019	2020	2021	2022
Waste Generated (metric tons)				
Total hazardous waste generated	1,008	874	1,038	1,004
Total non-hazardous waste generated	32,569	30,457	31,836	32,655
Total waste generated	33,577	31,331	32,874	33,659
Total solid waste generated	10,521	8,758	6,832	6,332
Reduction in solid waste generated from a 2019 baseline	-	17%	35%	40%
Normalized hazardous waste (metric tons/million USD)	0.0771	0.0701	0.0734	0.0628
Normalized non-hazardous waste (metric tons/million USD)	2.49	2.45	2.25	2.04
Number of sites that achieved zero waste to landfill at 90% diversion by year end	21	22	26	31
Waste Disposal (metric tons)				
Non-hazardous waste to landfill	5,564	6,103	4,227	1,807
Non-hazardous waste recycled	23,055	22,572	26,042	27,483
Normalized non-hazardous waste to landfill (metric tons/million USD)	0.43	0.49	0.30	0.11
Normalized non-hazardous waste recycled (metric tons/million USD)	1.76	1.81	1.84	1.72
Packaging Data				
Emissions avoided from returnable packaging projects (metric tons CO ₂ e)	>1,000	>22	415.5	1,252
Solid waste avoided from returnable packaging projects (metric tons)	>1,000	>200	1,360	2,424

Water	2019	2020	2021	2022
Water use (million cubic meters)	2.94	2.78	2.89	2.45
Normalized water use (cubic meters/million USD)	225	223	205	153
Percent of total water use at sites in areas of high to extremely high water stress	10%	8%	8%	9%
Wastewater used in water stressed locations (cubic meters)	295,381	226,368	242,604	230,746
Reduction in water use in water-stressed regions from 2019 baseline	-	23%	18%	22%
Trane Technologies sites in areas of high to extremely high water-stress	15	14	14	14
Wastewater permit exceedances	2	1	3	1

Social

Global Workforce									
Location (2022)	Employee Type	Women			Men		Grand Total		
Asia Pacific	Hourly	76%	73	92.4%	884	957			
	Salaried	25.0%	1,226	75.0%	3,671	4,897			
EMEA	Hourly	6.2%	147	93.8%	2,209	2,356			
	Salaried	29.3%	621	70.7%	1,496	2,117			
Americas	Hourly	25.5%	3,837	74.5%	11,237	15,074			
	Salaried	30.8%	3,774	69.2%	8,494	12,268			
Total	Hourly	22.1%	4,057	77.9%	14,330	18,387			
	Salaried	29.2%	5,621	70.8%	13,661	19,282			
New Employee Hires			2019	2020	2021	2022			
Total new hires			-	3,837	7,321	7,432			
New hires: women (global)			-	31.1%	29.2%	30.2%			
Salaried			-	34.5%	35.0%	37.6%			
Hourly			-	29.6%	25.6%	26.9%			
Management			-	31.5%	32.6%	33.3%			
Leadership			-	26.3%	52.0%	45.5%			
New hires: Racially & ethnically diverse overall (U.S.) ¹			-	47.9%	44.2%	50.5%			
Salaried			-	23.5%	25.5%	28.5%			
Hourly			-	57.8%	54.1%	59.1%			
Gender Diversity Data		2019		2020		2021		2022	
		Women	Men	Women	Men	Women	Men	Women	Men
Governance body (Executive Leadership Team)		33.3%	66.7%	12.5%	87.5%	13.3%	86.7%	18.8%	81.2%
Leadership positions (director level, vice president and above)		23.1%	76.9%	21.7%	78.3%	24.6%	75.4%	26.2%	73.8%
All management positions (all levels of management)		-	-	21.8%	78.2%	23.1%	76.9%	24.2%	75.8%
Workforce		24.3%	75.7%	25.3%	74.7%	25.5%	74.5%	25.7%	74.3%

1. Classified into five minimum categories by the US Census: White, Black or African American, American Indian or Alaska Native, Asian, and Native Hawaiian or Other Pacific Islander

Racial & Ethnic Diversity Data	2019	2020	2021	2022
Racially & Ethnically Diverse⁽¹⁾ (US) Overall	-	36%	36%	37%
Salaried	-	18%	18%	20%
Hourly	-	51%	52%	53%
Promotion rates (overall)	-	4%	7%	6%
Women	-	6%	8%	8%
Men	-	4%	6%	6%
Racially & ethnically diverse (US)	-	6%	7%	7%
White	-	5%	8%	8%
Members of our board of directors: women	-	5	5	5
Members of our board of directors: men	-	8	7	8
Global Workforce Data	2019	2020	2021	2022
Full-time employees	36,636	34,646	36,434	37,669
Contractors	2,962	3,108	3,123	4,711
Key talent retention rate	96.1%	97.2%	94.6%	93.1%
Age groups (2022)	Under 30 years old	30-50 years old	50+ years old	
Percentage of individuals with the organization's governance body (Executive Leadership Team)	0.0%	45.4%	54.6%	
Percentage of employees	17.2%	49.2%	33.6%	

1. Classified into five minimum categories by the US Census: White, Black or African American, American Indian or Alaska Native, Asian, and Native Hawaiian or Other Pacific Islander

Company Culture	2019	2020	2021	2022
Employee Engagement Survey Results				
Diversity & Inclusion Index	-	76	76	77
Sustainability Index	-	79	79	80
Average Employee Engagement Survey score	-	80	79	80
Participation rate	-	90%	89%	88%

U.S. Parental Leave Data	2019		2020		2021		2022	
	Women	Men	Women	Men	Women	Men	Women	Men
Employees who were eligible for parental leave	4,709	13,725	4,624	11,934	4,978	12,841	5,251	13,500
Employees who took parental leave	130	312	106	253	119	263	100	260
Employees who returned to work	124	306	102	247	112 ^[1]	258 ^[1]	97	255
Return to work rate	95%	98%	96.2%	97.6%	94.1%	98.1%	97.0%	98.1%
Employees who returned to work and were still employed after 12 months	86%	91%	86.9%	89.9%	78.3% ^[2]	84.2% ^[2]	78.2%	85.6%

1. Completed benefits in 2021 and were still employed 30 days after completing benefits.

2. Completed benefits in 2020 and were still employed 12 months after completing benefits.

Corporate Citizenship	2019	2020	2021	2022
Employee & Community Engagement Data				
Percent of employees globally who volunteered in community or sustainability initiatives	36%	49%	31%	35%
Volunteer participants	17,044	15,811	10,748	13,571
Hours volunteered	31,682	20,559	30,041	62,274
Global Contributions				
Trane Technologies Foundation donations to community partners	\$5,455,080	\$5,108,779	\$5,214,266	\$5,771,469
Charitable fundraising	\$1,007,855	\$3,170,136	\$1,692,459	\$1,544,622
Charitable contributions	\$1,818,910	\$1,048,499	\$2,235,053	\$2,944,494
In-kind giving	\$415,502	\$969,319	\$1,442,378	\$3,767,773
Value of employee volunteering time during paid working hours	\$805,673	\$548,284	\$784,371	\$1,680,782
Administrative overheads	\$150,407	\$88,893	\$103,709	\$182,924
Total philanthropic giving	\$9,653,427	\$10,933,910	\$11,472,236	\$15,892,064
Percent increase year over year in philanthropic giving	-	13%	5%	39%

Learning & Development	2019	2020	2021	2022
Average Number of Learning & Development Hours				
All employees	8	14	11	10.2
Salaried employees	9	-	17.9	18.1
Hourly employees	7	-	3.5	3.4

Occupational Health & Safety Data	2019	2020	2021	2022
Total recordable incident rate (per 200,000 hours worked)¹	0.86	0.79	0.96	0.8
Lost time incident rate (per 200,000 hours worked)²	0.1	0.09	0.12	0.14
Employee lost time frequency rate (per million hours worked)	0.52	0.44	0.55	0.64
Contractor lost time frequency rate (per million hours worked)	0.53	0.24	1.17	1.35
Employee occupational illness frequency rate (per million hours worked)	0	0	0	0
Work-related fatalities	0	0	0	0
Total hours worked (among employees and supervised employee contractors)	79,229,015	72,715,458	76,124,306	81,041,574
Number of Lost time Incidents per million hours worked	0.52	0.44	0.59	0.69

1. (recordable injuries x 200,000) / total hours worked by employees

2. (recordable injuries resulting in lost work time x 200,000) / total hours worked by employees

Human Rights Data	2019	2020	2021	2022
Salaried employees trained on anti-harassment (U.S.)	100%	100%	100%	100%
Employees able to access anti-harassment policy	100%	100%	100%	100%
Salaried employees trained on anti-corruption (U.S.)	100%	100%	100%	100%

Supplier Diversity Data	2019	2020	2021	2022
Supplier diversity score ⁽¹⁾	-	4.25	4.25	4.25
Number of diverse suppliers added	-	103	71	113
Diverse-owned business spend	\$532 million	\$380.4 million	\$435.1 million	\$607.7 million
Percent of spend with diverse-owned businesses	-	6%	6.8%	7.4%
Percent increase in diverse-owned business spend	-	11.1%	14.3%	39.7%
Diverse-owned business spend since inception of program in 2013	>\$2.6 billion	>\$3 billion	>\$3.4 billion	>\$4.0 billion
Percent of spend with women-owned businesses	-	3.8%	4.1%	4.7%
Percent increase in women-owned business spend	-	18.8%	15.4%	14.2%

1. We measure our program against the National Minority Supplier Development Council's eight best practices. Scores are 0 to 5.

Governance

Lobbying Expenditures	2019	2020	2021	2022
Total monetary value of Trane Technologies' financial and in-kind lobbying contributions made directly and indirectly by the organization.	\$680,370	\$632,680	\$804,508	\$920,975
Employee contributions to Trane Technologies' political action committee (U.S. Only)	\$27,658	\$22,056	\$15,284	\$12,391

Products & Innovation

Circularity: Product Life Cycle & Materials	2019	2020	2021	2022
Product Life Cycle Data				
New product development projects generated or improved by the Product Development Process	-	194	181	212
Avoided emissions from refrigerant reclamation program (metric tons CO ₂ e)	-	177,350	197,056	206,164
Materials Data				
Percentage of recycled key commodities used to manufacture the organization's primary products and services	-	-	44%	47%
Revenue from remanufactured products and remanufacturing services (U.S. only)	-	-	\$100 million	\$100 million

See packaging data in [Waste](#) section

Energy Efficient & Low Emissions Products	2019	2020	2021	2022
Clean Revenue percentage^[1]	25%	30%	35%	38%
Percentage of eligible products, by revenue, that meet Energy Star [®] criteria ^[2]	35% of shipment	53% of residential revenue	41% of revenue from Residential Furnaces and Residential & Light Commercial Central Air-conditioners and Heat Pumps	32% of revenue is from products that can meet the efficiency metrics specified by EnergyStar for Residential Furnaces and Residential & Light Commercial Central Air-conditioners and Heat Pumps.
Revenue from renewable energy-related and energy efficiency-related products	Approximately 25% of product & revenue contribute to clean energy transition	Approximately 30% of products & revenue contribute to clean energy transition	Approximately 35% revenue from products and services that contribute to the clean energy transition	Approximately 38% revenue from products and services that contribute to the clean energy transition.
Projects meeting or exceeding quality, design, and cost goals	-	85%	>85%	>80%

1. This is an estimation of the percentage of revenue Trane Technologies defines as Clean Revenue.

2. In 2022, we elected to include products that can meet specifics defined by Energy Star but did not pursue certification.

Technology & Innovation	2019	2020	2021	2022
Average revenue from innovation	18.6%	20.5%	20.5%	21.2%
Research and development spend	\$236 million	\$165 million	\$193 million	\$211 million
Business development spend	-	-	\$300 million	\$300 million
Percent of business development spend focused on sustainability-related objectives	-	-	>90%	>90%
New products and services launched	-	54	62	69
New patent filings	-	-	>145	>145

Supply Chain Transparency & Performance	2019	2020	2021	2022
Supplier Data				
Number of Trane Technologies suppliers across the globe	-	15,467	25,000	27,539
Combined annual spend for direct and indirect commodities	\$10.2 billion	\$8.25 billion	\$8.6 billion	\$10.03 billion
Direct spend with preferred suppliers	42%	34.70%	35%	29%
Preferred suppliers enrolled in ESG reporting platform	-	-	100%	100%
Supplier Risk Assessment Data				
Total number of suppliers audited for sustainability and business risks through On-Site Assessment (OSA) audits over three years	-	1,500	1,600	968
Direct material spend subject to On-Site Assessments	86%	69% ¹	93%	95%
Direct material spend assessed on a quarterly basis for risk	100%	100%	100%	100%
Percentage of new suppliers that were screened using environmental and social criteria	-	-	100%	100%
Number of suppliers assessed for environmental and social impacts	501	321	209	299
Number of suppliers identified as having significant actual and potential negative environmental or social impacts	0	0	0	0
Significant actual and potential negative environmental or social impacts identified in the supply chain	-	0	0	0
Percentage of suppliers identified as having significant actual and potential negative environmental or social impacts with which improvements were agreed upon as a result of assessment	-	0%	0%	0%
Percentage of suppliers identified as having significant actual and potential negative environmental or social impacts with which relationships were terminated as a result of assessment	-	0%	0%	0%
Logistics Data				
Reduction in dwell time in North America	-	-	50%	50%
Reduction in empty truck miles driven through Dedicated Carrier Program	-	-	16%	16%
Emissions avoided through Dedicated Carrier Program (metric tons CO ₂ e)	-	-	211	1,895

1. Due to COVID, we were unable to go on-site to conduct many of the planned OSAs.