



University of California, Irvine Detail Report - Control (Private)

Complete Inventory 2019

Description:

Industry: 61 - Educational Services

Address: 201-A Facilities Management Building

Irvine, California US

Contact: Matt Deines mdeines@uci.edu Website:

Reporting Information

Reporting Protocol: General Reporting Protocol 3.0 and associated updates and clarifications

Additional Reporting Standards: None

GWP Standard: AR5

Base Year:

Consolidation Methodology: Financial Control Only

Status: Verification in Progress

Verification Information

Verification Body: Cameron-Cole, LLC

Level of Assurance: Reasonable

Entity Emissions | Total in metric tons of CO2e

Scope 1 - Direct Emissions	Total CO₂e (t)	CO ₂ (t)	CH₄ (t of CO₂e)	N₂O (t of CO₂e)	HFC (t of CO₂e)	PFC (t of CO₂e)	NF₃ (t of CO₂e)	SF ₆ (t of CO ₂ e)	
Stationary Combustion	77,368.000139	77,138.155766	191.318909	38.525464	0	0	0	0	
Mobile Combustion	1,106.05388	1,105.922472	0.009076	0.122333	0	0	0	0	
Process	90.24	90.24	0	0	0	0	0	0	
Fugitive	4,812.321235	0	0	0	4,735.147	0	0	77.174235	
Total	83,376.615254	78,334.318238	191.327984	38.647797	4,735.147	0	0	77.174235	
Applied Offsets	-5,531	-5,531	0	0	0	0	0	0	
NetTotal	77,845.615254	72,803.318238	191.327984	38.647797	4,735.147	0	0	77.174235	
Scope 2 - Location Based - Indirect Emissions	Total CO₂e (t)	CO ₂ (t)	CH₄ (t of CO₂e)	N₂O (t of CO₂e)	HFC (t of CO₂e)	PFC (t of CO₂e)	NF₃ (t of CO₂e)	SF₅ (t of CO₂e)	
Purchased Electricity - Location Based	11,412.555363	11,366.494162	21.794365	24.266835	0	0	0	0	
Total	11,412.555363	11,366.494162	21.794365	24.266835	0	0	0	0	
NetTotal	11,412.555363	11,366.494162	21.794365	24.266835	0	0	0	0	
Scope 2 - Market Based - Indirect Emissions	Total CO₂e (t)	CO ₂ (t)	CH₄ (t of CO₂e)	N₂O (t of CO₂e)	HFC (t of CO₂e)	PFC (t of CO₂e)	NF₃ (t of CO₂e)	SF₅ (t of CO₂e)	
Purchased Electricity - Market Based	1,169.662091	1,124.518608	21.360137	23.783346	0	0	0	0	
Total	1,169.662091	1,124.518608	21.360137	23.783346	0	0	0	0	
NetTotal		1,124.518608	21.360137	23.783346	0	0	0	0	

Biogenic - Direct Emissions	Total CO₂e (t)	CO ₂ (t)	CH₄ (t of CO₂e)	N₂O (t of CO₂e)	HFC (t of CO₂e)	PFC (t of CO₂e)	NF₃ (t of CO₂e)	SF ₆ (t of CO ₂ e)
Mobile Biomass Combustion	197.81685	197.81685	0	0	0	0	0	0
Total	197.81685	197.81685	0	0	0	0	0	0
NetTotal	197.81685	197.81685	0	0	0	0	0	0
Biogenic - Market Based - Indirect Emissions	Total CO₂e (t)	CO ₂ (t)	CH₄ (t of CO₂e)	N₂O (t of CO₂e)	HFC (t of CO₂e)	PFC (t of CO₂e)	NF₃ (t of CO₂e)	SF₃ (t of CO₂e)
Purchased Electricity - Market Based - Biomass			0	0	0	0	0	0
Total			0	0	0	0	0	0
NetTotal			0	0	0	0	0	0
Optional - Optional Emissions	Total CO₂e (t)	CO ₂ (t)	CH₄ (t of CO₂e)	N₂O (t of CO₂e)	HFC (t of CO₂e)	PFC (t of CO₂e)	NF₃ (t of CO₂e)	SF₅ (t of CO₂e)
Scope 3	65,525.15	65,525.15	0	0	0	0	0	0
Total	65,525.15	65,525.15	0	0	0	0	0	0
NetTotal	65,525.15	65,525.15	0	0	0	0	0	0

Entity Emissions | Total in metric tons of gas

Scope 1 - Direct Emissions	Total CO₂e (t)	CO ₂ (t)	CH₄ (t)	N₂O (t)	HFC (t of CO₂e)	PFC (t of CO₂e)	NF₃ (t)	SF ₆ (t)
Stationary Combustion	77,368.000139	77,138.155766	6.832818	0.145379	0	0	0	0
Mobile Combustion	1,106.05388	1,105.922472	0.000324	0.000462	0	0	0	0
Process	90.24	90.24	0	0	0	0	0	0
Fugitive	4,812.321235	0	0	0	4,735.147	0	0	0.003284
Total	83,376.615254	78,334.318238	6.833142	0.145841	4,735.147	0	0	0.003284
Scope 2 - Location Based - Indirect Emissions	Total CO₂e (t)	CO ₂ (t)	CH₄ (t)	N₂O (t)	HFC (t of CO₂e)	PFC (t of CO₂e)	NF₃ (t)	SF ₆ (t)
Purchased Electricity - Location Based	11,412.555363	11,366.494162	0.77837	0.091573	0	0	0	0
Total	11,412.555363	11,366.494162	0.77837	0.091573	0	0	0	0
Scope 2 - Market Based - Indirect Emissions	Total CO₂e (t)	CO ₂ (t)	CH₄ (t)	N₂O (t)	HFC (t of CO ₂ e)	PFC (t of CO₂e)	NF₃ (t)	SF ₆ (t)
Purchased Electricity - Market Based	1,169.662091	1,124.518608	0.762862	0.089748	0	0	0	0
Total	1,169.662091	1,124.518608	0.762862	0.089748	0	0	0	0
Biogenic - Direct Emissions	Total CO₂e (t)	CO ₂ (t)	CH₄ (t)	N₂O (t)	HFC (t of CO₂e)	PFC (t of CO₂e)	NF₃ (t)	SF _e
Mobile Biomass Combustion	197.81685	197.81685	0	0	0	0	0	0
Total	197.81685	197.81685	0	0	0	0	0	0

Biogenic - Market Based - Indirect Emissions	Total CO₂e (t)	CO₂ (t)	CH₄ (t)	N₂O (t)	HFC (t of CO₂e)	PFC (t of CO₂e)	NF₃ (t)	SF ₆ (t)
Purchased Electricity - Market Based - Biomass			0	0	0	0	0	0
Total			0	0	0	0	0	0

Optional - Optional Emissions	Total CC	2e CO ₂ (t) (t)	CH₄ (t)	N₂O (t)	HFC (t of CO₂e)	PFC (t of CO₂e)	NF ₃ (t)	SF ₆ (t)
Scope 3	65,525.	15 65,525.15	0	0	0	0	0	0
To	otal 65,525.	15 65,525.15	0	0	0	0	0	0

Simplified Estimation Methods (SEMs)

	Total Estimated CO₂e (t)	Total Emissions (t of CO ₂ e)	Estimated CO ₂ e as a Percentage of Total*
Location Based	6,038.938611	94,986.987468	6.35764831745274%
Market Based	6,038.938611	84,744.094195	7.12608786241226%
			*Total based on scope 1, scope 2 & biomass emissions

Facility Emissions | Arroyo Vista Housing

Equity share - 100% | Entity controls the facility emissions - Yes 201-A Interim Office Building, Irvine, California, 92697-5444, US

Scope 1 - Direct Emissions		Total CO₂e (t)	CO ₂ (t)	CH₄(t)	N₂O (t)	HFC (t of CO₂e)	PFC (t of CO₂e)	NF₃(t)	SF₅(t)
Stationary Combustion		254.377196	253.621494	0.022466	0.000478	0	0	0	0
	Total	254.377196	253.621494	0.022466	0.000478	0	0	0	0

Scope 2 - Location Based - Indirect Emissions	Total CO₂e (t)	CO₂(t)	CH₄(t)	N₂O (t)	HFC (t of CO₂e)	PFC (t of CO₂e)	NF₃(t)	SF₅(t)
Purchased Electricity - Location Based	304.461079	303.232271	0.020765	0.002443	0	0	0	0
Total	304.461079	303.232271	0.020765	0.002443	0	0	0	0

Scope 2 - Market Based - Indirect Emissions	Total CO₂e (t)	CO₂(t)	CH₄(t)	N₂O (t)	HFC (t of CO₂e)	PFC (t of CO₂e)	NF₃(t)	SF₅(t)
Purchased Electricity - Market Based	304.461079	303.232271	0.020765	0.002443	0	0	0	0
Total	304.461079	303.232271	0.020765	0.002443	0	0	0	0

Source Emissions | Purchased Electricity - Location Based

Activity Type	Gas	Fuel Type	End Use Sector	Technology	Calculation Method	SEM	Aditional Information	Fuel	Fuel Quantity	Emission Factor (EF)	EF Reference	Gas Quantity	CO2e (t)
Purchased Electricity - Location Based	CO2	Regional Grid- Average	2019	Unspecified Technology	Emission Factor	No		WECC Californi a	1,346.45 MWh	496.5 lb/MWh	2020 Default Emission Factors - Table #3.1	303.23227 1	303.232271
Purchased Electricity - Location Based	CH4	Regional Grid- Average	2019	Unspecified Technology	Emission Factor	No		WECC Californi a	1,346.45 MWh	34 lb/GWh	2020 Default Emission Factors - Table #3.1	0.020765	0.581424
Purchased Electricity - Location Based	N2O	Regional Grid- Average	2019	Unspecified Technology	Emission Factor	No		WECC Californi a	1,346.45 MWh	4 lb/GWh	2020 Default Emission Factors - Table #3.1	0.002443	0.647384

Source Emissions | Purchased Electricity - Market Based

Activity Type	Gas	Fuel Type	End Use Sector	Technology	Calculation Method	SEM	Aditional Information	Fuel	Fuel Quantity	Emission Factor (EF)	EF Reference	Gas Quantity	CO2e (t)
Purchased Electricity - Market Based	CO2	Regional Grid- Average	2019	Unspecified Technology	Emission Factor	No		WECC Californi a	1,346.45 MWh	496.5 lb/MWh	2020 Default Emission Factors - Table #3.1	303.23227 1	303.232271
Purchased Electricity - Market Based	CH4	Regional Grid- Average	2019	Unspecified Technology	Emission Factor	No		WECC Californi a	1,346.45 MWh	34 lb/GWh	2020 Default Emission Factors - Table #3.1	0.020765	0.581424
Purchased Electricity - Market Based	N2O	Regional Grid- Average	2019	Unspecified Technology	Emission Factor	No		WECC Californi a	1,346.45 MWh	4 lb/GWh	2020 Default Emission Factors - Table #3.1	0.002443	0.647384

Source Emissions | Stationary Combustion

Activity Type	Gas	Fuel Type	End Use Sector	Technology	Calculation Method	SEM	Aditional Information	Fuel	Fuel Quantity	Emission Factor (EF)	EF Reference	Gas Quantity	CO2e (t)
Stationary Combustion	CO2	Natural Gas	Residential	Unspecified Technology	Emission Factor	No		Unspecified (Weighted U.S. Average	47,799 therm	53.06 kg/MMBtu	2020 Default Emission Factors - Table #1.1	253.62149 4	253.621494
Stationary Combustion	CH4	Natural Gas	Residential	Unspecified Technology	Emission Factor	No		Unspecified (Weighted U.S. Average	47,799 therm	4.7 g/MMBtu	2020 Default Emission Factors - Table #1.10	0.022466	0.629035
Stationary Combustion	N2O	Natural Gas	Residential	Unspecified Technology	Emission Factor	No		Unspecified (Weighted U.S. Average	47,799 therm	0.1 g/MMBtu	2020 Default Emission Factors - Table #1.10	0.000478	0.126667

Facility Emissions | Campus Village Apartments

Equity share - 100% | Entity controls the facility emissions - Yes 201-A Interim Office Building, Irvine, California, 92697, US

Scope 1 - Direct Emissions		Total CO₂e (t)	CO ₂ (t)	CH₄(t)	N₂O (t)	HFC (t of CO₂e)	PFC (t of CO₂e)	NF₃(t)	SF₅(t)
Stationary Combustion		163.863852	163.377046	0.014472	0.000308	0	0	0	0
	Total	163.863852	163.377046	0.014472	0.000308	0	0	0	0

Scope 2 - Location Based - Indirect Emissions	Total CO₂e (t)	CO₂(t)	CH₄(t)	N₂O (t)	HFC (t of CO₂e)	PFC (t of CO₂e)	NF₃(t)	SF₅(t)
Purchased Electricity - Location Based	161.579194	160.927059	0.01102	0.001296	0	0	0	0
Total	161.579194	160.927059	0.01102	0.001296	0	0	0	0

Scope 2 - Market Based - Indirect Emissions	Total CO₂e (t)	CO₂(t)	CH₄(t)	N₂O (t)	HFC (t of CO₂e)	PFC (t of CO₂e)	NF₃(t)	SF₅(t)
Purchased Electricity - Market Based	0.652135	0	0.01102	0.001296	0	0	0	0
Total	0.652135	0	0.01102	0.001296	0	0	0	0

Source Emissions | Purchased Electricty-Location Based

Activity Type	Gas	Fuel Type	End Use Sector	Technology	Calculation Method	SEM	Aditional Information	Fuel	Fuel Quantity	Emission Factor (EF)	EF Reference	Gas Quantity	CO2e (t)
Purchased Electricity - Location Based	CO2	Regional Grid- Average	2019	Unspecified Technology	Emission Factor	No		WECC Californi a	714,568 kWh	496.5 lb/MWh	2020 Default Emission Factors - Table #3.1	160.92705 9	160.927059
Purchased Electricity - Location Based	CH4	Regional Grid- Average	2019	Unspecified Technology	Emission Factor	No		WECC Californi a	714,568 kWh	34 lb/GWh	2020 Default Emission Factors - Table #3.1	0.01102	0.308565
Purchased Electricity - Location Based	N2O	Regional Grid- Average	2019	Unspecified Technology	Emission Factor	No		WECC Californi a	714,568 kWh	4 lb/GWh	2020 Default Emission Factors - Table #3.1	0.001296	0.34357

Source Emissions | Purchased Electricty-Market Based

Activity Type	Gas	Fuel Type	End Use Sector	Technology	Calculation Method	SEM	Aditional Information	Fuel	Fuel Quantity	Emission Factor (EF)	EF Reference	Gas Quantity	CO2e (t)
Purchased Electricity - Market Based	CO2	Utility-Specific Rate	2019	System Average	Emission Factor	No		Universit y of Californi a, Office of the Preside nt	714,568 kWh	0 lb/MWh	2020 Default Emission Factors - Table #3.8	0	0
Purchased Electricity - Market Based	CH4	Utility-Specific Rate	2019	System Average	Emission Factor	No		Universit y of Californi a, Office of the Preside nt	714,568 kWh	34 lb/GWh	2020 Default Emission Factors - Table #3.1	0.01102	0.308565
Purchased Electricity - Market Based	N2O	Utility-Specific Rate	2019	System Average	Emission Factor	No		Universit y of Californi a, Office of the Preside nt	714,568 kWh	4 lb/GWh	2020 Default Emission Factors - Table #3.1	0.001296	0.34357

Source Emissions | Stationary Combustion

30791 therms were purchased from Southern California Gas company during the 2019 reporting year.

Activity Type	Gas	Fuel Type	End Use Sector	Technology	Calculation Method	SEM	Aditional Information	Fuel	Fuel Quantity	Emission Factor (EF)	EF Reference	Gas Quantity	CO2e (t)
Stationary Combustion	CO2	Natural Gas	Residential	Unspecified Technology	Emission Factor	No		Unspecified (Weight ed U.S. Average	30,791 therm	53.06 kg/MMBtu	2020 Default Emission Factors - Table #1.1	163.37704 6	163.377046
Stationary Combustion	CH4	Natural Gas	Residential	Unspecified Technology	Emission Factor	No		Unspecified (Weight ed U.S. Average	30,791 therm	4.7 g/MMBtu	2020 Default Emission Factors - Table #1.10	0.014472	0.40521
Stationary Combustion	N2O	Natural Gas	Residential	Unspecified Technology	Emission Factor	No		Unspecified (Weight ed U.S. Average	30,791 therm	0.1 g/MMBtu	2020 Default Emission Factors - Table #1.10	0.000308	0.081596

Facility Emissions | Desert Research Center

Equity share - 100% | Entity controls the facility emissions - Yes 401 Tilting T Drive, Borrego Springs, California, 92004, US

Scope 2 - Location Based - Indirect Emissions	Total CO ₂ e (t)	CO ₂ (t)	CH₄(t)	N₂O (t)	HFC (t of CO₂e)	PFC (t of CO ₂ e)	NF₃(t)	SF₀(t)
Purchased Electricity - Location Based	4.99412	4.973963	0.000341	0.00004	0	0	0	0
Total	4.99412	4.973963	0.000341	0.00004	0	0	0	0

Scope 2 - Market Based - Indirect Emissions	Total CO₂e (t)	CO ₂ (t)	CH₄(t)	N₂O (t)	HFC (t of CO₂e)	PFC (t of CO ₂ e)	NF₃(t)	SF₅(t)
Purchased Electricity - Market Based	4.99412	4.973963	0.000341	0.00004	0	0	0	0
Total	4.99412	4.973963	0.000341	0.00004	0	0	0	0

Source Emissions | Purchased Electricity-Location Based

Activity Type	Gas	Fuel Type	End Use Sector	Technology	Calculation Method	SEM	Aditional Information	Fuel	Fuel Quantity	Emission Factor (EF)	EF Reference	Gas Quantity	CO2e (t)
Purchased Electricity - Location Based	CO2	Regional Grid- Average	2019	Unspecified Technology	Emission Factor	No		WECC Californi a	22,086 kWh	496.5 lb/MWh	2020 Default Emission Factors - Table #3.1	4.973963	4.973963
Purchased Electricity - Location Based	CH4	Regional Grid- Average	2019	Unspecified Technology	Emission Factor	No		WECC Californi a	22,086 kWh	34 lb/GWh	2020 Default Emission Factors - Table #3.1	0.000341	0.009537
Purchased Electricity - Location Based	N2O	Regional Grid- Average	2019	Unspecified Technology	Emission Factor	No		WECC Californi a	22,086 kWh	4 lb/GWh	2020 Default Emission Factors - Table #3.1	0.00004	0.010619

Source Emissions | Purchased Electricity-Market Based

Activity Type	Gas	Fuel Type	End Use Sector	Technology	Calculation Method	SEM	Aditional Information	Fuel	Fuel Quantity	Emission Factor (EF)	EF Reference	Gas Quantity	CO2e (t)
Purchased Electricity - Market Based	CO2	Regional Grid- Average	2018	Unspecified Technology	Emission Factor	No		WECC Californi a	22,086 kWh	496.5 lb/MWh	2020 Default Emission Factors - Table #3.1	4.973963	4.973963
Purchased Electricity - Market Based	CH4	Regional Grid- Average	2018	Unspecified Technology	Emission Factor	No		WECC Californi a	22,086 kWh	34 lb/GWh	2020 Default Emission Factors - Table #3.1	0.000341	0.009537
Purchased Electricity - Market Based	N2O	Regional Grid- Average	2018	Unspecified Technology	Emission Factor	No		WECC Californi a	22,086 kWh	4 lb/GWh	2020 Default Emission Factors - Table #3.1	0.00004	0.010619

Facility Emissions | Main Campus

Equity share - 100% | Entity controls the facility emissions - Yes 201-A Interim Office Building, Irvine, California, 92697-5444, US

Scope 1 - Direct Emissions		Total CO₂e (t)	CO₂(t)	CH₄(t)	N₂O (t)	HFC (t of CO₂e)	PFC (t of CO₂e)	NF₃(t)	SF ₆ (t)
Stationary Combustion		65,929.413483	65,733.550792	5.82261	0.123885	0	0	0	0
Mobile Combustion		1,004.21645	1,004.085042	0.000324	0.000462	0	0	0	0
Process		90.24	90.24	0	0	0	0	0	0
Fugitive		4,812.321235	0	0	0	4,735.147	0	0	0.003284
	Total	71,836.191168	66,827.875834	5.822934	0.124347	4,735.147	0	0	0.003284

Scope 2 - Location Based - Indirect Emissions	Total CO₂e (t)	CO₂(t)	CH₄(t)	N₂O (t)	HFC (t of CO₂e)	PFC (t of CO₂e)	NF₃(t)	SF₀(t)
Purchased Electricity - Location Based	598.400498	595.985347	0.040813	0.004801	0	0	0	0
Total	598.400498	595.985347	0.040813	0.004801	0	0	0	0

Scope 2 - Market Based - Indirect Emissions	Total CO₂e (t)	CO ₂ (t)	CH₄(t)	N₂O (t)	HFC (t of CO ₂ e)	PFC (t of CO ₂ e)	NF₃(t)	SF ₆ (t)
Purchased Electricity - Market Based	2.415151	0	0.040813	0.004801	0	0	0	0
Total	2.415151	0	0.040813	0.004801	0	0	0	0

Biogenic - Direct Emissions	Total CO₂e (t)	CO ₂ (t)	CH₄(t)	N₂O (t)	HFC (t of CO₂e)	PFC (t of CO₂e)	NF₃(t)	SF ₆ (t)
Mobile Biomass Combustion	197.81685	197.81685	0	0	0	0	0	0
Total	197.81685	197.81685	0	0	0	0	0	0

Biogenic - Market Based - Indirect Emissions	Total CO₂e (t)	CO ₂ (t)	CH₄(t)	N₂O (t)	HFC (t of CO₂e)	PFC (t of CO₂e)	NF₃(t)	SF₅(t)
Purchased Electricity - Market Based - Biomass			0	0	0	0	0	0
Total			0	0	0	0	0	0

Optional - Optional Emissions	Total CO₂e (t)	CO ₂ (t)	CH₄(t)	N₂O (t)	HFC (t of CO₂e)	PFC (t of CO₂e)	NF₃(t)	SF₅(t)
Scope 3	53,556.82	53,556.82	0	0	0	0	0	0
Total	53,556.82	53,556.82	0	0	0	0	0	0

Source Emissions | Air Travel Paid by University Estimated emissions based on percent change of 2018 air travel emissions.

Activity Type	Gas	Fuel Type	End Use Sector	Technology	Calculation Method	SEM	Aditional Information	Fuel	Fuel Quantity	Emission Factor (EF)	EF Reference	Gas Quantity	CO2e (t)
Scope 3 (Optional)	CO2	N/A	All	Unspecified Technology	PreCalculate d	No		N/A	N/A	N/A	N/A	42,682	42,682
Scope 3 (Optional)	CH4	N/A	All	Unspecified Technology	PreCalculate d	No		N/A	N/A	N/A	N/A	0	0
Scope 3 (Optional)	N2O	N/A	All	Unspecified Technology	PreCalculate d	No		N/A	N/A	N/A	N/A	0	0

Source Emissions | Commuting

Activity Type	Gas	Fuel Type	End Use Sector	Technology	Calculation Method	SEM	Aditional Information	Fuel	Fuel Quantity	Emission Factor (EF)	EF Reference	Gas Quantity	CO2e (t)
Scope 3 (Optional)	CO2	N/A	All	Unspecified Technology	PreCalculate d	No		N/A	N/A	N/A	N/A	10,874.82	10,874.82
Scope 3 (Optional)	CH4	N/A	All	Unspecified Technology	PreCalculate d	No		N/A	N/A	N/A	N/A	0	0
Scope 3 (Optional)	N2O	N/A	All	Unspecified Technology	PreCalculate d	No		N/A	N/A	N/A	N/A	0	0

Source Emissions | Electricity Distribution System Operation and Maintenance

Based on measured usage of 14.45 lbs.

7.24/2204.62 = 0.00655

Used an insulating gas in 12,000-Volt campus-owned electrical distribution system switches, transformers, and other equipment.

Activity Type	Gas	Fuel Type	End Use Sector	Technology	Calculation Method	SEM	Aditional Information	Fuel	Fuel Quantity	Emission Factor (EF)	EF Reference	Gas Quantity	CO2e (t)
Fugitive	SF6	N/A	All	Unspecified Technology	PreCalculate d	No		N/A	N/A	N/A	N/A	0.003284	77.174235

Source Emissions | Fleet Fuel Consumption B20 (Biodiesel Portion)

Activity Type	Gas	Fuel Type	End Use Sector	Technology	Calculation Method	SEM	Aditional Information	Fuel	Fuel Quantity	Emission Factor (EF)	EF Reference	Gas Quantity	CO2e (t)
Mobile Biomass Combustion - Biomass	CO2	Biofuels	Diesel Medium and Heavy-Duty Trucks and Busses	Aftertreatment	Emission Factor	Yes		Biodiese I (100%)	20,933 gal	9.45 kg/gal	2020 Default Emission Factors - Table #2.1	197.81685	197.81685
Mobile Combustion	CH4	Biofuels	Diesel Medium and Heavy-Duty Trucks and Busses	Aftertreatment	Not Reporting	Yes		Biodiese I (100%)	0	0.0051 g/mi		0	0
Mobile Combustion	N2O	Biofuels	Diesel Medium and Heavy-Duty Trucks and Busses	Aftertreatment	Not Reporting	Yes		Biodiese I (100%)	0	0.0048 g/mi		0	0

Source Emissions | Fleet Fuel Consumption B20 Biodiesel (Diesel Portion)

Calculated per Table 13.9 of the General Reporting Protocol SEM using CO2 value derived from the total CO2 from both the ULSD and Biodiesel portions of the B20 fuel.

CO2 from fuel consumption = 20,993.3 (total B20 fuel tank volume in gallons) x 10.21 kg CO2/gal x 1 tonne/1000kg = 214.34 tonnes.

Activity Type	Gas	Fuel Type	End Use Sector	Technology	Calculation Method	SEM	Aditional Information	Fuel	Fuel Quantity	Emission Factor (EF)	EF Reference	Gas Quantity	CO2e (t)
Mobile Combustion	CO2	Diesel Fuel	Diesel Medium and Heavy-Duty Trucks and Busses	Aftertreatment	PreCalculate d	Yes		All	N/A	N/A	N/A	214.34	214.34
Mobile Combustion	CH4	Diesel Fuel	Diesel Medium and Heavy-Duty Trucks and Busses	Aftertreatment	Not Reporting	Yes		All	0	0.0051 g/mi		0	0
Mobile Combustion	N2O	Diesel Fuel	Diesel Medium and Heavy-Duty Trucks and Busses	Aftertreatment	Not Reporting	Yes		All	0	0.0048 g/mi		0	0

Source Emissions | Fleet Fuel Consumption CNG

Activity Type	Gas	Fuel Type	End Use Sector	Technology	Calculation Method	SEM	Aditional Information	Fuel	Fuel Quantity	Emission Factor (EF)	EF Reference	Gas Quantity	CO2e (t)
Mobile Combustion	CO2	Alternative Fuels	Heavy Duty Trucks	Internal Combustion Engine	Emission Factor	No		Compre ssed Natural Gas (CNG)	1,453.34 scf	0.05444 kg/scf	2020 Default Emission Factors - Table #2.1	0.07912	0.07912
Mobile Combustion	CH4	Alternative Fuels	Heavy Duty Trucks	Internal Combustion Engine	Emission Factor	No		Compre ssed Natural Gas (CNG)	0	3.7 g/mi	2020 Default Emission Factors - Table #2.6	0	0
Mobile Combustion	N2O	Alternative Fuels	Heavy Duty Trucks	Internal Combustion Engine	Emission Factor	No		Compre ssed Natural Gas (CNG)	0	0.001 g/mi	2020 Default Emission Factors - Table #2.6	0	0

Source Emissions | Fleet Fuel Consumption Motor Gasoline

88,797 gallons

Calculated per Table 13.9 of the General Reporting Protocol SEM using CO2 value derived from the total

CH4 = 5.91E-05 CH4/CO2

N2O = 3.57E-05 N2O/CO2

CH4 CO2e = 88,763 gallons x 5.91E-05 CH4/CO2 x GWP (28) = 1.3 MT CO2e

N2O CO2e = 88,763 gallons x 3.57E-05 N2O/CO2 x GWP (265) = 7.3 MT CO2e

Activity Type	Gas	Fuel Type	End Use Sector	Technology	Calculation Method	SEM	Aditional Information	Fuel	Fuel Quantity	Emission Factor (EF)	EF Reference	Gas Quantity	CO2e (t)
Mobile Combustion	CO2	Motor Gasoline	Gasoline Light Trucks (Vans, Pickup Trucks, SUVs)	Vans, Pickup Trucks, SUVs (Model Year 1994)	Emission Factor	Yes		All	88,797 gal	8.78 kg/gal	2020 Default Emission Factors - Table #2.1	779.63766	779.63766
Mobile Combustion	CH4	Motor Gasoline	Gasoline Light Trucks (Vans, Pickup Trucks, SUVs)	Vans, Pickup Trucks, SUVs (Model Year 1994)	Not Reporting	Yes		All	0	0.0646 g/mi	2020 Default Emission Factors - Table #2.5	0	0
Mobile Combustion	N2O	Motor Gasoline	Gasoline Light Trucks (Vans, Pickup Trucks, SUVs)	Vans, Pickup Trucks, SUVs (Model Year 1994)	Not Reporting	Yes		All	0	0.0982 g/mi	2020 Default Emission Factors - Table #2.5	0	0

Source Emissions | Fleet Fuel Consumption ULSD Vehicles Highway Use

10,489 gallons purchased

Calculated per Table 13.9 of the General Reporting Protocol SEM using CO2 value derived from the total

5.91E-05 CH4/CO2

3.57E-05 N2O/CO2

CH4 CO2e = 10,489 gallons x 10.21 kg CO2/gal x 0.001 MT/kg x 5.91E-05 CH4/CO2 x GWP (28) = 0.177 MT CO2e

N2O CO2e = 10,489 gallons x 10.21 kg CO2/gal x 0.001 MT/kg x 3.57E-05 CH4/CO2 x GWP (265) = 0.96 MT CO2e

Activity Type	Gas	Fuel Type	End Use Sector	Technology	Calculation Method	SEM	Aditional Information	Fuel	Fuel Quantity	Emission Factor (EF)	EF Reference	Gas Quantity	CO2e (t)
Mobile Combustion	CO2	Diesel Fuel	Diesel Light Trucks	Moderate Control	Emission Factor	Yes		All		10.21 kg/gal	2019 Default Emission Factors - Table #2.1		
Mobile Combustion	CH4	Diesel Fuel	Diesel Light Trucks	Moderate Control	Not Reporting	Yes		All		0.0009 g/mi	2019 Default Emission Factors - Table #2.4		
Mobile Combustion	N2O	Diesel Fuel	Diesel Light Trucks	Moderate Control	Not Reporting	Yes		All		0.0014 g/mi	2019 Default Emission Factors - Table #2.4		

Source Emissions | Fleet Fuel Consumption Ultra Low Sulfur Diesel Fuel

982.2 gallons of diesel purchased in 2019.

Activity Type	Gas	Fuel Type	End Use Sector	Technology	Calculation Method	SEM	Aditional Information	Fuel	Fuel Quantity	Emission Factor (EF)	EF Reference	Gas Quantity	CO2e (t)
Mobile Combustion	CO2	Diesel Fuel	Non-Highway	Construction/Minin g Equipment	Emission Factor	Yes		All	982.2 gal	10.21 kg/gal	2020 Default Emission Factors - Table #2.1	10.028262	10.028262
Mobile Combustion	CH4	Diesel Fuel	Non-Highway	Construction/Minin g Equipment	Emission Factor	Yes		All	982.2 gal	0.33 g/gal	2020 Default Emission Factors - Table #2.7	0.000324	0.009076
Mobile Combustion	N2O	Diesel Fuel	Non-Highway	Construction/Minin g Equipment	Emission Factor	Yes		All	982.2 gal	0.47 g/gal	2020 Default Emission Factors - Table #2.7	0.000462	0.122333

Source Emissions | Operation and Maintenance of Standby Generators

The usage by campus standby and emergency diesel generators was 14,719 gallons.

CH4 and N2O emission factors from EPA for diesel were used to calculate CH4 (0.00041 kg CH4/gal) and N2O (0.00008 kg N2O/gal)

CH4 CO2e = 14,719 gallons x 0.00041 kg CH4/gal x 0.001 MT/kg x GWP (28) = 0.168 MT CO2e

N2O CO2e = 14,719 gallons x 0.00008 kg N2O/gal x 0.001 MT/kg x GWP (265) = 0.312 MT CO2e

Nearly 100% of use is for code-required testing of the generators.

12481

Activity Type	Gas	Fuel Type	End Use Sector	Technology	Calculation Method	SEM	Aditional Information	Fuel	Fuel Quantity	Emission Factor (EF)	EF Reference	Gas Quantity	CO2e (t)
Stationary Combustion	CO2	Petroleum Products	Electric Power	Large Diesel Oil Engines >600hp (447kW)	Emission Factor	No		Distillate Fuel Oil No. 2		10.21 kg/gal	2019 Default Emission Factors - Table #1.1		
Stationary Combustion	CH4	Petroleum Products	Electric Power	Large Diesel Oil Engines >600hp (447kW)	PreCalculate d	No		Distillate Fuel Oil No. 2	N/A	N/A	N/A		
Stationary Combustion	N2O	Petroleum Products	Electric Power	Large Diesel Oil Engines >600hp (447kW)	PreCalculate d	No		Distillate Fuel Oil No. 2	N/A	N/A	N/A		

Source Emissions | Operation and Maintenance of Standby Generators - Natural Gas

Activity Type	Gas	Fuel Type	End Use Sector	Technology	Calculation Method	SEM	Aditional Information	Fuel	Fuel Quantity	Emission Factor (EF)	EF Reference	Gas Quantity	CO2e (t)
Stationary Combustion	CO2	Petroleum Products	Electric Power	Unspecified Technology	Emission Factor	No		Natural Gasolin e		7.36 kg/gal	2019 Default Emission Factors - Table #1.1		
Stationary Combustion	CH4	Petroleum Products	Electric Power	Unspecified Technology	Emission Factor	No		Natural Gasolin e		0.003 kg/MMBtu	2019 Default Emission Factors - Table #1.9		
Stationary Combustion	N2O	Petroleum Products	Electric Power	Unspecified Technology	Emission Factor	No		Natural Gasolin e		0.0006 kg/MMBtu	2019 Default Emission Factors - Table #1.9		

Source Emissions | Process Emissions

Based on prior year's emissions.

Activity Type	Gas	Fuel Type	End Use Sector	Technology	Calculation Method	SEM	Aditional Information	Fuel	Fuel Quantity	Emission Factor (EF)	EF Reference	Gas Quantity	CO2e (t)
Process	CO2	N/A	All	Unspecified Technology	PreCalculate d	No		N/A	N/A	N/A	N/A	90.24	90.24
Process	CH4	N/A	All	Unspecified Technology	PreCalculate d	No		N/A	N/A	N/A	N/A	0	0
Process	N2O	N/A	All	Unspecified Technology	PreCalculate d	No		N/A	N/A	N/A	N/A	0	0

Source Emissions | Purchased Electricity-Location Based

Activity Type	Gas	Fuel Type	End Use Sector	Technology	Calculation Method	SEM	Aditional Information	Fuel	Fuel Quantity	Emission Factor (EF)	EF Reference	Gas Quantity	CO2e (t)
Purchased Electricity - Location Based	CO2	Regional Grid- Average	2018	Unspecified Technology	Emission Factor	No		WECC Californi a	2,646,367 kWh	496.5 lb/MWh	2020 Default Emission Factors - Table #3.1	595.98534 7	595.985347
Purchased Electricity - Location Based	CH4	Regional Grid- Average	2018	Unspecified Technology	Emission Factor	No		WECC Californi a	2,646,367 kWh	34 lb/GWh	2020 Default Emission Factors - Table #3.1	0.040813	1.142755
Purchased Electricity - Location Based	N2O	Regional Grid- Average	2018	Unspecified Technology	Emission Factor	No		WECC Californi a	2,646,367 kWh	4 lb/GWh	2020 Default Emission Factors - Table #3.1	0.004801	1.272396

Source Emissions | Purchased Electricity-Market Based

Activity Type	Gas	Fuel Type	End Use Sector	Technology	Calculation Method	SEM	Aditional Information	Fuel	Fuel Quantity	Emission Factor (EF)	EF Reference	Gas Quantity	CO2e (t)
Purchased Electricity - Market Based	CO2	Utility-Specific Rate	2019	System Average	Emission Factor	No		Universit y of Californi a, Office of the Preside nt	2,646,367 kWh	0 lb/MWh	2020 Default Emission Factors - Table #3.8	0	0
Purchased Electricity - Market Based	CH4	Utility-Specific Rate	2019	System Average	Emission Factor	No		Universit y of Californi a, Office of the Preside nt	2,646,367 kWh	34 lb/GWh	2020 Default Emission Factors - Table #3.1	0.040813	1.142755
Purchased Electricity - Market Based	N2O	Utility-Specific Rate	2019	System Average	Emission Factor	No		Universit y of Californi a, Office of the Preside nt	2,646,367 kWh	4 lb/GWh	2020 Default Emission Factors - Table #3.1	0.004801	1.272396

Source Emissions | Refrigeration Systems Operation and Maintenance

7384 lb 134A/2204.62 = 3.2 183 lb R-22A/2204.62 = .17 44 lb R-404A/2204.62 = .019 23 lb R410A/2204.62 = .01 20 lbs 407C = .01

Activity Type	Gas	Fuel Type	End Use Sector	Technology	Calculation Method	SEM	Aditional Information	Fuel	Fuel Quantity	Emission Factor (EF)	EF Reference	Gas Quantity	CO2e (t)
Fugitive	HFC- 134a	N/A	All	Unspecified Technology	PreCalculate d	Yes		N/A	N/A	N/A	N/A	3.2	4,160
Fugitive	R-404A	N/A	All	Unspecified Technology	PreCalculate d	Yes		N/A	N/A	N/A	N/A	0.019	74.917
Fugitive	R-407C	N/A	All	Unspecified Technology	PreCalculate d	Yes		N/A	N/A	N/A	N/A	0.01	16.24
Fugitive	R-410A	N/A	All	Unspecified Technology	PreCalculate d	Yes		N/A	N/A	N/A	N/A	0	0
Fugitive	R-422A	N/A	All	Unspecified Technology	PreCalculate d	Yes		N/A	N/A	N/A	N/A	0.17	483.99

Source Emissions | Renewable Energy Credits - Market Based

Activity Type	Gas	Fuel Type	End Use Sector	Technology	Calculation Method	SEM	Aditional Information	Fuel	Fuel Quantity	Emission Factor (EF)	EF Reference	Gas Quantity	CO2e (t)
Purchased Electricity - Market Based - Biomass	CO2	Energy Attribute Certificate	PreCalculated	PreCalculated	PreCalculate d	No		PreCalc ulated	N/A	N/A	N/A		
Purchased Electricity - Market Based	CH4	Energy Attribute Certificate	PreCalculated	PreCalculated	PreCalculate d	No		PreCalc ulated	N/A	N/A	N/A		
Purchased Electricity - Market Based	N2O	Energy Attribute Certificate	PreCalculated	PreCalculated	PreCalculate d	No		PreCalc ulated	N/A	N/A	N/A		

Source Emissions | Stationary Combustion The total use in the campus core was

Activity Type	Gas	Fuel Type	End Use Sector	Technology	Calculation Method	SEM	Aditional Information	Fuel	Fuel Quantity	Emission Factor (EF)	EF Reference	Gas Quantity	CO2e (t)
Stationary Combustion	CO2	Natural Gas	Commercial	Unspecified Technology	Emission Factor	No		Unspecified (Weighted U.S. Average	12,388,532 therm	53.06 kg/MMBtu	2020 Default Emission Factors - Table #1.1	65,733.550 792	65,733.550 792
Stationary Combustion	CH4	Natural Gas	Commercial	Unspecified Technology	Emission Factor	No		Unspecified (Weighted U.S. Average	12,388,532 therm	4.7 g/MMBtu	2020 Default Emission Factors - Table #1.10	5.82261	163.033081
Stationary Combustion	N2O	Natural Gas	Commercial	Unspecified Technology	Emission Factor	No		Unspecif ied (Weight ed U.S. Average)	10 200 522	0.1 g/MMBtu	2020 Default Emission Factors - Table #1.10	0.123885	32.82961

Facility Emissions | Medical Center

Equity share - 100% | Entity controls the facility emissions - Yes 101 The City Drive, Orange, California, 92868, US

Scope 1 - Direct Emissions		Total CO ₂ e (t)	CO ₂ (t)	CH₄(t)	N₂O (t)	HFC (t of CO₂e)	PFC (t of CO ₂ e)	NF₃(t)	SF₅(t)
Stationary Combustion		8,271.508341	8,246.935396	0.730505	0.015543	0	0	0	0
Mobile Combustion		101.83743	101.83743	0	0	0	0	0	0
Fugitive			0	0	0	0	0	0	0
	Total	8,373.345771	8,348.772826	0.730505	0.015543	0	0	0	0

Scope 2 - Location Based - Indirect Emissions	Total CO₂e (t)	CO ₂ (t)	CH₄(t)	N₂O (t)	HFC (t of CO₂e)	PFC (t of CO₂e)	NF₃(t)	SF₅(t)
Purchased Electricity - Location Based	7,889.362019	7,857.520466	0.538078	0.063303	0	0	0	0
Total	7,889.362019	7,857.520466	0.538078	0.063303	0	0	0	0

Scope 2 - Market Based - Indirect Emissions	Total CO₂e (t)	CO ₂ (t)	CH₄(t)	N₂O (t)	HFC (t of CO₂e)	PFC (t of CO₂e)	NF₃(t)	SF₅(t)
Purchased Electricity - Market Based	31.841553	0	0.538078	0.063303	0	0	0	0
Total	31.841553	0	0.538078	0.063303	0	0	0	0

Optional - Optional Emissions	Total CO ₂ e (t)	CO ₂ (t)	CH₄(t)	N₂O (t)	HFC (t of CO₂e)	PFC (t of CO₂e)	NF₃(t)	SF₅(t)
Scope 3	11,968.33	11,968.33	0	0	0	0	0	0
Total	11,968.33	11,968.33	0	0	0	0	0	0

Source Emissions | Commuting

Calculated using a methodology acceptable to the California Air Resources Board (CARB) for CO2. Default transportation emission factors (Table 13.9) were used to convert CO2 to CH4 and N2O for the GHG amounts listed above.

Activity Type	Gas	Fuel Type	End Use Sector	Technology	Calculation Method	SEM	Aditional Information	Fuel	Fuel Quantity	Emission Factor (EF)	EF Reference	Gas Quantity	CO2e (t)
Scope 3 (Optional)	CO2	N/A	All	Unspecified Technology	PreCalculate d	No		N/A	N/A	N/A	N/A	11,968.33	11,968.33
Scope 3 (Optional)	CH4	N/A	All	Unspecified Technology	PreCalculate d	No		N/A	N/A	N/A	N/A	0	0
Scope 3 (Optional)	N2O	N/A	All	Unspecified Technology	PreCalculate d	No		N/A	N/A	N/A	N/A	0	0

Source Emissions | Fleet Fuel Consumption ULSD Vehicles Highway Use

The UCI Medical Center purchased 4,751.5 gal of diesel fuel for use in their fleet during the 2018 reporting period. Data was not collected in 2019 so using 2018 data as operations have not changed.

Activity Type	Gas	Fuel Type	End Use Sector	Technology	Calculation Method	SEM	Aditional Information	Fuel	Fuel Quantity	Emission Factor (EF)	EF Reference	Gas Quantity	CO2e (t)
Mobile Combustion	CO2	Diesel Fuel	Diesel Light Trucks	Moderate Control	Emission Factor	Yes		All	4,751 gal	10.21 kg/gal	2020 Default Emission Factors - Table #2.1	48.50771	48.50771
Mobile Combustion	CH4	Diesel Fuel	Diesel Light Trucks	Moderate Control	Not Reporting	Yes		All	0	0.0009 g/mi	2020 Default Emission Factors - Table #2.4	0	0
Mobile Combustion	N2O	Diesel Fuel	Diesel Light Trucks	Moderate Control	Not Reporting	Yes		All	0	0.0014 g/mi	2020 Default Emission Factors - Table #2.4	0	0

Source Emissions | Medical Center Vehicle Fleet

The UCI Medical Center purchased 6074 gallons of unleaded fuel during the 2019 reporting period for use in the fleet vehicles. The default factors for the transportation sector from table 13.9 were used to calculate GHG for CH4 and N2O.

Activity Type	Gas	Fuel Type	End Use Sector	Technology	Calculation Method	SEM	Aditional Information	Fuel	Fuel Quantity	Emission Factor (EF)	EF Reference	Gas Quantity	CO2e (t)
Mobile Combustion	CO2	Motor Gasoline	Gasoline Light Trucks (Vans, Pickup Trucks, SUVs)	Vans, Pickup Trucks, SUVs (Model Year 2000)	Emission Factor	Yes		All	6,074 gal	8.78 kg/gal	2020 Default Emission Factors - Table #2.1	53.32972	53.32972
Mobile Combustion	CH4	Motor Gasoline	Gasoline Light Trucks (Vans, Pickup Trucks, SUVs)	Vans, Pickup Trucks, SUVs (Model Year 2000)	Not Reporting	Yes		All	0	0.034 g/mi	2020 Default Emission Factors - Table #2.5	0	0
Mobile Combustion	N2O	Motor Gasoline	Gasoline Light Trucks (Vans, Pickup Trucks, SUVs)	Vans, Pickup Trucks, SUVs (Model Year 2000)	Not Reporting	Yes		All	0	0.0631 g/mi	2020 Default Emission Factors - Table #2.5	0	0

Source Emissions | Operation and Maintenance of Standby Generators

The UCI Medical Center used 756 gal of diesel fuel in the 2017 reporting period for regular testing of a fleet of large emergency diesel generators. Factors from EPA Emission Factors for GHG Inventories Other Diesel Sources = 0.26 g/gallon and the default value of 138,000 Btu/gallon to calculate the 1.884 g/MMBtu.

Activity Type	Gas	Fuel Type	End Use Sector	Technology	Calculation Method	SEM	Aditional Information	Fuel	Fuel Quantity	Emission Factor (EF)	EF Reference	Gas Quantity	CO2e (t)
Stationary Combustion	CO2	Petroleum Products	Industrial	Large Diesel Oil Engines >600hp (447kW)	Emission Factor	No		Distillate Fuel Oil No. 2		10.21 kg/gal	2018 Default Emission Factors - Table #12.1		
Stationary Combustion	CH4	Petroleum Products	Industrial	Large Diesel Oil Engines >600hp (447kW)	PreCalculate d	No		Distillate Fuel Oil No. 2	N/A	N/A	N/A		
Stationary Combustion	N2O	Petroleum Products	Industrial	Large Diesel Oil Engines >600hp (447kW)	PreCalculate d	No		Distillate Fuel Oil No. 2	N/A	N/A	N/A		

Source Emissions | Purchased Electricity-Location Based

Activity Type	Gas	Fuel Type	End Use Sector	Technology	Calculation Method	SEM	Aditional Information	Fuel	Fuel Quantity	Emission Factor (EF)	EF Reference	Gas Quantity	CO2e (t)
Purchased Electricity - Location Based	CO2	Regional Grid- Average	2018	Unspecified Technology	Emission Factor	No		WECC Californi a	34,889,923 kWh	496.5 lb/MWh	2020 Default Emission Factors - Table #3.1	7,857.5204 66	7,857.5204 66
Purchased Electricity - Location Based	CH4	Regional Grid- Average	2018	Unspecified Technology	Emission Factor	No		WECC Californi a	34,889,923 kWh	34 lb/GWh	2020 Default Emission Factors - Table #3.1	0.538078	15.066182
Purchased Electricity - Location Based	N2O	Regional Grid- Average	2018	Unspecified Technology	Emission Factor	No		WECC Californi a	34,889,923 kWh	4 lb/GWh	2020 Default Emission Factors - Table #3.1	0.063303	16.775371

Source Emissions | Purchased Electricity-Market Based

Activity Type	Gas	Fuel Type	End Use Sector	Technology	Calculation Method	SEM	Aditional Information	Fuel	Fuel Quantity	Emission Factor (EF)	EF Reference	Gas Quantity	CO2e (t)
Purchased Electricity - Market Based	CO2	Utility-Specific Rate	2019	System Average	Emission Factor	No		Universit y of Californi a, Office of the Preside nt	34,889,923 kWh	0 lb/MWh	2020 Default Emission Factors - Table #3.8	0	0
Purchased Electricity - Market Based	CH4	Utility-Specific Rate	2019	System Average	Emission Factor	No		Universit y of Californi a, Office of the Preside nt	34,889,923 kWh	34 lb/GWh	2020 Default Emission Factors - Table #3.1	0.538078	15.066182
Purchased Electricity - Market Based	N2O	Utility-Specific Rate	2019	System Average	Emission Factor	No		Universit y of Californi a, Office of the Preside nt	34,889,923 kWh	4 lb/GWh	2020 Default Emission Factors - Table #3.1	0.063303	16.775371

Source Emissions | Refrigeration Systems Operations and Maintenance

R410A - 390.6 lbs purchased *.0004536 = .177 mt x 1,924 = 341 mt R407C(R22 replacement): 255.6 lbs purchased * .0004536 x = .1161,624 =

Activity Type	Gas	Fuel Type	End Use Sector	Technology	Calculation Method	SEM	Aditional Information	Fuel	Fuel Quantity	Emission Factor (EF)	EF Reference	Gas Quantity	CO2e (t)
Fugitive	R-407C	N/A	All	Unspecified Technology	PreCalculate d	No		N/A	N/A	N/A	N/A		
Fugitive	R-410A	N/A	All	Unspecified Technology	PreCalculate d	No		N/A	N/A	N/A	N/A		
Fugitive	CO2	N/A	All	Unspecified Technology	PreCalculate d	No		N/A	N/A	N/A	N/A		

Source Emissions | Stationary Combustion

Activity Type	Gas	Fuel Type	End Use Sector	Technology	Calculation Method	SEM	Aditional Information	Fuel	Fuel Quantity	Emission Factor (EF)	EF Reference	Gas Quantity	CO2e (t)
Stationary Combustion	CO2	Natural Gas	Commercial	Unspecified Technology	Emission Factor	No		Unspecified (Weighted U.S. Average	1,554,266 therm	53.06 kg/MMBtu	2020 Default Emission Factors - Table #1.1	8,246.9353 96	8,246.9353 96
Stationary Combustion	CH4	Natural Gas	Commercial	Unspecified Technology	Emission Factor	No		Unspecif ied (Weight ed U.S. Average	1,554,266 therm	4.7 g/MMBtu	2020 Default Emission Factors - Table #1.10	0.730505	20.454141
Stationary Combustion	N2O	Natural Gas	Commercial	Unspecified Technology	Emission Factor	No		Unspecified (Weighted U.S. Average	1,554,266 therm	0.1 g/MMBtu	2020 Default Emission Factors - Table #1.10	0.015543	4.118805

Facility Emissions | Mesa Court

Equity share - 100% | Entity controls the facility emissions - Yes 201 A Interim Office Building, Irvine, California, 92697, US

Scope 1 - Direct Emissions		Total CO₂e (t)	CO ₂ (t)	CH₄(t)	N₂O (t)	HFC (t of CO₂e)	PFC (t of CO₂e)	NF₃(t)	SF₅(t)
Stationary Combustion		718.353879	716.219798	0.063442	0.00135	0	0	0	0
	Total	718.353879	716.219798	0.063442	0.00135	0	0	0	0

Scope 2 - Location Based - Indirect Emissions	Total CO ₂ e (t)	CO ₂ (t)	CH₄(t)	N₂O (t)	HFC (t of CO₂e)	PFC (t of CO₂e)	NF₃(t)	SF₅(t)
Purchased Electricity - Location Based	1,028.249797	1,024.09977	0.07013	0.008251	0	0	0	0
Total	1,028.249797	1,024.09977	0.07013	0.008251	0	0	0	0

Scope 2 - Market Based - Indirect Emissions	Total CO₂e (t)	CO₂(t)	CH₄(t)	N₂O (t)	HFC (t of CO₂e)	PFC (t of CO₂e)	NF₃(t)	SF₅(t)
Purchased Electricity - Market Based	4.150028	0	0.07013	0.008251	0	0	0	0
Total	4.150028	0	0.07013	0.008251	0	0	0	0

Source Emissions | Purchased Electricty-Location Based

Activity Type	Gas	Fuel Type	End Use Sector	Technology	Calculation Method	SEM	Aditional Information	Fuel	Fuel Quantity	Emission Factor (EF)	EF Reference	Gas Quantity	CO2e (t)
Purchased Electricity - Location Based	CO2	Regional Grid- Average	2018	Unspecified Technology	Emission Factor	No		WECC Californi a	4,547,333 kWh	496.5 lb/MWh	2020 Default Emission Factors - Table #3.1	1,024.0997 7	1,024.0997
Purchased Electricity - Location Based	CH4	Regional Grid- Average	2018	Unspecified Technology	Emission Factor	No		WECC Californi a	4,547,333 kWh	34 lb/GWh	2020 Default Emission Factors - Table #3.1	0.07013	1.963631
Purchased Electricity - Location Based	N2O	Regional Grid- Average	2018	Unspecified Technology	Emission Factor	No		WECC Californi a	4,547,333 kWh	4 lb/GWh	2020 Default Emission Factors - Table #3.1	0.008251	2.186396

Source Emissions | Purchased Electricty-Market Based

Activity Type	Gas	Fuel Type	End Use Sector	Technology	Calculation Method	SEM	Aditional Information	Fuel	Fuel Quantity	Emission Factor (EF)	EF Reference	Gas Quantity	CO2e (t)
Purchased Electricity - Market Based	CO2	Utility-Specific Rate	2019	System Average	Emission Factor	No		Universit y of Californi a, Office of the Preside nt	4,547,333 kWh	0 lb/MWh	2020 Default Emission Factors - Table #3.8	0	0
Purchased Electricity - Market Based	CH4	Utility-Specific Rate	2019	System Average	Emission Factor	No		Universit y of Californi a, Office of the Preside nt	4,547,333 kWh	34 lb/GWh	2020 Default Emission Factors - Table #3.1	0.07013	1.963631
Purchased Electricity - Market Based	N2O	Utility-Specific Rate	2019	System Average	Emission Factor	No		Universit y of Californi a, Office of the Preside nt	4,547,333 kWh	4 lb/GWh	2020 Default Emission Factors - Table #3.1	0.008251	2.186396

Source Emissions | Stationary Combustion

Activity Type	Gas	Fuel Type	End Use Sector	Technology	Calculation Method	SEM	Aditional Information	Fuel	Fuel Quantity	Emission Factor (EF)	EF Reference	Gas Quantity	CO2e (t)
Stationary Combustion	CO2	Natural Gas	Commercial	Unspecified Technology	Emission Factor	No		Unspecified (Weight ed U.S. Average	134,983 therm	53.06 kg/MMBtu	2020 Default Emission Factors - Table #1.1	716.21979 8	716.219798
Stationary Combustion	CH4	Natural Gas	Commercial	Unspecified Technology	Emission Factor	No		Unspecified (Weighted U.S. Average	134,983 therm	4.7 g/MMBtu	2020 Default Emission Factors - Table #1.10	0.063442	1.776376
Stationary Combustion	N2O	Natural Gas	Commercial	Unspecified Technology	Emission Factor	No		Unspecif ied (Weight ed U.S. Average)	134,983 therm	0.1 g/MMBtu	2020 Default Emission Factors - Table #1.10	0.00135	0.357705

Facility Emissions | Middle Earth Housing

Equity share - 100% | Entity controls the facility emissions - Yes 201-A Interim Office Building, Irvine, California, 92697-5444, US

Scope 1 - Direct Emissions		Total CO₂e (t)	CO₂(t)	CH₄(t)	N₂O (t)	HFC (t of CO₂e)	PFC (t of CO₂e)	NF₃(t)	SF₀(t)
Stationary Combustion		592.642083	590.881466	0.05234	0.001114	0	0	0	0
	Total	592.642083	590.881466	0.05234	0.001114	0	0	0	0

Scope 2 - Location Based - Indirect Emissions	Total CO ₂ e (t)	CO ₂ (t)	CH₄(t)	N₂O (t)	HFC (t of CO₂e)	PFC (t of CO₂e)	NF₃(t)	SF₅(t)
Purchased Electricity - Location Based	378.505924	376.978269	0.025815	0.003037	0	0	0	0
Total	378.505924	376.978269	0.025815	0.003037	0	0	0	0

Scope 2 - Market Based - Indirect Emissions	Total CO₂e (t)	CO₂(t)	CH₄(t)	N₂O (t)	HFC (t of CO₂e)	PFC (t of CO₂e)	NF₃(t)	SF₀(t)
Purchased Electricity - Market Based	1.527654	0	0.025815	0.003037	0	0	0	0
Total	1.527654	0	0.025815	0.003037	0	0	0	0

Source Emissions | Purchased Electricity - Market Based

Activity Type	Gas	Fuel Type	End Use Sector	Technology	Calculation Method	SEM	Aditional Information	Fuel	Fuel Quantity	Emission Factor (EF)	EF Reference	Gas Quantity	CO2e (t)
Purchased Electricity - Market Based	CO2	Utility-Specific Rate	2019	System Average	Emission Factor	No		Universit y of Californi a, Office of the Preside nt	1,673.91 MWh	0 lb/MWh	2020 Default Emission Factors - Table #3.8	0	0
Purchased Electricity - Market Based	CH4	Utility-Specific Rate	2019	System Average	Emission Factor	No		Universit y of Californi a, Office of the Preside nt	1,673.91 MWh	34 lb/GWh	2020 Default Emission Factors - Table #3.1	0.025815	0.722826
Purchased Electricity - Market Based	N2O	Utility-Specific Rate	2019	System Average	Emission Factor	No		Universit y of Californi a, Office of the Preside nt	1,673.91 MWh	4 lb/GWh	2020 Default Emission Factors - Table #3.1	0.003037	0.804828

Source Emissions | Purchased Electricity - Location Based

Activity Type	Gas	Fuel Type	End Use Sector	Technology	Calculation Method	SEM	Aditional Information	Fuel	Fuel Quantity	Emission Factor (EF)	EF Reference	Gas Quantity	CO2e (t)
Purchased Electricity - Location Based	CO2	Regional Grid- Average	2019	Unspecified Technology	Emission Factor	No		WECC Californi a	1,673.91 MWh	496.5 lb/MWh	2020 Default Emission Factors - Table #3.1	376.97826 9	376.978269
Purchased Electricity - Location Based	CH4	Regional Grid- Average	2019	Unspecified Technology	Emission Factor	No		WECC Californi a	1,673.91 MWh	34 lb/GWh	2020 Default Emission Factors - Table #3.1	0.025815	0.722826
Purchased Electricity - Location Based	N2O	Regional Grid- Average	2019	Unspecified Technology	Emission Factor	No		WECC Californi a	1,673.91 MWh	4 lb/GWh	2020 Default Emission Factors - Table #3.1	0.003037	0.804828

Source Emissions | Stationary Combustion

Activity Type	Gas	Fuel Type	End Use Sector	Technology	Calculation Method	SEM	Aditional Information	Fuel	Fuel Quantity	Emission Factor (EF)	EF Reference	Gas Quantity	CO2e (t)
Stationary Combustion	CO2	Natural Gas	Commercial	Unspecified Technology	Emission Factor	No		Unspecif ied (Weight ed U.S. Average	111,361 therm	53.06 kg/MMBtu	2020 Default Emission Factors - Table #1.1	590.88146 6	590.881466
Stationary Combustion	CH4	Natural Gas	Commercial	Unspecified Technology	Emission Factor	No		Unspecified (Weighted U.S. Average	111,361 therm	4.7 g/MMBtu	2020 Default Emission Factors - Table #1.10	0.05234	1.465511
Stationary Combustion	N2O	Natural Gas	Commercial	Unspecified Technology	Emission Factor	No		Unspecif ied (Weight ed U.S. Average	111,361 therm	0.1 g/MMBtu	2020 Default Emission Factors - Table #1.10	0.001114	0.295107

Facility Emissions | Palo Verde Housing

Equity share - 100% | Entity controls the facility emissions - Yes 201-A Interim Office Building, Irvine, California, 92697-5444, US

Scope 1 - Direct Emissions		Total CO₂e (t)	CO ₂ (t)	CH₄(t)	N₂O (t)	HFC (t of CO₂e)	PFC (t of CO₂e)	NF₃(t)	SF₅(t)
Stationary Combustion		353.458655	352.408602	0.031216	0.000664	0	0	0	0
	Total	353.458655	352.408602	0.031216	0.000664	0	0	0	0

Scope 2 - Location Based - Indirect Emissions	Total CO₂e (t)	CO₂(t)	CH₄(t)	N₂O (t)	HFC (t of CO₂e)	PFC (t of CO₂e)	NF₃(t)	SF₅(t)
Purchased Electricity - Location Based	378.505924	376.978269	0.025815	0.003037	0	0	0	0
Total	378.505924	376.978269	0.025815	0.003037	0	0	0	0

Scope 2 - Market Based - Indirect Emissions	Total CO₂e (t)	CO₂(t)	CH₄(t)	N₂O (t)	HFC (t of CO₂e)	PFC (t of CO ₂ e)	NF₃(t)	SF₅(t)
Purchased Electricity - Market Based	151.123562	150.513625	0.010307	0.001213	0	0	0	0
Total	151.123562	150.513625	0.010307	0.001213	0	0	0	0

Source Emissions | Purchased Electricity - Market Based

Activity Type	Gas	Fuel Type	End Use Sector	Technology	Calculation Method	SEM	Aditional Information	Fuel	Fuel Quantity	Emission Factor (EF)	EF Reference	Gas Quantity	CO2e (t)
Purchased Electricity - Market Based	CO2	Regional Grid- Average	2019	Unspecified Technology	Emission Factor	No		WECC Californi a	668,329 kWh	496.5 lb/MWh	2020 Default Emission Factors - Table #3.1	150.51362 5	150.513625
Purchased Electricity - Market Based	CH4	Regional Grid- Average	2019	Unspecified Technology	Emission Factor	No		WECC Californi a	668,329 kWh	34 lb/GWh	2020 Default Emission Factors - Table #3.1	0.010307	0.288598
Purchased Electricity - Market Based	N2O	Regional Grid- Average	2019	Unspecified Technology	Emission Factor	No		WECC Californi a	668,329 kWh	4 lb/GWh	2020 Default Emission Factors - Table #3.1	0.001213	0.321338

Source Emissions | Purchased Electricity- Location Based

Activity Type	Gas	Fuel Type	End Use Sector	Technology	Calculation Method	SEM	Aditional Information	Fuel	Fuel Quantity	Emission Factor (EF)	EF Reference	Gas Quantity	CO2e (t)
Purchased Electricity - Location Based	CO2	Regional Grid- Average	2019	Unspecified Technology	Emission Factor	No		WECC Californi a	1,673,905 kWh	496.5 lb/MWh	2020 Default Emission Factors - Table #3.1	376.97826 9	376.978269
Purchased Electricity - Location Based	CH4	Regional Grid- Average	2019	Unspecified Technology	Emission Factor	No		WECC Californi a	1,673,905 kWh	34 lb/GWh	2020 Default Emission Factors - Table #3.1	0.025815	0.722826
Purchased Electricity - Location Based	N2O	Regional Grid- Average	2019	Unspecified Technology	Emission Factor	No		WECC Californi a	1,673,905 kWh	4 lb/GWh	2020 Default Emission Factors - Table #3.1	0.003037	0.804828

Source Emissions | Stationary Combustion

Activity Type	Gas	Fuel Type	End Use Sector	Technology	Calculation Method	SEM	Aditional Information	Fuel	Fuel Quantity	Emission Factor (EF)	EF Reference	Gas Quantity	CO2e (t)
Stationary Combustion	CO2	Natural Gas	Commercial	Unspecified Technology	Emission Factor	No		Unspecified (Weighted U.S. Average	66,417 therm	53.06 kg/MMBtu	2020 Default Emission Factors - Table #1.1	352.40860 2	352.408602
Stationary Combustion	CH4	Natural Gas	Commercial	Unspecified Technology	Emission Factor	No		Unspecified (Weighted U.S. Average	66,417 therm	4.7 g/MMBtu	2020 Default Emission Factors - Table #1.10	0.031216	0.874048
Stationary Combustion	N2O	Natural Gas	Commercial	Unspecified Technology	Emission Factor	No		Unspecified (Weighted U.S. Average	66,417 therm	0.1 g/MMBtu	2020 Default Emission Factors - Table #1.10	0.000664	0.176005

Facility Emissions | University Extension and Alumni House

Equity share - 100% | Entity controls the facility emissions - Yes 201-A Interim Office Building, Irvine, California, 92697-5444, US

Scope 1 - Direct Emissions		Total CO₂e (t)	CO ₂ (t)	CH₄(t)	N₂O (t)	HFC (t of CO₂e)	PFC (t of CO₂e)	NF₃(t)	SF ₆ (t)
Stationary Combustion		6.274414	6.255774	0.000554	0.000012	0	0	0	0
	Total	6.274414	6.255774	0.000554	0.000012	0	0	0	0

Scope 2 - Location Based - Indirect Emissions	Total CO₂e (t)	CO ₂ (t)	CH₄(t)	N₂O (t)	HFC (t of CO₂e)	PFC (t of CO₂e)	NF₃(t)	SF₅(t)
Purchased Electricity - Location Based	88.185579	87.829661	0.006015	0.000708	0	0	0	0
Total	88.185579	87.829661	0.006015	0.000708	0	0	0	0

Scope 2 - Market Based - Indirect Emissions	Total CO₂e (t)	CO ₂ (t)	CH₄(t)	N₂O (t)	HFC (t of CO₂e)	PFC (t of CO ₂ e)	NF₃(t)	SF₅(t)
Purchased Electricity - Market Based	88.185579	87.829661	0.006015	0.000708	0	0	0	0
Total	88.185579	87.829661	0.006015	0.000708	0	0	0	0

Source Emissions | Purchased Electricity-Location Based

Activity Type	Gas	Fuel Type	End Use Sector	Technology	Calculation Method	SEM	Aditional Information	Fuel	Fuel Quantity	Emission Factor (EF)	EF Reference	Gas Quantity	CO2e (t)
Purchased Electricity - Location Based	CO2	Regional Grid- Average	2019	Unspecified Technology	Emission Factor	No		WECC Californi a	389,992 kWh	496.5 lb/MWh	2020 Default Emission Factors - Table #3.1	87.829661	87.829661
Purchased Electricity - Location Based	CH4	Regional Grid- Average	2019	Unspecified Technology	Emission Factor	No		WECC Californi a	389,992 kWh	34 lb/GWh	2020 Default Emission Factors - Table #3.1	0.006015	0.168407
Purchased Electricity - Location Based	N2O	Regional Grid- Average	2019	Unspecified Technology	Emission Factor	No		WECC Californi a	389,992 kWh	4 lb/GWh	2020 Default Emission Factors - Table #3.1	0.000708	0.187511

Source Emissions | Purchased Electricity-Market Based

Activity Type	Gas	Fuel Type	End Use Sector	Technology	Calculation Method	SEM	Aditional Information	Fuel	Fuel Quantity	Emission Factor (EF)	EF Reference	Gas Quantity	CO2e (t)
Purchased Electricity - Market Based	CO2	Regional Grid- Average	2019	Unspecified Technology	Emission Factor	No		WECC Californi a	389,992 kWh	496.5 lb/MWh	2020 Default Emission Factors - Table #3.1	87.829661	87.829661
Purchased Electricity - Market Based	CH4	Regional Grid- Average	2019	Unspecified Technology	Emission Factor	No		WECC Californi a	389,992 kWh	34 lb/GWh	2020 Default Emission Factors - Table #3.1	0.006015	0.168407
Purchased Electricity - Market Based	N2O	Regional Grid- Average	2019	Unspecified Technology	Emission Factor	No		WECC Californi a	389,992 kWh	4 lb/GWh	2020 Default Emission Factors - Table #3.1	0.000708	0.187511

Source Emissions | Stationary Combustion

Activity Type	Gas	Fuel Type	End Use Sector	Technology	Calculation Method	SEM	Aditional Information	Fuel	Fuel Quantity	Emission Factor (EF)	EF Reference	Gas Quantity	CO2e (t)
Stationary Combustion	CO2	Natural Gas	Commercial	Unspecified Technology	Emission Factor	No		Unspecified (Weighted U.S. Average	1,179 therm	53.06 kg/MMBtu	2020 Default Emission Factors - Table #1.1	6.255774	6.255774
Stationary Combustion	CH4	Natural Gas	Commercial	Unspecified Technology	Emission Factor	No		Unspecified (Weighted U.S. Average	1,179 therm	4.7 g/MMBtu	2020 Default Emission Factors - Table #1.10	0.000554	0.015516
Stationary Combustion	N2O	Natural Gas	Commercial	Unspecified Technology	Emission Factor	No		Unspecified (Weighted U.S. Average	1,179 therm	0.1 g/MMBtu	2020 Default Emission Factors - Table #1.10	0.000012	0.003124

Facility Emissions | Verano Place Housing

Equity share - 100% | Entity controls the facility emissions - Yes 201-A Interim Office Building, Irvine, California, 92697-5444, US

Scope 1 - Direct Emissions		Total CO₂e (t)	CO ₂ (t)	CH₄(t)	N₂O (t)	HFC (t of CO₂e)	PFC (t of CO₂e)	NF₃(t)	SF₅(t)
Stationary Combustion		1,078.108235	1,074.905398	0.095214	0.002026	0	0	0	0
	Total	1,078.108235	1,074.905398	0.095214	0.002026	0	0	0	0

Scope 2 - Location Based - Indirect Emissions	Total CO ₂ e (t)	CO ₂ (t)	CH₄(t)	N₂O (t)	HFC (t of CO₂e)	PFC (t of CO₂e)	NF₃(t)	SF₅(t)
Purchased Electricity - Location Based	580.31123	577.969087	0.039579	0.004656	0	0	0	0
Total	580.31123	577.969087	0.039579	0.004656	0	0	0	0

Scope 2 - Market Based - Indirect Emissions	Total CO₂e (t)	CO₂(t)	CH₄(t)	N₂O (t)	HFC (t of CO₂e)	PFC (t of CO ₂ e)	NF₃(t)	SF₀(t)
Purchased Electricity - Market Based	580.31123	577.969087	0.039579	0.004656	0	0	0	0
Total	580.31123	577.969087	0.039579	0.004656	0	0	0	0

Source Emissions | Purchased Electricity-Location Based

Activity Type	Gas	Fuel Type	End Use Sector	Technology	Calculation Method	SEM	Aditional Information	Fuel	Fuel Quantity	Emission Factor (EF)	EF Reference	Gas Quantity	CO2e (t)
Purchased Electricity - Location Based	CO2	Regional Grid- Average	2019	Unspecified Technology	Emission Factor	No		WECC Californi a	2,566.37 MWh	496.5 lb/MWh	2020 Default Emission Factors - Table #3.1	577.96908 7	577.969087
Purchased Electricity - Location Based	CH4	Regional Grid- Average	2019	Unspecified Technology	Emission Factor	No		WECC Californi a	2,566.37 MWh	34 lb/GWh	2020 Default Emission Factors - Table #3.1	0.039579	1.108211
Purchased Electricity - Location Based	N2O	Regional Grid- Average	2019	Unspecified Technology	Emission Factor	No		WECC Californi a	2,566.37 MWh	4 lb/GWh	2020 Default Emission Factors - Table #3.1	0.004656	1.233932

Source Emissions | Purchased Electricity-Market Based

Activity Type	Gas	Fuel Type	End Use Sector	Technology	Calculation Method	SEM	Aditional Information	Fuel	Fuel Quantity	Emission Factor (EF)	EF Reference	Gas Quantity	CO2e (t)
Purchased Electricity - Market Based	CO2	Regional Grid- Average	2019	Unspecified Technology	Emission Factor	No		WECC Californi a	2,566.37 MWh	496.5 lb/MWh	2020 Default Emission Factors - Table #3.1	577.96908 7	577.969087
Purchased Electricity - Market Based	CH4	Regional Grid- Average	2019	Unspecified Technology	Emission Factor	No		WECC Californi a	2,566.37 MWh	34 lb/GWh	2020 Default Emission Factors - Table #3.1	0.039579	1.108211
Purchased Electricity - Market Based	N2O	Regional Grid- Average	2019	Unspecified Technology	Emission Factor	No		WECC Californi a	2,566.37 MWh	4 lb/GWh	2020 Default Emission Factors - Table #3.1	0.004656	1.233932

Source Emissions | Stationary Combustion

Activity Type	Gas	Fuel Type	End Use Sector	Technology	Calculation Method	SEM	Aditional Information	Fuel	Fuel Quantity	Emission Factor (EF)	EF Reference	Gas Quantity	CO2e (t)
Stationary Combustion	CO2	Natural Gas	Commercial	Unspecified Technology	Emission Factor	No		Unspecif ied (Weight ed U.S. Average	202,583 therm	53.06 kg/MMBtu	2020 Default Emission Factors - Table #1.1	1,074.9053 98	1,074.9053 98
Stationary Combustion	CH4	Natural Gas	Commercial	Unspecified Technology	Emission Factor	No		Unspecified (Weighted U.S. Average	202,583 therm	4.7 g/MMBtu	2020 Default Emission Factors - Table #1.10	0.095214	2.665992
Stationary Combustion	N2O	Natural Gas	Commercial	Unspecified Technology	Emission Factor	No		Unspecif ied (Weight ed U.S. Average	202,583 therm	0.1 g/MMBtu	2020 Default Emission Factors - Table #1.10	0.002026	0.536845