

Description:	<p>The Sacramento Municipal Utility District (SMUD) is the nation's sixth largest publicly owned and operated electric utility in terms of customers served. SMUD generates, transmits, and distributes electric power within a 900-square mile service area in and around the County of Sacramento, California. SMUD owns and operates approximately 2,009 MW of electrical generation resources located in the California Counties of Sacramento, El Dorado and Solano. SMUD's electrical generation is comprised of approximately 1,130 MW of natural gas-fired combined cycle, cogeneration and peaking resources, 673 MW of hydroelectric, 230 MW of wind, and 1.5 MW of Solar photovoltaic generation. In addition, SMUD also has long-term contracts in place to purchase solar power from Rancho Seco II (160 MW) and Wildflower (13 MW) solar farms. These facilities are operated by a 3rd party, and SMUD purchases the power to sell to its customers. SMUD owns and operates a 76-mile natural gas transmission pipeline serving the cogeneration and fossil generation facilities. SMUD has equity shares in a Northern California transmission line known as the California Oregon Transmission Project (COTP), which is part of the Transmission Association of Northern California (TANC). SMUD also had an equity share in the Rosa Natural Gas Production field in New Mexico. However, in November 2019, SMUD divested from Rosa Natural Gas Production and no longer has an equity share of the facility.</p>		
Industry:	22 - Utilities		
Address:	6201 S Street, Sacramento, California, US	Contact: Eric Rivero-Montes	www.smud.org

**Reporting Information**

Inventory Type	Complete
Reporting Protocol:	GRP 3.0
GWP Standard:	AR4
Base Year:	2018
Scope 2 method	Market-based
Reporting Year Type	Calendar Year
Consolidation Methodology:	Operational Control and Equity
Status:	TCR Accepted

**Verification Information**

Verification Body: TÜV SÜD America, Inc - Ruby Canyon

Level of Assurance: Reasonable

## Entity Emissions | Total in metric tons of CO2e

Scope 1 - Direct Emissions	Total CO2e (t)	CO2 (t)	CH4 (t of CO2e)	N2O (t of CO2e)	HFC (t of CO2e)	PFC (t of CO2e)	NF3 (t of CO2e)	SF6 (t of CO2e)
Stationary Combustion - Scope 1	2,138,974.57563	2,136,729.03	1,013.89375	1,231.65188	0	0	0	0
Mobile Combustion - Scope 1	3,999.7	3,957.71	3.25	38.74	0	0	0	0
Fugitive - Scope 1	14,102.01	31.25	13,162.5	0	39.58	0	0	868.68
<b>Total</b>	<b>2,157,076.28563</b>	<b>2,140,717.99</b>	<b>14,179.64375</b>	<b>1,270.39188</b>	<b>39.58</b>	<b>0</b>	<b>0</b>	<b>868.68</b>
<b>Applied Offsets</b>	<b>0</b>							
<b>Net Total</b>	<b>2,157,076.28563</b>							

Scope 2 - Location Based - Indirect Emissions	Total CO2e (t)	CO2 (t)	CH4 (t of CO2e)	N2O (t of CO2e)	HFC (t of CO2e)	PFC (t of CO2e)	NF3 (t of CO2e)	SF6 (t of CO2e)
Purchased Electricity - Location Based - Scope 2	43,724.77	43,526.84	75.75	122.18	0	0	0	0
<b>Total</b>	<b>43,724.77</b>	<b>43,526.84</b>	<b>75.75</b>	<b>122.18</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Applied Offsets</b>	<b>0</b>							
<b>Net Total</b>	<b>43,724.77</b>							

Scope 2 - Market Based - Indirect Emissions	Total CO2e (t)	CO2 (t)	CH4 (t of CO2e)	N2O (t of CO2e)	HFC (t of CO2e)	PFC (t of CO2e)	NF3 (t of CO2e)	SF6 (t of CO2e)
Purchased Electricity - Market Based - Scope 2	31,675.68	31,513.82	141	20.86	0	0	0	0
<b>Total</b>	<b>31,675.68</b>	<b>31,513.82</b>	<b>141</b>	<b>20.86</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Applied Offsets</b>	<b>0</b>							
<b>Net Total</b>	<b>31,675.68</b>							

Direct Emissions - Biomass	Total CO2e (t)	CO2 (t)	CH4 (t of CO2e)	N2O (t of CO2e)	HFC (t of CO2e)	PFC (t of CO2e)	NF3 (t of CO2e)	SF6 (t of CO2e)
Stationary Biomass Combustion - Biomass	23,376.38	23,376.38	0	0	0	0	0	0
Mobile Biomass Combustion - Biomass	2,036.6	2,036.6	0	0	0	0	0	0
<b>Total</b>	25,412.98	25,412.98	0	0	0	0	0	0
<b>Applied Offsets</b>	0							
<b>Net Total</b>	25,412.98							

## Entity Emissions | Total in metric tons of gas

Scope 1 - Direct Emissions	Total CO2e (t)	CO2 (t)	CH4 (t)	N2O (t)	HFC (t of CO2e)	PFC CO2e (t of CO2e)	NF3 (t)	SF6 (t)
Stationary Combustion - Scope 1	2,138,974.57563	2,136,729.03	40.55575	4.13306	0	0	0	0
Mobile Combustion - Scope 1	3,999.7	3,957.71	0.13	0.13	0	0	0	0
Fugitive - Scope 1	14,102.01	31.25	526.5	0	39.58	0	0	0.0381
<b>Total</b>	2,157,076.28563	2,140,717.99	567.18575	4.26306	39.58	0	0	0.0381

Scope 2 - Location Based - Indirect Emissions	Total CO2e (t)	CO2 (t)	CH4 (t)	N2O (t)	HFC (t of CO2e)	PFC CO2e (t of CO2e)	NF3 (t)	SF6 (t)
Purchased Electricity - Location Based - Scope 2	43,724.77	43,526.84	3.03	0.41	0	0	0	0
<b>Total</b>	43,724.77	43,526.84	3.03	0.41	0	0	0	0

Scope 2 - Market Based - Indirect Emissions	Total CO2e (t)	CO2 (t)	CH4 (t)	N2O (t)	HFC (t of CO2e)	PFC CO2e (t of CO2e)	NF3 (t)	SF6 (t)
Purchased Electricity - Market Based - Scope 2	31,675.68	31,513.82	5.64	0.07	0	0	0	0
<b>Total</b>	31,675.68	31,513.82	5.64	0.07	0	0	0	0

Direct Emissions - Biomass	Total CO2e (t)	CO2 (t)	CH4 (t)	N2O (t)	HFC (t of CO2e)	PFC CO2e (t of CO2e)	NF3 (t)	SF6 (t)
Stationary Biomass Combustion - Biomass	23,376.38	23,376.38	0	0	0	0	0	0
Mobile Biomass Combustion - Biomass	2,036.6	2,036.6	0	0	0	0	0	0
<b>Total</b>	25,412.98	25,412.98	0	0	0	0	0	0

## Simplified Estimation Methods (SEMs)

	Total Estimated CO2e (t)	Total Emissions (t of CO2e)	Estimated CO2e as a Percentage of Total*
Location-based	2,024	2,256,894	0.09%
Market-based	2,025	2,244,845	0.09%
*Total based on Scope 1, Scope 2, & biomass emissions			