

**Description:** Established in 1887, the Turlock Irrigation District (TID) was the first publicly owned irrigation district in the state and is one of only four in California today that also provides electric retail energy directly to homes, farms and businesses. Organized under the Wright Act, the District operates under the provisions of the California Water Code as a special district. TID is also an independent control area and is governed by a five member Board of Directors.

Since 1923, TID has been providing safe, affordable and reliable electricity to a growing retail customer base that now numbers in excess of 98,000 residential, farm, business, industrial and municipal accounts in an electric service area that encompasses 662 square-miles in portions of Stanislaus, Merced, Tuolumne and Mariposa counties.

TID provides irrigation water to more than 5,800 growers in a 307 square-mile service area that incorporates 149,500 acres of Central Valley farmland. The District has been delivering irrigation water to growers since completing its gravity-fed water conveyance system of canals and laterals in 1900. The Tuolumne River is the District's primary source of water, originating at Mt. Lyell in Yosemite National Park. Water for irrigation and hydroelectric power production is kept at Don Pedro Reservoir about 50 miles east of Turlock in the Sierra Nevada foothills near the historic gold rush era town of La Grange.

**Industry:** 22 - Utilities

**Address:** 1116 Wellington Dr,  
Modesto, California, US

**Contact:** 209-535-7797

[www.tid.org](http://www.tid.org)

**Reporting Information**

**Inventory Type** Complete

**Reporting Protocol:** GRP 3.0

**GWP Standard:** AR5

**Base Year:**

**Scope 2 method** Location-based

**Reporting Year Type** Calendar Year

**Consolidation Methodology:** Operational Control Only

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<br>(t of CO2e) | N2O<br>(t of CO2e)  | HFC<br>(t of CO2e) | PFC<br>(t of CO2e) | NF3<br>(t of CO2e) | SF6<br>(t of CO2e) |
|---------------------------------|-----------------------|-----------------------|--------------------|---------------------|--------------------|--------------------|--------------------|--------------------|
| Stationary Combustion - Scope 1 | 627,964.994696        | 620,260.241443        | 537.253063         | 7,167.50019         | 0                  | 0                  | 0                  | 0                  |
| Mobile Combustion - Scope 1     | 2,671.136352          | 2,648.448401          | 5.060543           | 17.627408           | 0                  | 0                  | 0                  | 0                  |
| Fugitive - Scope 1              | 1.088623              | 1.088623              | 0                  | 0                   | 0                  | 0                  | 0                  | 0                  |
| <b>Total</b>                    | <b>630,637.219671</b> | <b>622,909.778467</b> | <b>542.313606</b>  | <b>7,185.127598</b> | <b>0</b>           | <b>0</b>           | <b>0</b>           | <b>0</b>           |
| <b>Applied Offsets</b>          |                       |                       |                    |                     |                    |                    |                    |                    |
| <b>Net Total</b>                | <b>630,637.219671</b> |                       |                    |                     |                    |                    |                    |                    |

| Scope 2 - Location Based - Indirect Emissions    | Total CO2e (t)       | CO2 (t)              | CH4<br>(t of CO2e) | N2O<br>(t of CO2e) | HFC<br>(t of CO2e) | PFC<br>(t of CO2e) | NF3<br>(t of CO2e) | SF6<br>(t of CO2e) |
|--|----------------------|----------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| Purchased Electricity - Location Based - Scope 2 | 19,433.008173        | 19,321.422033        | 48.902809          | 62.683331          | 0                  | 0                  | 0                  | 0                  |
| Purchased Heating - Location Based - Scope 2     | 2.279862             | 2.27309              | 0.005637           | 0.001135           | 0                  | 0                  | 0                  | 0                  |
| <b>Total</b>                                     | <b>19,435.288035</b> | <b>19,323.695123</b> | <b>48.908446</b>   | <b>62.684466</b>   | <b>0</b>           | <b>0</b>           | <b>0</b>           | <b>0</b>           |
| <b>Applied Offsets</b>                           |                      |                      |                    |                    |                    |                    |                    |                    |
| <b>Net Total</b>                                 | <b>19,435.288035</b> |                      |                    |                    |                    |                    |                    |                    |

| Scope 2 - Market Based - Indirect Emissions    | Total CO2e (t) | CO2 (t)       | CH4<br>(t of CO2e) | N2O<br>(t of CO2e) | HFC<br>(t of CO2e) | PFC<br>(t of CO2e) | NF3<br>(t of CO2e) | SF6<br>(t of CO2e) |
|--|----------------|---------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| Purchased Electricity - Market Based - Scope 2 | 14,090.943244  | 13,994.786751 | 41.527377          | 54.629116          | 0                  | 0                  | 0                  | 0                  |
| Purchased Heating - Market Based - Scope 2     | 2.279862       | 2.27309       | 0.005637           | 0.001135           | 0                  | 0                  | 0                  | 0                  |

|                        |               |               |           |           |   |   |   |   |
|------------------------|---------------|---------------|-----------|-----------|---|---|---|---|
| <b>Total</b>           | 14,093.223106 | 13,997.059841 | 41.533014 | 54.630251 | 0 | 0 | 0 | 0 |
| <b>Applied Offsets</b> |               |               |           |           |   |   |   |   |
| <b>Net Total</b>       | 14,093.223106 |               |           |           |   |   |   |   |

## 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 | 627,964.994696 | 620,260.241443 | 19.187603 | 27.047163 | 0               | 0                    | 0       | 0       |
| Mobile Combustion - Scope 1     | 2,671.136352   | 2,648.448401   | 0.18073   | 0.066515  | 0               | 0                    | 0       | 0       |
| Fugitive - Scope 1              | 1.088623       | 1.088623       | 0         | 0         | 0               | 0                    | 0       | 0       |
| <b>Total</b>                    | 630,637.219671 | 622,909.778467 | 19.368333 | 27.113678 | 0               | 0                    | 0       | 0       |

| 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 | 19,433.008173  | 19,321.422033 | 1.746523 | 0.236535 | 0               | 0                    | 0       | 0       |
| Purchased Heating - Location Based - Scope 2     | 2.279862       | 2.27309       | 0.000201 | 0.000004 | 0               | 0                    | 0       | 0       |
| <b>Total</b>                                     | 19,435.288035  | 19,323.695123 | 1.746724 | 0.236539 | 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 | 14,090.943244  | 13,994.786751 | 1.483117 | 0.206143 | 0               | 0                    | 0       | 0       |

|  |               |               |          |          |   |   |   |   |
|--|---------------|---------------|----------|----------|---|---|---|---|
| Purchased Heating - Market Based - Scope 2 | 2.279862      | 2.27309       | 0.000201 | 0.000004 | 0 | 0 | 0 | 0 |
| <b>Total</b>                               | 14,093.223106 | 13,997.059841 | 1.483318 | 0.206147 | 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 | 0                        | 650,072                     | 0.00%                                    |
| Market-based   | 0                        | 644,730                     | 0.00%                                    |

\*Total based on Scope 1, Scope 2, & biomass emissions

## Facility Emissions | Almond 2 Power Plant

Equity share - 100.00 | Entity controls the facility emissions - Yes

| Scope 1 - Direct Emissions      | Total CO2e (t) | CO2 (t)       | CH4 (t)  | N2O (t)  | HFC (t of CO2e) | PFC (t of CO2e) | NF3 (t) | SF6 (t) |
|---------------------------------|----------------|---------------|----------|----------|-----------------|-----------------|---------|---------|
| Stationary Combustion - Scope 1 | 119,944.1477   | 119,169.52334 | 8.534568 | 2.021345 | 0               | 0               | 0       | 0       |
| <b>Total</b>                    | 119,944.1477   | 119,169.52334 | 8.534568 | 2.021345 | 0               | 0               | 0       | 0       |

## Facility Emissions | Almond Power Plant

**Equity share - 100.00 | Entity controls the facility emissions - Yes**

| Scope 1 - Direct Emissions      | Total CO2e (t)       | CO2 (t)              | CH4 (t)         | N2O (t)         | HFC (t of CO2e) | PFC (t of CO2e) | NF3 (t)  | SF6 (t)  |
|---------------------------------|----------------------|----------------------|-----------------|-----------------|-----------------|-----------------|----------|----------|
| Stationary Combustion - Scope 1 | 39,210.341264        | 38,957.123522        | 2.789888        | 0.660757        | 0               | 0               | 0        | 0        |
| Fugitive - Scope 1              | 1.088623             | 1.088623             | 0               | 0               | 0               | 0               | 0        | 0        |
| <b>Total</b>                    | <b>39,211.429887</b> | <b>38,958.212145</b> | <b>2.789888</b> | <b>0.660757</b> | <b>0</b>        | <b>0</b>        | <b>0</b> | <b>0</b> |

**Facility Emissions | Buildings**

**Equity share - 100.00 | Entity controls the facility emissions - Yes**

| Scope 1 - Direct Emissions      | Total CO2e (t)   | CO2 (t)          | CH4 (t)         | N2O (t)         | HFC (t of CO2e) | PFC (t of CO2e) | NF3 (t)  | SF6 (t)  |
|---------------------------------|------------------|------------------|-----------------|-----------------|-----------------|-----------------|----------|----------|
| Stationary Combustion - Scope 1 | 99.692929        | 99.396766        | 0.008802        | 0.000184        | 0               | 0               | 0        | 0        |
| <b>Total</b>                    | <b>99.692929</b> | <b>99.396766</b> | <b>0.008802</b> | <b>0.000184</b> | <b>0</b>        | <b>0</b>        | <b>0</b> | <b>0</b> |

| 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)  | SF6 (t)  |
|---|-----------------|----------------|-----------------|-----------------|-----------------|-----------------|----------|----------|
| Purchased Heating - Location Based - Scope 2  | 2.279862        | 2.27309        | 0.000201        | 0.000004        | 0               | 0               | 0        | 0        |
| <b>Total</b>                                  | <b>2.279862</b> | <b>2.27309</b> | <b>0.000201</b> | <b>0.000004</b> | <b>0</b>        | <b>0</b>        | <b>0</b> | <b>0</b> |

| 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) | SF6 (t) |
|---|----------------|---------|---------|---------|-----------------|-----------------|---------|---------|
|---|----------------|---------|---------|---------|-----------------|-----------------|---------|---------|

|  |          |         |          |          |   |   |   |   |
|--|----------|---------|----------|----------|---|---|---|---|
| Purchased Heating - Market Based - Scope 2 | 2.279862 | 2.27309 | 0.000201 | 0.000004 | 0 | 0 | 0 | 0 |
| <b>Total</b>                               | 2.279862 | 2.27309 | 0.000201 | 0.000004 | 0 | 0 | 0 | 0 |

## Facility Emissions | Don Pedro Recreation Agency

Equity share - 100.00 | Entity controls the facility emissions - Yes

| Scope 1 - Direct Emissions  | Total CO2e (t) | CO2 (t)    | CH4 (t)  | N2O (t)  | HFC (t of CO2e) | PFC (t of CO2e) | NF3 (t) | SF6 (t) |
|-----------------------------|----------------|------------|----------|----------|-----------------|-----------------|---------|---------|
| Mobile Combustion - Scope 1 | 212.343737     | 209.905289 | 0.042102 | 0.004752 | 0               | 0               | 0       | 0       |
| <b>Total</b>                | 212.343737     | 209.905289 | 0.042102 | 0.004752 | 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) | SF6 (t) |
|--|----------------|-----------|----------|----------|-----------------|-----------------|---------|---------|
| Purchased Electricity - Location Based - Scope 2 | 43.985833      | 43.808306 | 0.002999 | 0.000352 | 0               | 0               | 0       | 0       |
| <b>Total</b>                                     | 43.985833      | 43.808306 | 0.002999 | 0.000352 | 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) | SF6 (t) |
|--|----------------|-----------|----------|----------|-----------------|-----------------|---------|---------|
| Purchased Electricity - Market Based - Scope 2 | 18.379371      | 18.201844 | 0.002999 | 0.000352 | 0               | 0               | 0       | 0       |
| <b>Total</b>                                   | 18.379371      | 18.201844 | 0.002999 | 0.000352 | 0               | 0               | 0       | 0       |

## Facility Emissions | Emergency Generators

Equity share - 100.00 | Entity controls the facility emissions - Yes

| Scope 1 - Direct Emissions      | Total CO2e (t) | CO2 (t)  | CH4 (t)  | N2O (t)  | HFC (t of CO2e) | PFC (t of CO2e) | NF3 (t) | SF6 (t) |
|---------------------------------|----------------|----------|----------|----------|-----------------|-----------------|---------|---------|
| Stationary Combustion - Scope 1 | 3.66806        | 3.653936 | 0.000173 | 0.000034 | 0               | 0               | 0       | 0       |
| <b>Total</b>                    | 3.66806        | 3.653936 | 0.000173 | 0.000034 | 0               | 0               | 0       | 0       |

## Facility Emissions | Mobile Fleet Combustion Emissions

Equity share - 100.00 | Entity controls the facility emissions - Yes

| Scope 1 - Direct Emissions  | Total CO2e (t) | CO2 (t)      | CH4 (t)  | N2O (t)  | HFC (t of CO2e) | PFC (t of CO2e) | NF3 (t) | SF6 (t) |
|-----------------------------|----------------|--------------|----------|----------|-----------------|-----------------|---------|---------|
| Mobile Combustion - Scope 1 | 2,458.792615   | 2,438.543112 | 0.138628 | 0.061763 | 0               | 0               | 0       | 0       |
| Fugitive - Scope 1          | 0              | 0            | 0        | 0        | 0               | 0               | 0       | 0       |
| <b>Total</b>                | 2,458.792615   | 2,438.543112 | 0.138628 | 0.061763 | 0               | 0               | 0       | 0       |

## Facility Emissions | Power Plants and Substations

Equity share - 100.00 | Entity controls the facility emissions - Yes

| 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) | SF6 (t) |
|--|----------------|-----------|---------|----------|-----------------|-----------------|---------|---------|
| Purchased Electricity - Location Based - Scope 2 | 31.265135      | 31.138954 | 0.00213 | 0.000248 | 0               | 0               | 0       | 0       |

|              |           |           |         |          |   |   |   |   |
|--------------|-----------|-----------|---------|----------|---|---|---|---|
| <b>Total</b> | 31.265135 | 31.138954 | 0.00213 | 0.000248 | 0 | 0 | 0 | 0 |
|--------------|-----------|-----------|---------|----------|---|---|---|---|

| <b>Scope 2 - Market Based - Indirect Emissions</b> | <b>Total CO2e (t)</b> | <b>CO2 (t)</b> | <b>CH4 (t)</b> | <b>N2O (t)</b> | <b>HFC (t of CO2e)</b> | <b>PFC (t of CO2e)</b> | <b>NF3 (t)</b> | <b>SF6 (t)</b> |
|--|-----------------------|----------------|----------------|----------------|------------------------|------------------------|----------------|----------------|
| Purchased Electricity - Market Based - Scope 2     | 13.064054             | 12.937873      | 0.00213        | 0.000248       | 0                      | 0                      | 0              | 0              |
| <b>Total</b>                                       | 13.064054             | 12.937873      | 0.00213        | 0.000248       | 0                      | 0                      | 0              | 0              |

## Facility Emissions | Transmission and Distribution System

Equity share - 100.00 | Entity controls the facility emissions - Yes

| <b>Scope 1 - Direct Emissions</b> | <b>Total CO2e (t)</b> | <b>CO2 (t)</b> | <b>CH4 (t)</b> | <b>N2O (t)</b> | <b>HFC (t of CO2e)</b> | <b>PFC (t of CO2e)</b> | <b>NF3 (t)</b> | <b>SF6 (t)</b> |
|-----------------------------------|-----------------------|----------------|----------------|----------------|------------------------|------------------------|----------------|----------------|
| Fugitive - Scope 1                | 0                     | 0              | 0              | 0              | 0                      | 0                      | 0              | 0              |
| <b>Total</b>                      | 0                     | 0              | 0              | 0              | 0                      | 0                      | 0              | 0              |

| <b>Scope 2 - Location Based - Indirect Emissions</b> | <b>Total CO2e (t)</b> | <b>CO2 (t)</b> | <b>CH4 (t)</b> | <b>N2O (t)</b> | <b>HFC (t of CO2e)</b> | <b>PFC (t of CO2e)</b> | <b>NF3 (t)</b> | <b>SF6 (t)</b> |
|--|-----------------------|----------------|----------------|----------------|------------------------|------------------------|----------------|----------------|
| Purchased Electricity - Location Based - Scope 2     | 19,357.757205         | 19,246.474773  | 1.741394       | 0.235935       | 0                      | 0                      | 0              | 0              |
| <b>Total</b>   | 19,357.757205         | 19,246.474773  | 1.741394       | 0.235935       | 0                      | 0                      | 0              | 0              |

| <b>Scope 2 - Market Based - Indirect Emissions</b> | <b>Total CO2e (t)</b> | <b>CO2 (t)</b> | <b>CH4 (t)</b> | <b>N2O (t)</b> | <b>HFC (t of CO2e)</b> | <b>PFC (t of CO2e)</b> | <b>NF3 (t)</b> | <b>SF6 (t)</b> |
|--|-----------------------|----------------|----------------|----------------|------------------------|------------------------|----------------|----------------|
| Purchased Electricity - Market Based - Scope 2     | 14,059.499819         | 13,963.647034  | 1.477988       | 0.205543       | 0                      | 0                      | 0              | 0              |

|              |               |               |          |          |   |   |   |   |
|--------------|---------------|---------------|----------|----------|---|---|---|---|
| <b>Total</b> | 14,059.499819 | 13,963.647034 | 1.477988 | 0.205543 | 0 | 0 | 0 | 0 |
|--------------|---------------|---------------|----------|----------|---|---|---|---|

## Facility Emissions | Walnut Energy Center

Equity share - 100.00 | Entity controls the facility emissions - Yes

| Scope 1 - Direct Emissions      | Total CO2e (t) | CO2 (t)        | CH4 (t)  | N2O (t)   | HFC (t of CO2e) | PFC (t of CO2e) | NF3 (t) | SF6 (t) |
|---------------------------------|----------------|----------------|----------|-----------|-----------------|-----------------|---------|---------|
| Stationary Combustion - Scope 1 | 468,288.123458 | 461,613.649039 | 7.829952 | 24.359379 | 0               | 0               | 0       | 0       |
| Fugitive - Scope 1              | 0              | 0              | 0        | 0         | 0               | 0               | 0       | 0       |
| <b>Total</b>                    | 468,288.123458 | 461,613.649039 | 7.829952 | 24.359379 | 0               | 0               | 0       | 0       |

## Facility Emissions | Walnut Power Plant

Equity share - 100.00 | Entity controls the facility emissions - Yes

| Scope 1 - Direct Emissions      | Total CO2e (t) | CO2 (t)   | CH4 (t) | N2O (t)  | HFC (t of CO2e) | PFC (t of CO2e) | NF3 (t) | SF6 (t) |
|---------------------------------|----------------|-----------|---------|----------|-----------------|-----------------|---------|---------|
| Stationary Combustion - Scope 1 | 419.021285     | 416.89484 | 0.02422 | 0.005464 | 0               | 0               | 0       | 0       |
| Fugitive - Scope 1              | 0              | 0         | 0       | 0        | 0               | 0               | 0       | 0       |
| <b>Total</b>                    | 419.021285     | 416.89484 | 0.02422 | 0.005464 | 0               | 0               | 0       | 0       |